# CONTENTS

1 Salt Project
   1.1 About Salt ................................................................. 2
   1.2 About SaltStack ............................................................ 2
   1.3 Download Salt .............................................................. 2
   1.4 Salt Project Documentation ............................................. 2
   1.5 Security Advisories ...................................................... 2
   1.6 Engage the Salt Project and The Community ........................ 3
   1.7 License ........................................................................... 3

2 Introduction to Salt ............................................................. 5
   2.1 The 30 second summary .................................................... 5
   2.2 Simplicity ........................................................................ 5
   2.3 Parallel execution ............................................................ 5
   2.4 Builds on proven technology ............................................. 6
   2.5 Python client interface .................................................... 6
   2.6 Fast, flexible, scalable .................................................... 6
   2.7 Open ............................................................................. 6
   2.8 Salt Community .............................................................. 6
   2.9 Mailing List ................................................................... 7
   2.10 IRC .............................................................................. 7
   2.11 Follow on Github .......................................................... 7
   2.12 Blogs ........................................................................... 7
   2.13 Example Salt States ....................................................... 7
   2.14 Follow on Open Hub ..................................................... 8
   2.15 Other community links .................................................. 8
   2.16 Hack the Source ............................................................ 8

3 Salt system architecture .......................................................... 9
   3.1 Overview ....................................................................... 9
   3.2 What is Salt? .................................................................. 9
   3.3 The Salt system architecture ............................................ 9

4 Installation ............................................................................ 15
   4.1 Quick Install ................................................................. 15
   4.2 Platform-specific Installation Instructions ............................ 15
   4.3 Initial Configuration ....................................................... 47
   4.4 Additional Installation Guides .......................................... 50
   4.5 Dependencies ............................................................... 67
   4.6 Optional Dependencies .................................................. 68
   4.7 Upgrading Salt .............................................................. 68
9.1 Retcode Passthrough .............................................. 659

10 Utility Modules - Code Reuse in Custom Modules 661

11 Events & Reactor 665
  11.1 Event System .............................................. 665
  11.2 Beacons ................................................... 673
  11.3 Reactor System ............................................ 679

12 Orchestration 691
  12.1 Orchestrate Runner ........................................ 691

13 Solaris 701
  13.1 Solaris-specific Behaviour ................................ 701

14 Salt SSH 703
  14.1 Getting Started ........................................... 703
  14.2 Salt SSH Roster ............................................ 703
  14.3 Deploy ssh key for salt-ssh ............................... 704
  14.4 Calling Salt SSH ........................................... 704
  14.5 States Via Salt SSH ....................................... 705
  14.6 Targeting with Salt SSH .................................. 705
  14.7 Configuring Salt SSH ...................................... 705
  14.8 Running Salt SSH as non-root user ....................... 706
  14.9 Define CLI Options with Saltfile ....................... 706
  14.10 Advanced options with salt-ssh ......................... 707
  14.11 Debugging salt-ssh ..................................... 707
  14.12 Different Python Versions ............................... 711

15 Thorium Complex Reactor 713
  15.1 Starting the Thorium Engine ............................ 713
  15.2 Thorium Modules ......................................... 713
  15.3 Writing Thorium Formulas ............................... 713
  15.4 The Thorium Register .................................... 716

16 Salt Cloud 719
  16.1 Configuration ............................................. 719
  16.2 Configuration Inheritance ............................... 719
  16.3 QuickStart ............................................... 720
  16.4 Using Salt Cloud .......................................... 720
  16.5 Core Configuration ....................................... 730
  16.6 Windows Configuration ................................... 741
  16.7 Cloud Provider Specifics ................................. 744
  16.8 Miscellaneous Options ................................... 906
  16.9 Troubleshooting Steps ................................... 912
  16.10 Extending Salt Cloud .................................... 914
  16.11 Using Salt Cloud from Salt ............................. 924
  16.12 Feature Comparison ..................................... 929
  16.13 Tutorials .................................................. 932

17 Salt Proxy Minion 941
  17.1 New in 2017.7.0 ........................................... 941
  17.2 New in 2016.11.0 ......................................... 942
  17.3 New in 2016.3 ............................................. 942
  17.4 New in 2015.8.2 ........................................... 943
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Network Automation</td>
<td>961</td>
</tr>
<tr>
<td>18.1</td>
<td>New in Carbon (2016.11)</td>
<td>961</td>
</tr>
<tr>
<td>18.2</td>
<td>NAPALM</td>
<td>961</td>
</tr>
<tr>
<td>18.3</td>
<td>JUNOS</td>
<td>968</td>
</tr>
<tr>
<td>19</td>
<td>Salt Virt</td>
<td>971</td>
</tr>
<tr>
<td>19.1</td>
<td>Salt Virt Tutorial</td>
<td>971</td>
</tr>
<tr>
<td>19.2</td>
<td>The Salt Virt Runner</td>
<td>972</td>
</tr>
<tr>
<td>19.3</td>
<td>Based on Live State Data</td>
<td>972</td>
</tr>
<tr>
<td>19.4</td>
<td>Deploy from Network or Disk</td>
<td>972</td>
</tr>
<tr>
<td>20</td>
<td>Command Line Reference</td>
<td>975</td>
</tr>
<tr>
<td>20.1</td>
<td>salt-api</td>
<td>975</td>
</tr>
<tr>
<td>20.2</td>
<td>salt-call</td>
<td>976</td>
</tr>
<tr>
<td>20.3</td>
<td>salt</td>
<td>979</td>
</tr>
<tr>
<td>20.4</td>
<td>salt-cloud</td>
<td>982</td>
</tr>
<tr>
<td>20.5</td>
<td>salt-cp</td>
<td>982</td>
</tr>
<tr>
<td>20.6</td>
<td>salt-extend</td>
<td>985</td>
</tr>
<tr>
<td>20.7</td>
<td>salt-key</td>
<td>986</td>
</tr>
<tr>
<td>20.8</td>
<td>salt-master</td>
<td>989</td>
</tr>
<tr>
<td>20.9</td>
<td>salt-minion</td>
<td>990</td>
</tr>
<tr>
<td>20.10</td>
<td>salt-proxy</td>
<td>991</td>
</tr>
<tr>
<td>20.11</td>
<td>salt-run</td>
<td>993</td>
</tr>
<tr>
<td>20.12</td>
<td>salt-ssh</td>
<td>994</td>
</tr>
<tr>
<td>20.13</td>
<td>salt-syndic</td>
<td>998</td>
</tr>
<tr>
<td>20.14</td>
<td>salt-unity</td>
<td>999</td>
</tr>
<tr>
<td>20.15</td>
<td>spm</td>
<td>1000</td>
</tr>
<tr>
<td>21</td>
<td>Pillars</td>
<td>1003</td>
</tr>
<tr>
<td>22</td>
<td>Master Tops</td>
<td>1005</td>
</tr>
<tr>
<td>23</td>
<td>Salt Module Reference</td>
<td>1007</td>
</tr>
<tr>
<td>23.1</td>
<td>auth modules</td>
<td>1007</td>
</tr>
<tr>
<td>23.2</td>
<td>beacon modules</td>
<td>1007</td>
</tr>
<tr>
<td>23.3</td>
<td>cache modules</td>
<td>1008</td>
</tr>
<tr>
<td>23.4</td>
<td>cloud modules</td>
<td>1008</td>
</tr>
<tr>
<td>23.5</td>
<td>engine modules</td>
<td>1009</td>
</tr>
<tr>
<td>23.6</td>
<td>executors modules</td>
<td>1010</td>
</tr>
<tr>
<td>23.7</td>
<td>fileserver modules</td>
<td>1011</td>
</tr>
<tr>
<td>23.8</td>
<td>grains modules</td>
<td>1011</td>
</tr>
<tr>
<td>23.9</td>
<td>execution modules</td>
<td>1012</td>
</tr>
<tr>
<td>23.10</td>
<td>netapi modules</td>
<td>1294</td>
</tr>
<tr>
<td>23.11</td>
<td>output modules</td>
<td>1294</td>
</tr>
<tr>
<td>23.12</td>
<td>pillar modules</td>
<td>1294</td>
</tr>
<tr>
<td>23.13</td>
<td>proxy modules</td>
<td>1295</td>
</tr>
<tr>
<td>23.14</td>
<td>queue modules</td>
<td>1308</td>
</tr>
<tr>
<td>23.15</td>
<td>roster modules</td>
<td>1309</td>
</tr>
<tr>
<td>23.16</td>
<td>runner modules</td>
<td>1309</td>
</tr>
<tr>
<td>23.17</td>
<td>sdb modules</td>
<td>1315</td>
</tr>
</tbody>
</table>
Salt is the world’s fastest, most intelligent and scalable automation engine.
1.1 About Salt

Built on python, Salt uses simple and human-readable YAML combined with event-driven automation to deploy and configure complex IT systems. In addition to leveling-up vRealize Automation SaltStack Config, Salt can be found under the hood of products from Juniper, Cisco, Cloudflare, Nutanix, SUSE, and Tieto, to name a few.

1.2 About SaltStack

SaltStack was acquired by VMware in 2020. Salt Project remains an open source ecosystem that VMware supports and contributes to.

1.3 Download Salt

Salt is tested and packaged to run on CentOS, Debian, RHEL, Ubuntu, MacOS, Windows, and more. Download Salt and get started now.

- https://repo.saltproject.io/
- Installation Instructions

1.4 Salt Project Documentation

Installation instructions, getting started guides, in-depth API documentation, and contributing to Salt.

- Getting Started with Salt
- Latest Salt Documentation
- Salt’s Contributor Guide

1.5 Security Advisories

Keep an eye on the Salt Project Security Announcements landing page. Salt Project recommends subscribing to the Salt Project Security RSS feed to receive notification when new information is available regarding security announcements.

Other channels to receive security announcements include the Salt Community mailing list and the Salt Community Slack Channel.

1.5.1 Responsibly Reporting Security Vulnerabilities

When reporting security vulnerabilities for Salt or other SaltStack projects, refer to the SECURITY.md file found in this repository.
1.6 Engage the Salt Project and The Community

Please be sure to review our Code of Conduct. Also, check out some of our community resources including:

- Salt Project Community Wiki
- Salt Project Community Slack
- Salt Project: IRC on Freenode
- Salt Project YouTube channel
- Salt Project Twitch channel

There are lots of ways to get involved in our community. Every month, there are around a dozen opportunities to meet with other contributors and the Salt Core team and collaborate in real time. The best way to keep track is by subscribing to the Salt Project Community Events Calendar on the main https://saltproject.io website.

If you have additional questions, email us at core@saltstack.com or reach out directly to the Community Manager, Janae Andrus via Slack. We’d be glad to have you join our community!

1.7 License

Salt is licensed under the Apache 2.0 license. Please see the LICENSE file for the full text of the Apache license, followed by a full summary of the licensing used by external modules.

A complete list of attributions and dependencies can be found here: salt/DEPENDENCIES.md
INTRODUCTION TO SALT

We’re not just talking about NaCl.

2.1 The 30 second summary

Salt is:

- A configuration management system. Salt is capable of maintaining remote nodes in defined states. For example, it can ensure that specific packages are installed and that specific services are running.
- A distributed remote execution system used to execute commands and query data on remote nodes. Salt can query and execute commands either on individual nodes or by using an arbitrary selection criteria.

It was developed in order to bring the best solutions found in the world of remote execution together and make them better, faster, and more malleable. Salt accomplishes this through its ability to handle large loads of information, and not just dozens but hundreds and even thousands of individual servers quickly through a simple and manageable interface.

2.2 Simplicity

Providing versatility between massive scale deployments and smaller systems may seem daunting, but Salt is very simple to set up and maintain, regardless of the size of the project. The architecture of Salt is designed to work with any number of servers, from a handful of local network systems to international deployments across different data centers. The topology is a simple server/client model with the needed functionality built into a single set of daemons. While the default configuration will work with little to no modification, Salt can be fine tuned to meet specific needs.

2.3 Parallel execution

The core functions of Salt:

- enable commands to remote systems to be called in parallel rather than serially
- use a secure and encrypted protocol
- use the smallest and fastest network payloads possible
- provide a simple programming interface

Salt also introduces more granular controls to the realm of remote execution, allowing systems to be targeted not just by hostname, but also by system properties.
2.4 Builds on proven technology

Salt takes advantage of a number of technologies and techniques. The networking layer is built with the excellent ZeroMQ networking library, so the Salt daemon includes a viable and transparent AMQ broker. Salt uses public keys for authentication with the master daemon, then uses faster AES encryption for payload communication; authentication and encryption are integral to Salt. Salt takes advantage of communication via msgpack, enabling fast and light network traffic.

2.5 Python client interface

In order to allow for simple expansion, Salt execution routines can be written as plain Python modules. The data collected from Salt executions can be sent back to the master server, or to any arbitrary program. Salt can be called from a simple Python API, or from the command line, so that Salt can be used to execute one-off commands as well as operate as an integral part of a larger application.

2.6 Fast, flexible, scalable

The result is a system that can execute commands at high speed on target server groups ranging from one to very many servers. Salt is very fast, easy to set up, amazingly malleable and provides a single remote execution architecture that can manage the diverse requirements of any number of servers. The Salt infrastructure brings together the best of the remote execution world, amplifies its capabilities and expands its range, resulting in a system that is as versatile as it is practical, suitable for any network.

2.7 Open

Salt is developed under the Apache 2.0 license, and can be used for open and proprietary projects. Please submit your expansions back to the Salt project so that we can all benefit together as Salt grows. Please feel free to sprinkle Salt around your systems and let the deliciousness come forth.

2.8 Salt Community

Join the Salt!

There are many ways to participate in and communicate with the Salt community.

Salt has an active IRC channel and a mailing list.
2.9 Mailing List

Join the salt-users mailing list. It is the best place to ask questions about Salt and see what's going on with Salt development! The Salt mailing list is hosted by Google Groups. It is open to new members.

Additionally, all users of Salt should be subscribed to the Announcements mailing list which contains important updates about Salt, such as new releases and security-related announcements. This list is low-traffic.

2.10 IRC

The #salt IRC channel is hosted on the popular Freenode network. You can use the Freenode webchat client right from your browser. Logs of the IRC channel activity are also available.

If you wish to discuss the development of Salt itself join us in #salt-devel.

2.11 Follow on Github

The Salt code is developed via Github. Follow Salt for constant updates on what is happening in Salt development:
https://github.com/saltstack/salt

Long-term planning and strategic decisions are handled via Salt Enhancement Proposals and can be found on GitHub.

2.12 Blogs

SaltStack Inc. keeps a blog with recent news and advancements:
http://www.saltstack.com/blog/

2.13 Example Salt States

The official salt-states repository is: https://github.com/SS-archive/salt-states

A few examples of salt states from the community:

- https://github.com/blast-hardcheese/blast-salt-states
- https://github.com/kevingranade/kevingranade-salt-state
- https://github.com/uggedal/states
- https://github.com/mattmclean/salt-openstack/tree/master/salt
- https://github.com/rentalita/ubuntu-setup/
- https://github.com/brutasse/states
- https://github.com/bclermont/states
- https://github.com/pcrews/salt-data
2.14 Follow on Open Hub

https://www.openhub.net/p/salt

2.15 Other community links

- Salt Stack Inc.
- Subreddit
- YouTube
- Facebook
- Twitter
- Wikipedia page
- Stack Overflow

2.16 Hack the Source

If you want to get involved with the development of source code or the documentation efforts, please review the contributing documentation!
3.1 Overview

This page provides a high-level overview of the Salt system architecture and its different components.

3.2 What is Salt?

Salt is a Python-based open-source remote execution framework used for:

- Configuration management
- Automation
- Provisioning
- Orchestration

3.3 The Salt system architecture

The following diagram shows the primary components of the basic Salt architecture:
The following sections describe some of the core components of the Salt architecture.

### 3.3.1 Salt Masters and Salt Minions

Salt uses the master-client model in which a master issues commands to a client and the client executes the command. In the Salt ecosystem, the Salt Master is a server that is running the `salt-master` service. It issues commands to one or more Salt Minions, which are servers that are running the `salt-minion` service and that are registered with that particular Salt Master.

Another way to describe Salt is as a publisher-subscriber model. The master publishes jobs that need to be executed and Salt Minions subscribe to those jobs. When a specific job applies to that minion, it will execute the job.

When a minion finishes executing a job, it sends job return data back to the master. Salt has two ports used by default for the minions to communicate with their master(s). These ports work in concert to receive and deliver data to the Message Bus. Salt’s message bus is ZeroMQ, which creates an asynchronous network topology to provide the fastest communication possible.
3.3.2 Targets and grains

The master indicates which minions should execute the job by defining a target. A target is the group of minions, across one or many masters, that a job's Salt command applies to.

Note: A master can also be managed like a minion and can be a target if it is running the salt-minion service.

The following is an example of one of the many kinds of commands that a master might issue to a minion. This command indicates that all minions should install the Vim application:

```
salt -v '* pkg.install vim
```

In this case the glob '* is the target, which indicates that all minions should execute this command. Many other targeting options are available, including targeting a specific minion by its ID or targeting minions by their shared traits or characteristics (called grains in Salt).

Salt comes with an interface to derive information about the underlying system. This is called the grains interface, because it presents Salt with grains of information. Grains are collected for the operating system, domain name, IP address, kernel, OS type, memory, and many other system properties. You can also create your own custom grain data.

Grain data is relatively static. However, grain data is refreshed when system information changes (such as network settings) or when a new value is assigned to a custom grain.

3.3.3 Open event system (event bus)

The event system is used for inter-process communication between the Salt Master and Salt Minions. In the event system:

- Events are seen by both the master and minions.
- Events can be monitored and evaluated by both.

The event bus lays the groundwork for orchestration and real-time monitoring.

All minions see jobs and results by subscribing to events published on the event system. Salt uses a pluggable event system with two layers:

- ZeroMQ (0MQ) - The current default socket-level library providing a flexible transport layer.
- Tornado - Full TCP-based transport layer event system.

One of the greatest strengths of Salt is the speed of execution. The event system’s communication bus is more efficient than running a higher-level web service (http). The remote execution system is the component that all components are built upon, allowing for decentralized remote execution to spread load across resources.

3.3.4 Salt states

In addition to remote execution, Salt provides another method for configuring minions by declaring which state a minion should be in, otherwise referred to as Salt states. Salt states make configuration management possible. You can use Salt states to deploy and manage infrastructure with simple YAML files. Using states, you can automate recursive and predictable tasks by queueing jobs for Salt to implement without needing user input. You can also add more complex conditional logic to state files with Jinja.

To illustrate the subtle differences between remote execution and configuration management, take the command referenced in the previous section about Targets and grains in which Salt installed the application Vim on all minions:
Remote execution
- Run `salt -v '*' pkg. install vim` from the terminal
- Remotely installs Vim on the targeted minions

Configuration management
- Write a YAML state file that checks whether Vim is installed
- This state file is then applied to the targeted minions
- Ensures that Vim is always installed on the targeted minions
- Salt analyzes the state file and determines what actions need to be taken to ensure the minion complies with the state declarations
- If Vim is not installed, it automates the processes to install Vim on the targeted minions

<table>
<thead>
<tr>
<th>Methodology</th>
<th>Implementation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote execution</td>
<td>Run <code>salt -v '*' pkg. install vim</code> from the terminal</td>
<td>Remotely installs Vim on the targeted minions</td>
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<tr>
<td>Configuration management</td>
<td>Write a YAML state file that checks whether Vim is installed</td>
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</tr>
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<tr>
<td></td>
<td></td>
<td>If Vim is not installed, it automates the processes to install Vim on the targeted minions</td>
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The state file that verifies Vim is installed might look like the following example:

```
# File:/srv/salt/vim_install.sls
install_vim_now:
  pkg.installed:
    - pkgs:
      - vim
```

To apply this state to a minion, you would use the `state.apply` module, such as in the following example:

```
salt '*' state.apply vim_install
```

This command applies the `vim_install` state to all minions.

Formulas are collections of states that work in harmony to configure a minion or application. For example, one state might trigger another state.

### 3.3.5 The Top file

It is not practical to manually run each state individually targeting specific minions each time. Some environments have hundreds of state files targeting thousands of minions.

Salt offers two features to help with this scaling problem:

- **The top.sls file** - Maps Salt states to their applicable minions.
- **Highstate execution** - Runs all Salt states outlined in `top.sls` in a single execution.

The top file maps which states should be applied to different minions in certain environments. The following is an example of a simple top file:

```
# File: /srv/salt/top.sls

base:
  '*':
    - all_server_setup

'01webserver':
  - web_server_setup
```
In this example, base refers to the Salt environment, which is the default. You can specify more than one environment as needed, such as prod, dev, QA, etc.

Groups of minions are specified under the environment, and states are listed for each set of minions. This top file indicates that a state called all_server_setup should be applied to all minions '*' and the state called web_server_setup should be applied to the 01webserver minion.

To run the Salt command, you would use the state.highstate function:

```
salt * state.highstate
```

This command applies the top file to the targeted minions.

### 3.3.6 Salt pillar

Salt’s pillar feature takes data defined on the Salt Master and distributes it to minions as needed. Pillar is primarily used to store secrets or other highly sensitive data, such as account credentials, cryptographic keys, or passwords. Pillar is also useful for storing non-secret data that you don’t want to place directly in your state files, such as configuration data.

Salt pillar brings data into the cluster from the opposite direction as grains. While grains are data generated from the minion, the pillar is data generated from the master.

Pillars are organized similarly to states in a Pillar state tree, where `top.sls` acts to coordinate pillar data to environments and minions privy to the data. Information transferred using pillar has a dictionary generated for the targeted minion and encrypted with that minion’s key for secure data transfer. Pillar data is encrypted on a per-minion basis, which makes it useful for storing sensitive data specific to a particular minion.

### 3.3.7 Beacons and reactors

The beacon system is a monitoring tool that can listen for a variety of system processes on Salt Minions. Beacons can trigger reactors which can then help implement a change or troubleshoot an issue. For example, if a service’s response times out, the reactor system can restart the service.

Beacons are used for a variety of purposes, including:

- Automated reporting
- Error log delivery
- Microservice monitoring
- User shell activity
- Resource monitoring

When coupled with reactors, beacons can create automated pre-written responses to infrastructure and application issues. Reactors expand Salt with automated responses using pre-written remediation states.

Reactors can be applied in a variety of scenarios:

- Infrastructure scaling
- Notifying administrators
- Restarting failed applications
- Automatic rollback

When both beacons and reactors are used together, you can create unique states customized to your specific needs.
3.3.8 Salt runners and orchestration

Salt runners are convenience applications executed with the `salt-run` command. Salt runners work similarly to Salt execution modules. However, they execute on the Salt Master instead of the Salt Minions. A Salt runner can be a simple client call or a complex application.

Salt provides the ability to orchestrate system administrative tasks throughout the enterprise. Orchestration makes it possible to coordinate the activities of multiple machines from a central place. It has the added advantage of being able to control the sequence of when certain configuration events occur. Orchestration states execute on the master using the state runner module.
This section contains instructions to install Salt. If you are setting up your environment for the first time, you should install a Salt master on a dedicated management server or VM, and then install a Salt minion on each system that you want to manage using Salt. For now you don’t need to worry about your architecture, you can easily add components and modify your configuration later without needing to reinstall anything.

The general installation process is as follows:

1. Install a Salt master using the instructions for your platform or by running the Salt bootstrap script. If you use the bootstrap script, be sure to include the ~M option to install the Salt master.

2. Make sure that your Salt minions can find the Salt master.

3. Install the Salt minion on each system that you want to manage.

4. Accept the Salt minion keys after the Salt minion connects.

After this, you should be able to run a simple command and receive salt version returns from all connected Salt minions.

```
salt '*' test.version
```

### 4.1 Quick Install

On most distributions, you can set up a Salt Minion with the Salt bootstrap.

### 4.2 Platform-specific Installation Instructions

These guides go into detail how to install Salt on a given platform.

#### 4.2.1 Arch Linux

**Installation**

Salt (stable) is currently available via the Arch Linux Official repositories. There are currently -git packages available in the Arch User repositories (AUR) as well.
Stable Release

Install Salt stable releases from the Arch Linux Official repositories as follows:

```
pacman -S salt
```

Tracking develop

To install the bleeding edge version of Salt (may include bugs!), use the -git package. Installing the -git package as follows:

```
wget https://aur.archlinux.org/packages/sa/salt-git/salt-git.tar.gz
tar xf salt-git.tar.gz
cd salt-git/
makepkg -is
```

**Note:** yaourt

If a tool such as Yaourt is used, the dependencies will be gathered and built automatically.

The command to install salt using the yaourt tool is:

```
yaourt salt-git
```

Post-installation tasks

**systemd**

Activate the Salt Master and/or Minion via systemctl as follows:

```
systemctl enable salt-master.service
systemctl enable salt-minion.service
```

Start the Master

Once you've completed all of these steps you're ready to start your Salt Master. You should be able to start your Salt Master now using the command seen here:

```
systemctl start salt-master
```

Now go to the Configuring Salt page.

### 4.2.2 Debian GNU/Linux / Raspbian

Debian GNU/Linux distribution and some derivatives such as Raspbian already have included Salt packages to their repositories. However, current stable Debian release contains old outdated Salt releases. It is recommended to use SaltStack repository for Debian as described below.

Installation from official Debian and Raspbian repositories is described [here](#).
Installation from the Official SaltStack Repository

Packages for Debian 10 (Buster) and Debian 9 (Stretch) are available in the Official SaltStack repository. Instructions are at https://repo.saltstack.com/#debian.

**Note:** Archived builds from unsupported branches:

- Archive 1
- Archive 2

If looking to use archives, the same directions from the Debian install directions can be used by replacing the URL paths with the appropriate archive location. The repository configuration endpoint also needs to be adjusted to point to the archives. Here is an example sed command:

```
# Salt repo configurations are found in the /etc/apt/sources.list.d/saltstack.list directory
sed -i 's/repo.saltstack.com/archive.repo.saltstack.com/g' /etc/apt/sources.list.d/saltstack.list
```

**Warning:** Regular security support for Debian 8 ended on June 30th 2018. As a result, 3000.3 and 2019.2.5 will be the last Salt releases for which Debian 8 packages are created. Debian 8 also reached LTS EOL on June 30 2020.

Regular security support for Debian 7 ended on April 25th 2016. As a result, 2016.3.1 and 2015.8.10 will be the last Salt releases for which Debian 7 packages are created. Debian 7 also reached LTS EOL on May 31 2018.

Installation from the Debian / Raspbian Official Repository

The Debian distributions contain mostly old Salt packages built by the Debian Salt Team. You can install Salt components directly from Debian but it is recommended to use the instructions above for the packages from the official Salt repository.

On Jessie there is an option to install Salt minion from Stretch with python-tornado dependency from jessie-backports repositories.

To install fresh release of Salt minion on Jessie:

1. Add jessie-backports and stretch repositories:

   **Debian:**
   
   ```
   echo 'deb http://httpredir.debian.org/debian jessie-backports main' >> /etc/apt/sources.list
   echo 'deb http://httpredir.debian.org/debian stretch main' >> /etc/apt/sources.list
   ```

   **Raspbian:**
   
   ```
   echo 'deb http://archive.raspbian.org/raspbian/ stretch main' >> /etc/apt/sources.list
   ```

2. Make Jessie a default release:
3. Install Salt dependencies:

**Debian:**

```bash
apt-get update
apt-get install python-zmq python-systemd/jessie-backports python-tornado/jessie-backports salt-common/stretch
```

**Raspbian:**

```bash
apt-get update
apt-get install python-zmq python-tornado/stretch salt-common/stretch
```

4. Install Salt minion package from Latest Debian Release:

```bash
apt-get install salt-minion/stretch
```

### Install Packages

Install the Salt master, minion or other packages from the repository with the `apt-get` command. These examples each install one of Salt components, but more than one package name may be given at a time:

- `apt-get install salt-api`
- `apt-get install salt-cloud`
- `apt-get install salt-master`
- `apt-get install salt-minion`
- `apt-get install salt-ssh`
- `apt-get install salt-syndic`

### Post-installation tasks

Now, go to the [Configuring Salt](#) page.

#### 4.2.3 Arista EOS Salt minion installation guide

The Salt minion for Arista EOS is distributed as a SWIX extension and can be installed directly on the switch. The EOS network operating system is based on old Fedora distributions and the installation of the `salt-minion` requires backports. This SWIX extension contains the necessary backports, together with the Salt basecode.

**Note:** This SWIX extension has been tested on Arista DCS-7280SE-68-R, running EOS 4.17.5M and vEOS 4.18.3F.
**Important Notes**

This package is in beta, make sure to test it carefully before running it in production.
If confirmed working correctly, please report and add a note on this page with the platform model and EOS version.
If you want to uninstall this package, please refer to the *uninstalling* section.

**Installation from the Official SaltStack Repository**

Download the swix package and save it to flash.

```
veos#copy https://salt-eos.netops.life/salt-eos-latest.swix flash:
veos#copy https://salt-eos.netops.life/startup.sh flash:
```

**Install the Extension**

Copy the Salt package to extension

```
veos#copy flash:salt-eos-latest.swix extension:
```

Install the SWIX

```
veos#extension salt-eos-latest.swix force
```

Verify the installation

```
veos#show extensions | include salt-eos
  salt-eos-2017-07-19.swix 1.0.11/1.fc25 A, F 27
```

Change the Salt master IP address or FQDN, by edit the variable (SALT_MASTER)

```
veos#bash vi /mnt/flash/startup.sh
```

Make sure you enable the eAPI with unix-socket

```
veos(config)#management api http-commands
  protocol unix-socket
  no shutdown
```

**Post-installation tasks**

Generate Keys and host record and start Salt minion

```
veos#bash
  #sudo /mnt/flash/startup.sh
```

`salt-minion` should be running

Copy the installed extensions to boot-extensions

```
veos#copy installed-extensions boot-extensions
```

Apply event-handler to let EOS start salt-minion during boot-up

---

**4.2. Platform-specific Installation Instructions**


```bash
veos(config)#event-handler boot-up-script
   trigger on-boot
   action bash sudo /mnt/flash/startup.sh
```

For more specific installation details of the `salt-minion`, please refer to *Configuring Salt*.

**Uninstalling**

If you decide to uninstall this package, the following steps are recommended for safety:

1. Remove the extension from boot-extensions

   ```bash
   veos#bash rm /mnt/flash/boot-extensions
   ```

2. Remove the extension from extensions folder

   ```bash
   veos#bash rm /mnt/flash/./extensions/salt-eos-latest.swix
   ```

2. Remove boot-up script

   ```bash
   veos(config)#no event-handler boot-up-script
   ```

**Additional Information**

This SWIX extension contains the following RPM packages:

```makefile
libsodium-1.0.11-1.fc25.i686.rpm
libstdc++-6.2.1-2.fc25.i686.rpm
openssl-5.2.122-6.fc24.i686.rpm
python-3injja2-2.8-0.i686.rpm
python-PyYAML-3.12-0.i686.rpm
python-babel-0.9.6-5.fc18.noarch.rpm
python-backports-1.8-3.fc18.i686.rpm
python-backports-ssl_match_hostname-3.4.0.2-1.fc18.noarch.rpm
python-backports-abc-0.5-0.i686.rpm
python-certifi-2016.9.26-0.i686.rpm
python-chardet-2.0.1-5.fc18.noarch.rpm
python-crypto-1.4.1-1.noarch.rpm
python-crypto-2.6.1-1.fc18.i686.rpm
python-futures-3.1.1-1.noarch.rpm
python-jtextfsm-0.3.1-0.noarch.rpm
python-kitchen-1.1.1-2.fc18.noarch.rpm
python-markupsafe-0.18-1.fc18.i686.rpm
python-msgpack-python-0.4.8-0.i686.rpm
python-napalm-base-0.24.3-1.noarch.rpm
python-napalm-eos-0.6.0-1.noarch.rpm
python-netaddr-0.7.18-0.noarch.rpm
python-pyeapi-0.7.0-0.noarch.rpm
python-six-1.10.0-0.i686.rpm
python-tornado-4.4.2-0.i686.rpm
python-urllib3-1.5-7.fc18.noarch.rpm
python2-zmq-15.3.0-2.fc25.i686.rpm
zeromq-4.1.4-5.fc25.i686.rpm
```
4.2.4 Fedora

Beginning with version 0.9.4, Salt has been available in the primary Fedora repositories and EPEL. It is installable using `yum` or `dnf`, depending on your version of Fedora.

**Note:** Released versions of Salt starting with 2015.5.2 through 2016.3.2 do not have Fedora packages available though EPEL. To install a version of Salt within this release array, please use SaltStack’s Bootstrap Script and use the git method of installing Salt using the version’s associated release tag.

Release 2016.3.3 and onward will have packaged versions available via EPEL.

**WARNING:** Fedora 19 comes with systemd 204. Systemd has known bugs fixed in later revisions that prevent the salt-master from starting reliably or opening the network connections that it needs to. It's not likely that a salt-master will start or run reliably on any distribution that uses systemd version 204 or earlier. Running salt-minions should be OK.

**Installation**

Salt can be installed using `yum` and is available in the standard Fedora repositories.

**Stable Release**

Salt is packaged separately for the minion and the master. It is necessary only to install the appropriate package for the role the machine will play. Typically, there will be one master and multiple minions.

```bash
yum install salt-master
yum install salt-minion
```

**Installing from updates-testing**

When a new Salt release is packaged, it is first admitted into the `updates-testing` repository, before being moved to the stable repo.

To install from `updates-testing`, use the `enablerepo` argument for `yum`:

```bash
yum --enablerepo=updates-testing install salt-master
yum --enablerepo=updates-testing install salt-minion
```

**Installation Using pip**

Since Salt is on PyPI, it can be installed using pip, though most users prefer to install using a package manager. Installing from pip has a few additional requirements:

- Install the group ‘Development Tools’, `dnf groupinstall 'Development Tools'
- Install the ‘zeromq-devel’ package if it fails on linking against that afterwards as well.

A pip install does not make the init scripts or the `/etc/salt` directory, and you will need to provide your own systemd service unit.

Installation from pip:
pip install salt

**Warning:** If installing from pip (or from source using `setup.py install`), be advised that the `yum-utils` package is needed for Salt to manage packages. Also, if the Python dependencies are not already installed, then you will need additional libraries/tools installed to build some of them. More information on this can be found [here](#).

### Post-installation tasks

**Master**

To have the Master start automatically at boot time:

```bash
systemctl enable salt-master.service
```

To start the Master:

```bash
systemctl start salt-master.service
```

**Minion**

To have the Minion start automatically at boot time:

```bash
systemctl enable salt-minion.service
```

To start the Minion:

```bash
systemctl start salt-minion.service
```

Now go to the *Configuring Salt* page.

### 4.2.5 FreeBSD

**Installation**

Salt is available in the FreeBSD ports tree at `sysutils/py-salt`.

**FreeBSD binary repo**

Install Salt on FreeBSD via the official package repository. Salt is packaged both as a Python 2.7 or 3.7 version.

For Python 2.7 use:

```bash
pkg install py27-salt
```

For Python 3.7 use:

```bash
pkg install py37-salt
```
FreeBSD ports

Installation from ports:

```
cd /usr/ports/sysutils/py-salt
make install
```

Python 3.7 can be used by setting default Python version to 3.7:

```
echo "DEFAULT_VERSIONS+= python=3.7" >> /etc/make.conf
```

Post-installation tasks

```
rc.conf
```

Activate the Salt Master in `/etc/rc.conf`:

```
sysrc salt_master_enable="YES"
```

Start the Master

Start the Salt Master as follows:

```
service salt_master start
```

```
rc.conf
```

Activate the Salt Minion in `etc/rc.conf`:

```
sysrc salt_minion_enable="YES"
```

Start the Minion

Start the Salt Minion as follows:

```
service salt_minion start
```

Now go to the Configuring Salt page.

4.2.6 Gentoo

Salt can be easily installed on Gentoo via Portage:

```
emerge app-admin/salt
```

Post-installation tasks

Now go to the Configuring Salt page.
4.2.7 Cisco Nexus Salt Minion Installation and Configuration Guide

This document describes the Salt Minion installation and configuration on Cisco Nexus switches. These instructions detail the process for managing the Nexus switches using a Proxy Minion or Native Minion on platforms that have GuestShell support.

Table of Contents

- Cisco Nexus Salt Minion Installation and Configuration Guide
  - Pre-Install Tasks
    * STEP 1: Verify Platform and Software Version Support
    * STEP 2: Choose Salt Minion Type
    * STEP 3: Network Connectivity
  - Salt Proxy Minion Configuration
    * Proxy Minion Pillar Data
  - GuestShell Salt Minion Installation
    * STEP 1a: Enable the Guestshell on low footprint N3ks
    * STEP 1b: Enable the Guestshell
    * STEP 2: Set Up Guestshell Network
    * STEP 3: Install SaltStack Minion
    * STEP 4: Configure SaltStack Minion
      - GuestShell Salt Minion Persistence
  - References

Pre-Install Tasks

STEP 1: Verify Platform and Software Version Support

The following platforms and software versions have been certified to work with this version of Salt.

<table>
<thead>
<tr>
<th>Supported Platforms</th>
<th>Minimum NX-OS Version</th>
<th>SSH Proxy Minion</th>
<th>Proxy Minion</th>
<th>GuestShell Minion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisco Nexus N3k</td>
<td>7.0(3)I2(5) and later</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>Cisco Nexus N9k</td>
<td>7.0(3)I2(5) and later</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>Cisco Nexus N6k</td>
<td>7.3(0)N1(1) and later</td>
<td>Supported</td>
<td>Not Supported</td>
<td>Not Supported</td>
</tr>
<tr>
<td>Cisco Nexus N7k</td>
<td>7.3(0)D1(1) and later</td>
<td>Supported</td>
<td>Supported</td>
<td>Not Supported</td>
</tr>
</tbody>
</table>
Table 2: Platform Models

<table>
<thead>
<tr>
<th>Platform</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N3k</td>
<td>Support includes N30xx, N31xx, N32xx and N35xx models</td>
</tr>
<tr>
<td>N6k</td>
<td>Support includes all N6xxx models</td>
</tr>
<tr>
<td>N7k</td>
<td>Support includes all N7xxx models</td>
</tr>
<tr>
<td>N9k</td>
<td>Support includes all N9xxx models</td>
</tr>
</tbody>
</table>

**STEP 2: Choose Salt Minion Type**

Using the tables above, select the Salt Minion type.

**Choices:**

- **SSH Proxy Minion** (See *Salt Proxy Minion Configuration* Section)
- **NX-API Proxy Minion** (See *Salt Proxy Minion Configuration* Section)
- **GuestShell** Native Minion (See *GuestShell Salt Minion Installation* Section)
  - Some platforms support a native minion installed directly on the NX-OS device inside the GuestShell
  - The GuestShell is a secure Linux container environment running CentOS

**STEP 3: Network Connectivity**

Ensure that IP reachability exists between the NX-OS Salt Minion device and the SaltStack Master.

**Note:** The management interface exists in a separate VRF context and requires additional configuration as shown.

**Example:** Nexus CLI Configuration for connectivity via management interface

```bash
config term
  vrf context management
    ip name-server 10.0.0.202
    ip domain-name mycompany.com
    ip route 0.0.0.0/0 10.0.0.1

  interface mgmt0
    vrf member management
    ip address 10.0.0.99/24

  ntp server 10.0.0.201 use-vrf management
end
```
Salt Proxy Minion Configuration

Here is a sample Proxy Minion directory structure

```
saltmaster:/srv/pillar$tree
. ├── n3k-proxy.sls
    ├── n7k-proxy.sls
    └── top.sls
```

This displays a top sls file and two proxy minion sls files for a Nexus 3k and Nexus 7k device.

Sample contents for the `top.sls` file.

```
saltmaster:/srv/pillar$cat top.sls
base:
    n3k-proxy:
        - n3k-proxy
    n7k-proxy:
        - n7k-proxy
```

Proxy Minion Pillar Data

Here is a sample Proxy Minion pillar data file.

All of the data for both ssh and nxapi proxy minion types can be stored in the same pillar data file. To choose ssh or nxapi, simply set the `connection:` parameter accordingly.

```
saltmaster:/srv/pillar$cat n7k-proxy.sls
proxy:
    proxytype: nxos
    # Specify ssh or nxapi connection type (default is ssh)
    #connection: ssh
    connection: nxapi

    # Parameters Common to both SSH and NX-API
    host: n7k.example.com
    username: admin
    password: password

    # SSH Parameters
    prompt_name: n7k
    ssh_args: '-o PubkeyAuthentication=no'
    key_accept: True

    # NX-API Parameters
    transport: https
    port: 443
    verify: False

    # Option to prevent auto-save after each configuration command.
    # Setting this to True will improve performance when using
    # nxos execution module functions to configure the device.
    no_save_config: True
```

• For the most current nxos proxy minion configuration options, See `salt.proxy.nxos`
• For the most current list of nxos execution module functions, See salt.modules.nxos

**GuestShell Salt Minion Installation**

This section is only required when running the SaltStack Minion from the guestshell.

**STEP 1a: Enable the Guestshell on low footprint N3ks**

**NOTE:** Skip down to **STEP 1b** if the target system is not a low footprint N3k.

Nexus 3xxx switches with 4 GB RAM and 1.6 GB bootflash are advised to use compacted images to reduce the storage resources consumed by the image. As part of the compaction process, the `guestshell.ova` is removed from the system image. To make use of the guestshell on these systems, the `guestshell.ova` may be downloaded and used to install the guestshell.

**Guestshell OVA Download** [Link](#)

Starting in release 9.2(1) and onward, the `.ova` file can be copied to the `volatile:` directory which frees up more space on `bootflash:`.

Copy the `guestshell.ova` file to `volatile:` if supported, otherwise copy it to `bootflash:`:

```bash
n3xxx# copy scp://admin@1.2.3.4/guestshell.ova volatile: vrf management
guestshell.ova 100% 55MB 10.9MB/s 00:05
Copy complete, now saving to disk (please wait)...
Copy complete.
```

Use the `guestshell enable` command to install and enable guestshell.

```bash
n3xxx# guestshell enable package volatile:guestshell.ova
```

**STEP 1b: Enable the Guestshell**

The `guestshell` container environment is enabled by default on most platforms; however, the default disk and memory resources allotted to guestshell are typically too small to support SaltStack Minion requirements. The resource limits may be increased with the NX-OS CLI `guestshell resize` commands as shown below.

**Table 3: Resource Requirements**

<table>
<thead>
<tr>
<th>Resource</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disk</td>
<td>500 MB</td>
</tr>
<tr>
<td>Memory</td>
<td>350 MB</td>
</tr>
</tbody>
</table>

`show guestshell detail` displays the current resource limits:

```bash
n3k# show guestshell detail
Virtual service guestshell+ detail
  State : Activated
...
  Resource reservation
    Disk : 150 MB
    Memory : 128 MB
```

### 4.2. Platform-specific Installation Instructions
guestshell resize rootfs sets disk size limits while guestshell resize memory sets memory limits. The resize commands do not take effect until after the guestshell container is (re)started by guestshell reboot or guestshell enable.

Example. Allocate resources for guestshell by setting new limits to 500MB disk and 350MB memory.

```bash
n3k# guestshell resize rootfs 500
n3k# guestshell resize memory 350
n3k# guestshell reboot
Are you sure you want to reboot the guest shell? (y/n) [n] y
```

STEP 2: Set Up Guestshell Network

The guestshell is an independent CentOS container that does not inherit settings from NX-OS.

- Use guestshell to enter the guestshell environment, then become root.
- Optional: Use chvrf to specify a vrf namespace; e.g. `sudo chvrf management`

```bash
n3k# guestshell
[guestshell@guestshell ~]$ sudo su -
# Optional: sudo chvrf management

[root@guestshell guestshell]
```

OPTIONAL: Add DNS Configuration

```bash
[root@guestshell guestshell]# cat >> /etc/resolv.conf << EOF
nameserver 10.0.0.202
domain mycompany.com
EOF
```

OPTIONAL: Define proxy server variables if needed to allow network access to SaltStack package repositories

```bash
export http_proxy=http://proxy.yourdomain.com:<port>
export https_proxy=https://proxy.yourdomain.com:<port>
```

STEP 3: Install SaltStack Minion

OPTIONAL: Upgrade the pip installer

```bash
[root@guestshell guestshell]# pip install --upgrade pip
```

Install the certifi python package.

```bash
[root@guestshell guestshell]# pip install certifi
```

The most current information on installing the SaltStack Minion in a Centos7 environment can be found [here](#).

Information from the install guide is provided here for convenience.

Run the following commands to install the SaltStack repository and key:

```bash
[root@guestshell guestshell]# yum install https://repo.saltstack.com/yum/redhat/salt-repo-latest-2.el7.noarch.rpm
```

Run the following command to force yum to revalidate the cache for each repository.

```bash
[root@guestshell guestshell]# yum clean expire-cache
```
Install the Salt Minion.

```bash
[root@guestshell guestshell]# yum install salt-minion
```

**STEP 4: Configure SaltStack Minion**

Make the following changes to the `/etc/salt/minion` configuration file in the NX-OS GuestShell.

Change the `master:` directive to point to the SaltStack Master.

```plaintext
- #master: salt
+ master: saltmaster.example.com
```

Change the `id:` directive to easily identify the minion running in the GuestShell.

Example:

```plaintext
- #id: salt
+ id: n3k-guestshell-minion
```

Start the Minion in the Guestshell and accept the key on the SaltStack Master.

```bash
[root@guestshell ~]# systemctl start salt-minion
```

```
Saltmaster: salt-key -L
Accepted Keys:
Denied Keys:
Unaccepted Keys:
```

```
- n3k-guestshell-minion
```

```
Rejected Keys:
```

Saltmaster: salt-key -A

```text
The following keys are going to be accepted:
Unaccepted Keys:
```

```
n3k-guestshell-minion
```

Proceed? [n/Y] Y

Key for minion n3k-guestshell-minion accepted.

Ping the SaltStack Minion running in the GuestShell.

```bash
saltmaster: salt n3k-guestshell-minion nxos.ping
```

```bash
n3k-guestshell-minion:
```

```bash
True
```

**GuestShell Salt Minion Persistence**

This section documents SaltStack Minion persistence in the `guestshell` after system restarts and high availability switchovers.

The `guestshell` container does not automatically sync filesystem changes from the active processor to the standby processor. This means that SaltStack Minion installation files and related file changes will not be present on the standby until they are manually synced with the following NX-OS exec command:

```bash
guestshell sync
```

The `guestshell` environment uses `systemd` for service management. The SaltStack Minion provides a generic `systemd` script when installed, but a slight modification as shown below is needed for nodes that run Salt in the management (or other vrf) namespace:
--- /usr/lib/systemd/system/salt-minion.service.old
+++ /usr/lib/systemd/system/salt-minion.service

[Unit]
Description=The Salt Minion
After=network.target salt-master.service

[Service]
KillMode=process
Type=notify
NotifyAccess=all
LimitNOFILE=8192
- ExecStart=/usr/bin/salt-minion
+ ExecStart=/bin/nsenter --net=/var/run/netns/management -- /usr/bin/salt-minion

[Install]
WantedBy=multi-user.target

Change the `pidfile:` directive to point to the `/run tmpfs` location in the GuestShell.

- #pidfile: /var/run/salt-minion.pid
+ pidfile: /run/salt-minion.pid

Next, enable the SaltStack Minion systemd service (the `enable` command adds it to systemd for autostarting on the next boot) and optionally start it now:

```
systemctl enable salt-minion
systemctl start salt-minion
```

References

<table>
<thead>
<tr>
<th>References</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GuestShell_N9k</td>
<td>N9k Guestshell Programmability Guide</td>
</tr>
<tr>
<td>GuestShell_N3k</td>
<td>N3k Guestshell Programmability Guide</td>
</tr>
</tbody>
</table>

4.2.8 OpenBSD

Salt was added to the OpenBSD ports tree on Aug 10th 2013. It has been tested on OpenBSD 5.5 onwards.

Salt is dependent on the following additional ports. These will be installed as dependencies of the `sysutils/salt` port:

```
devel/py3-progressbar
net/py3-msgpack
net/py3-zmq
security/py3-Cryptodome
security/py3-M2Crypto
sysutils/py3-distro
textproc/py3-MarkupSafe
textproc/py3-yaml
```

(continues on next page)
Installation

To install Salt from the OpenBSD package repo, use the command:

```
pkg_add salt
```

Post-installation tasks

Master

To have the Master start automatically at boot time:

```
rcctl enable salt_master
```

To start the Master:

```
rcctl start salt_master
```

Minion

To have the Minion start automatically at boot time:

```
rcctl enable salt_minion
```

To start the Minion:

```
rcctl start salt_minion
```

Now go to the Configuring Salt page.

4.2.9 macOS

Installation from the Official SaltStack Repository

Latest stable build from the selected branch:

The output of `md5 <salt pkg>` should match the contents of the corresponding md5 file.

Note:
- Earlier builds from supported branches
- Archived builds from unsupported branches
Installation from Homebrew

```
brew install saltstack
```

It should be noted that Homebrew explicitly discourages the use of sudo:

Homebrew is designed to work without using sudo. You can decide to use it but we strongly recommend not to do so. If you have used sudo and run into a bug then it is likely to be the cause. Please don’t file a bug report unless you can reproduce it after reinstalling Homebrew from scratch without using sudo.

Installation from MacPorts

Macports isolates its dependencies from the OS, and installs salt in /opt/local by default, with config files under /opt/local/etc/salt. For best results, add /opt/local/bin to your PATH.

```
sudo port install salt
```

Variants allow selection of python version used to run salt, defaulting to python27, but also supporting python34, python35, and python36. To install salt with Python 3.6, use the python36 variant, for example:

```
sudo port install salt @python36
```

Startup items (for master, minion, and rest-cherrypy API gateway, respectively) are installed by subport targets. These will register launchd LaunchDaemons as org.macports.salt-minion, for example, to trigger automatic startup of the salt-minion through launchd. LaunchDaemons for salt can be started and stopped without reboot using the macports load and unload commands.

```
sudo port install salt-master salt-minion salt-api
sudo port load salt-master salt-minion salt-api
```

Installation from Pip

When only using the macOS system's pip, install this way:

```
sudo pip install salt
```

Salt-Master Customizations

**Note:** Salt master on macOS is not tested or supported by SaltStack. See [SaltStack Platform Support](#) for more information.

To run salt-master on macOS, sudo add this configuration option to the /etc/salt/master file:

```
max_open_files: 8192
```

On versions previous to macOS 10.10 (Yosemite), increase the root user maxfiles limit:

```
sudo launchctl limit maxfiles 4096 8192
```
Salt Documentation, Release 3002.5

Note: On macOS 10.10 (Yosemite) and higher, maxfiles should not be adjusted. The default limits are sufficient in all but the most extreme scenarios. Overriding these values with the setting below will cause system instability!

Now the salt-master should run without errors:

```
sudo salt-master --log-level=all
```

Post-installation tasks

Now go to the Configuring Salt page.

4.2.10 RHEL / CentOS / Scientific Linux / Amazon Linux / Oracle Linux

Salt should work properly with all mainstream derivatives of Red Hat Enterprise Linux, including CentOS, Scientific Linux, Oracle Linux, and Amazon Linux. Report any bugs or issues on the issue tracker.

Installation from the Official Salt Project Repository

Packages for Redhat, CentOS, and Amazon Linux are available in the Salt Project Repository.

- Red Hat / CentOS
- Amazon Linux

Note: Archived builds from unsupported branches:

Red Hat / CentOS

- Archive 1
- Archive 2

If looking to use archives, the same directions from the RHEL/CentOS install directions can be used by replacing the URL paths with the appropriate archive location. The repository configuration endpoint also needs to be adjusted to point to the archives. Here is an example `sed` command:

```
# Salt repo configurations are found in the /etc/yum.repos.d/ directory
sed -i 's/repo.saltproject.io/archive.repo.saltproject.io/g' /etc/yum.repos.d/salt*.repo
```

Amazon Linux

- Archive 1
- Archive 2

If looking to use archives, the same directions from the Amazon install directions can be used by replacing the URL paths with the appropriate archive location. The repository configuration endpoint also needs to be adjusted to point to the archives. Here is an example `sed` command:

```
# Salt repo configurations are found in the /etc/yum.repos.d/ directory
sed -i 's/repo.saltproject.io/archive.repo.saltproject.io/g' /etc/yum.repos.d/salt*.repo
```
Note: As of 2015.8.0, EPEL repository is no longer required for installing on RHEL systems. Salt Project repository provides all needed dependencies.

Warning: If installing on Red Hat Enterprise Linux 7 with disabled (not subscribed on) 'RHEL Server Releases' or 'RHEL Server Optional Channel' repositories, append CentOS 7 GPG key URL to Salt Project yum repository configuration to install required base packages:

```
[saltstack-repo]
name=Salt repo for Red Hat Enterprise Linux $releasever
enabled=1
gpgcheck=1
   SALTSTACK-GPG-KEY.pub
   https://repo.saltproject.io/py3/redhat/$releasever/$basearch/latest/base/RPM-
   GPG-KEY-CentOS-7
```

Note: systemd and systemd-python are required by Salt, but are not installed by the Red Hat 7 @base installation or by the Salt installation. These dependencies might need to be installed before Salt.

### Installation Using pip

Since Salt is on PyPI, it can be installed using pip, though most users prefer to install using RPM packages (which can be installed by following the directions in the Salt Repository).

Installing from pip has a few additional requirements:

- Install the group 'Development Tools', `yum groupinstall 'Development Tools'
- Install the 'zeromq-devel' package if it fails on linking against that afterwards as well.

A pip install does not make the init scripts or the `/etc/salt` directory, and you will need to provide your own systemd service unit.

Installation from pip:

```
pip install salt
```
ZeroMQ 4

We recommend using ZeroMQ 4 where available. Salt Project provides ZeroMQ 4.3.1 and pyzmq 17.0.0 in the Salt Repository.

If this repository is added before Salt is installed, then installing either salt-master or salt-minion will automatically pull in ZeroMQ 4.3.1, and additional steps to upgrade ZeroMQ and pyzmq are unnecessary.

Package Management

Salt's interface to yum makes heavy use of the repoquery utility, from the yum-utils package. If salt has been installed using pip, or a host is being managed using salt-ssh, then as of version 2014.7.0 yum-utils will be installed automatically to satisfy this dependency.

Post-installation tasks

Master

To have the Master start automatically at boot time:

RHEL/CentOS 7 and 8

```
systemctl enable salt-master.service
```

To start the Master:

RHEL/CentOS 7 and 8

```
systemctl start salt-master.service
```

Minion

To have the Minion start automatically at boot time:

RHEL/CentOS 7 and 8

```
systemctl enable salt-minion.service
```

To start the Minion:

RHEL/CentOS 7 and 8

```
systemctl start salt-minion.service
```

Now go to the Configuring Salt page.

4.2. Platform-specific Installation Instructions
4.2.11 Solaris

Salt is known to work on Solaris but community packages are unmaintained.

It is possible to install Salt on Solaris by using `setuptools`.

For example, to install the develop version of salt:

```
git clone https://github.com/saltstack/salt
cd salt
sudo python setup.py install --force
```

Note: SaltStack does offer commercial support for Solaris which includes packages. Packages can be found on the Downloads page of the Enterprise Installation Guide and are downloadable with a SaltStack Enterprise account.

4.2.12 Ubuntu

Installation from the Official SaltStack Repository

Packages for Ubuntu 20.04 (Focal), Ubuntu 18.04 (Bionic), and Ubuntu 16 (Xenial) are available in the SaltStack repository.

Instructions are at https://repo.saltstack.com/#ubuntu.

Note: Archived builds from unsupported branches:

- Archive 1
- Archive 2

If looking to use archives, the same directions from the Ubuntu install directions can be used by replacing the URL paths with the appropriate archive location. The repository configuration endpoint also needs to be adjusted to point to the archives. Here is an example `sed` command:

```
# Salt repo configurations are found in the /etc/apt/sources.list.d/saltstack.list directory
sed -i 's/repo.saltstack.com/archive.repo.saltstack.com/g' /etc/apt/sources.list.d/saltstack.list
```

Install Packages

Install the Salt master, minion or other packages from the repository with the `apt-get` command. These examples each install one of Salt components, but more than one package name may be given at a time:

- `apt-get install salt-api`
- `apt-get install salt-cloud`
- `apt-get install salt-master`
- `apt-get install salt-minion`
- `apt-get install salt-ssh`
- `apt-get install salt-syndic`
Post-installation tasks

Now go to the Configuring Salt page.

4.2.13 Windows

Salt has full support for running the Salt minion on Windows. You must connect Windows Salt minions to a Salt master on a supported operating system to control your Salt Minions.

Many of the standard Salt modules have been ported to work on Windows and many of the Salt States currently work on Windows as well.

Installation from the Official SaltStack Repository

Latest stable build from the selected branch:

The output of `md5sum <salt minion exe>` should match the contents of the corresponding md5 file.

There are installers available for Python 3. Starting with Salt 3001, only Python 3 builds of the Windows Salt Minion will be built. Python 2 builds exist for earlier Salt Minion versions.

Note:
- Earlier builds from supported branches
Archived builds from unsupported branches:
  - Archive 1
  - Archive 2

Note: The installation executable installs dependencies that the Salt minion requires.

The 64bit and 32bit installers have been tested on Windows 8.1, Windows Server 2012 R2, Windows 10, Windows Server 2016, and Windows Server 2019. 32bit installers have only been tested on 64bit systems. Please file a bug report on our GitHub repo if issues for other platforms are found.

The installer will detect previous installations of Salt and ask if you would like to remove them. Clicking OK will remove the Salt binaries and related files but leave any existing config, cache, and PKI information.

Salt Minion Installation

If the system is missing the appropriate version of the Visual C++ Redistributable (vcredist) the user will be prompted to install it. Click OK to install the vcredist. Click Cancel to abort the installation without making modifications to the system.

If Salt is already installed on the system the user will be prompted to remove the previous installation. Click OK to uninstall Salt without removing the configuration, PKI information, or cached files. Click Cancel to abort the installation before making any modifications to the system.

After the Welcome and the License Agreement, the installer asks for two bits of information to configure the minion; the master hostname and the minion name. The installer will update the minion config with these options.

If the installer finds an existing minion config file, these fields will be populated with values from the existing config, but they will be grayed out. There will also be a checkbox to use the existing config. If you continue, the existing...
config will be used. If the checkbox is unchecked, default values are displayed and can be changed. If you continue, the existing config file in c:\salt\conf will be removed along with the c:\salt\conf\minion.d directory. The values entered will be used with the default config.

The final page allows you to start the minion service and optionally change its startup type. By default, the minion is set to Automatic. You can change the minion start type to Automatic (Delayed Start) by checking the ‘Delayed Start’ checkbox.

---

**Note:** Highstates that require a reboot may fail after reboot because salt continues the highstate before Windows has finished the booting process. This can be fixed by changing the startup type to ‘Automatic (Delayed Start)’. The drawback is that it may increase the time it takes for the ‘salt-minion’ service to actually start.

---

The salt-minion service will appear in the Windows Service Manager and can be managed there or from the command line like any other Windows service.

```bash
sc start salt-minion
net start salt-minion
```

---

**Installation Prerequisites**

Most Salt functionality should work just fine right out of the box. A few Salt modules rely on PowerShell. The minimum version of PowerShell required for Salt is version 3. If you intend to work with DSC then Powershell version 5 is the minimum.

---

**Silent Installer Options**

The installer can be run silently by providing the /S option at the command line. The installer also accepts the following options for configuring the Salt Minion silently:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/master=</td>
<td>A string value to set the IP address or hostname of the master. Default value is ‘salt’. You can pass a single master or a comma-separated list of masters. Setting the master will cause the installer to use the default config or a custom config if defined.</td>
</tr>
<tr>
<td>/minion-name=</td>
<td>A string value to set the minion name. Default value is ‘hostname’. Setting the minion name causes the installer to use the default config or a custom config if defined.</td>
</tr>
<tr>
<td>/start-minion=</td>
<td>Either a 1 or 0. ’1’ will start the salt-minion service, ‘0’ will not. Default is to start the service after installation.</td>
</tr>
<tr>
<td>/start-minion-delayed</td>
<td>Set the minion start type to Automatic (Delayed Start).</td>
</tr>
<tr>
<td>/default-config</td>
<td>Overwrite the existing config if present with the default config for salt. Default is to use the existing config if present. If /master and/or /minion-name is passed, those values will be used to update the new default config.</td>
</tr>
<tr>
<td>/custom-config=</td>
<td>A string value specifying the name of a custom config file in the same path as the installer or the full path to a custom config file. If /master and/or /minion-name is passed, those values will be used to update the new custom config.</td>
</tr>
<tr>
<td>/S</td>
<td>Runs the installation silently. Uses the above settings or the defaults.</td>
</tr>
<tr>
<td>/?</td>
<td>Displays command line help.</td>
</tr>
</tbody>
</table>

---

**Note:** /start-service has been deprecated but will continue to function as expected for the time being.
Note: /default-config and /custom-config= will backup an existing config if found. A timestamp and a .bak extension will be added. That includes the minion file and the minion.d directory.

Here are some examples of using the silent installer:

```bash
# Install the Salt Minion
# Configure the minion and start the service
Salt-Minion-3001-Py3-AMD64-Setup.exe /S /master=yoursaltmaster /minion-...
```

```bash
# Install the Salt Minion
# Configure the minion but don't start the minion service
Salt-Minion-3001-Py3-AMD64-Setup.exe /S /master=yoursaltmaster /minion-...
```

```bash
# Install the Salt Minion
# Configure the minion using a custom config and configuring multimaster
Salt-Minion-3001-Py3-AMD64-Setup.exe /S /custom-config=windows_minion /master=prod_...
```

Running the Salt Minion on Windows as an Unprivileged User

Notes:

• These instructions were tested with Windows Server 2008 R2
• They are generalizable to any version of Windows that supports a salt-minion

Create the Unprivileged User that the Salt Minion will Run As

1. Click Start > Control Panel > User Accounts.
2. Click Add or remove user accounts.
3. Click Create new account.
4. Enter salt-user (or a name of your preference) in the New account name field.
5. Select the Standard user radio button.
6. Click the Create Account button.
7. Click on the newly created user account.
8. Click the Create a password link.
9. In the New password and Confirm new password fields, provide a password (e.g. "SuperSecretMinionPassword4Me!").
10. In the Type a password hint field, provide appropriate text (e.g. "My Salt Password").
11. Click the Create password button.
12. Close the Change an Account window.

4.2. Platform-specific Installation Instructions
Add the New User to the Access Control List for the Salt Folder

1. In a File Explorer window, browse to the path where Salt is installed (the default path is C:\Salt).
2. Right-click on the Salt folder and select Properties.
3. Click on the Security tab.
4. Click the Edit button.
5. Click the Add button.
6. Type the name of your designated Salt user and click the OK button.
7. Check the box to Allow the Modify permission.
8. Click the OK button.
9. Click the OK button to close the Salt Properties window.

Update the Windows Service User for the salt-minion Service

1. Click Start > Administrative Tools > Services.
2. In the Services list, right-click on salt-minion and select Properties.
3. Click the Log On tab.
4. Click the This account radio button.
5. Provide the account credentials created in section A.
6. Click the OK button.
7. Click the OK button to the prompt confirming that the user has been granted the Log On As A Service right.
8. Click the OK button to the prompt confirming that The new logon name will not take effect until you stop and restart the service.
9. Right-Click on salt-minion and select Stop.
10. Right-Click on salt-minion and select Start.

Building and Developing on Windows

This document will explain how to set up a development environment for Salt on Windows. The development environment allows you to work with the source code to customize or fix bugs. It will also allow you to build your own installation.

There are several scripts to automate creating a Windows installer as well as setting up an environment that facilitates developing and troubleshooting Salt code. They are located in the pkg\windows directory in the Salt repo (here).
Scripts:

<table>
<thead>
<tr>
<th>Script</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>build_env_2.ps1</td>
<td>A PowerShell script that sets up a Python 2 build environment</td>
</tr>
<tr>
<td>build_env_3.ps1</td>
<td>A PowerShell script that sets up a Python 3 build environment</td>
</tr>
<tr>
<td>build_pkg.bat</td>
<td>A batch file that builds a Windows installer based on the contents of the C:\Python27 directory</td>
</tr>
<tr>
<td>build.bat</td>
<td>A batch file that fully automates the building of the Windows installer using the above two scripts</td>
</tr>
</tbody>
</table>

**Note:** The build.bat and build_pkg.bat scripts both accept a parameter to specify the version of Salt that will be displayed in the Windows installer. If no version is passed, the version will be determined using git. Both scripts also accept an additional parameter to specify the version of Python to use. The default is 2.

**Prerequisite Software**

The only prerequisite is Git for Windows.

**Create a Build Environment**

1. **Working Directory**

Create a Salt-Dev directory on the root of C:. This will be our working directory. Navigate to Salt-Dev and clone the Salt repo from GitHub.

Open a command line and type:

```
cd \md Salt-Dev
cd Salt-Dev
git clone https://github.com/saltstack/salt
```

Go into the salt directory and checkout the version of salt to work with (2016.3 or higher).

```
cd salt
git checkout 2017.7.2
```
2. Setup the Python Environment

Navigate to the pkg\windows directory and execute the build_env.ps1 PowerShell script.

```
cd pkg\windows
powershell -file build_env_2.ps1
```

Note: You can also do this from Explorer by navigating to the pkg\windows directory, right clicking the build_env_2.ps1 powershell script and selecting Run with PowerShell.

This will download and install Python 2 with all the dependencies needed to develop and build Salt.

Note: If you get an error or the script fails to run you may need to change the execution policy. Open a powershell window and type the following command:

```
Set-ExecutionPolicy RemoteSigned
```

3. Salt in Editable Mode

Editable mode allows you to more easily modify and test the source code. For more information see the Pip documentation.

Navigate to the root of the salt directory and install Salt in editable mode with pip.

```
cd \Salt-Dev\salt
pip install -e .
```

Note: The . is important

Note: If pip is not recognized, you may need to restart your shell to get the updated path

Note: If pip is still not recognized make sure that the Python Scripts folder is in the System %PATH%. (C:\Python2\Scripts)

4. Setup Salt Configuration

Salt requires a minion configuration file and a few other directories. The default config file is named minion located in C:\salt\conf. The easiest way to set this up is to copy the contents of the salt\pkg\windows\buildenv directory to C:\salt.

```
cd \
md salt
xcopy /s /e \Salt-Dev\salt\pkg\windows\buildenv\* \salt\`
```
Now go into the `C:\salt\conf` directory and edit the minion config file named `minion` (no extension). You need to configure the master and id parameters in this file. Edit the following lines:

```
master: <ip or name of your master>
id: <name of your minion>
```

### Create a Windows Installer

To create a Windows installer, follow steps 1 and 2 from *Create a Build Environment* above. Then proceed to 3 below:

#### 3. Install Salt

To create the installer for Window we install Salt using Python instead of pip. Navigate to the root `salt` directory and install Salt.

```
cd \Salt-Dev\salt
python setup.py install
```

#### 4. Create the Windows Installer

Navigate to the `pkg\windows` directory and run the `build_pkg.bat` with the build version (2017.7.2) and the Python version as parameters.

```
cd pkg\windows
build_pkg.bat 2017.7.2 2
```

---

**Note:** If no version is passed, the `build_pkg.bat` will guess the version number using `git`. If the python version is not passed, the default is 2.

### Creating a Windows Installer: Alternate Method (Easier)

Clone the `Salt` repo from GitHub into the directory of your choice. We're going to use `Salt-Dev`.

```
cd \md Salt-Dev
cd Salt-Dev
git clone https://github.com/saltstack/salt
```

Go into the `salt` directory and checkout the version of Salt you want to build.

```
cd salt
git checkout 2017.7.2
```

Then navigate to `pkg\windows` and run the `build.bat` script with the version you're building.
This will install everything needed to build a Windows installer for Salt using Python 3. The binary will be in the `salt\pkg\windows\installer` directory.

**Testing the Salt minion**

1. Create the directory `C:\salt` (if it doesn't exist already)
2. Copy the example `conf` and `var` directories from `pkg\windows\buildenv` into `C:\salt`
3. Edit `C:\salt\conf\minion`
   
   ```
   master: ipaddress or hostname of your salt-master
   ```

4. Start the salt-minion
   
   ```
   cd C:\Python27\Scripts
   python salt-minion -l debug
   ```

5. On the salt-master accept the new minion's key
   
   ```
   sudo salt-key -A
   ```
   This accepts all unaccepted keys. If you're concerned about security just accept the key for this specific minion.

6. Test that your minion is responding
   
   On the salt-master run:
   
   ```
   sudo salt '*' test.version
   ```
   You should get the following response: `{'your minion hostname': True}`

**Packages Management Under Windows 2003**

Windows Server 2003 and Windows XP have both reached End of Support. Though Salt is not officially supported on operating systems that are EoL, some functionality may continue to work.

On Windows Server 2003, you need to install optional component "WMI Windows Installer Provider" to get a full list of installed packages. If you don't have this, salt-minion can't report some installed software.
4.2.14 SUSE

Installation from the Official SaltStack Repository

The SaltStack Repository has packages available for the following platforms:

- SLES 11 SP4
- SLES 12 / SLES 12 SP1 through SP4
- SLES 15
- openSUSE Leap 15.0, 15.1, 42.2, 42.3
- openSUSE Tumbleweed

Instructions are at https://repo.saltstack.com/#suse.

Installation from the SUSE Repository

Since openSUSE 13.2, Salt has been available in the primary repositories. With the release of SUSE manager 3 a new repository setup has been created. The new repo will by systemsmanagement:saltstack, which is the source for newer stable packages. For backward compatibility a linkpackage will be created to the old devel:language:python repo. All development of suse packages will be done in systemsmanagement:saltstack:testing. This will ensure that salt will be in mainline suse repo's, a stable release repo and a testing repo for further enhancements.

Installation

Salt can be installed using `zypper` and is available in the standard openSUSE/SLES repositories.

Stable Release

Salt is packaged separately for the minion and the master. It is necessary only to install the appropriate package for the role the machine will play. Typically, there will be one master and multiple minions.

```
zypper install salt-master
zypper install salt-minion
```

Post-installation tasks openSUSE

Master

To have the Master start automatically at boot time:

```
systemctl enable salt-master.service
```

To start the Master:

```
systemctl start salt-master.service
```

Minion

To have the Minion start automatically at boot time:
systemctl enable salt-minion.service

To start the Minion:

systemctl start salt-minion.service

**Post-installation tasks SLES**

**Master**

To have the Master start automatically at boot time:

chkconfig salt-master on

To start the Master:

rcsalt-master start

**Minion**

To have the Minion start automatically at boot time:

chkconfig salt-minion on

To start the Minion:

rcsalt-minion start

**Unstable Release**

**openSUSE**

For openSUSE Leap or Tumbleweed systems, run the following as root:

zypper install salt salt-minion salt-master

**SUSE Linux Enterprise**

For SLES 15 and above run the following as root:

zypper install salt salt-minion salt-master

Now go to the *Configuring Salt* page.
4.3 Initial Configuration

4.3.1 Configuring Salt

Salt configuration is very simple. The default configuration for the master will work for most installations and the only requirement for setting up a minion is to set the location of the master in the minion configuration file.

The configuration files will be installed to /etc/salt and are named after the respective components, /etc/salt/master, and /etc/salt/minion.

Master Configuration

By default the Salt master listens on ports 4505 and 4506 on all interfaces (0.0.0.0). To bind Salt to a specific IP, redefine the "interface" directive in the master configuration file, typically /etc/salt/master, as follows:

- #interface: 0.0.0.0
+ interface: 10.0.0.1

After updating the configuration file, restart the Salt master. See the master configuration reference for more details about other configurable options.

Minion Configuration

Although there are many Salt Minion configuration options, configuring a Salt Minion is very simple. By default a Salt Minion will try to connect to the DNS name "salt"; if the Minion is able to resolve that name correctly, no configuration is needed.

If the DNS name "salt" does not resolve to point to the correct location of the Master, redefine the "master" directive in the minion configuration file, typically /etc/salt/minion, as follows:

- #master: salt
+ master: 10.0.0.1

After updating the configuration file, restart the Salt minion. See the minion configuration reference for more details about other configurable options.

Proxy Minion Configuration

A proxy minion emulates the behaviour of a regular minion and inherits their options.

Similarly, the configuration file is /etc/salt/proxy and the proxy tries to connect to the DNS name "salt".

In addition to the regular minion options, there are several proxy-specific - see the proxy minion configuration reference.
Running Salt

1. Start the master in the foreground (to daemonize the process, pass the `-d` flag):

   `salt-master`

2. Start the minion in the foreground (to daemonize the process, pass the `-d` flag):

   `salt-minion`

Having trouble?

The simplest way to troubleshoot Salt is to run the master and minion in the foreground with `log level` set to `debug`:

`salt-master --log-level=debug`

For information on salt’s logging system please see the [logging document](#).

Run as an unprivileged (non-root) user

To run Salt as another user, set the `user` parameter in the master config file.

Additionally, ownership, and permissions need to be set such that the desired user can read from and write to the following directories (and their subdirectories, where applicable):

- `/etc/salt`
- `/var/cache/salt`
- `/var/log/salt`
- `/var/run/salt`

More information about running salt as a non-privileged user can be found [here](#).

There is also a full [troubleshooting guide](#) available.

Key Identity

Salt provides commands to validate the identity of your Salt master and Salt minions before the initial key exchange. Validating key identity helps avoid inadvertently connecting to the wrong Salt master, and helps prevent a potential MiTM attack when establishing the initial connection.

Master Key Fingerprint

Print the master key fingerprint by running the following command on the Salt master:

`salt-key -F master`

Copy the `master.pub` fingerprint from the `Local Keys` section, and then set this value as the `master_finger` in the minion configuration file. Save the configuration file and then restart the Salt minion.
Minion Key Fingerprint

Run the following command on each Salt minion to view the minion key fingerprint:

```
salt-call --local key.finger
```

Compare this value to the value that is displayed when you run the `salt-key --finger <MINION_ID>` command on the Salt master.

Key Management

Salt uses AES encryption for all communication between the Master and the Minion. This ensures that the commands sent to the Minions cannot be tampered with, and that communication between Master and Minion is authenticated through trusted, accepted keys.

Before commands can be sent to a Minion, its key must be accepted on the Master. Run the `salt-key` command to list the keys known to the Salt Master:

```
[root@master ~]# salt-key -L
Unaccepted Keys:
  alpha
  bravo
  charlie
  delta
Accepted Keys:
```

This example shows that the Salt Master is aware of four Minions, but none of the keys has been accepted. To accept the keys and allow the Minions to be controlled by the Master, again use the `salt-key` command:

```
[root@master ~]# salt-key -A
[root@master ~]# salt-key -L
Unaccepted Keys:
Accepted Keys:
  alpha
  bravo
  charlie
  delta
```

The `salt-key` command allows for signing keys individually or in bulk. The example above, using `-A` bulk-accepts all pending keys. To accept keys individually use the lowercase of the same option, `-a` `keyname`.

See also:

`salt-key manpage`

Sending Commands

Communication between the Master and a Minion may be verified by running the `test.version` command:

```
[root@master ~]# salt alpha test.version
alpha:
  2018.3.4
```

Communication between the Master and all Minions may be tested in a similar way:
Each of the Minions should send a 2018.3.4 response as shown above, or any other salt version installed.

What’s Next?

Understanding targeting is important. From there, depending on the way you wish to use Salt, you should also proceed to learn about Remote Execution and Configuration Management.

4.4 Additional Installation Guides

4.4.1 Salt Bootstrap

The Salt Bootstrap Script allows a user to install the Salt Minion or Master on a variety of system distributions and versions.

The Salt Bootstrap Script is a shell script known as bootstrap-salt.sh. It runs through a series of checks to determine the operating system type and version. It then installs the Salt binaries using the appropriate methods.

The Salt Bootstrap Script installs the minimum number of packages required to run Salt. This means that if you run the bootstrap to install via package, Git will not be installed. Installing the minimum number of packages helps ensure the script stays as lightweight as possible, assuming the user will install any other required packages after the Salt binaries are present on the system.

The Salt Bootstrap Script is maintained in a separate repo from Salt, complete with its own issues, pull requests, contributing guidelines, release protocol, etc.

To learn more, please see the Salt Bootstrap repo links:

- Salt Bootstrap repo
- README: includes supported operating systems, example usage, and more.
- Contributing Guidelines
- Release Process

Note: The Salt Bootstrap script can be found in the Salt repo under the salt/cloud/deploy/bootstrap-salt.sh path. Any changes to this file will be overwritten! Bug fixes and feature additions must be submitted via the Salt Bootstrap repo. Please see the Salt Bootstrap Script’s Release Process for more information.
4.4.2 Opening the Firewall up for Salt

The Salt master communicates with the minions using an AES-encrypted ZeroMQ connection. These communications are done over TCP ports 4505 and 4506, which need to be accessible on the master only. This document outlines suggested firewall rules for allowing these incoming connections to the master.

Note: No firewall configuration needs to be done on Salt minions. These changes refer to the master only.

Fedora 18 and beyond / RHEL 7 / CentOS 7

Starting with Fedora 18 FirewallD is the tool that is used to dynamically manage the firewall rules on a host. It has support for IPv4/6 settings and the separation of runtime and permanent configurations. To interact with FirewallD use the command line client `firewall-cmd`.

**firewall-cmd example:**

```
firewall-cmd --permanent --zone=<zone> --add-port=4505-4506/tcp
```

A network zone defines the security level of trust for the network. The user should choose an appropriate zone value for their setup. Possible values include: drop, block, public, external, dmz, work, home, internal, trusted.

Don't forget to reload after you made your changes.

```
firewall-cmd --reload
```

RHEL 6 / CentOS 6

The `lokkit` command packaged with some Linux distributions makes opening iptables firewall ports very simple via the command line. Just be careful to not lock out access to the server by neglecting to open the ssh port.

**lokkit example:**

```
```

The `system-config-firewall-tui` command provides a text-based interface to modifying the firewall.

**system-config-firewall-tui:**

```
system-config-firewall-tui
```

openSUSE

Salt installs firewall rules in `/etc/sysconfig/SuSEfirewall2.d/services/salt`. Enable with:

```
SuSEfirewall2 open
SuSEfirewall2 start
```

If you have an older package of Salt where the above configuration file is not included, the `SuSEfirewall2` command makes opening iptables firewall ports very simple via the command line.

**SuSEfirewall example:**
Windows

Windows Firewall is the default component of Microsoft Windows that provides firewalling and packet filtering. There are many 3rd party firewalls available for Windows, some of which use rules from the Windows Firewall. If you are experiencing problems see the vendor's specific documentation for opening the required ports.

The Windows Firewall can be configured using the Windows Interface or from the command line.

Windows Firewall (interface):
1. Open the Windows Firewall Interface by typing `wf.msc` at the command prompt or in a run dialog (Windows Key + R)
2. Navigate to Inbound Rules in the console tree
3. Add a new rule by clicking New Rule... in the Actions area
4. Change the Rule Type to Port. Click Next
5. Set the Protocol to TCP and specify local ports 4505-4506. Click Next
6. Set the Action to Allow the connection. Click Next
7. Apply the rule to Domain, Private, and Public. Click Next
8. Give the new rule a Name, ie: Salt. You may also add a description. Click Finish

Windows Firewall (command line):
The Windows Firewall rule can be created by issuing a single command. Run the following command from the command line or a run prompt:

```
netsh advfirewall firewall add rule name="Salt" dir=in action=allow protocol=TCP localport=4505-4506
```

iptables

Different Linux distributions store their `iptables` (also known as `netfilter`) rules in different places, which makes it difficult to standardize firewall documentation. Included are some of the more common locations, but your mileage may vary.

Fedora / RHEL / CentOS:

```
/etc/sysconfig/iptables
```

Arch Linux:

```
/etc/iptables/iptables.rules
```
Debian

Follow these instructions: [https://wiki.debian.org/iptables](https://wiki.debian.org/iptables)

Once you've found your firewall rules, you'll need to add the below line to allow traffic on tcp/4505 and tcp/4506:

```
-A INPUT -m state --state new -m tcp -p tcp --dport 4505:4506 -j ACCEPT
```

Ubuntu

Salt installs firewall rules in `/etc/ufw/applications.d/salt.ufw`. Enable with:

```
ufw allow salt
```

`pf.conf`

The BSD-family of operating systems uses packet filter (pf). The following example describes the addition to `pf.conf` needed to access the Salt master.

```
pass in on $int_if proto tcp from any to $int_if port 4505:4506
```

Once this addition has been made to the `pf.conf` the rules will need to be reloaded. This can be done using the `pfctl` command.

```
pfctl -vf /etc/pf.conf
```

### 4.4.3 Whitelist communication to Master

There are situations where you want to selectively allow Minion traffic from specific hosts or networks into your Salt Master. The first scenario which comes to mind is to prevent unwanted traffic to your Master out of security concerns, but another scenario is to handle Minion upgrades when there are backwards incompatible changes between the installed Salt versions in your environment.

Here is an example [Linux `iptables` ruleset](https://www.cesNET.cz/services/technical-support/practical-solutions/linux) ruleset to be set on the Master:

```
# Allow Minions from these networks
-I INPUT -s 10.1.2.0/24 -p tcp --dports 4505:4506 -j ACCEPT
-I INPUT -s 10.1.3.0/24 -p tcp --dports 4505:4506 -j ACCEPT

# Allow Salt to communicate with Master on the loopback interface
-A INPUT -i lo -p tcp --dports 4505:4506 -j ACCEPT

# Reject everything else
-A INPUT -p tcp --dports 4505:4506 -j REJECT
```

**Note:** The important thing to note here is that the `salt` command needs to communicate with the listening network socket of `salt-master` on the `loopback` interface. Without this you will see no outgoing Salt traffic from the master, even for a simple `salt '*' test.version`, because the `salt` client never reached the `salt-master` to tell it to carry out the execution.

---

4.4. Additional Installation Guides
4.4.4 Preseed Minion with Accepted Key

In some situations, it is not convenient to wait for a minion to start before accepting its key on the master. For instance, you may want the minion to bootstrap itself as soon as it comes online. You may also want to let your developers provision new development machines on the fly.

See also:

Many ways to preseed minion keys

Salt has other ways to generate and pre-accept minion keys in addition to the manual steps outlined below.

salt-cloud performs these same steps automatically when new cloud VMs are created (unless instructed not to).

salt-api exposes an HTTP call to Salt's REST API to generate and download the new minion keys as a tarball.

There is a general four step process to do this:

1. Generate the keys on the master:

   ```bash
   root@saltmaster# salt-key --gen-keys=[key_name]
   ```

   Pick a name for the key, such as the minion's id.

2. Add the public key to the accepted minion folder:

   ```bash
   root@saltmaster# cp key_name.pub /etc/salt/pki/master/minions/[minion_id]
   ```

   It is necessary that the public key file has the same name as your minion id. This is how Salt matches minions with their keys. Also note that the pki folder could be in a different location, depending on your OS or if specified in the master config file.

3. Distribute the minion keys.

   There is no single method to get the keypair to your minion. The difficulty is finding a distribution method which is secure. For Amazon EC2 only, an AWS best practice is to use IAM Roles to pass credentials. (See blog post, https://aws.amazon.com/blogs/security/using-iam-roles-to-distribute-non-aws-credentials-to-your-ec2-instances/ )

Security Warning

Since the minion key is already accepted on the master, distributing the private key poses a potential security risk. A malicious party will have access to your entire state tree and other sensitive data if they gain access to a preseeded minion key.

4. Preseed the Minion with the keys

   You will want to place the minion keys before starting the salt-minion daemon:

   ```bash
   /etc/salt/pki/minion/minion.pem
   /etc/salt/pki/minion/minion.pub
   ```

   Once in place, you should be able to start salt-minion and run `salt-call state.apply` or any other salt commands that require master authentication.
4.4.5 The macOS (Maverick) Developer Step By Step Guide To Salt Installation

This document provides a step-by-step guide to installing a Salt cluster consisting of one master, and one minion running on a local VM hosted on macOS.

Note: This guide is aimed at developers who wish to run Salt in a virtual machine. The official (Linux) walkthrough can be found here.

The 5 Cent Salt Intro

Since you’re here you’ve probably already heard about Salt, so you already know Salt lets you configure and run commands on hordes of servers easily. Here’s a brief overview of a Salt cluster:

- Salt works by having a "master" server sending commands to one or multiple "minion" servers. The master server is the "command center". It is going to be the place where you store your configuration files, aka: "which server is the db, which is the web server, and what libraries and software they should have installed". The minions receive orders from the master. Minions are the servers actually performing work for your business.

- Salt has two types of configuration files:
  1. the "salt communication channels" or "meta" or "config" configuration files (not official names): one for the master (usually is /etc/salt/master, on the master server), and one for minions (default is /etc/salt/minion or /etc/salt/minion.conf, on the minion servers). Those files are used to determine things like the Salt Master IP, port, Salt folder locations, etc.. If these are configured incorrectly, your minions will probably be unable to receive orders from the master, or the master will not know which software a given minion should install.

  2. the "business" or "service" configuration files (once again, not an official name): these are configuration files, ending with "sls" extension, that describe which software should run on which server, along with particular configuration properties for the software that is being installed. These files should be created in the /srv/salt folder by default, but their location can be changed using ... /etc/salt/master configuration file!

Note: This tutorial contains a third important configuration file, not to be confused with the previous two: the virtual machine provisioning configuration file. This in itself is not specifically tied to Salt, but it also contains some Salt configuration. More on that in step 3. Also note that all configuration files are YAML files. So indentation matters.

Note: Salt also works with "masterless" configuration where a minion is autonomous (in which case salt can be seen as a local configuration tool), or in "multiple master" configuration. See the documentation for more on that.

Before Digging In, The Architecture Of The Salt Cluster

Salt Master

The "Salt master" server is going to be the Mac OS machine, directly. Commands will be run from a terminal app, so Salt will need to be installed on the Mac. This is going to be more convenient for toying around with configuration files.

4.4. Additional Installation Guides 55
Salt Minion

We'll only have one "Salt minion" server. It is going to be running on a Virtual Machine running on the Mac, using VirtualBox. It will run an Ubuntu distribution.

Step 1 - Configuring The Salt Master On Your Mac

Official Documentation

Because Salt has a lot of dependencies that are not built in macOS, we will use Homebrew to install Salt. Homebrew is a package manager for Mac, it's great, use it (for this tutorial at least!). Some people spend a lot of time installing libs by hand to better understand dependencies, and then realize how useful a package manager is once they're configuring a brand new machine and have to do it all over again. It also lets you uninstall things easily.

Note: Brew is a Ruby program (Ruby is installed by default with your Mac). Brew downloads, compiles, and links software. The linking phase is when compiled software is deployed on your machine. It may conflict with manually installed software, especially in the /usr/local directory. It's ok, remove the manually installed version then refresh the link by typing brew link 'packageName'. Brew has a brew doctor command that can help you troubleshoot. It's a great command, use it often. Brew requires xcode command line tools. When you run brew the first time it asks you to install them if they're not already on your system. Brew installs software in /usr/local/bin (system bins are in /usr/bin). In order to use those bins you need your $PATH to search there first. Brew tells you if your $PATH needs to be fixed.

Tip: Use the keyboard shortcut cmd + shift + period in the "open" macOS dialog box to display hidden files and folders, such as .profile.

Install Homebrew

Install Homebrew here https://brew.sh/

Or just type

```
ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"
```

Now type the following commands in your terminal (you may want to type brew doctor after each to make sure everything's fine):

```
brew install python
brew install swig
brew install zmq
```

Note: zmq is ZeroMQ. It's a fantastic library used for server to server network communication and is at the core of Salt efficiency.
Install Salt

You should now have everything ready to launch this command:

```
pip install salt
```

**Note:** There should be no need for `sudo pip install salt`. Brew installed Python for your user, so you should have all the access. In case you would like to check, type `which python` to ensure that it's `/usr/local/bin/python`, and which `pip` which should be `/usr/local/bin/pip`.

Now type `python` in a terminal then, `import salt`. There should be no errors. Now exit the Python terminal using `exit()`.

Create The Master Configuration

If the default `/etc/salt/master` configuration file was not created, copy-paste it from here: [http://docs.saltstack.com/ref/configuration/examples.html#configuration-examples-master](http://docs.saltstack.com/ref/configuration/examples.html#configuration-examples-master)

**Note:** `/etc/salt/master` is a file, not a folder.

Salt Master configuration changes. The Salt master needs a few customization to be able to run on macOS:

```
sudo launchctl limit maxfiles 4096 8192
```

In the `/etc/salt/master` file, change `max_open_files` to 8192 (or just add the line: `max_open_files: 8192` (no quote) if it doesn't already exists).

You should now be able to launch the Salt master:

```
sudo salt-master --log-level=all
```

There should be no errors when running the above command.

**Note:** This command is supposed to be a daemon, but for toying around, we'll keep it running on a terminal to monitor the activity.

Now that the master is set, let’s configure a minion on a VM.

Step 2 - Configuring The Minion VM

The Salt minion is going to run on a Virtual Machine. There are a lot of software options that let you run virtual machines on a mac. But for this tutorial we’re going to use VirtualBox. In addition to virtualBox, we will use Vagrant, which allows you to create the base VM configuration.

Vagrant lets you build ready to use VM images, starting from an OS image and customizing it using "provisioners". In our case, we’ll use it to:

- Download the base Ubuntu image
- Install salt on that Ubuntu image (Salt is going to be the "provisioner" for the VM).
- Launch the VM
• SSH into the VM to debug
• Stop the VM once you're done.

Install VirtualBox

Go get it here: https://www.virtualbox.org/wiki/Downloads (click on VirtualBox for macOS hosts => x86/amd64)

Install Vagrant

Go get it here: https://www.vagrantup.com/downloads.html and choose the latest version (1.3.5 at time of writing), then the .dmg file. Double-click to install it. Make sure the vagrant command is found when run in the terminal. Type vagrant. It should display a list of commands.

Create The Minion VM Folder

Create a folder in which you will store your minion's VM. In this tutorial, it's going to be a minion folder in the $home directory.

```bash
cd $home
mkdir minion
```

Initialize Vagrant

From the minion folder, type

```bash
vagrant init
```

This command creates a default Vagrantfile configuration file. This configuration file will be used to pass configuration parameters to the Salt provisioner in Step 3.

Import Precise64 Ubuntu Box

```bash
vagrant box add precise64 http://files.vagrantup.com/precise64.box
```

Note: This box is added at the global Vagrant level. You only need to do it once as each VM will use this same file.

Modify the Vagrantfile

Modify ./minion/Vagrantfile to use the precise64 box. Change the config.vm.box line to:

```bash
config.vm.box = "precise64"
```

Uncomment the line creating a host-only IP. This is the IP of your minion (you can change it to something else if that IP is already in use):
At this point you should have a VM that can run, although there won't be much in it. Let's check that.

Checking The VM

From the $home/minion folder type:

```bash
vagrant up
```

A log showing the VM booting should be present. Once it's done you'll be back to the terminal:

```bash
ping 192.168.33.10
```

The VM should respond to your ping request.

Now log into the VM in ssh using Vagrant again:

```bash
vagrant ssh
```

You should see the shell prompt change to something similar to `vagrant@precise64:~$` meaning you're inside the VM. From there, enter the following:

```bash
ping 10.0.2.2
```

**Note:** That ip is the ip of your VM host (the macOS host). The number is a VirtualBox default and is displayed in the log after the Vagrant ssh command. We'll use that IP to tell the minion where the Salt master is. Once you're done, end the ssh session by typing `exit`.

It's now time to connect the VM to the salt master

Step 3 - Connecting Master and Minion

Creating The Minion Configuration File

Create the `/etc/salt/minion` file. In that file, put the following lines, giving the ID for this minion, and the IP of the master:

```yaml
master: 10.0.2.2
id: 'minion1'
file_client: remote
```

Minions authenticate with the master using keys. Keys are generated automatically if you don't provide one and can accept them later on. However, this requires accepting the minion key every time the minion is destroyed or created (which could be quite often). A better way is to create those keys in advance, feed them to the minion, and authorize them once.
Preseed minion keys

From the minion folder on your Mac run:

```
sudo salt-key --gen-keys=minion1
```

This should create two files: minion1.pem, and minion1.pub. Since those files have been created using sudo, but will be used by vagrant, you need to change ownership:

```
sudo chown youruser:yourgroup minion1.pem
sudo chown youruser:yourgroup minion1.pub
```

Then copy the .pub file into the list of accepted minions:

```
sudo cp minion1.pub /etc/salt/pki/master/minions/minion1
```

Modify Vagrantfile to Use Salt Provisioner

Let's now modify the Vagrantfile used to provision the Salt VM. Add the following section in the Vagrantfile (note: it should be at the same indentation level as the other properties):

```
# salt-vagrant config
config.vm.provision :salt do |salt|
  salt.run_highstate = true
  salt.minion_config = "\/etc/salt/minion"
  salt.minion_key = "/minion1.pem"
  salt.minion_pub = "/minion1.pub"
end
```

Now destroy the vm and recreate it from the /minion folder:

```
vagrant destroy
vagrant up
```

If everything is fine you should see the following message:

```
"Bootstrapping Salt... (this may take a while)
Salt successfully configured and installed!"
```

Checking Master-Minion Communication

To make sure the master and minion are talking to each other, enter the following:

```
sudo salt '*' test.version
```

You should see your minion answering with its salt version. It's now time to do some configuration.
Step 4 - Configure Services to Install On the Minion

In this step we’ll use the Salt master to instruct our minion to install Nginx.

Checking the system’s original state

First, make sure that an HTTP server is not installed on our minion. When opening a browser directed at http://192.168.33.10/ You should get an error saying the site cannot be reached.

Initialize the top.sls file

System configuration is done in /srv/salt/top.sls (and subfiles/folders), and then applied by running the state.apply function to have the Salt master order its minions to update their instructions and run the associated commands.

First Create an empty file on your Salt master (macOS machine):

```
touch /srv/salt/top.sls
```

When the file is empty, or if no configuration is found for our minion an error is reported:

```
sudo salt 'minion1' state.apply
```

This should return an error stating: No Top file or external nodes data matches found.

Create The Nginx Configuration

Now is finally the time to enter the real meat of our server’s configuration. For this tutorial our minion will be treated as a web server that needs to have Nginx installed.

Insert the following lines into /srv/salt/top.sls (which should current be empty).

```
base:
  'minion1':
    - bin.nginx
```

Now create /srv/salt/bin/nginx.sls containing the following:

```
nginx:
  pkg.installed:
    - name: nginx
  service.running:
    - enable: True
    - reload: True
```
Check Minion State

Finally, run the state.apply function again:

```bash
sudo salt 'minion1' state.apply
```

You should see a log showing that the Nginx package has been installed and the service configured. To prove it, open your browser and navigate to `http://192.168.33.10/`, you should see the standard Nginx welcome page.

Congratulations!

Where To Go From Here

A full description of configuration management within Salt (sls files among other things) is available here: [http://docs.saltstack.com/en/latest/index.html#configuration-management](http://docs.saltstack.com/en/latest/index.html#configuration-management)

4.4.6 running salt as normal user tutorial

Before continuing make sure you have a working Salt installation by following the Installation and the configuration instructions.

Stuck?

There are many ways to Salt Community including our mailing list and our IRC channel #salt.

Running Salt functions as non root user

If you don't want to run salt cloud as root or even install it you can configure it to have a virtual root in your working directory.

The salt system uses the salt.syspath module to find the variables

If you run the salt-build, it will generated in:

```
./build/lib.linux-x86_64-2.7/salt/_syspaths.py
```

To generate it, run the command:

```bash
python setup.py build
```

Copy the generated module into your salt directory

```
cp ./build/lib.linux-x86_64-2.7/salt/_syspaths.py salt/_syspaths.py
```

Edit it to include needed variables and your new paths

```python
# you need to edit this
__your_current_dir__ = ... 
ROOT_DIR = __your_current_dir__ + "salt/root"

# you need to edit this
__location_of_source_code__ = ... 
INSTALL_DIR = __location_of_source_code__
```

(continues on next page)
Create the directory structure

```bash
```

Populate the configuration files:

```bash
cp -r conf/* root/etc/salt/
```

Edit your `root/etc/salt/master` configuration that is used by salt-cloud:

```bash
user: *your user name*
```

Run like this:

```bash
PYTHONPATH=`pwd` scripts/salt-cloud
```

### 4.4.7 Standalone Minion

Since the Salt minion contains such extensive functionality it can be useful to run it standalone. A standalone minion can be used to do a number of things:

- Use salt-call commands on a system without connectivity to a master
- Masterless States, run states entirely from files local to the minion

**Note:** When running Salt in masterless mode, it is not required to run the salt-minion daemon. By default the salt-minion daemon will attempt to connect to a master and fail. The salt-call command stands on its own and does not need the salt-minion daemon.

As of version 2016.11.0 you can have a running minion (with engines and beacons) without a master connection. If you wish to run the salt-minion daemon you will need to set the `master_type` configuration setting to be set to 'disable'.
Minion Configuration

Throughout this document there are several references to setting different options to configure a masterless Minion. Salt Minions are easy to configure via a configuration file that is located, by default, in /etc/salt/minion. Note, however, that on FreeBSD systems, the minion configuration file is located in /usr/local/etc/salt/minion.

You can learn more about minion configuration options in the Configuring the Salt Minion docs.

Telling Salt Call to Run Masterless

The salt-call command is used to run module functions locally on a minion instead of executing them from the master. Normally the salt-call command checks into the master to retrieve file server and pillar data, but when running standalone salt-call needs to be instructed to not check the master for this data. To instruct the minion to not look for a master when running salt-call the file_client configuration option needs to be set. By default the file_client is set to remote so that the minion knows that file server and pillar data are to be gathered from the master. When setting the file_client option to local the minion is configured to not gather this data from the master.

file_client: local

Now the salt-call command will not look for a master and will assume that the local system has all of the file and pillar resources.

Running States Masterless

The state system can be easily run without a Salt master, with all needed files local to the minion. To do this the minion configuration file needs to be set up to know how to return file_roots information like the master. The file_roots setting defaults to /srv/salt for the base environment just like on the master:

file_roots:
  base:
    - /srv/salt

Now set up the Salt State Tree, top file, and SLS modules in the same way that they would be set up on a master. Now, with the file_client option set to local and an available state tree then calls to functions in the state module will use the information in the file_roots on the minion instead of checking in with the master.

Remember that when creating a state tree on a minion there are no syntax or path changes needed, SLS modules written to be used from a master do not need to be modified in any way to work with a minion.

This makes it easy to "script" deployments with Salt states without having to set up a master, and allows for these SLS modules to be easily moved into a Salt master as the deployment grows.

The declared state can now be executed with:

salt-call state.apply

Or the salt-call command can be executed with the --local flag, this makes it unnecessary to change the configuration file:

salt-call state.apply --local
External Pillars

*External pillars* are supported when running in masterless mode.

### 4.4.8 Salt Masterless Quickstart

Running a masterless salt-minion lets you use Salt’s configuration management for a single machine without calling out to a Salt master on another machine.

Since the Salt minion contains such extensive functionality it can be useful to run it standalone. A standalone minion can be used to do a number of things:

- Stand up a master server via States (Salting a Salt Master)
- Use salt-call commands on a system without connectivity to a master
- Masterless States, run states entirely from files local to the minion

It is also useful for testing out state trees before deploying to a production setup.

**Bootstrap Salt Minion**

The *salt-bootstrap* script makes bootstrapping a server with Salt simple for any OS with a Bourne shell:

```
curl -L https://bootstrap.saltstack.com -o bootstrap_salt.sh
sudo sh bootstrap_salt.sh
```

See the *salt-bootstrap* documentation for other one liners. When using Vagrant to test out salt, the *Vagrant salt provisioner* will provision the VM for you.

**Telling Salt to Run Masterless**

To instruct the minion to not look for a master, the *file_client* configuration option needs to be set in the minion configuration file. By default the *file_client* is set to *remote* so that the minion gathers file server and pillar data from the salt master. When setting the *file_client* option to *local* the minion is configured to not gather this data from the master.

```markdown
file_client: local
```

Now the salt minion will not look for a master and will assume that the local system has all of the file and pillar resources.

Configuration which resided in the *master configuration* (e.g. `/etc/salt/master`) should be moved to the *minion configuration* since the minion does not read the master configuration.

**Note:** When running Salt in masterless mode, do not run the salt-minion daemon. Otherwise, it will attempt to connect to a master and fail. The salt-call command stands on its own and does not need the salt-minion daemon.
Create State Tree

Following the successful installation of a salt-minion, the next step is to create a state tree, which is where the SLS files that comprise the possible states of the minion are stored.

The following example walks through the steps necessary to create a state tree that ensures that the server has the Apache webserver installed.

Note: For a complete explanation on Salt States, see the tutorial.

1. Create the top.sls file:

```
/srv/salt/top.sls:
```

```
base:
  '*':
    - webserver
```

2. Create the webserver state tree:

```
/srv/salt/webserver.sls:
```

```
apache:        # ID declaration
  pkg:          # state declaration
    - installed # function declaration
```

Note: The apache package has different names on different platforms, for instance on Debian/Ubuntu it is apache2, on Fedora/RHEL it is httpd and on Arch it is apache

The only thing left is to provision our minion using salt-call.

Salt-call

The salt-call command is used to run remote execution functions locally on a minion instead of executing them from the master. Normally the salt-call command checks into the master to retrieve file server and pillar data, but when running standalone salt-call needs to be instructed to not check the master for this data:

```
salt-call --local state.apply
```

The --local flag tells the salt-minion to look for the state tree in the local file system and not to contact a Salt Master for instructions.

To provide verbose output, use -l debug:

```
salt-call --local state.apply -l debug
```

The minion first examines the top.sls file and determines that it is a part of the group matched by * glob and that the webserver SLS should be applied.

It then examines the webserver.sls file and finds the apache state, which installs the Apache package.

The minion should now have Apache installed, and the next step is to begin learning how to write more complex states.
4.5 Dependencies

Salt should run on any Unix-like platform so long as the dependencies are met.

- **Python** - Python2 >= 2.7, Python3 >= 3.4
- **msgpack** - High-performance message interchange format
- **YAML** - Python YAML bindings
- **Jinja2** - parsing Salt States (configurable in the master settings)
- **MarkupSafe** - Implements a XML/HTML/XHTML Markup safe string for Python
- **apache-libcloud** - Python lib for interacting with many of the popular cloud service providers using a unified API
- **Requests** - HTTP library
- **Tornado** - Web framework and asynchronous networking library
- **futures** - Python2 only dependency. Backport of the concurrent.futures package from Python 3.2
- **ZeroMQ**:
  - ZeroMQ >= 3.2.0
  - pyzmq >= 2.2.0 - ZeroMQ Python bindings
  - PyCrypto - The Python cryptography toolkit

**Warning**: For historical reasons, Salt requires PyCrypto as a "lowest common denominator". However, PyCrypto is unmaintained and best practice is to manually upgrade to use a more maintained library such as PyCryptodome. See Issue #52674 and Issue #54115 for more info.

Salt defaults to the ZeroMQ transport. The --salt-transport installation option is available, but currently only supports the zeromq option. This may be expanded in the future.

```bash
python setup.py --salt-transport=zeromq install
```

This way, only the required dependencies are pulled by the setup script if need be.

If installing using pip, the --salt-transport install option can be provided like:

```bash
pip install --install-option="--salt-transport=zeromq" salt
```

**Note**: Salt does not bundle dependencies that are typically distributed as part of the base OS. If you have unmet dependencies and are using a custom or minimal installation, you might need to install some additional packages from your OS vendor.
4.6 Optional Dependencies

- mako - an optional parser for Salt States (configurable in the master settings)
- gcc - dynamic Cython module compiling

4.7 Upgrading Salt

When upgrading Salt, the master(s) should always be upgraded first. Backward compatibility for minions running newer versions of salt than their masters is not guaranteed.

Whenever possible, backward compatibility between new masters and old minions will be preserved. Generally, the only exception to this policy is in case of a security vulnerability.

See also:

Installing Salt for development and contributing to the project.

4.8 Building Packages using Salt Pack

Salt-pack is an open-source package builder for most commonly used Linux platforms, for example: Redhat/CentOS and Debian/Ubuntu families, utilizing SaltStack states and execution modules to build Salt and a specified set of dependencies, from which a platform specific repository can be built.

https://github.com/saltstack/salt-pack
This section explains how to configure user access, view and store job results, secure and troubleshoot, and how to perform many other administrative tasks.

### 5.1 Configuring the Salt Master

The Salt system is amazingly simple and easy to configure, the two components of the Salt system each have a respective configuration file. The *salt-master* is configured via the master configuration file, and the *salt-minion* is configured via the minion configuration file.

**See also:**

*Example master configuration file.*

The configuration file for the salt-master is located at `/etc/salt/master` by default. Atomic included configuration files can be placed in `/etc/salt/master.d/*.conf`. Warning: files with other suffixes than `.conf` will not be included. A notable exception is FreeBSD, where the configuration file is located at `/usr/local/etc/salt`. The available options are as follows:

#### 5.1.1 Primary Master Configuration

**interface**

Default: `0.0.0.0` (all interfaces)

The local interface to bind to, must be an IP address.

```plaintext
interface: 192.168.0.1
```

**ipv6**

Default: `False`

Whether the master should listen for IPv6 connections. If this is set to `True`, the interface option must be adjusted too (for example: `interface: '::'`)

```plaintext
ipv6: True
```
**publish_port**

Default: 4505
The network port to set up the publication interface.

| **publish_port**: 4505 |

**master_id**

Default: None
The id to be passed in the publish job to minions. This is used for MultiSyndics to return the job to the requesting master.

Note: This must be the same string as the syndic is configured with.

| **master_id**: MasterOfMaster |

**user**

Default: root
The user to run the Salt processes

| **user**: root |

**enable_ssh_minions**

Default: False
Tell the master to also use salt-ssh when running commands against minions.

| **enable_ssh_minions**: True |

Note: Cross-minion communication is still not possible. The Salt mine and publish.publish do not work between minion types.

**ret_port**

Default: 4506
The port used by the return server, this is the server used by Salt to receive execution returns and command executions.

| **ret_port**: 4506 |
pidfile

Default: /var/run/salt-master.pid
Specify the location of the master pidfile.

```
| pidfile: /var/run/salt-master.pid |
```

root_dir

Default: /
The system root directory to operate from, change this to make Salt run from an alternative root.

```
| root_dir: / |
```

**Note:** This directory is prepended to the following options: pki_dir, cachedir, sock_dir, log_file, autosign_file, autoreject_file, pidfile, autosign_grains_dir.

conf_file

Default: /etc/salt/master
The path to the master’s configuration file.

```
| conf_file: /etc/salt/master |
```

pki_dir

Default: /etc/salt/pki/master
The directory to store the pki authentication keys.

```
| pki_dir: /etc/salt/pki/master |
```

extension_modules

Changed in version 2016.3.0: The default location for this directory has been moved. Prior to this version, the location was a directory named extmods in the Salt cachedir (on most platforms, /var/cache/salt/extmods). It has been moved into the master cachedir (on most platforms, /var/cache/salt/master/extmods).
Directory for custom modules. This directory can contain subdirectories for each of Salt’s module types such as runners, output, wheel, modules, states, returners, engines, utils, etc. This path is appended to root_dir.

```
| extension_modules: /root/salt_extmods |
```
extmod_whitelist/extmod_blacklist

New in version 2017.7.0.

By using this dictionary, the modules that are synced to the master’s extmod cache using `saltutil.sync_*` can be limited. If nothing is set to a specific type, then all modules are accepted. To block all modules of a specific type, whitelist an empty list.

```
extmod_whitelist:
  modules:
  - custom_module
  engines:
  - custom_engine
  pillars: []

extmod_blacklist:
  modules:
  - specific_module
```

Valid options:

- modules
- states
- grains
- renderers
- returners
- output
- proxy
- runners
- wheel
- engines
- queues
- pillar
- utils
- sdb
- cache
- clouds
- tops
- roster
- tokens
module_dirs

Default: []
Like extension_modules, but a list of extra directories to search for Salt modules.

```
module_dirs:
  - /var/cache/salt/minion/extmods
```

cachedir

Default: /var/cache/salt/master
The location used to store cache information, particularly the job information for executed salt commands.
This directory may contain sensitive data and should be protected accordingly.

```
cachedir: /var/cache/salt/master
```

verify_env

Default: True
Verify and set permissions on configuration directories at startup.

```
verify_env: True
```

keep_jobs

Default: 24
Set the number of hours to keep old job information. Note that setting this option to 0 disables the cache cleaner.

```
keep_jobs: 24
```

gather_job_timeout

New in version 2014.7.0.
Default: 10
The number of seconds to wait when the client is requesting information about running jobs.

```
gather_job_timeout: 10
```
**timeout**

Default: 5

Set the default timeout for the salt command and api.

**loop_interval**

Default: 60

The `loop_interval` option controls the seconds for the master’s maintenance process check cycle. This process updates file server backends, cleans the job cache and executes the scheduler.

**output**

Default: `nested`

Set the default outputer used by the salt command.

**output_dirs**

Default: `[]`

A list of additional directories to search for salt outputters in.

```
output_dirs: []
```

**output_file**

Default: None

Set the default output file used by the salt command. Default is to output to the CLI and not to a file. Functions the same way as the `--out-file` CLI option, only sets this to a single file for all salt commands.

```
output_file: /path/output/file
```

**show_timeout**

Default: True

Tell the client to show minions that have timed out.

```
show_timeout: True
```
**show_jid**

Default: False
Tell the client to display the jid when a job is published.

```
show_jid: False
```

**color**

Default: True
By default output is colored, to disable colored output set the color value to False.

```
color: False
```

**color_theme**

Default: ""
Specifies a path to the color theme to use for colored command line output.

```
color_theme: /etc/salt/color_theme
```

**cli_summary**

Default: False
When set to True, displays a summary of the number of minions targeted, the number of minions returned, and the number of minions that did not return.

```
cli_summary: False
```

**sock_dir**

Default: /var/run/salt/master
Set the location to use for creating Unix sockets for master process communication.

```
sock_dir: /var/run/salt/master
```

**enable_gpu_grains**

Default: False
Enable GPU hardware data for your master. Be aware that the master can take a while to start up when lspci and/or dmidecode is used to populate the grains for the master.

```
enable_gpu_grains: True
```
skip_grains

Default: False

MasterMinions should omit grains. A MasterMinion is "a minion function object for generic use on the master" that omit pillar. A RunnerClient creates a MasterMinion omitting states and renderer. Setting to True can improve master performance.

```
skip_grains: True
```

job_cache

Default: True

The master maintains a temporary job cache. While this is a great addition, it can be a burden on the master for larger deployments (over 5000 minions). Disabling the job cache will make previously executed jobs unavailable to the jobs system and is not generally recommended. Normally it is wise to make sure the master has access to a faster IO system or a tmpfs is mounted to the jobs dir.

```
job_cache: True
```

Note: Setting the `job_cache` to False will not cache minion returns, but the JID directory for each job is still created. The creation of the JID directories is necessary because Salt uses those directories to check for JID collisions. By setting this option to False, the job cache directory, which is /var/cache/salt/master/jobs/ by default, will be smaller, but the JID directories will still be present.

Note that the `keep_jobs` option can be set to a lower value, such as 1, to limit the number of hours jobs are stored in the job cache. (The default is 24 hours.)

Please see the Managing the Job Cache documentation for more information.

minion_data_cache

Default: True

The minion data cache is a cache of information about the minions stored on the master, this information is primarily the pillar, grains and mine data. The data is cached via the cache subsystem in the Master cachedir under the name of the minion or in a supported database. The data is used to predetermine what minions are expected to reply from executions.

```
minion_data_cache: True
```

cache

Default: localfs

Cache subsystem module to use for minion data cache.

```
cache: consul
```
**memcache_expire_seconds**

Default: 0

Memcache is an additional cache layer that keeps a limited amount of data fetched from the minion data cache for a limited period of time in memory that makes cache operations faster. It doesn't make much sense for the `localfs` cache driver but helps for more complex drivers like `consul`.

This option sets the memcache items expiration time. By default is set to 0 that disables the memcache.

```
memcache_expire_seconds: 30
```

**memcache_max_items**

Default: 1024

Set memcache limit in items that are bank-key pairs. I.e the list of minion_0/data, minion_0/mine, minion_1/data contains 3 items. This value depends on the count of minions usually targeted in your environment. The best one could be found by analyzing the cache log with `memcache_debug` enabled.

```
memcache_max_items: 1024
```

**memcache_full_cleanup**

Default: False

If cache storage got full, i.e. the items count exceeds the `memcache_max_items` value, memcache cleans up its storage. If this option set to False memcache removes the only one oldest value from its storage. If this set set to True memcache removes all the expired items and also removes the oldest one if there are no expired items.

```
memcache_full_cleanup: True
```

**memcache_debug**

Default: False

Enable collecting the memcache stats and log it on `debug` log level. If enabled memcache collect information about how many fetch calls has been done and how many of them has been hit by memcache. Also it outputs the rate value that is the result of division of the first two values. This should help to choose right values for the expiration time and the cache size.

```
memcache_debug: True
```

**ext_job_cache**

Default: ''

Used to specify a default returner for all minions. When this option is set, the specified returner needs to be properly configured and the minions will always default to sending returns to this returner. This will also disable the local job cache on the master.

```
ext_job_cache: redis
```
**event_return**

New in version 2015.5.0.

Default: `'`

Specify the returner(s) to use to log events. Each returner may have installation and configuration requirements. Read the returner's documentation.

**Note:** Not all returners support event returns. Verify that a returner has an `event_return()` function before configuring this option with a returner.

```yaml
event_return:
  - syslog
  - splunk
```

**event_return_queue**

New in version 2015.5.0.

Default: `0`

On busy systems, enabling event_returns can cause a considerable load on the storage system for returners. Events can be queued on the master and stored in a batched fashion using a single transaction for multiple events. By default, events are not queued.

```yaml
event_return_queue: 0
```

**event_return_whitelist**

New in version 2015.5.0.

Default: `[]`

Only return events matching tags in a whitelist.

Changed in version 2016.11.0: Supports glob matching patterns.

```yaml
event_return_whitelist:
  - salt/master/a_tag
  - salt/run/*/ret
```

**event_return_blacklist**

New in version 2015.5.0.

Default: `[]`

Store all event returns _except_ the tags in a blacklist.

Changed in version 2016.11.0: Supports glob matching patterns.

```yaml
event_return_blacklist:
  - salt/master/not_this_tag
  - salt/wheel/*/ret
```
max_event_size

New in version 2014.7.0.
Default: 1048576
Passing very large events can cause the minion to consume large amounts of memory. This value tunes the maximum size of a message allowed onto the master event bus. The value is expressed in bytes.

```
max_event_size: 1048576
```

master_job_cache

New in version 2014.7.0.
Default: local_cache
Specify the returner to use for the job cache. The job cache will only be interacted with from the salt master and therefore does not need to be accessible from the minions.

```
master_job_cache: redis
```

job_cache_store_endtime

New in version 2015.8.0.
Default: False
Specify whether the Salt Master should store end times for jobs as returns come in.

```
job_cache_store_endtime: False
```

enforce_mine_cache

Default: False
By-default when disabling the minion_data_cache mine will stop working since it is based on cached data, by enabling this option we explicitly enabling only the cache for the mine system.

```
enforce_mine_cache: False
```

max_minions

Default: 0
The maximum number of minion connections allowed by the master. Use this to accommodate the number of minions per master if you have different types of hardware serving your minions. The default of 0 means unlimited connections. Please note that this can slow down the authentication process a bit in large setups.

```
max_minions: 100
```
con_cache

Default: False

If max_minions is used in large installations, the master might experience high-load situations because of having to check the number of connected minions for every authentication. This cache provides the minion-ids of all connected minions to all MWorker-processes and greatly improves the performance of max_minions.

| con_cache: True |

presence_events

Default: False

Causes the master to periodically look for actively connected minions. Presence events are fired on the event bus on a regular interval with a list of connected minions, as well as events with lists of newly connected or disconnected minions. This is a master-only operation that does not send executions to minions.

| presence_events: False |

ping_on_rotate

New in version 2014.7.0.

Default: False

By default, the master AES key rotates every 24 hours. The next command following a key rotation will trigger a key refresh from the minion which may result in minions which do not respond to the first command after a key refresh.

To tell the master to ping all minions immediately after an AES key refresh, set ping_on_rotate to True. This should mitigate the issue where a minion does not appear to initially respond after a key is rotated.

Note that enabling this may cause high load on the master immediately after the key rotation event as minions reconnect. Consider this carefully if this salt master is managing a large number of minions.

If disabled, it is recommended to handle this event by listening for the aes_key_rotate event with the key tag and acting appropriately.

| ping_on_rotate: False |

transport

Default: zeromq

Changes the underlying transport layer. ZeroMQ is the recommended transport while additional transport layers are under development. Supported values are zeromq and tcp (experimental). This setting has a significant impact on performance and should not be changed unless you know what you are doing!

| transport: zeromq |
**transport_opts**

Default: {}

(experimental) Starts multiple transports and overrides options for each transport with the provided dictionary. This setting has a significant impact on performance and should not be changed unless you know what you are doing! The following example shows how to start a TCP transport alongside a ZMQ transport.

```yaml
transport_opts:
  tcp:
    publish_port: 4605
    ret_port: 4606
  zeromq: []
```

**master_stats**

Default: False

Turning on the master stats enables runtime throughput and statistics events to be fired from the master event bus. These events will report on what functions have been run on the master and how long these runs have, on average, taken over a given period of time.

**master_stats_event_iter**

Default: 60

The time in seconds to fire master_stats events. This will only fire in conjunction with receiving a request to the master; idle masters will not fire these events.

**sock_pool_size**

Default: 1

To avoid blocking waiting while writing a data to a socket, we support socket pool for Salt applications. For example, a job with a large number of target host list can cause long period blocking waiting. The option is used by ZMQ and TCP transports, and the other transport methods don't need the socket pool by definition. Most of Salt tools, including CLI, are enough to use a single bucket of socket pool. On the other hands, it is highly recommended to set the size of socket pool larger than 1 for other Salt applications, especially Salt API, which must write data to socket concurrently.

```yaml
sock_pool_size: 15
```

**ipc_mode**

Default: ipc

The ipc strategy. (i.e., sockets versus tcp, etc.) Windows platforms lack POSIX IPC and must rely on TCP based inter-process communications. **ipc_mode** is set to tcp by default on Windows.

```yaml
ipc_mode: ipc
```
**tcp_master_pub_port**

Default: 4512

The TCP port on which events for the master should be published if `ipc_mode` is TCP.

```
tcp_master_pub_port: 4512
```

**tcp_master_pull_port**

Default: 4513

The TCP port on which events for the master should be pulled if `ipc_mode` is TCP.

```
tcp_master_pull_port: 4513
```

**tcp_master_publish_pull**

Default: 4514

The TCP port on which events for the master should be pulled from and then republished onto the event bus on the master.

```
tcp_master_publish_pull: 4514
```

**tcp_master_workers**

Default: 4515

The TCP port for `mworkers` to connect to on the master.

```
tcp_master_workers: 4515
```

**auth_events**

New in version 2017.7.3.

Default: True

Determines whether the master will fire authentication events. Authentication events are fired when a minion performs an authentication check with the master.

```
auth_events: True
```
**minion_data_cache_events**

New in version 2017.7.3.

Default: True

Determines whether the master will fire minion data cache events. Minion data cache events are fired when a minion requests a minion data cache refresh.

```
minion_data_cache_events: True
```

**http_connect_timeout**

New in version 2019.2.0.

Default: 20

HTTP connection timeout in seconds. Applied when fetching files using tornado back-end. Should be greater than overall download time.

```
http_connect_timeout: 20
```

**http_request_timeout**

New in version 2015.8.0.

Default: 3600

HTTP request timeout in seconds. Applied when fetching files using tornado back-end. Should be greater than overall download time.

```
http_request_timeout: 3600
```

**use_yamlloader_old**

New in version 2019.2.1.

Default: False

Use the pre-2019.2 YAML renderer. Uses legacy YAML rendering to support some legacy inline data structures. See the 2019.2.1 release notes for more details.

```
use_yamlloader_old: False
```

**req_server_niceness**

New in version 3001.

Default: None

Process priority level of the ReqServer subprocess of the master. Supported on POSIX platforms only.

```
req_server_niceness: 9
```
pub_server_niceness

New in version 3001.
Default: None
Process priority level of the PubServer subprocess of the master. Supported on POSIX platforms only.

| pub_server_niceness: 9 |

fileserver_update_niceness

New in version 3001.
Default: None
Process priority level of the FileServerUpdate subprocess of the master. Supported on POSIX platforms only.

| fileserver_update_niceness: 9 |

maintenance_niceness

New in version 3001.
Default: None
Process priority level of the Maintenance subprocess of the master. Supported on POSIX platforms only.

| maintenance_niceness: 9 |

mworker_niceness

New in version 3001.
Default: None
Process priority level of the MWorker subprocess of the master. Supported on POSIX platforms only.

| mworker_niceness: 9 |

mworker_queue_niceness

New in version 3001.
default: None
Process priority level of the MWorkerQueue subprocess of the master. supported on POSIX platforms only.

| mworker_queue_niceness: 9 |
**event_return_niceness**

New in version 3001.

default: None

process priority level of the EventReturn subprocess of the master. supported on POSIX platforms only.

```
event_return_niceness: 9
```

**event_publisher_niceness**

New in version 3001.

default: none

process priority level of the EventPublisher subprocess of the master. supported on POSIX platforms only.

```
event_publisher_niceness: 9
```

**reactor_niceness**

New in version 3001.

default: None

process priority level of the Reactor subprocess of the master. supported on POSIX platforms only.

```
reactor_niceness: 9
```

### 5.1.2 Salt-SSH Configuration

**roster**

Default: flat

Define the default salt-ssh roster module to use.

```
roster: cache
```

**roster_defaults**

New in version 2017.7.0.

Default settings which will be inherited by all rosters.

```
roster_defaults:
  user: daniel
  sudo: True
  priv: /root/.ssh/id_rsa
  tty: True
```
**roster_file**

Default: `/etc/salt/roster`

Pass in an alternative location for the salt-ssh flat roster file.

```
roster_file: /root/roster
```

**rosters**

Default: None

Define locations for flat roster files so they can be chosen when using Salt API. An administrator can place roster files into these locations. Then, when calling Salt API, the `roster_file` parameter should contain a relative path to these locations. That is, `roster_file=/foo/roster` will be resolved as `/etc/salt/roster.d/foo/roster` etc. This feature prevents passing insecure custom rosters through the Salt API.

```
rosters:
- /etc/salt/roster.d
- /opt/salt/some/more/rosters
```

**ssh_passwd**

Default: `''`

The ssh password to log in with.

```
ssh_passwd: ''
```

**ssh_priv_passwd**

Default: `''`

Passphrase for ssh private key file.

```
ssh_priv_passwd: ''
```

**ssh_port**

Default: 22

The target system's ssh port number.

```
ssh_port: 22
```
**ssh_scan_ports**

Default: 22
Comma-separated list of ports to scan.

```
ssh_scan_ports: 22
```

**ssh_scan_timeout**

Default: 0.01
Scanning socket timeout for salt-ssh.

```
ssh_scan_timeout: 0.01
```

**ssh_sudo**

Default: False
Boolean to run command via sudo.

```
ssh_sudo: False
```

**ssh_timeout**

Default: 60
Number of seconds to wait for a response when establishing an SSH connection.

```
ssh_timeout: 60
```

**ssh_user**

Default: root
The user to log in as.

```
ssh_user: root
```

**ssh_log_file**

New in version 2016.3.5.
Default: /var/log/salt/ssh
Specify the log file of the salt-ssh command.

```
ssh_log_file: /var/log/salt/ssh
```
**ssh_minion_opts**

Default: None

Pass in minion option overrides that will be inserted into the SHIM for salt-ssh calls. The local minion config is not used for salt-ssh. Can be overridden on a per-minion basis in the roster (minion_opts)

```yaml
ssh_minion_opts:
  gpg_keydir: /root/gpg
```

**ssh_use_home_key**

Default: False

Set this to True to default to using `~/.ssh/id_rsa` for salt-ssh authentication with minions

```yaml
ssh_use_home_key: False
```

**ssh_identities_only**

Default: False

Set this to True to default salt-ssh to run with `-o IdentitiesOnly=yes`. This option is intended for situations where the ssh-agent offers many different identities and allows ssh to ignore those identities and use the only one specified in options.

```yaml
ssh_identities_only: False
```

**ssh_list_nodegroups**

Default: {}

List-only nodegroups for salt-ssh. Each group must be formed as either a comma-separated list, or a YAML list. This option is useful to group minions into easy-to-target groups when using salt-ssh. These groups can then be targeted with the normal `-N` argument to salt-ssh.

```yaml
ssh_list_nodegroups:
  groupA: minion1,minion2
  groupB: minion1,minion3
```

Default: False

Run the ssh_pre_flight script defined in the salt-ssh roster. By default the script will only run when the thin dir does not exist on the targeted minion. This will force the script to run and not check if the thin dir exists first.
thin_extra_mods

Default: None
List of additional modules, needed to be included into the Salt Thin. Pass a list of importable Python modules that are typically located in the site-packages Python directory so they will be also always included into the Salt Thin, once generated.

min_extra_mods

Default: None
Identical as thin_extra_mods, only applied to the Salt Minimal.

5.1.3 Master Security Settings

open_mode

Default: False
Open mode is a dangerous security feature. One problem encountered with pki authentication systems is that keys can become "mixed up" and authentication begins to fail. Open mode turns off authentication and tells the master to accept all authentication. This will clean up the pki keys received from the minions. Open mode should not be turned on for general use. Open mode should only be used for a short period of time to clean up pki keys. To turn on open mode set this value to True.

auto_accept

Default: False
Enable auto_accept. This setting will automatically accept all incoming public keys from minions.

keysize

Default: 2048
The size of key that should be generated when creating new keys.

5.1. Configuring the Salt Master
**autosign_timeout**

New in version 2014.7.0.

Default: 120

Time in minutes that a incoming public key with a matching name found in pki_dir/minion_autosign/keyid is automatically accepted. Expired autosign keys are removed when the master checks the minion_autosign directory. This method to auto accept minions can be safer than an autosign_file because the keyid record can expire and is limited to being an exact name match. This should still be considered a less than secure option, due to the fact that trust is based on just the requesting minion id.

**autosign_file**

Default: not defined

If the `autosign_file` is specified incoming keys specified in the autosign_file will be automatically accepted. Matches will be searched for first by string comparison, then by globbing, then by full-string regex matching. This should still be considered a less than secure option, due to the fact that trust is based on just the requesting minion id.

Changed in version 2018.3.0: For security reasons the file must be readonly except for its owner. If `permissive_pki_access` is True the owning group can also have write access, but if Salt is running as root it must be a member of that group. A less strict requirement also existed in previous version.

**autoreject_file**

New in version 2014.1.0.

Default: not defined

Works like `autosign_file`, but instead allows you to specify minion IDs for which keys will automatically be rejected. Will override both membership in the `autosign_file` and the `auto_accept` setting.

**autosign_grains_dir**

New in version 2018.3.0.

Default: not defined

If the `autosign_grains_dir` is specified, incoming keys from minions with grain values that match those defined in files in the autosign_grains_dir will be accepted automatically. Grain values that should be accepted automatically can be defined by creating a file named like the corresponding grain in the autosign_grains_dir and writing the values into that file, one value per line. Lines starting with a # will be ignored. Minion must be configured to send the corresponding grains on authentication. This should still be considered a less than secure option, due to the fact that trust is based on just the requesting minion.

Please see the Autoaccept Minions from Grains documentation for more information.

| Autosign_grains_dir | /etc/salt/autosign_grains |
**permissive_pki_access**

Default: False

Enable permissive access to the salt keys. This allows you to run the master or minion as root, but have a non-root group be given access to your pki_dir. To make the access explicit, root must belong to the group you’ve given access to. This is potentially quite insecure. If an autosign_file is specified, enabling permissive_pki_access will allow group access to that specific file.

```
permissive_pki_access: False
```

**publisher_acl**

Default: {}

Enable user accounts on the master to execute specific modules. These modules can be expressed as regular expressions.

```
publisher_acl:
   fred:
     - test.ping
     - pkg.*
```

**publisher_acl_blacklist**

Default: {}

Blacklist users or modules

This example would blacklist all non sudo users, including root from running any commands. It would also blacklist any use of the "cmd" module.

This is completely disabled by default.

```
publisher_acl_blacklist:
   users:
     - root
     - '^(?!sudo_).*$'  # all non sudo users
   modules:
     - cmd.*
     - test.echo
```

**sudo_acl**

Default: False

Enforce publisher_acl and publisher_acl_blacklist when users have sudo access to the salt command.

```
sudo_acl: False
```
external_auth

Default: {}

The external auth system uses the Salt auth modules to authenticate and validate users to access areas of the Salt system.

```
external_auth:
    pam:
        fred:
            - test.*
```

token_expire

Default: 43200

Time (in seconds) for a newly generated token to live.

Default: 12 hours

```
token_expire: 43200
```

token_expire_user_override

Default: False

Allow eauth users to specify the expiry time of the tokens they generate.

A boolean applies to all users or a dictionary of whitelisted eauth backends and usernames may be given:

```
token_expire_user_override:
    pam:
        - fred
        - tom
    ldap:
        - gary
```

keep_acl_in_token

Default: False

Set to True to enable keeping the calculated user’s auth list in the token file. This is disabled by default and the auth list is calculated or requested from the eauth driver each time.

```
keep_acl_in_token: False
```
**eauth_acl_module**

Default: ''
Auth subsystem module to use to get authorized access list for a user. By default it's the same module used for external authentication.

```
eauth_acl_module: django
```

**file_recv**

Default: False
Allow minions to push files to the master. This is disabled by default, for security purposes.

```
file_recv: False
```

**file_recv_max_size**

New in version 2014.7.0.
Default: 100
Set a hard-limit on the size of the files that can be pushed to the master. It will be interpreted as megabytes.

```
file_recv_max_size: 100
```

**master_sign_pubkey**

Default: False
Sign the master auth-replies with a cryptographic signature of the master's public key. Please see the tutorial how to use these settings in the Multimaster-PKI with Failover Tutorial

```
master_sign_pubkey: True
```

**master_sign_key_name**

Default: master_sign
The customizable name of the signing-key-pair without suffix.

```
master_sign_key_name: <filename_without_suffix>
```
**master_pubkey_signature**

Default: `master_pubkey_signature`

The name of the file in the master's pki-directory that holds the pre-calculated signature of the master's public-key.

```
master_pubkey_signature: <filename>
```

**master_use_pubkey_signature**

Default: False

Instead of computing the signature for each auth-reply, use a pre-calculated signature. The `master_pubkey_signature` must also be set for this.

```
master_use_pubkey_signature: True
```

**rotate_aes_key**

Default: True

Rotate the salt-masters AES-key when a minion-public is deleted with salt-key. This is a very important security-setting. Disabling it will enable deleted minions to still listen in on the messages published by the salt-master. Do not disable this unless it is absolutely clear what this does.

```
rotate_aes_key: True
```

**publish_session**

Default: 86400

The number of seconds between AES key rotations on the master.

```
publish_session: Default: 86400
```

**ssl**

New in version 2016.11.0.

Default: None

TLS/SSL connection options. This could be set to a dictionary containing arguments corresponding to python `ssl` `wrap_socket` method. For details see Tornado and Python documentation.

Note: to set enum arguments values like `cert_reqs` and `ssl_version` use constant names without ssl module prefix: CERT_REQUIRED or PROTOCOL_TLSv1_2.

```
ssl:
  keyfile: <path_to_keyfile>
  certfile: <path_to_certfile>
  ssl_version: PROTOCOL_TLSv1_2
```
**preserve_minion_cache**

Default: False

By default, the master deletes its cache of minion data when the key for that minion is removed. To preserve the cache after key deletion, set `preserve_minion_cache` to True.

WARNING: This may have security implications if compromised minions auth with a previous deleted minion ID.

```
preserve_minion_cache: False
```

**allow_minion_key_revoke**

Default: True

Controls whether a minion can request its own key revocation. When True the master will honor the minion's request and revoke its key. When False, the master will drop the request and the minion's key will remain accepted.

```
allow_minion_key_revoke: False
```

**optimization_order**

Default: [0, 1, 2]

In cases where Salt is distributed without .py files, this option determines the priority of optimization level(s) Salt's module loader should prefer.

Note: This option is only supported on Python 3.5+.

```
optimization_order:
- 2
- 0
- 1
```

### 5.1.4 Master Large Scale Tuning Settings

**max_open_files**

Default: 100000

Each minion connecting to the master uses AT LEAST one file descriptor, the master subscription connection. If enough minions connect you might start seeing on the console(and then salt-master crashes):

```
Too many open files (tcp_listener.cpp:335)
Aborted (core dumped)
```

```
max_open_files: 100000
```

By default this value will be the one of `ulimit -Hn`, i.e., the hard limit for max open files.

To set a different value than the default one, uncomment, and configure this setting. Remember that this value CANNOT be higher than the hard limit. Raising the hard limit depends on the OS and/or distribution, a good way to find the limit is to search the internet for something like this:
worker_threads

Default: 5

The number of threads to start for receiving commands and replies from minions. If minions are stalling on replies because you have many minions, raise the worker_threads value.

Worker threads should not be put below 3 when using the peer system, but can drop down to 1 worker otherwise.

Note: When the master daemon starts, it is expected behaviour to see multiple salt-master processes, even if 'worker_threads' is set to '1'. At a minimum, a controlling process will start along with a Publisher, an EventPublisher, and a number of MWorker processes will be started. The number of MWorker processes is tuneable by the 'worker_threads' configuration value while the others are not.

worker_threads: 5

pub_hwm

Default: 1000

The zeromq high water mark on the publisher interface.

pub_hwm: 1000

zmq_backlog

Default: 1000

The listen queue size of the ZeroMQ backlog.

zmq_backlog: 1000

5.1.5 Master Module Management

runner_dirs

Default: []

Set additional directories to search for runner modules.

runner_dirs:
  - /var/lib/salt/runners
**utils_dirs**

New in version 2018.3.0.
Default: []
Set additional directories to search for util modules.

```yaml
utils_dirs:
- /var/lib/salt/utils
```

**cython_enable**

Default: False
Set to true to enable Cython modules (.pyx files) to be compiled on the fly on the Salt master.

```yaml
cython_enable: False
```

### 5.1.6 Master State System Settings

**state_top**

Default: top.sls
The state system uses a "top" file to tell the minions what environment to use and what modules to use. The state_top file is defined relative to the root of the base environment. The value of "state_top" is also used for the pillar top file

```yaml
state_top: top.sls
```

**state_top_saltenv**

This option has no default value. Set it to an environment name to ensure that only the top file from that environment is considered during a highstate.

Note: Using this value does not change the merging strategy. For instance, if `top_file_merging_strategy` is set to `merge`, and `state_top_saltenv` is set to `foo`, then any sections for environments other than `foo` in the top file for the `foo` environment will be ignored. With `state_top_saltenv` set to `base`, all states from all environments in the `base` top file will be applied, while all other top files are ignored. The only way to set `state_top_saltenv` to something other than `base` and not have the other environments in the targeted top file ignored, would be to set `top_file_merging_strategy` to `merge_all`.

```yaml
state_top_saltenv: dev
```
**top_file_merging_strategy**

Changed in version 2016.11.0: A `merge_all` strategy has been added.

Default: `merge`

When no specific fileserver environment (a.k.a. saltenv) has been specified for a `highstate`, all environments' top files are inspected. This config option determines how the SLS targets in those top files are handled.

When set to `merge`, the `base` environment's top file is evaluated first, followed by the other environments' top files. The first target expression (e.g. `'*'`) for a given environment is kept, and when the same target expression is used in a different top file evaluated later, it is ignored. Because `base` is evaluated first, it is authoritative. For example, if there is a target for `'*'` for the `foo` environment in both the `base` and `foo` environment's top files, the one in the `foo` environment would be ignored. The environments will be evaluated in no specific order (aside from `base` coming first). For greater control over the order in which the environments are evaluated, use `env_order`. Note that, aside from the `base` environment's top file, any sections in top files that do not match that top file's environment will be ignored. So, for example, a section for the `qa` environment would be ignored if it appears in the `dev` environment's top file. To keep use cases like this from being ignored, use the `merge_all` strategy.

When set to `same`, then for each environment, only that environment's top file is processed, with the others being ignored. For example, only the dev environment's top file will be processed for the dev environment, and any SLS targets defined for dev in the base environment's (or any other environment's) top file will be ignored. If an environment does not have a top file, then the top file from the `default_top` config parameter will be used as a fallback.

When set to `merge_all`, then all states in all environments in all top files will be applied. The order in which individual SLS files will be executed will depend on the order in which the top files were evaluated, and the environments will be evaluated in no specific order. For greater control over the order in which the environments are evaluated, use `env_order`.

```yaml
| top_file_merging_strategy: same |
```

**env_order**

Default: `[]`

When `top_file_merging_strategy` is set to `merge`, and no environment is specified for a `highstate`, this config option allows for the order in which top files are evaluated to be explicitly defined.

```yaml
| env_order: |
| - base |
| - dev |
| - qa |
```

**master_tops**

Default: `[]`

The `master_tops` option replaces the `external_nodes` option by creating a pluggable system for the generation of external top data. The `external_nodes` option is deprecated by the `master_tops` option. To gain the capabilities of the classic `external_nodes` system, use the following configuration:

```yaml
| master_tops: |
|  ext_nodes: <Shell command which returns yaml> |
```
**renderer**

Default: `jinja|yaml`

The renderer to use on the minions to render the state data.

```
renderer: jinja|json
```

**userdata_template**

New in version 2016.11.4.

Default: `None`

The renderer to use for templating userdata files in salt-cloud, if the `userdata_template` is not set in the cloud profile. If no value is set in the cloud profile or master config file, no templating will be performed.

```
userdata_template: jinja
```

**jinja_env**

New in version 2018.3.0.

Default: `{}`

`jinja_env` overrides the default Jinja environment options for all templates except sls templates. To set the options for sls templates use `jinja_sls_env`.

---

**Note:** The Jinja2 Environment documentation is the official source for the default values. Not all the options listed in the jinja documentation can be overridden using `jinja_env` or `jinja_sls_env`.

The default options are:

```
jinja_env:
    block_start_string: '{%'
    block_end_string: '%}'}
    variable_start_string: '{{'
    variable_end_string: '}}'
    comment_start_string: '{#'
    comment_end_string: '#}'}
    line_statement_prefix:
    line_comment_prefix:
    trim_blocks: False
    lstrip_blocks: False
    newline_sequence: '\n'
    keep_trailing_newline: False
```
**jinja_sls_env**

New in version 2018.3.0.

Default: `{}`

`jinja_sls_env` sets the Jinja environment options for *sls templates*. The defaults and accepted options are exactly the same as they are for *jinja_env*.

The default options are:

```python
jinja_sls_env:
    block_start_string: '{%'
    block_end_string: '%}'}'
    variable_start_string: '{{'
    variable_end_string: '}}''
    comment_start_string: '#{'
    comment_end_string: '}''
    line_statement_prefix:
    line_comment_prefix:
    trim_blocks: False
    lstrip_blocks: False
    newline_sequence: '\n'
    keep_trailing_newline: False
```

Example using line statements and line comments to increase ease of use:

If your configuration options are

```python
jinja_sls_env:
    line_statement_prefix: '%
    line_comment_prefix: '##'
```

With these options Jinja will interpret anything after a `%` at the start of a line (ignoring whitespace) as a Jinja statement and will interpret anything after a `##` as a comment.

This allows the following more convenient syntax to be used:

```python
## (this comment will not stay once rendered)
# (this comment remains in the rendered template)
## ensure all the formula services are running
{% for service in formula_services %}
    enable_service_{{ service }}:
        service.running:
            name: {{ service }}
{% endfor %}
```

The following less convenient but equivalent syntax would have to be used if you had not set the `line_statement` and `line_comment` options:

```python
{% (this comment will not stay once rendered) %}
( this comment remains in the rendered template)
{% for service in formula_services %}
    enable_service_{{ service }}:
        service.running:
            name: {{ service }}
{% endfor %}
```
### jinja_trim_blocks

Deprecated since version 2018.3.0: Replaced by `jinja_env` and `jinja_sls_env`

New in version 2014.1.0.

Default: False

If this is set to True, the first newline after a Jinja block is removed (block, not variable tag!). Defaults to False and corresponds to the Jinja environment init variable `trim_blocks`.

**jinja_trim_blocks**: False

### jinja_lstrip_blocks

Deprecated since version 2018.3.0: Replaced by `jinja_env` and `jinja_sls_env`

New in version 2014.1.0.

Default: False

If this is set to True, leading spaces and tabs are stripped from the start of a line to a block. Defaults to False and corresponds to the Jinja environment init variable `lstrip_blocks`.

**jinja_lstrip_blocks**: False

### failhard

Default: False

Set the global failhard flag. This informs all states to stop running states at the moment a single state fails.

**failhard**: False

### state_verbose

Default: True

Controls the verbosity of state runs. By default, the results of all states are returned, but setting this value to False will cause salt to only display output for states that failed or states that have changes.

**state_verbose**: False

### state_output

Default: full

The state_output setting controls which results will be output full multi line:

- full, terse - each state will be full/terse
- mixed - only states with errors will be full
- changes - states with changes and errors will be full

`full_id, mixed_id, changes_id` and `terse_id` are also allowed; when set, the state ID will be used as name in the output.
**state_output**: full

**state_output_diff**

Default: False

The state_output_diff setting changes whether or not the output from successful states is returned. Useful when even the terse output of these states is cluttering the logs. Set it to True to ignore them.

**state_output_diff**: False

**state_output_profile**

Default: True

The state_output_profile setting changes whether profile information will be shown for each state run.

**state_output_profile**: True

**state_aggregate**

Default: False

Automatically aggregate all states that have support for mod_aggregate by setting to True.

**state_aggregate**: True

Or pass a list of state module names to automatically aggregate just those types.

**state_aggregate**:
- pkg

**state_events**

Default: False

Send progress events as each function in a state run completes execution by setting to True. Progress events are in the format salt/job/<JID>/prog/<MID>/<RUN NUM>.

**state_events**: True

**yaml_utf8**

Default: False

Enable extra routines for YAML renderer used states containing UTF characters.

**yaml_utf8**: False
**runner_returns**

Default: False

If set to True, runner jobs will be saved to job cache (defined by `master_job_cache`).

```
runner_returns: True
```

### 5.1.7 Master File Server Settings

**fileserver_backend**

Default: ['roots']

Salt supports a modular fileserver backend system, this system allows the salt master to link directly to third party systems to gather and manage the files available to minions. Multiple backends can be configured and will be searched for the requested file in the order in which they are defined here. The default setting only enables the standard backend `roots`, which is configured using the `file_roots` option.

Example:

```
fileserver_backend:
  - roots
  - gitfs
```

**Note**: For masterless Salt, this parameter must be specified in the minion config file.

**fileserver_followsymlinks**

New in version 2014.1.0.

Default: True

By default, the file_server follows symlinks when walking the filesystem tree. Currently this only applies to the default roots fileserver_backend.

```
fileserver_followsymlinks: True
```

**fileserver_ignoresymlinks**

New in version 2014.1.0.

Default: False

If you do not want symlinks to be treated as the files they are pointing to, set `fileserver_ignoresymlinks` to True. By default this is set to False. When set to True, any detected symlink while listing files on the Master will not be returned to the Minion.

```
fileserver_ignoresymlinks: False
```
fileserver_limit_traversal

New in version 2014.1.0.

Deprecated since version 2018.3.4: This option is now ignored. Firstly, it only traversed file_roots, which means it did not work for the other fileserver backends. Secondly, since this option was added we have added caching to the code that traverses the file_roots (and gitfs, etc.), which greatly reduces the amount of traversal that is done.

Default: False

By default, the Salt fileserver recurses fully into all defined environments to attempt to find files. To limit this behavior so that the fileserver only traverses directories with SLS files and special Salt directories like _modules, set fileserver_limit_traversal to True. This might be useful for installations where a file root has a very large number of files and performance is impacted.

fileserver_limit_traversal: False

fileserver_list_cache_time

New in version 2014.1.0.

Changed in version 2016.11.0: The default was changed from 30 seconds to 20.

Default: 20

Salt caches the list of files/symlinks/directories for each fileserver backend and environment as they are requested, to guard against a performance bottleneck at scale when many minions all ask the fileserver which files are available simultaneously. This configuration parameter allows for the max age of that cache to be altered.

Set this value to 0 to disable use of this cache altogether, but keep in mind that this may increase the CPU load on the master when running a highstate on a large number of minions.

Note: Rather than altering this configuration parameter, it may be advisable to use the fileserver.clear_file_list_cache runner to clear these caches.

fileserver_list_cache_time: 5

fileserver_verify_config

New in version 2017.7.0.

Default: True

By default, as the master starts it performs some sanity checks on the configured fileserver backends. If any of these sanity checks fail (such as when an invalid configuration is used), the master daemon will abort.

To skip these sanity checks, set this option to False.

fileserver_verify_config: False
hash_type

Default: sha256

The hash_type is the hash to use when discovering the hash of a file on the master server. The default is sha256, but md5, sha1, sha224, sha384, and sha512 are also supported.

| hash_type: sha256 |

file_buffer_size

Default: 1048576

The buffer size in the file server in bytes.

| file_buffer_size: 1048576 |

file_ignore_regex

Default: ''

A regular expression (or a list of expressions) that will be matched against the file path before syncing the modules and states to the minions. This includes files affected by the file.recurse state. For example, if you manage your custom modules and states in subversion and don't want all the '.svn' folders and content synced to your minions, you could set this to '/.svn($|/)'. By default nothing is ignored.

| file_ignore_regex: |
| - '/.svn($|/)'
| - '/.git($|/)'

file_ignore_glob

Default: ''

A file glob (or list of file globs) that will be matched against the file path before syncing the modules and states to the minions. This is similar to file_ignore_regex above, but works on globs instead of regex. By default nothing is ignored.

| file_ignore_glob: |
| - '*.pyc' |
| - '*/somefolder/*bak' |
| - '*.swp' |

Note: Vim's .swp files are a common cause of Unicode errors in file.recurse states which use templating. Unless there is a good reason to distribute them via the files server, it is good practice to include '/*.swp' in the file_ignore_glob.
master_roots

Default: ''
A master-only copy of the file_roots dictionary, used by the state compiler.
Example:

```yaml
master_roots:
  base:
    - /srv/salt-master
```

roots: Master's Local File Server

file_roots

Default:

```yaml
base:
  - /srv/salt
```

Salt runs a lightweight file server written in ZeroMQ to deliver files to minions. This file server is built into the master daemon and does not require a dedicated port.

The file server works on environments passed to the master. Each environment can have multiple root directories. The subdirectories in the multiple file roots cannot match, otherwise the downloaded files will not be able to be reliably ensured. A base environment is required to house the top file.

As of 2018.3.5 and 2019.2.1, it is possible to have __env__ as a catch-all environment.

Example:

```yaml
file_roots:
  base:
    - /srv/salt
  dev:
    - /srv/salt/dev/services
    - /srv/salt/dev/states
  prod:
    - /srv/salt/prod/services
    - /srv/salt/prod/states
  __env__:
    - /srv/salt/default
```

Note: For masterless Salt, this parameter must be specified in the minion config file.
**roots_update_interval**

New in version 2018.3.0.
Default: 60

This option defines the update interval (in seconds) for file_roots.

**Note:** Since file_roots consists of files local to the minion, the update process for this fileserver backend just reaps the cache for this backend.

| roots_update_interval | 120 |

**gitfs: Git Remote File Server Backend**

**gitfs_remotes**

Default: []

When using the git fileserver backend at least one git remote needs to be defined. The user running the salt master will need read access to the repo.

The repos will be searched in order to find the file requested by a client and the first repo to have the file will return it. Branches and tags are translated into salt environments.

<table>
<thead>
<tr>
<th>gitfs_remotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>- git://github.com/saltstack/salt-states.git</td>
</tr>
<tr>
<td>- file:///var/git/saltmaster</td>
</tr>
</tbody>
</table>

**Note:** file:// repos will be treated as a remote and copied into the master's gitfs cache, so only the local refs for those repos will be exposed as fileserver environments.

As of 2014.7.0, it is possible to have per-repo versions of several of the gitfs configuration parameters. For more information, see the *GitFS Walkthrough*.

**gitfs_provider**

New in version 2014.7.0.

Optional parameter used to specify the provider to be used for gitfs. More information can be found in the *GitFS Walkthrough*.

Must be either pygit2 or gitpython. If unset, then each will be tried in that same order, and the first one with a compatible version installed will be the provider that is used.

| gitfs_provider | gitpython |
**gitfs_ssl_verify**

Default: True

Specifies whether or not to ignore SSL certificate errors when fetching from the repositories configured in `gitfs_remotes`. The `False` setting is useful if you're using a git repo that uses a self-signed certificate. However, keep in mind that setting this to anything other `True` is considered insecure, and using an SSH-based transport (if available) may be a better option.

| gitfs_ssl_verify: False |

**Note:** pygit2 only supports disabling SSL verification in versions 0.23.2 and newer.

Changed in version 2015.8.0: This option can now be configured on individual repositories as well. See [here](#) for more info.

Changed in version 2016.11.0: The default config value changed from `False` to `True`.

**gitfs_mountpoint**

New in version 2014.7.0.

Default: ''

Specifies a path on the salt fileserver which will be prepended to all files served by gitfs. This option can be used in conjunction with `gitfs_root`. It can also be configured for an individual repository, see [here](#) for more info.

| gitfs_mountpoint: salt://foo/bar |

**Note:** The `salt://` protocol designation can be left off (in other words, `foo/bar` and `salt://foo/bar` are equivalent). Assuming a file `baz.sh` in the root of a gitfs remote, and the above example mountpoint, this file would be served up via `salt://foo/bar/baz.sh`.

**gitfs_root**

Default: ''

Relative path to a subdirectory within the repository from which Salt should begin to serve files. This is useful when there are files in the repository that should not be available to the Salt fileserver. Can be used in conjunction with `gitfs_mountpoint`. If used, then from Salt’s perspective the directories above the one specified will be ignored and the relative path will (for the purposes of gitfs) be considered as the root of the repo.

| gitfs_root: somefolder/otherfolder |

Changed in version 2014.7.0: This option can now be configured on individual repositories as well. See [here](#) for more info.
**gitfs_base**

Default: master
Defines which branch/tag should be used as the base environment.

```
**gitfs_base**: salt
```

Changed in version 2014.7.0: This option can now be configured on individual repositories as well. See here for more info.

**gitfs_saltenv**

New in version 2016.11.0.
Default: []
Global settings for per-saltenv configuration parameters. Though per-saltenv configuration parameters are typically one-off changes specific to a single gitfs remote, and thus more often configured on a per-remote basis, this parameter can be used to specify per-saltenv changes which should apply to all remotes. For example, the below configuration will map the develop branch to the dev saltenv for all gitfs remotes.

```
**gitfs_saltenv**: 
  - **dev**:
    - **ref**: develop
```

**gitfs_disable_saltenv_mapping**

New in version 2018.3.0.
Default: False
When set to True, all saltenv mapping logic is disregarded (aside from which branch/tag is mapped to the base saltenv). To use any other environments, they must then be defined using per-saltenv configuration parameters.

```
**gitfs_disable_saltenv_mapping**: True
```

Note: This is is a global configuration option, see here for examples of configuring it for individual repositories.

**gitfs_ref_types**

New in version 2018.3.0.
Default: ['branch', 'tag', 'sha']
This option defines what types of refs are mapped to fileserv environments (i.e. saltenvs). It also sets the order of preference when there are ambiguously-named refs (i.e. when a branch and tag both have the same name). The below example disables mapping of both tags and SHAs, so that only branches are mapped as saltenvs:

```
**gitfs_ref_types**: 
  - branch
```
Note: This is a global configuration option, see here for examples of configuring it for individual repositories.

Note: sha is special in that it will not show up when listing saltenvs (e.g. with the fileserver.envs runner), but works within states and with cp.cache_file to retrieve a file from a specific git SHA.

gitfs_saltenv_whitelist

New in version 2014.7.0.
Changed in version 2018.3.0: Renamed from gitfs_env_whitelist to gitfs_saltenv_whitelist
Default: []

Used to restrict which environments are made available. Can speed up state runs if the repos in gitfs_remotes contain many branches/tags. More information can be found in the GitFS Walkthrough.

```
gitfs_saltenv_whitelist:
  - base
  - v1.*
  - 'mybranch\d+'
```

gitfs_saltenv_blacklist

New in version 2014.7.0.
Changed in version 2018.3.0: Renamed from gitfs_env_blacklist to gitfs_saltenv_blacklist
Default: []

Used to restrict which environments are made available. Can speed up state runs if the repos in gitfs_remotes contain many branches/tags. More information can be found in the GitFS Walkthrough.

```
gitfs_saltenv_blacklist:
  - base
  - v1.*
  - 'mybranch\d+'
```

gitfs_global_lock

New in version 2015.8.9.

Default: True

When set to False, if there is an update lock for a gitfs remote and the pid written to it is not running on the master, the lock file will be automatically cleared and a new lock will be obtained. When set to True, Salt will simply log a warning when there is an update lock present.

On single-master deployments, disabling this option can help automatically deal with instances where the master was shutdown/restarted during the middle of a gitfs update, leaving a update lock in place.

However, on multi-master deployments with the gitfs cachedir shared via GlusterFS, nfs, or another network filesystem, it is strongly recommended not to disable this option as doing so will cause lock files to be removed if they were created by a different master.
# Disable global lock

```yaml
# Disable global lock
gitfs_global_lock: False
```

## gitfs_update_interval

New in version 2018.3.0.

Default: 60

This option defines the default update interval (in seconds) for gitfs remotes. The update interval can also be set for a single repository via a per-remote config option

```yaml
gitfs_update_interval: 120
```

### GitFS Authentication Options

These parameters only currently apply to the pygit2 gitfs provider. Examples of how to use these can be found in the [GitFS Walkthrough](#).

## gitfs_user

New in version 2014.7.0.

Default: `'`

Along with *gitfs_password*, is used to authenticate to HTTPS remotes.

```yaml
# gitfs_user
```

### Note: This is a global configuration option, see here for examples of configuring it for individual repositories.

## gitfs_password

New in version 2014.7.0.

Default: `'`

Along with *gitfs_user*, is used to authenticate to HTTPS remotes. This parameter is not required if the repository does not use authentication.

```yaml
# gitfs_password
```

### Note: This is a global configuration option, see here for examples of configuring it for individual repositories.
**gitfs_insecure_auth**

New in version 2014.7.0.
Default: False

By default, Salt will not authenticate to an HTTP (non-HTTPS) remote. This parameter enables authentication over HTTP. **Enable this at your own risk.**

```
gitfs_insecure_auth: True
```

Note: This is a global configuration option, see [here](#) for examples of configuring it for individual repositories.

**gitfs_pubkey**

New in version 2014.7.0.
Default: ''

Along with `gitfs_privkey` (and optionally `gitfs_passphrase`), is used to authenticate to SSH remotes. Required for SSH remotes.

```
gitfs_pubkey: /path/to/key.pub
```

Note: This is a global configuration option, see [here](#) for examples of configuring it for individual repositories.

**gitfs_privkey**

New in version 2014.7.0.
Default: ''

Along with `gitfs_pubkey` (and optionally `gitfs_passphrase`), is used to authenticate to SSH remotes. Required for SSH remotes.

```
gitfs_privkey: /path/to/key
```

Note: This is a global configuration option, see [here](#) for examples of configuring it for individual repositories.

**gitfs_passphrase**

New in version 2014.7.0.
Default: ''

This parameter is optional, required only when the SSH key being used to authenticate is protected by a passphrase.

```
gitfs_passphrase: mypassphrase
```
Note: This is a global configuration option, see here for examples of configuring it for individual repositories.

**gitfs_refspecs**

New in version 2017.7.0.

Default: `['+refs/heads/*:refs/remotes/origin/*', '+refs/tags/*:refs/tags/*']`

When fetching from remote repositories, by default Salt will fetch branches and tags. This parameter can be used to override the default and specify alternate refspecs to be fetched. More information on how this feature works can be found in the *GitFS Walkthrough*.

```yaml
# gitfs_refspecs
- '+refs/heads/*:refs/remotes/origin/*'
- '+refs/tags/*:refs/tags/*'
- '+refs/pull/*/head:refs/remotes/origin/pr/*'
- '+refs/pull/*/merge:refs/remotes/origin/merge/*'
```

**hgfs: Mercurial Remote File Server Backend**

**hgfs_remotes**

New in version 0.17.0.

Default: `[]`

When using the `hg` fileserver backend at least one mercurial remote needs to be defined. The user running the salt master will need read access to the repo.

The repos will be searched in order to find the file requested by a client and the first repo to have the file will return it. Branches and/or bookmarks are translated into salt environments, as defined by the `hgfs_branch_method` parameter.

```yaml
# hgfs_remotes
- https://username@bitbucket.org/username/reponame

Note: As of 2014.7.0, it is possible to have per-repo versions of the `hgfs_root`, `hgfs_mountpoint`, `hgfs_base`, and `hgfs_branch_method` parameters. For example:

```yaml
# hgfs_remotes
- https://username@bitbucket.org/username/repo1
  - base: saltstates
- https://username@bitbucket.org/username/repo2:
  - root: salt
  - mountpoint: salt://foo/bar/baz
- https://username@bitbucket.org/username/repo3:
  - root: salt/states
  - branch_method: mixed
```

5.1. Configuring the Salt Master
**hgfs_branch_method**

New in version 0.17.0.
Default: branches

Defines the objects that will be used as fileserver environments.

- branches - Only branches and tags will be used
- bookmarks - Only bookmarks and tags will be used
- mixed - Branches, bookmarks, and tags will be used

| hgfs_branch_method | mixed |

Note: Starting in version 2014.1.0, the value of the `hgfs_base` parameter defines which branch is used as the base environment, allowing for a base environment to be used with an `hgfs_branch_method` of bookmarks.

Prior to this release, the default branch will be used as the base environment.

**hgfs_mountpoint**

New in version 2014.7.0.
Default: ''

Specifies a path on the salt fileserver which will be prepended to all files served by hgfs. This option can be used in conjunction with `hgfs_root`. It can also be configured on a per-remote basis, see here for more info.

| hgfs_mountpoint | salt://foo/bar |

Note: The salt:// protocol designation can be left off (in other words, foo/bar and salt://foo/bar are equivalent). Assuming a file baz.sh in the root of an hgfs remote, this file would be served up via salt://foo/bar/baz.sh.

**hgfs_root**

New in version 0.17.0.
Default: ''

Relative path to a subdirectory within the repository from which Salt should begin to serve files. This is useful when there are files in the repository that should not be available to the Salt fileserver. Can be used in conjunction with `hgfs_mountpoint`. If used, then from Salt's perspective the directories above the one specified will be ignored and the relative path will (for the purposes of hgfs) be considered as the root of the repo.

| hgfs_root | somefolder/otherfolder |

Changed in version 2014.7.0: Ability to specify hgfs roots on a per-remote basis was added. See here for more info.
**hgfs_base**

New in version 2014.1.0.

Default: **default**

Defines which branch should be used as the base environment. Change this if `hgfs_branch_method` is set to bookmarks to specify which bookmark should be used as the base environment.

```yaml
hgfs_base: salt
```

**hgfs_saltenv_whitelist**

New in version 2014.7.0.

Changed in version 2018.3.0: Renamed from `hgfs_env_whitelist` to `hgfs_saltenv_whitelist`

Default: `[]`

Used to restrict which environments are made available. Can speed up state runs if your hgfs remotes contain many branches/bookmarks/tags. Full names, globs, and regular expressions are supported. If using a regular expression, the expression must match the entire minion ID.

If used, only branches/bookmarks/tags which match one of the specified expressions will be exposed as fileserver environments.

If used in conjunction with `hgfs_saltenv_blacklist`, then the subset of branches/bookmarks/tags which match the whitelist but do not match the blacklist will be exposed as fileserver environments.

```yaml
hgfs_saltenv_whitelist:
  - base
  - v1.*
  - 'mybranch\d+'
```

**hgfs_saltenv_blacklist**

New in version 2014.7.0.

Changed in version 2018.3.0: Renamed from `hgfs_env_blacklist` to `hgfs_saltenv_blacklist`

Default: `[]`

Used to restrict which environments are made available. Can speed up state runs if your hgfs remotes contain many branches/bookmarks/tags. Full names, globs, and regular expressions are supported. If using a regular expression, the expression must match the entire minion ID.

If used, branches/bookmarks/tags which match one of the specified expressions will not be exposed as fileserver environments.

If used in conjunction with `hgfs_saltenv_whitelist`, then the subset of branches/bookmarks/tags which match the whitelist but do not match the blacklist will be exposed as fileserver environments.

```yaml
hgfs_saltenv_blacklist:
  - base
  - v1.*
  - 'mybranch\d+'
```
**hgfs_update_interval**

New in version 2018.3.0.

Default: 60

This option defines the update interval (in seconds) for `hgfs_remotes`.

| hgfs_update_interval: 120 |

**svnfs: Subversion Remote File Server Backend**

**svnfs_remotes**

New in version 0.17.0.

Default: []

When using the `svn` fileserver backend at least one subversion remote needs to be defined. The user running the salt master will need read access to the repo.

The repos will be searched in order to find the file requested by a client and the first repo to have the file will return it. The trunk, branches, and tags become environments, with the trunk being the base environment.

<table>
<thead>
<tr>
<th>svnfs_remotes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- svn://foo.com/svn/myproject</td>
</tr>
</tbody>
</table>

---

**Note:** As of 2014.7.0, it is possible to have per-repo versions of the following configuration parameters:

- `svnfs_root`
- `svnfs_mountpoint`
- `svnfs_trunk`
- `svnfs_branches`
- `svnfs_tags`

For example:

<table>
<thead>
<tr>
<th>svnfs_remotes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- svn://foo.com/svn/project1</td>
</tr>
<tr>
<td>- svn://foo.com/svn/project2:</td>
</tr>
<tr>
<td>- root: salt</td>
</tr>
<tr>
<td>- mountpoint: salt://foo/bar/baz</td>
</tr>
<tr>
<td>- svn://foo.com/svn/project3:</td>
</tr>
<tr>
<td>- root: salt/states</td>
</tr>
<tr>
<td>- branches: branch</td>
</tr>
<tr>
<td>- tags: tag</td>
</tr>
</tbody>
</table>
**svnfs_mountpoint**

New in version 2014.7.0.

Default: ''

Specifies a path on the salt files server which will be prepended to all files served by hgfs. This option can be used in conjunction with `svnfs_root`. It can also be configured on a per-remote basis, see [here](#) for more info.

```
svnfs_mountpoint: salt://foo/bar
```

**Note:** The `salt://` protocol designation can be left off (in other words, `foo/bar` and `salt://foo/bar` are equivalent). Assuming a file `baz.sh` in the root of an svnfs remote, this file would be served up via `salt://foo/bar/baz.sh`.

**svnfs_root**

New in version 0.17.0.

Default: ''

Relative path to a subdirectory within the repository from which Salt should begin to serve files. This is useful when there are files in the repository that should not be available to the Salt fileserver. Can be used in conjunction with `svnfs_mountpoint`. If used, then from Salt's perspective the directories above the one specified will be ignored and the relative path will (for the purposes of svnfs) be considered as the root of the repo.

```
svnfs_root: somefolder/otherfolder
```

Changed in version 2014.7.0: Ability to specify svnfs roots on a per-remote basis was added. See [here](#) for more info.

**svnfs_trunk**

New in version 2014.7.0.

Default: trunk

Path relative to the root of the repository where the trunk is located. Can also be configured on a per-remote basis, see [here](#) for more info.

```
svnfs_trunk: trunk
```

**svnfs_branches**

New in version 2014.7.0.

Default: branches

Path relative to the root of the repository where the branches are located. Can also be configured on a per-remote basis, see [here](#) for more info.

```
svnfs_branches: branches
```
**svnfs_tags**

New in version 2014.7.0.

Default: **tags**

Path relative to the root of the repository where the tags are located. Can also be configured on a per-remote basis, see _here_ for more info.

```
svnfs_tags: tags
```

**svnfs_saltenv_whitelist**

New in version 2014.7.0.

Changed in version 2018.3.0: Renamed from **svnfs_env_whitelist** to **svnfs_saltenv_whitelist**

Default: `[]`

Used to restrict which environments are made available. Can speed up state runs if your svnfs remotes contain many branches/tags. Full names, globs, and regular expressions are supported. If using a regular expression, the expression must match the entire minion ID.

If used, only branches/tags which match one of the specified expressions will be exposed as fileserver environments. If used in conjunction with **svnfs_saltenv_blacklist**, then the subset of branches/tags which match the whitelist but do **not** match the blacklist will be exposed as fileserver environments.

```
svnfs_saltenv_whitelist:
  - base
  - v1.*
  - 'mybranch\d+'
```

**svnfs_saltenv_blacklist**

New in version 2014.7.0.

Changed in version 2018.3.0: Renamed from **svnfs_env_blacklist** to **svnfs_saltenv_blacklist**

Default: `[]`

Used to restrict which environments are made available. Can speed up state runs if your svnfs remotes contain many branches/tags. Full names, globs, and regular expressions are supported. If using a regular expression, the expression must match the entire minion ID.

If used, branches/tags which match one of the specified expressions will **not** be exposed as fileserver environments. If used in conjunction with **svnfs_saltenv_whitelist**, then the subset of branches/tags which match the whitelist but do **not** match the blacklist will be exposed as fileserver environments.

```
svnfs_saltenv_blacklist:
  - base
  - v1.*
  - 'mybranch\d+'
```
### `svnfs_update_interval`

New in version 2018.3.0.

Default: `60`

This option defines the update interval (in seconds) for `svnfs_remotes`.

| `svnfs_update_interval`: 120 |

### `minionfs`: MinionFS Remote File Server Backend

#### `minionfs_env`

New in version 2014.7.0.

Default: `base`

Environment from which MinionFS files are made available.

| `minionfs_env`: minionfs |

#### `minionfs_mountpoint`

New in version 2014.7.0.

Default: `''`

Specifies a path on the salt fileserver from which minionfs files are served.

| `minionfs_mountpoint`: `salt://foo/bar` |

**Note:** The `salt://` protocol designation can be left off (in other words, `foo/bar` and `salt://foo/bar` are equivalent).

### `minionfs_whitelist`

New in version 2014.7.0.

Default: `[]`

Used to restrict which minions' pushed files are exposed via minionfs. If using a regular expression, the expression must match the entire minion ID.

If used, only the pushed files from minions which match one of the specified expressions will be exposed.

If used in conjunction with `minionfs_blacklist`, then the subset of hosts which match the whitelist but do *not* match the blacklist will be exposed.

<table>
<thead>
<tr>
<th><code>minionfs_whitelist</code>:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- server01</td>
</tr>
<tr>
<td>- dev*</td>
</tr>
<tr>
<td>- 'mail\d+.mydomain.tld'</td>
</tr>
</tbody>
</table>
**minionfs_blacklist**

New in version 2014.7.0.

Default: `[]`

Used to restrict which minions' pushed files are exposed via minionfs. If using a regular expression, the expression must match the entire minion ID.

If used, only the pushed files from minions which match one of the specified expressions will *not* be exposed.

If used in conjunction with `minionfs_whitelist`, then the subset of hosts which match the whitelist but do *not* match the blacklist will be exposed.

```
minionfs_blacklist:
  - server01
  - dev*
  - 'mail\d+.mydomain.tld'
```

**minionfs_update_interval**

New in version 2018.3.0.

Default: `60`

This option defines the update interval (in seconds) for *MinionFS*.

**Note:** Since *MinionFS* consists of files local to the master, the update process for this fileserver backend just reaps the cache for this backend.

```
minionfs_update_interval: 120
```

**azurefs: Azure File Server Backend**

New in version 2015.8.0.

See the azurefs documentation for usage examples.

**azurefs_update_interval**

New in version 2018.3.0.

Default: `60`

This option defines the update interval (in seconds) for azurefs.

```
azurefs_update_interval: 120
```
s3fs: S3 File Server Backend

New in version 0.16.0.
See the s3fs documentation for usage examples.

**s3fs_update_interval**

New in version 2018.3.0.
Default: 60
This option defines the update interval (in seconds) for s3fs.

```
s3fs_update_interval: 120
```

5.1.8 Pillar Configuration

**pillar_roots**

Default:

```
base:
  - /srv/pillar
```

Set the environments and directories used to hold pillar sls data. This configuration is the same as `file_roots`:
As of 2017.7.5 and 2018.3.1, it is possible to have `__env__` as a catch-all environment.

Example:

```
piller_roots:
  base:
    - /srv/pillar
  dev:
    - /srv/pillar/dev
  prod:
    - /srv/pillar/prod
  __env__:
    - /srv/pillar/others
```

**on_demand_ext_pillar**

New in version 2016.3.6, 2016.11.3, 2017.7.0.
Default: ['libvirt', 'virtkey']
The external pillars permitted to be used on-demand using pillar.ext.

```
on_demand_ext_pillar:
  - libvirt
  - virtkey
  - git
```

5.1. Configuring the Salt Master
Warning: This will allow minions to request specific pillar data via pillar.ext, and may be considered a security risk. However, pillar data generated in this way will not affect the in-memory pillar data, so this risk is limited to instances in which states/modules/etc. (built-in or custom) rely upon pillar data generated by pillar.ext.

**decrypt_pillar**

New in version 2017.7.0.

Default: []

A list of paths to be recursively decrypted during pillar compilation.

```yaml
decrypt_pillar:
  - 'foo:bar': gpg
  - 'lorem:ipsum:dolor'
```

Entries in this list can be formatted either as a simple string, or as a key/value pair, with the key being the pillar location, and the value being the renderer to use for pillar decryption. If the former is used, the renderer specified by `decrypt_pillar_default` will be used.

**decrypt_pillar_delimiter**

New in version 2017.7.0.

Default: :

The delimiter used to distinguish nested data structures in the `decrypt_pillar` option.

```yaml
decrypt_pillar_delimiter: '|
decrypt_pillar:
  - 'foo|bar': gpg
  - 'lorem|ipsum|dolor'
```

**decrypt_pillar_default**

New in version 2017.7.0.

Default: gpg

The default renderer used for decryption, if one is not specified for a given pillar key in `decrypt_pillar`.

```yaml
decrypt_pillar_default: my_custom_renderer
```
**decrypt_pillar_renderers**

New in version 2017.7.0.

Default: ['gpg']

List of renderers which are permitted to be used for pillar decryption.

```
decrypt_pillar_renderers:
  - gpg
  - my_custom_renderer
```

**pillar_opts**

Default: False

The `pillar_opts` option adds the master configuration file data to a dict in the pillar called `master`. This can be used to set simple configurations in the master config file that can then be used on minions.

Note that setting this option to `True` means the master config file will be included in all minion's pillars. While this makes global configuration of services and systems easy, it may not be desired if sensitive data is stored in the master configuration.

```
pillar_opts: False
```

**pillar_safe_render_error**

Default: True

The `pillar_safe_render_error` option prevents the master from passing pillar render errors to the minion. This is set on by default because the error could contain templating data which would give that minion information it shouldn’t have, like a password! When set to `True`, the error message will only show:

```
Rendering SLS 'my.sls' failed. Please see master log for details.
```

```
pillar_safe_render_error: True
```

**ext_pillar**

The `ext_pillar` option allows for any number of external pillar interfaces to be called when populating pillar data. The configuration is based on `ext_pillar` functions. The available `ext_pillar` functions can be found herein:

https://github.com/saltstack/salt/blob/master/salt/pillar

By default, the `ext_pillar` interface is not configured to run.

Default: []

```
ext_pillar:
  - hiera: /etc/hiera.yaml
  - cmd_yaml: cat /etc/salt/yaml
  - reclass:
    - inventory_base_uri: /etc/reclass
```

There are additional details at Pillars
ext_pillar_first

New in version 2015.5.0.

Default: False

This option allows for external pillar sources to be evaluated before pillar_roots. External pillar data is evaluated separately from pillar_roots pillar data, and then both sets of pillar data are merged into a single pillar dictionary, so the value of this config option will have an impact on which key "wins" when there is one of the same name in both the external pillar data and pillar_roots pillar data. By setting this option to True, ext_pillar keys will be overridden by pillar_roots, while leaving it as False will allow ext_pillar keys to override those from pillar_roots.

Note: For a while, this config option did not work as specified above, because of a bug in Pillar compilation. This bug has been resolved in version 2016.3.4 and later.

```
ext_pillar_first: False
```

pillarenv_from_saltenv

Default: False

When set to True, the pillarenv value will assume the value of the effective saltenv when running states. This essentially makes salt-run pillar.show_pillar saltenv=dev equivalent to salt-run pillar.show_pillar saltenv=dev pillarenv=dev. If pillarenv is set on the CLI, it will override this option.

```
pillarenv_from_saltenv: True
```

Note: For salt remote execution commands this option should be set in the Minion configuration instead.

pillar_raise_on_missing

New in version 2015.5.0.

Default: False

Set this option to True to force a KeyError to be raised whenever an attempt to retrieve a named value from pillar fails. When this option is set to False, the failed attempt returns an empty string.

Git External Pillar (git_pillar) Configuration Options

git_pillar_provider

New in version 2015.8.0.

Specify the provider to be used for git_pillar. Must be either pygit2 or gitpython. If unset, then both will be tried in that same order, and the first one with a compatible version installed will be the provider that is used.

```
git_pillar_provider: gitpython
```
**git_pillar_base**

New in version 2015.8.0.

Default: master

If the desired branch matches this value, and the environment is omitted from the git_pillar configuration, then the environment for that git_pillar remote will be base. For example, in the configuration below, the foo branch/tag would be assigned to the base environment, while bar would be mapped to the bar environment.

```
<table>
<thead>
<tr>
<th>git_pillar_base: foo</th>
</tr>
</thead>
<tbody>
<tr>
<td>ext_pillar:</td>
</tr>
<tr>
<td>- git:</td>
</tr>
<tr>
<td>- foo <a href="https://mygitserver/git-pillar.git">https://mygitserver/git-pillar.git</a></td>
</tr>
<tr>
<td>- bar <a href="https://mygitserver/git-pillar.git">https://mygitserver/git-pillar.git</a></td>
</tr>
</tbody>
</table>
```

**git_pillar_branch**

New in version 2015.8.0.

Default: master

If the branch is omitted from a git_pillar remote, then this branch will be used instead. For example, in the configuration below, the first two remotes would use the pillardata branch/tag, while the third would use the foo branch/tag.

```
<table>
<thead>
<tr>
<th>git_pillar_branch: pillardata</th>
</tr>
</thead>
<tbody>
<tr>
<td>ext_pillar:</td>
</tr>
<tr>
<td>- git:</td>
</tr>
<tr>
<td>- <a href="https://mygitserver/pillar1.git">https://mygitserver/pillar1.git</a></td>
</tr>
<tr>
<td>- <a href="https://mygitserver/pillar2.git">https://mygitserver/pillar2.git</a>:</td>
</tr>
<tr>
<td>- root: pillar</td>
</tr>
<tr>
<td>- foo <a href="https://mygitserver/pillar3.git">https://mygitserver/pillar3.git</a></td>
</tr>
</tbody>
</table>
```

**git_pillar_env**

New in version 2015.8.0.

Default: '' (unset)

Environment to use for git_pillar remotes. This is normally derived from the branch/tag (or from a per-remote env parameter), but if set this will override the process of deriving the env from the branch/tag name. For example, in the configuration below the foo branch would be assigned to the base environment, while the bar branch would need to explicitly have bar configured as its environment to keep it from also being mapped to the base environment.

```
<table>
<thead>
<tr>
<th>git_pillar_env: base</th>
</tr>
</thead>
<tbody>
<tr>
<td>ext_pillar:</td>
</tr>
<tr>
<td>- git:</td>
</tr>
<tr>
<td>- foo <a href="https://mygitserver/git-pillar.git">https://mygitserver/git-pillar.git</a></td>
</tr>
<tr>
<td>- bar <a href="https://mygitserver/git-pillar.git">https://mygitserver/git-pillar.git</a>:</td>
</tr>
<tr>
<td>- env: bar</td>
</tr>
</tbody>
</table>
```

5.1. Configuring the Salt Master
For this reason, this option is recommended to be left unset, unless the use case calls for all (or almost all) of the git_pillar remotes to use the same environment irrespective of the branch/tag being used.

**git_pillar_root**

New in version 2015.8.0.

Default: ''

Path relative to the root of the repository where the git_pillar top file and SLS files are located. In the below configuration, the pillar top file and SLS files would be looked for in a subdirectory called *pillar*.

```yaml
# ext_pillar:
- git:
  - master https://mygitserver/pillar1.git
  - master https://mygitserver/pillar2.git
```

**Note:** This is a global option. If only one or two repos need to have their files sourced from a subdirectory, then *git_pillar_root* can be omitted and the root can be specified on a per-remote basis, like so:

```yaml
# ext_pillar:
- git:
  - master https://mygitserver/pillar1.git
  - master https://mygitserver/pillar2.git:
    - root: pillar
```

In this example, for the first remote the top file and SLS files would be looked for in the root of the repository, while in the second remote the pillar data would be retrieved from the *pillar* subdirectory.

**git_pillar_ssl_verify**

New in version 2015.8.0.

Changed in version 2016.11.0.

Default: False

Specifies whether or not to ignore SSL certificate errors when contacting the remote repository. The False setting is useful if you’re using a git repo that uses a self-signed certificate. However, keep in mind that setting this to anything other True is a considered insecure, and using an SSH-based transport (if available) may be a better option.

In the 2016.11.0 release, the default config value changed from False to True.

```yaml
# git_pillar_ssl_verify: True
```

**Note:** pygit2 only supports disabling SSL verification in versions 0.23.2 and newer.
**git_pillar_global_lock**

New in version 2015.8.9.

Default: True

When set to False, if there is an update/checkout lock for a git_pillar remote and the pid written to it is not running on the master, the lock file will be automatically cleared and a new lock will be obtained. When set to True, Salt will simply log a warning when there is an lock present.

On single-master deployments, disabling this option can help automatically deal with instances where the master was shutdown/restarted during the middle of a git_pillar update/checkout, leaving a lock in place.

However, on multi-master deployments with the git_pillar cachedir shared via GlusterFS, nfs, or another network filesystem, it is strongly recommended not to disable this option as doing so will cause lock files to be removed if they were created by a different master.

```yaml
# Disable global lock
git_pillar_global_lock: False
```

**git_pillar_includes**

New in version 2017.7.0.

Default: True

Normally, when processing git_pillar remotes, if more than one repo under the same git section in the ext_pillar configuration refers to the same pillar environment, then each repo in a given environment will have access to the other repos' files to be referenced in their top files. However, it may be desirable to disable this behavior. If so, set this value to False.

For a more detailed examination of how includes work, see this explanation from the git_pillar documentation.

```yaml
git_pillar_includes: False
```

**git_pillar_update_interval**

New in version 3000.

Default: 60

This option defines the default update interval (in seconds) for git_pillar remotes. The update is handled within the global loop, hence git_pillar_update_interval should be a multiple of loop_interval.

```yaml
git_pillar_update_interval: 120
```
Git External Pillar Authentication Options

These parameters only currently apply to the pygit2 `git_pillar_provider`. Authentication works the same as it does in gitfs, as outlined in the `GitFS Walkthrough`, though the global configuration options are named differently to reflect that they are for `git_pillar` instead of `gitfs`.

**git_pillar_user**

New in version 2015.8.0.

Default: ''

Along with `git_pillar_password`, is used to authenticate to HTTPS remotes.

```
git_pillar_user: git
```

**git_pillar_password**

New in version 2015.8.0.

Default: ''

Along with `git_pillar_user`, is used to authenticate to HTTPS remotes. This parameter is not required if the repository does not use authentication.

```
git_pillar_password: mypassword
```

**git_pillar_insecure_auth**

New in version 2015.8.0.

Default: False

By default, Salt will not authenticate to an HTTP (non-HTTPS) remote. This parameter enables authentication over HTTP. Enable this at your own risk.

```
git_pillar_insecure_auth: True
```

**git_pillar_pubkey**

New in version 2015.8.0.

Default: ''

Along with `git_pillar_privkey` (and optionally `git_pillar_passphrase`), is used to authenticate to SSH remotes.

```
git_pillar_pubkey: /path/to/key.pub
```
**git_pillar_privkey**

New in version 2015.8.0.
Default: ''
Along with `git_pillar_pubkey` (and optionally `git_pillar_passphrase`), is used to authenticate to SSH remotes.

| **git_pillar_privkey** | /path/to/key |

**git_pillar_passphrase**

New in version 2015.8.0.
Default: ''
This parameter is optional, required only when the SSH key being used to authenticate is protected by a passphrase.

| **git_pillar_passphrase** | mypassphrase |

**git_pillar_refspecs**

New in version 2017.7.0.
Default: ['+refs/heads/*:refs/remotes/origin/*', '+refs/tags/*:refs/tags/*']
When fetching from remote repositories, by default Salt will fetch branches and tags. This parameter can be used to override the default and specify alternate refspecs to be fetched. This parameter works similarly to its GitFS counterpart, in that it can be configured both globally and for individual remotes.

<table>
<thead>
<tr>
<th><strong>git_pillar_refspecs</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- '+refs/heads/<em>:refs/remotes/origin/</em>'</td>
</tr>
<tr>
<td>- '+refs/tags/<em>:refs/tags/</em>'</td>
</tr>
<tr>
<td>- '+refs/pull/<em>/head:refs/remotes/origin/pr/</em>'</td>
</tr>
<tr>
<td>- '+refs/pull/<em>/merge:refs/remotes/origin/merge/</em>'</td>
</tr>
</tbody>
</table>

**git_pillar_verify_config**

New in version 2017.7.0.
Default: True
By default, as the master starts it performs some sanity checks on the configured git_pillar repositories. If any of these sanity checks fail (such as when an invalid configuration is used), the master daemon will abort.
To skip these sanity checks, set this option to False.

| **git_pillar_verify_config** | False |
Pillar Merging Options

pillar_source_merging_strategy

New in version 2014.7.0.

Default: smart

The pillar_source_merging_strategy option allows you to configure merging strategy between different sources. It accepts 5 values:

- none:
  
  It will not do any merging at all and only parse the pillar data from the passed environment and 'base' if no environment was specified.
  
  New in version 2016.3.4.

- recurse:
  
  It will recursively merge data. For example, these 2 sources:

  ```yaml
  foo: 42
  bar:
    element1: True
  
  bar:
    element2: True
  baz: quux
  ```

  will be merged as:

  ```yaml
  foo: 42
  bar:
    element1: True
    element2: True
  baz: quux
  ```

- aggregate:
  
  instructs aggregation of elements between sources that use the #!yamlex renderer.
  
  For example, these two documents:

  ```yaml
  foo: 42
  bar: !aggregate {
    element1: True
  }
  baz: !aggregate quux
  
  bar: !aggregate {
    element2: True
  }
  baz: !aggregate quux2
  ```

  will be merged as:

  ```yaml
  foo: 42
  bar:
  ```

  (continues on next page)
Note: This requires that the `render pipeline` defined in the `renderer` master configuration ends in `yamlex`.

- **overwrite:**
  Will use the behaviour of the 2014.1 branch and earlier.
  Overwrites elements according the order in which they are processed.

  First pillar processed:

  ```yaml
  A:
    first_key: blah
    second_key: blah
  ```

  Second pillar processed:

  ```yaml
  A:
    third_key: blah
    fourth_key: blah
  ```

  will be merged as:

  ```yaml
  A:
    third_key: blah
    fourth_key: blah
  ```

- **smart** (default):
  Guesses the best strategy based on the "renderer" setting.

  Note: In order for yamlex based features such as `!aggregate` to work as expected across documents using the default `smart` merge strategy, the `renderer` config option must be set to `jinja|yamlex` or similar.

  **pillar_merge_lists**

  New in version 2015.8.0.
  Default: False
  Recursively merge lists by aggregating them instead of replacing them.

  ```yaml
  pillar_merge_lists: False
  ```
pillar_includes_override_sls

New in version 2017.7.6,2018.3.1.
Default: False

Prior to version 2017.7.3, keys from pillar includes would be merged on top of the pillar SLS. Since 2017.7.3, the includes are merged together and then the pillar SLS is merged on top of that.

Set this option to True to return to the old behavior.

| pillar_includes_override_sls: True |

Pillar Cache Options

pillar_cache

Default: False

A master can cache pillars locally to bypass the expense of having to render them for each minion on every request. This feature should only be enabled in cases where pillar rendering time is known to be unsatisfactory and any attendant security concerns about storing pillars in a master cache have been addressed.

When enabling this feature, be certain to read through the additional pillar_cache_* configuration options to fully understand the tunable parameters and their implications.

| pillar_cache: False |

Note: Setting pillar_cache: True has no effect on targeting minions with pillar.

pillar_cache_ttl

Default: 3600

If and only if a master has set pillar_cache: True, the cache TTL controls the amount of time, in seconds, before the cache is considered invalid by a master and a fresh pillar is recompiled and stored.

pillar_cache_backend

Default: disk

If an only if a master has set pillar_cache: True, one of several storage providers can be utilized:

- disk (default):
  The default storage backend. This caches rendered pillars to the master cache. Rendered pillars are serialized and deserialized as msgpack structures for speed. Note that pillars are stored UNENCRYPTED. Ensure that the master cache has permissions set appropriately (sane defaults are provided).
• memory [EXPERIMENTAL]:

An optional backend for pillar caches which uses a pure-Python in-memory data structure for maximal performance. There are several caveats, however. First, because each master worker contains its own in-memory cache, there is no guarantee of cache consistency between minion requests. This works best in situations where the pillar rarely if ever changes. Secondly, and perhaps more importantly, this means that unencrypted pillars will be accessible to any process which can examine the memory of the salt-master! This may represent a substantial security risk.

```
pillar_cache_backend: disk
```

### 5.1.9 Master Reactor Settings

**reactor**

Default: []

Defines a salt reactor. See the *Reactor* documentation for more information.

```
reactor:
  - 'salt/minion/*/start':
  - salt://reactor/startup_tasks.sls
```

**reactor_refresh_interval**

Default: 60

The TTL for the cache of the reactor configuration.

```
reactor_refresh_interval: 60
```

**reactor_worker_threads**

Default: 10

The number of workers for the runner/wheel in the reactor.

```
reactor_worker_threads: 10
```

**reactor_worker_hwm**

Default: 10000

The queue size for workers in the reactor.

```
reactor_worker_hwm: 10000
```
5.1.10 Salt-API Master Settings

There are some settings for `salt-api` that can be configured on the Salt Master.

**api_logfile**

Default: `/var/log/salt/api`

The logfile location for `salt-api`.

```
api_logfile: /var/log/salt/api
```

**api_pidfile**

Default: `/var/run/salt-api.pid`

If this master will be running `salt-api`, specify the pidfile of the `salt-api` daemon.

```
api_pidfile: /var/run/salt-api.pid
```

**rest_timeout**

Default: 300

Used by `salt-api` for the master requests timeout.

```
rest_timeout: 300
```

5.1.11 Syndic Server Settings

A Salt syndic is a Salt master used to pass commands from a higher Salt master to minions below the syndic. Using the syndic is simple. If this is a master that will have syndic servers(s) below it, set the `order_masters` setting to True.

If this is a master that will be running a syndic daemon for passthrough the `syndic_master` setting needs to be set to the location of the master server.

Do not forget that, in other words, it means that it shares with the local minion its ID and PKI directory.

**order_masters**

Default: False

Extra data needs to be sent with publications if the master is controlling a lower level master via a syndic minion. If this is the case the `order_masters` value must be set to True.

```
order_masters: False
```
**syndic_master**

Changed in version 2016.3.5,2016.11.1: Set default higher level master address.

Default: `masterofmasters`

If this master will be running the `salt-syndic` to connect to a higher level master, specify the higher level master with this configuration value.

```yaml
syndic_master: masterofmasters
```

You can optionally connect a syndic to multiple higher level masters by setting the `syndic_master` value to a list:

```yaml
syndic_master:
  - masterofmasters1
  - masterofmasters2
```

Each higher level master must be set up in a multi-master configuration.

**syndic_master_port**

Default: 4506

If this master will be running the `salt-syndic` to connect to a higher level master, specify the higher level master port with this configuration value.

```yaml
syndic_master_port: 4506
```

**syndic_pidfile**

Default: `/var/run/salt-syndic.pid`

If this master will be running the `salt-syndic` to connect to a higher level master, specify the pidfile of the syndic daemon.

```yaml
syndic_pidfile: /var/run/syndic.pid
```

**syndic_log_file**

Default: `/var/log/salt/syndic`

If this master will be running the `salt-syndic` to connect to a higher level master, specify the log file of the syndic daemon.

```yaml
syndic_log_file: /var/log/salt-syndic.log
```
syndic_failover

New in version 2016.3.0.
Default: random

The behaviour of the multi-syndic when connection to a master of masters failed. Can specify random (default) or ordered. If set to random, masters will be iterated in random order. If ordered is specified, the configured order will be used.

| syndic_failover: random |

syndic_wait

Default: 5

The number of seconds for the salt client to wait for additional syndics to check in with their lists of expected minions before giving up.

| syndic_wait: 5 |

syndic_forward_all_events

New in version 2017.7.0.
Default: False

Option on multi-syndic or single when connected to multiple masters to be able to send events to all connected masters.

| syndic_forward_all_events: False |

5.1.12 Peer Publish Settings

Salt minions can send commands to other minions, but only if the minion is allowed to. By default "Peer Publication" is disabled, and when enabled it is enabled for specific minions and specific commands. This allows secure compartmentalization of commands based on individual minions.

peer

Default: {}

The configuration uses regular expressions to match minions and then a list of regular expressions to match functions. The following will allow the minion authenticated as foo.example.com to execute functions from the test and pkg modules.

| peer: |
| foo.example.com: |
| - test.* |
| - pkg.* |

This will allow all minions to execute all commands:
peer:
  .*:
    - .*

This is not recommended, since it would allow anyone who gets root on any single minion to instantly have root on all of the minions!

By adding an additional layer you can limit the target hosts in addition to the accessible commands:

peer:
  foo.example.com:
    'db*':
      - test.*
      - pkg.*

peer_run

Default: {}

The peer_run option is used to open up runners on the master to access from the minions. The peer_run configuration matches the format of the peer configuration.

The following example would allow foo.example.com to execute the manage.up runner:

peer_run:
  foo.example.com:
    - manage.up

5.1.13 Master Logging Settings

log_file

Default: /var/log/salt/master

The master log can be sent to a regular file, local path name, or network location. See also log_file.

Examples:

log_file: /var/log/salt/master

log_file: file:///dev/log

log_file: udp://loghost:10514
**log_level**

Default: warning

The level of messages to send to the console. See also *log_level*.

```
log_level: warning
```

**log_level_logfile**

Default: warning

The level of messages to send to the log file. See also *log_level_logfile*. When it is not set explicitly it will inherit the level set by *log_level* option.

```
log_level_logfile: warning
```

**log_datefmt**

Default: %H:%M:%S

The date and time format used in console log messages. See also *log_datefmt*.

```
log_datefmt: '%H:%M:%S'
```

**log_datefmt_logfile**

Default: %Y-%m-%d %H:%M:%S

The date and time format used in log file messages. See also *log_datefmt_logfile*.

```
log_datefmt_logfile: '%Y-%m-%d %H:%M:%S'
```

**log_fmt_console**

Default: [%{levelname}-8s] %{message}s

The format of the console logging messages. See also *log_fmt_console*.

Note: Log colors are enabled in *log_fmt_console* rather than the *color* config since the logging system is loaded before the master config.

Console log colors are specified by these additional formatters:

%{colorlevel}s %{colormsg}s

Since it is desirable to include the surrounding brackets, `[` and `]`, in the coloring of the messages, these color formatters also include padding as well. Color LogRecord attributes are only available for console logging.

```
log_fmt_console: '%{colorlevel}s %{colormsg}s'
log_fmt_console: '[%{levelname}-8s] %{message}s'
```
log_fmt_logfile

Default: `%%(asctime)s,%(msecs)03d [%(name)-17s][%(levelname)-8s] %(message)s`
The format of the log file logging messages. See also log_fmt_logfile.

log_granular_levels

Default: {}
This can be used to control logging levels more specifically. See also log_granular_levels.

log_rotate_max_bytes

Default: 0
The maximum number of bytes a single log file may contain before it is rotated. A value of 0 disables this feature. Currently only supported on Windows. On other platforms, use an external tool such as 'logrotate' to manage log files.

log_rotate_backup_count

Default: 0
The number of backup files to keep when rotating log files. Only used if log_rotate_max_bytes is greater than 0. Currently only supported on Windows. On other platforms, use an external tool such as 'logrotate' to manage log files.

5.1.14 Node Groups

nodegroups

Default: {}
Node groups allow for logical groupings of minion nodes. A group consists of a group name and a compound target.

nodegroups:
  group1: 'L@foo.domain.com,bar.domain.com,baz.domain.com or bl*.domain.com'
  group2: 'G@os:Debian and foo.domain.com'
  group3: 'G@os:Debian and N@group1'
  group4:
    - 'G@foo:bar'
    - 'or'
    - 'G@foo:baz'

More information on using nodegroups can be found here.
5.1.15 Range Cluster Settings

range_server

Default: 'range:80'

The range server (and optional port) that serves your cluster information https://github.com/ytoolshed/range/wiki/%22yamlfile%22-module-file-spec

| range_server: range:80 |

5.1.16 Include Configuration

Configuration can be loaded from multiple files. The order in which this is done is:

1. The master config file itself
2. The files matching the glob in default_include
3. The files matching the glob in include (if defined)

Each successive step overrides any values defined in the previous steps. Therefore, any config options defined in one of the default_include files would override the same value in the master config file, and any options defined in include would override both.

default_include

Default: master.d/*.conf

The master can include configuration from other files. Per default the master will automatically include all config files from master.d/*.conf where master.d is relative to the directory of the master configuration file.

Note: Salt creates files in the master.d directory for its own use. These files are prefixed with an underscore. A common example of this is the _schedule.conf file.

include

Default: not defined

The master can include configuration from other files. To enable this, pass a list of paths to this option. The paths can be either relative or absolute; if relative, they are considered to be relative to the directory the main minion configuration file lives in. Paths can make use of shell-style globbing. If no files are matched by a path passed to this option then the master will log a warning message.

```
# Include files from a master.d directory in the same directory as the master config file
include: master.d/*

# Include a single extra file into the configuration
include: /etc/roles/webserver

# Include several files and the master.d directory
include:
```

(continues on next page)
5.1.17 Keepalive Settings

**tcp_keepalive**

Default: True

The tcp keepalive interval to set on TCP ports. This setting can be used to tune Salt connectivity issues in messy network environments with misbehaving firewalls.

```yaml
tcp_keepalive: True
```

**tcp_keepalive_cnt**

Default: -1

Sets the ZeroMQ TCP keepalive count. May be used to tune issues with minion disconnects.

```yaml
tcp_keepalive_cnt: -1
```

**tcp_keepalive_idle**

Default: 300

Sets ZeroMQ TCP keepalive idle. May be used to tune issues with minion disconnects.

```yaml
tcp_keepalive_idle: 300
```

**tcp_keepalive_intvl**

Default: -1

Sets ZeroMQ TCP keepalive interval. May be used to tune issues with minion disconnects.

```yaml
tcp_keepalive_intvl': -1
```

5.1.18 Windows Software Repo Settings

**winrepo_provider**

New in version 2015.8.0.

Specify the provider to be used for winrepo. Must be either pygit2 or gitpython. If unset, then both will be tried in that same order, and the first one with a compatible version installed will be the provider that is used.

```yaml
winrepo_provider: gitpython
```
**winrepo_dir**

Changed in version 2015.8.0: Renamed from `win_repo` to `winrepo_dir`.

Default: `/srv/salt/win/repo`

Location on the master where the `winrepo_remotes` are checked out for pre-2015.8.0 minions. 2015.8.0 and later minions use `winrepo_remotes_ng` instead.

```plaintext
winrepo_dir: /srv/salt/win/repo
```

**winrepo_dir_ng**

New in version 2015.8.0: A new ng repo was added.

Default: `/srv/salt/win/repo-ng`

Location on the master where the `winrepo_remotes_ng` are checked out for 2015.8.0 and later minions.

```plaintext
winrepo_dir_ng: /srv/salt/win/repo-ng
```

**winrepo_cachefile**

Changed in version 2015.8.0: Renamed from `win_repo_mastercachefile` to `winrepo_cachefile`.

Note: 2015.8.0 and later minions do not use this setting since the cachefile is now generated by the minion.

Default: `winrepo.p`

Path relative to `winrepo_dir` where the winrepo cache should be created.

```plaintext
winrepo_cachefile: winrepo.p
```

**winrepo_remotes**

Changed in version 2015.8.0: Renamed from `win_gitrepos` to `winrepo_remotes`.

Default: `['https://github.com/saltstack/salt-winrepo.git']`

List of git repositories to checkout and include in the winrepo for pre-2015.8.0 minions. 2015.8.0 and later minions use `winrepo_remotes_ng` instead.

```plaintext
winrepo_remotes:
  - https://github.com/saltstack/salt-winrepo.git
```

To specify a specific revision of the repository, prepend a commit ID to the URL of the repository:

```plaintext
winrepo_remotes:
  - '<commit_id> https://github.com/saltstack/salt-winrepo.git'
```

Replace `<commit_id>` with the SHA1 hash of a commit ID. Specifying a commit ID is useful in that it allows one to revert back to a previous version in the event that an error is introduced in the latest revision of the repo.
**winrepo_remotes_ng**

New in version 2015.8.0: A new `ng` repo was added.

Default: ['https://github.com/saltstack/salt-winrepo-ng.git']

List of git repositories to checkout and include in the winrepo for 2015.8.0 and later minions.

<table>
<thead>
<tr>
<th>winrepo_remotes_ng:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>- <a href="https://github.com/saltstack/salt-winrepo-ng.git">https://github.com/saltstack/salt-winrepo-ng.git</a></td>
</tr>
</tbody>
</table>

To specify a specific revision of the repository, prepend a commit ID to the URL of the repository:

<table>
<thead>
<tr>
<th>winrepo_remotes_ng:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>- '&lt;commit_id&gt; <a href="https://github.com/saltstack/salt-winrepo-ng.git">https://github.com/saltstack/salt-winrepo-ng.git</a>'</td>
</tr>
</tbody>
</table>

Replace `<commit_id>` with the SHA1 hash of a commit ID. Specifying a commit ID is useful in that it allows one to revert back to a previous version in the event that an error is introduced in the latest revision of the repo.

**winrepo_branch**

New in version 2015.8.0.

Default: master

If the branch is omitted from a winrepo remote, then this branch will be used instead. For example, in the configuration below, the first two remotes would use the `winrepo` branch/tag, while the third would use the `foo` branch/tag.

<table>
<thead>
<tr>
<th>winrepo_branch: winrepo</th>
</tr>
</thead>
<tbody>
<tr>
<td>winrepo_remotes:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>- <a href="https://mygitserver/winrepo1.git">https://mygitserver/winrepo1.git</a></td>
</tr>
<tr>
<td>- <a href="https://mygitserver/winrepo2.git">https://mygitserver/winrepo2.git</a>:</td>
</tr>
<tr>
<td>- foo <a href="https://mygitserver/winrepo3.git">https://mygitserver/winrepo3.git</a></td>
</tr>
</tbody>
</table>

**winrepo_ssl_verify**

New in version 2015.8.0.

Changed in version 2016.11.0.

Default: False

Specifies whether or not to ignore SSL certificate errors when contacting the remote repository. The False setting is useful if you’re using a git repo that uses a self-signed certificate. However, keep in mind that setting this to anything other True is a considered insecure, and using an SSH-based transport (if available) may be a better option.

In the 2016.11.0 release, the default config value changed from False to True.

| winrepo_ssl_verify: True |
Winrepo Authentication Options

These parameters only currently apply to the pygit2\texttt{winrepo}\_provider. Authentication works the same as it does in gitfs, as outlined in the \textit{GitFS Walkthrough}, though the global configuration options are named differently to reflect that they are for winrepo instead of gitfs.

\textbf{\texttt{winrepo}\_user}

New in version 2015.8.0.

Default: ''

Along with \texttt{winrepo}\_password, is used to authenticate to HTTPS remotes.

\begin{verbatim}
\texttt{winrepo}\_user: git
\end{verbatim}

\textbf{\texttt{winrepo}\_password}

New in version 2015.8.0.

Default: ''

Along with \texttt{winrepo}\_user, is used to authenticate to HTTPS remotes. This parameter is not required if the repository does not use authentication.

\begin{verbatim}
\texttt{winrepo}\_password: mypassword
\end{verbatim}

\textbf{\texttt{winrepo}\_insecure\_auth}

New in version 2015.8.0.

Default: False

By default, Salt will not authenticate to an HTTP (non-HTTPS) remote. This parameter enables authentication over HTTP. Enable this at your own risk.

\begin{verbatim}
\texttt{winrepo}\_insecure\_auth: True
\end{verbatim}

\textbf{\texttt{winrepo}\_pubkey}

New in version 2015.8.0.

Default: ''

Along with \texttt{winrepo}\_privkey (and optionally \texttt{winrepo}\_passphrase), is used to authenticate to SSH remotes.

\begin{verbatim}
\texttt{winrepo}\_pubkey: /path/to/key.pub
\end{verbatim}
**winrepo_privkey**

New in version 2015.8.0.
Default: ''
Along with `winrepo_pubkey` (and optionally `winrepo_passphrase`), is used to authenticate to SSH remotes.

```
winrepo_privkey: /path/to/key
```

**winrepo_passphrase**

New in version 2015.8.0.
Default: ''
This parameter is optional, required only when the SSH key being used to authenticate is protected by a passphrase.

```
winrepo_passphrase: mypassphrase
```

**winrepo_refspecs**

New in version 2017.7.0.
Default: `['+refs/heads/*/refs/remotes/origin/*', '+refs/tags/*/refs/tags/*']`
When fetching from remote repositories, by default Salt will fetch branches and tags. This parameter can be used to override the default and specify alternate refspecs to be fetched. This parameter works similarly to its GitFS counterpart, in that it can be configured both globally and for individual remotes.

```
winrepo_refspecs:
  - '+refs/heads/*/refs/remotes/origin/*'
  - '+refs/tags/*/refs/tags/*'
  - '+refs/pull/*/head:refs/remotes/origin/pr/*'
  - '+refs/pull/*/merge:refs/remotes/origin/merge/*'
```

5.1.19 Configure Master on Windows

The master on Windows requires no additional configuration. You can modify the master configuration by creating/editing the master config file located at `c:\salt\conf\master`. The same configuration options available on Linux are available in Windows, as long as they apply. For example, SSH options wouldn't apply in Windows.
The main differences are the file paths. If you are familiar with common salt paths, the following table may be useful:

<table>
<thead>
<tr>
<th>linux Paths</th>
<th>Windows Paths</th>
</tr>
</thead>
<tbody>
<tr>
<td>/etc/salt</td>
<td>c:\salt\conf</td>
</tr>
<tr>
<td>/</td>
<td>c:\salt</td>
</tr>
</tbody>
</table>

So, for example, the master config file in Linux is `/etc/salt/master`. In Windows the master config file is `c:\salt\conf\master`. The Linux path `/etc/salt` becomes `c:\salt\conf` in Windows.
Common File Locations

<table>
<thead>
<tr>
<th>Linux Paths</th>
<th>Windows Paths</th>
</tr>
</thead>
<tbody>
<tr>
<td>conf_file: /etc/salt/master</td>
<td>conf_file: c:\salt\conf\master</td>
</tr>
<tr>
<td>log_file: /var/log/salt/master</td>
<td>log_file: c:\salt\var\log\salt\master</td>
</tr>
<tr>
<td>pidfile: /var/run/salt-master.pid</td>
<td>pidfile: c:\salt\var\run\salt-master.pid</td>
</tr>
</tbody>
</table>

Common Directories

<table>
<thead>
<tr>
<th>Linux Paths</th>
<th>Windows Paths</th>
</tr>
</thead>
<tbody>
<tr>
<td>cachedir: /var/cache/salt/master</td>
<td>cachedir: c:\salt\var\cache\salt\master</td>
</tr>
<tr>
<td>extension_modules: /var/cache/salt/master/extmods</td>
<td>c:\salt\var\cache\salt\master\extmods</td>
</tr>
<tr>
<td>pki_dir: /etc/salt/pki/master</td>
<td>pki_dir: c:\salt\conf\pki\master</td>
</tr>
<tr>
<td>root_dir: /</td>
<td>root_dir: c:\salt</td>
</tr>
<tr>
<td>sock_dir: /var/run/salt/master</td>
<td>sock_dir: c:\salt\var\run\salt\master</td>
</tr>
</tbody>
</table>

Roots

file_roots

<table>
<thead>
<tr>
<th>Linux Paths</th>
<th>Windows Paths</th>
</tr>
</thead>
<tbody>
<tr>
<td>/srv/salt</td>
<td>c:\salt\srv\salt</td>
</tr>
<tr>
<td>/srv/spm/salt</td>
<td>c:\salt\srv\spm\salt</td>
</tr>
</tbody>
</table>

pillar_roots

<table>
<thead>
<tr>
<th>Linux Paths</th>
<th>Windows Paths</th>
</tr>
</thead>
<tbody>
<tr>
<td>/srv/pillar</td>
<td>c:\salt\srv\pillar</td>
</tr>
<tr>
<td>/srv/spm/pillar</td>
<td>c:\salt\srv\spm\pillar</td>
</tr>
</tbody>
</table>

Win Repo Settings

<table>
<thead>
<tr>
<th>Linux Paths</th>
<th>Windows Paths</th>
</tr>
</thead>
<tbody>
<tr>
<td>winrepo_dir: /srv/salt/win/repo</td>
<td>winrepo_dir: c:\salt\srv\salt\win\repo</td>
</tr>
<tr>
<td>winrepo_dir_ng: /srv/salt/win/repo-ng</td>
<td>winrepo_dir_ng: c:\salt\srv\salt\win\repo-ng</td>
</tr>
</tbody>
</table>
5.2 Configuring the Salt Minion

The Salt system is amazingly simple and easy to configure. The two components of the Salt system each have a respective configuration file. The salt-master is configured via the master configuration file, and the salt-minion is configured via the minion configuration file.

See also:
example minion configuration file

The Salt Minion configuration is very simple. Typically, the only value that needs to be set is the master value so the minion knows where to locate its master.

By default, the salt-minion configuration will be in /etc/salt/minion. A notable exception is FreeBSD, where the configuration will be in /usr/local/etc/salt/minion.

5.2.1 Minion Primary Configuration

master

Default: salt
The hostname or IP address of the master. See ipv6 for IPv6 connections to the master.

Default: salt

```
master: salt
```

master:port Syntax

New in version 2015.8.0.
The master config option can also be set to use the master's IP in conjunction with a port number by default.

```
master: localhost:1234
```

For IPv6 formatting with a port, remember to add brackets around the IP address before adding the port and enclose the line in single quotes to make it a string:

```
```

Note: If a port is specified in the master as well as master_port, the master_port setting will be overridden by the master configuration.
List of Masters Syntax

The option can also be set to a list of masters, enabling multi-master mode.

```
master:
    - address1
    - address2
```

Changed in version 2014.7.0: The master can be dynamically configured. The `master` value can be set to an module function which will be executed and will assume that the returning value is the ip or hostname of the desired master. If a function is being specified, then the `master_type` option must be set to `func`, to tell the minion that the value is a function to be run and not a fully-qualified domain name.

```
master: module.function
master_type: func
```

In addition, instead of using multi-master mode, the minion can be configured to use the list of master addresses as a failover list, trying the first address, then the second, etc. until the minion successfully connects. To enable this behavior, set `master_type` to `failover`:

```
master:
    - address1
    - address2
master_type: failover
```

**color**

Default: True

By default output is colored. To disable colored output, set the color value to False.

**ipv6**

Default: None

Whether the master should be connected over IPv6. By default salt minion will try to automatically detect IPv6 connectivity to master.

```
ipv6: True
```

**master_uri_format**

New in version 2015.8.0.

Specify the format in which the master address will be evaluated. Valid options are default or ip_only. If `ip_only` is specified, then the master address will not be split into IP and PORT, so be sure that only an IP (or domain name) is set in the `master` configuration setting.

```
master_uri_format: ip_only
```
**master_tops_first**

New in version 2018.3.0.

Default: False

SLS targets defined using the *Master Tops* system are normally executed after any matches defined in the *Top File*. Set this option to True to have the minion execute the *Master Tops* states first.

```
master_tops_first: True
```

**master_type**

New in version 2014.7.0.

Default: str

The type of the master variable. Can be str, failover, func or disable.

```
master_type: failover
```

If this option is set to failover, master must be a list of master addresses. The minion will then try each master in the order specified in the list until it successfully connects. master_alive_interval must also be set, this determines how often the minion will verify the presence of the master.

```
master_type: func
```

If the master needs to be dynamically assigned by executing a function instead of reading in the static master value, set this to func. This can be used to manage the minion’s master setting from an execution module. By simply changing the algorithm in the module to return a new master ip/fqdn, restart the minion and it will connect to the new master.

As of version 2016.11.0 this option can be set to disable and the minion will never attempt to talk to the master. This is useful for running a masterless minion daemon.

```
master_type: disable
```

**max_event_size**

New in version 2014.7.0.

Default: 1048576

Passing very large events can cause the minion to consume large amounts of memory. This value tunes the maximum size of a message allowed onto the minion event bus. The value is expressed in bytes.

```
max_event_size: 1048576
```

### 5.2. Configuring the Salt Minion
**enable_legacy_startup_events**

New in version 2019.2.0.

Default: True

When a minion starts up it sends a notification on the event bus with a tag that looks like this: `salt/minion/<minion_id>/start`. For historical reasons the minion also sends a similar event with an event tag like this: `minion_start`. This duplication can cause a lot of clutter on the event bus when there are many minions. Set `enable_legacy_startup_events: False` in the minion config to ensure only the `salt/minion/<minion_id>/start` events are sent. Beginning with the 3001 Salt release this option will default to False.

```
enable_legacy_startup_events: True
```

**master_failback**

New in version 2016.3.0.

Default: False

If the minion is in multi-master mode and the `conf_minion.master_type` configuration option is set to `failover`, this setting can be set to True to force the minion to fail back to the first master in the list if the first master is back online.

```
master_failback: False
```

**master_failback_interval**

New in version 2016.3.0.

Default: 0

If the minion is in multi-master mode, the `conf_minion.master_type` configuration is set to `failover`, and the `master_failback` option is enabled, the master failback interval can be set to ping the top master with this interval, in seconds.

```
master_failback_interval: 0
```

**master_alive_interval**

Default: 0

Configures how often, in seconds, the minion will verify that the current master is alive and responding. The minion will try to establish a connection to the next master in the list if it finds the existing one is dead.

```
master_alive_interval: 30
```
**master_shuffle**

New in version 2014.7.0.
Deprecated since version 2019.2.0.
Default: False

**Warning**: This option has been deprecated in Salt 2019.2.0. Please use `random_master` instead.

```
master_shuffle: True
```

**random_master**

New in version 2014.7.0.

Changed in version 2019.2.0: The `master_failback` option can be used in conjunction with `random_master` to force the minion to fail back to the first master in the list if the first master is back online. Note that `master_type` must be set to `failover` in order for the `master_failback` setting to work.

Default: False

If `master` is a list of addresses, shuffle them before trying to connect to distribute the minions over all available masters. This uses Python's `random.shuffle` method.

If multiple masters are specified in the 'master' setting as a list, the default behavior is to always try to connect to them in the order they are listed. If `random_master` is set to True, the order will be randomized instead upon Minion startup. This can be helpful in distributing the load of many minions executing `salt-call` requests, for example, from a cron job. If only one master is listed, this setting is ignored and a warning is logged.

```
random_master: True
```

**Note**: When the `failover`, `master_failback`, and `random_master` options are used together, only the "secondary masters" will be shuffled. The first master in the list is ignored in the `random.shuffle` call. See `master_failback` for more information.

**retry_dns**

Default: 30

Set the number of seconds to wait before attempting to resolve the master hostname if name resolution fails. Defaults to 30 seconds. Set to zero if the minion should shutdown and not retry.

```
retry_dns: 30
```
**retry_dns_count**

New in version 2018.3.4.
Default: None
Set the number of attempts to perform when resolving the master hostname if name resolution fails. By default the minion will retry indefinitely.

```
retry_dns_count: 3
```

**master_port**

Default: 4506
The port of the master ret server, this needs to coincide with the ret_port option on the Salt master.

```
master_port: 4506
```

**publish_port**

Default: 4505
The port of the master publish server, this needs to coincide with the publish_port option on the Salt master.

```
publish_port: 4505
```

**source_interface_name**

New in version 2018.3.0.
The name of the interface to use when establishing the connection to the Master.

**Note:** If multiple IP addresses are configured on the named interface, the first one will be selected. In that case, for a better selection, consider using the `source_address` option.

**Note:** To use an IPv6 address from the named interface, make sure the option `ipv6` is enabled, i.e., `ipv6: true`.

**Note:** If the interface is down, it will avoid using it, and the Minion will bind to `0.0.0.0` (all interfaces).

**Warning:** This option requires modern version of the underlying libraries used by the selected transport:
- zeromq requires `pyzmq >= 16.0.1` and `libzmq >= 4.1.6`
- tcp requires `tornado >= 4.5`

Configuration example:
**source_interface_name**: bond0.1234

**source_address**

New in version 2018.3.0.
The source IP address or the domain name to be used when connecting the Minion to the Master. See *ipv6* for IPv6 connections to the Master.

**Warning**: This option requires modern version of the underlying libraries used by the selected transport:
- zmq requires pyzmq >= 16.0.1 and libzmq >= 4.1.6
- tcp requires tornado >= 4.5

Configuration example:

```
source_address: if-bond0-1234.sjc.us-west.internal
```

**source_ret_port**

New in version 2018.3.0.
The source port to be used when connecting the Minion to the Master ret server.

**Warning**: This option requires modern version of the underlying libraries used by the selected transport:
- zmq requires pyzmq >= 16.0.1 and libzmq >= 4.1.6
- tcp requires tornado >= 4.5

Configuration example:

```
source_ret_port: 49017
```

**source_publish_port**

New in version 2018.3.0.
The source port to be used when connecting the Minion to the Master publish server.

**Warning**: This option requires modern version of the underlying libraries used by the selected transport:
- zmq requires pyzmq >= 16.0.1 and libzmq >= 4.1.6
- tcp requires tornado >= 4.5

Configuration example:

```
source_publish_port: 49018
```

5.2. Configuring the Salt Minion
**user**

Default: root

The user to run the Salt processes

```
user: root
```

**sudo_user**

Default: ''

The user to run salt remote execution commands as via sudo. If this option is enabled then sudo will be used to change the active user executing the remote command. If enabled the user will need to be allowed access via the sudoers file for the user that the salt minion is configured to run as. The most common option would be to use the root user. If this option is set the user option should also be set to a non-root user. If migrating from a root minion to a non root minion the minion cache should be cleared and the minion pki directory will need to be changed to the ownership of the new user.

```
sudo_user: root
```

**pidfile**

Default: /var/run/salt-minion.pid

The location of the daemon's process ID file

```
pidfile: /var/run/salt-minion.pid
```

**root_dir**

Default: /

This directory is prepended to the following options: pki_dir, cachedir, log_file, sock_dir, and pidfile.

```
root_dir: /
```

**conf_file**

Default: /etc/salt/minion

The path to the minion's configuration file.

```
conf_file: /etc/salt/minion
```
**pki_dir**

Default: /etc/salt/pki/minion

The directory used to store the minion's public and private keys.

| pki_dir: /etc/salt/pki/minion |

**id**

Default: the system's hostname

See also:

_Salt Walkthrough_

The Setting up a Salt Minion section contains detailed information on how the hostname is determined.

Explicitly declare the id for this minion to use. Since Salt uses detached ids it is possible to run multiple minions on the same machine but with different ids.

| id: foo.bar.com |

**minion_id_caching**

New in version 0.17.2.

Default: True

Caches the minion id to a file when the minion's *id* is not statically defined in the minion config. This setting prevents potential problems when automatic minion id resolution changes, which can cause the minion to lose connection with the master. To turn off minion id caching, set this config to False.

For more information, please see Issue #7558 and Pull Request #8488.

| minion_id_caching: True |

**append_domain**

Default: None

Append a domain to a hostname in the event that it does not exist. This is useful for systems where socket.getfqdn() does not actually result in a FQDN (for instance, Solaris).

| append_domain: foo.org |
**minion_id_remove_domain**

New in version 3000.

Default: False

Remove a domain when the minion id is generated as a fully qualified domain name (either by the user provided `id_function`, or by Salt). This is useful when the minions shall be named like hostnames. Can be a single domain (to prevent name clashes), or True, to remove all domains.

Examples:

- `minion_id_remove_domain = foo.org` - FQDN = king_bob.foo.org --> minion_id = king_bob - FQDN = king_bob.bar.org --> minion_id = king_bob.bar.org

- `minion_id_remove_domain = True` - FQDN = king_bob.foo.org --> minion_id = king_bob - FQDN = king_bob.bar.org --> minion_id = king_bob

For more information, please see issue #49212 and PR #49378.

```
minion_id_remove_domain: foo.org
```

**minion_id_lowercase**

Default: False

Convert minion id to lowercase when it is being generated. Helpful when some hosts get the minion id in uppercase. Cached ids will remain the same and not converted.

```
minion_id_lowercase: True
```

**cachedir**

Default: `/var/cache/salt/minion`

The location for minion cache data.

This directory may contain sensitive data and should be protected accordingly.

```
cachedir: /var/cache/salt/minion
```

**color_theme**

Default: ""

Specifies a path to the color theme to use for colored command line output.

```
color_theme: /etc/salt/color_theme
```
append_minionid_config_dirs

Default: [] (the empty list) for regular minions, ['cachedir'] for proxy minions.

Append minion_id to these configuration directories. Helps with multiple proxies and minions running on the same machine. Allowed elements in the list: pki_dir, cachedir, extension_modules. Normally not needed unless running several proxies and/or minions on the same machine.

```
append_minionid_config_dirs:
  - pki_dir
  - cachedir
```

verify_env

Default: True

Verify and set permissions on configuration directories at startup.

```
verify_env: True
```

Note: When set to True the verify_env option requires WRITE access to the configuration directory (/etc/salt/). In certain situations such as mounting /etc/salt/ as read-only for templating this will create a stack trace when state.apply is called.

cache_jobs

Default: False

The minion can locally cache the return data from jobs sent to it, this can be a good way to keep track of the minion side of the jobs the minion has executed. By default this feature is disabled, to enable set cache_jobs to True.

```
cache_jobs: False
```

grain

Default: (empty)

See also:

Using grains in a state

Statically assigns grains to the minion.

```
grains:
  roles:
    - webserver
    - memcache
  deployment: datacenter4
  cabinet: 13
  cab_u: 14-15
```
grains_blacklist

Default: []

Each grains key will be compared against each of the expressions in this list. Any keys which match will be filtered from the grains. Exact matches, glob matches, and regular expressions are supported.

Note: Some states and execution modules depend on grains. Filtering may cause them to be unavailable or run unreliably.

New in version 3000.

| grains_blacklist:
| ---
| - cpu_flags
| - zmq*
| - ipv[46]

grains_cache

Default: False

The minion can locally cache grain data instead of refreshing the data each time the grain is referenced. By default this feature is disabled, to enable set grains_cache to True.

| grains_cache: False

grains_cache_expiration

Default: 300

Grains cache expiration, in seconds. If the cache file is older than this number of seconds then the grains cache will be dumped and fully re-populated with fresh data. Defaults to 5 minutes. Will have no effect if grains_cache is not enabled.

| grains_cache_expiration: 300

grains_deep_merge

New in version 2016.3.0.

Default: False

The grains can be merged, instead of overridden, using this option. This allows custom grains to defined different subvalues of a dictionary grain. By default this feature is disabled, to enable set grains_deep_merge to True.

| grains_deep_merge: False

For example, with these custom grains functions:

```python
def custom1_k1():
    return {'custom1": ":v1"}}
```

(continues on next page)
```python
def custom1_k2():
    return {"custom1": {"k2": "v2"}}
```

Without `grains_deep_merge`, the result would be:

```yaml
custom1:
    k1: v1
```

With `grains_deep_merge`, the result will be:

```yaml
custom1:
    k1: v1
    k2: v2
```

**grains_refresh_every**

Default: 0

The `grains_refresh_every` setting allows for a minion to periodically check its grains to see if they have changed and, if so, to inform the master of the new grains. This operation is moderately expensive, therefore care should be taken not to set this value too low.

Note: This value is expressed in minutes.

A value of 10 minutes is a reasonable default.

```yaml
grains_refresh_every: 0
```

**metadata_server_grains**

New in version 2017.7.0.

Default: False

Set this option to enable gathering of cloud metadata from `http://169.254.169.254/latest` for use in grains (see [here](#) for more information).

```yaml
metadata_server_grains: True
```

**fibre_channel_grains**

Default: False

The `fibre_channel_grains` setting will enable the `fc_wwn` grain for Fibre Channel WWN's on the minion. Since this grain is expensive, it is disabled by default.

```yaml
fibre_channel_grains: True
```
iscsi_grains

Default: False
The iscsi_grains setting will enable the iscsi_iqn grain on the minion. Since this grain is expensive, it is disabled by default.

```
iscsi_grains: True
```

nvme_grains

Default: False
The nvme_grains setting will enable the nvme_nqn grain on the minion. Since this grain is expensive, it is disabled by default.

```
vme_grains: True
```

mine_enabled

New in version 2015.8.10.
Default: True
Determines whether or not the salt minion should run scheduled mine updates. If this is set to False then the mine update function will not get added to the scheduler for the minion.

```
mine_enabled: True
```

mine_return_job

New in version 2015.8.10.
Default: False
Determines whether or not scheduled mine updates should be accompanied by a job return for the job cache.

```
mine_return_job: False
```

mine_functions

Default: Empty
Designate which functions should be executed at mine_interval intervals on each minion. See this documentation on the Salt Mine for more information. Note these can be defined in the pillar for a minion as well.

```
mine_functions:
    test.ping: []
    network.ip_addrs:
        interface: eth0
        cidr: '10.0.0.0/8'
```

---

example minion configuration file
**mine_interval**

Default: 60

The number of minutes between mine updates.

| mine_interval: 60 |

**sock_dir**

Default: /var/run/salt/minion

The directory where Unix sockets will be kept.

| sock_dir: /var/run/salt/minion |

**enable_fqdns_grains**

Default: True

In order to calculate the fqdns grain, all the IP addresses from the minion are processed with underlying calls to socket.gethostbyaddr which can take 5 seconds to be released (after reaching socket.timeout) when there is no fqdn for that IP. These calls to socket.gethostbyaddr are processed asynchronously, however, it still adds 5 seconds every time grains are generated if an IP does not resolve. In Windows grains are regenerated each time a new process is spawned. Therefore, the default for Windows is False. In many cases this value does not make sense to include for proxy minions as it will be FQDN for the host running the proxy minion process, so the default for proxy minions is False`. All other OSes default to True. This options was added here.

| enable_fqdns_grains: False |

**enable_gpu_grains**

Default: True

Enable GPU hardware data for your master. Be aware that the minion can take a while to start up when lspci and/or dmidecode is used to populate the grains for the minion, so this can be set to False if you do not need these grains.

| enable_gpu_grains: False |

**outputter_dirs**

Default: []

A list of additional directories to search for salt outputters in.

| outputter_dirs: [] |
**backup_mode**

Default: ''

Make backups of files replaced by `file.managed` and `file.recurse` state modules under `cachedir` in `file_backup` subdirectory preserving original paths. Refer to *File State Backups documentation* for more details.

```
backup_mode: minion
```

**acceptance_wait_time**

Default: 10

The number of seconds to wait until attempting to re-authenticate with the master.

```
acceptance_wait_time: 10
```

**acceptance_wait_time_max**

Default: 0

The maximum number of seconds to wait until attempting to re-authenticate with the master. If set, the wait will increase by `acceptance_wait_time` seconds each iteration.

```
acceptance_wait_time_max: 0
```

**rejected_retry**

Default: False

If the master rejects the minion's public key, retry instead of exiting. Rejected keys will be handled the same as waiting on acceptance.

```
rejected_retry: False
```

**random_reauth_delay**

Default: 10

When the master key changes, the minion will try to re-auth itself to receive the new master key. In larger environments this can cause a syn-flood on the master because all minions try to re-auth immediately. To prevent this and have a minion wait for a random amount of time, use this optional parameter. The wait-time will be a random number of seconds between 0 and the defined value.

```
random_reauth_delay: 60
```
**master_tries**

New in version 2016.3.0.

Default: 1

The number of attempts to connect to a master before giving up. Set this to \(-1\) for unlimited attempts. This allows for a master to have downtime and the minion to reconnect to it later when it comes back up. In ‘failover’ mode, which is set in the `master_type` configuration, this value is the number of attempts for each set of masters. In this mode, it will cycle through the list of masters for each attempt.

`master_tries` is different than `auth_tries` because `auth_tries` attempts to retry auth attempts with a single master. `auth_tries` is under the assumption that you can connect to the master but not gain authorization from it. `master_tries` will still cycle through all of the masters in a given try, so it is appropriate if you expect occasional downtime from the master(s).

```
master_tries: 1
```

**auth_tries**

New in version 2014.7.0.

Default: 7

The number of attempts to authenticate to a master before giving up. Or, more technically, the number of consecutive `SaltReqTimeoutErrors` that are acceptable when trying to authenticate to the master.

```
auth_tries: 7
```

**auth_timeout**

New in version 2014.7.0.

Default: 5

When waiting for a master to accept the minion’s public key, salt will continuously attempt to reconnect until successful. This is the timeout value, in seconds, for each individual attempt. After this timeout expires, the minion will wait for `acceptance_wait_time` seconds before trying again. Unless your master is under unusually heavy load, this should be left at the default.

**Note:** For high latency networks try increasing this value

```
auth_timeout: 5
```
auth_safemode

New in version 2014.7.0.
Default: False
If authentication fails due to SaltReqTimeoutError during a ping_interval, this setting, when set to True, will cause a sub-minion process to restart.

| auth_safemode: False |

ping_interval

Default: 0
Instructs the minion to ping its master(s) every n number of minutes. Used primarily as a mitigation technique against minion disconnects.

| ping_interval: 0 |

random_startup_delay

Default: 0
The maximum bound for an interval in which a minion will randomly sleep upon starting up prior to attempting to connect to a master. This can be used to splay connection attempts for cases where many minions starting up at once may place undue load on a master.

For example, setting this to 5 will tell a minion to sleep for a value between 0 and 5 seconds.

| random_startup_delay: 5 |

class_default

Default: 1000
The interval in milliseconds that the socket should wait before trying to reconnect to the master (1000ms = 1 second).

| recon_default: 1000 |

class_max

Default: 10000
The maximum time a socket should wait. Each interval the time to wait is calculated by doubling the previous time. If recon_max is reached, it starts again at the recon_default.

Short example:

1. reconnect 1: the socket will wait 'recon_default' milliseconds
2. reconnect 2: 'recon_default' * 2
3. reconnect 3: (recon_default * 2) * 2
4. reconnect 4: value from previous interval * 2
- reconnect 5: value from previous interval * 2
- reconnect x: if value >= recon_max, it starts again with recon_default

```yaml
recon_max: 10000
```

**recon_randomize**

Default: True

Generate a random wait time on minion start. The wait time will be a random value between recon_default and recon_default + recon_max. Having all minions reconnect with the same recon_default and recon_max value kind of defeats the purpose of being able to change these settings. If all minions have the same values and the setup is quite large (several thousand minions), they will still flood the master. The desired behavior is to have time-frame within all minions try to reconnect.

```yaml
recon_randomize: True
```

**loop_interval**

Default: 1

The loop_interval sets how long in seconds the minion will wait between evaluating the scheduler and running cleanup tasks. This defaults to 1 second on the minion scheduler.

```yaml
loop_interval: 1
```

**pub_ret**

Default: True

Some installations choose to start all job returns in a cache or a returner and forgo sending the results back to a master. In this workflow, jobs are most often executed with --async from the Salt CLI and then results are evaluated by examining job caches on the minions or any configured returners. WARNING: Setting this to False will disable returns back to the master.

```yaml
pub_ret: True
```

**return_retry_timer**

Default: 5

The default timeout for a minion return attempt.

```yaml
return_retry_timer: 5
```
**return_retry_timer_max**

Default: 10

The maximum timeout for a minion return attempt. If non-zero the minion return retry timeout will be a random int between `return_retry_timer` and `return_retry_timer_max`.

| return_retry_timer_max: 10 |

**return_retry_tries**

Default: 3

The maximum number of retries for a minion return attempt.

| return_retry_tries: 3 |

**cache_sreqs**

Default: True

The connection to the master ret_port is kept open. When set to False, the minion creates a new connection for every return to the master.

| cache_sreqs: True |

**ipc_mode**

Default: ipc

Windows platforms lack POSIX IPC and must rely on slower TCP based inter-process communications. `ipc_mode` is set to `tcp` on such systems.

| ipc_mode: ipc |

**tcp_pub_port**

Default: 4510

Publish port used when `ipc_mode` is set to `tcp`.

| tcp_pub_port: 4510 |
**tcp_pull_port**

Default: 4511

Pull port used when `ipc_mode` is set to `tcp`.

```
tcp_pull_port: 4511
```

**transport**

Default: zeromq

Changes the underlying transport layer. ZeroMQ is the recommended transport while additional transport layers are under development. Supported values are `zeromq` and `tcp` (experimental). This setting has a significant impact on performance and should not be changed unless you know what you are doing!

```
transport: zeromq
```

**syndic_finger**

Default: ''

The key fingerprint of the higher-level master for the syndic to verify it is talking to the intended master.

```
```

**http_connect_timeout**

New in version 2019.2.0.

Default: 20

HTTP connection timeout in seconds. Applied when fetching files using tornado back-end. Should be greater than overall download time.

```
http_connect_timeout: 20
```

**http_request_timeout**

New in version 2015.8.0.

Default: 3600

HTTP request timeout in seconds. Applied when fetching files using tornado back-end. Should be greater than overall download time.

```
http_request_timeout: 3600
```
proxy_host

Default: ''
The hostname used for HTTP proxy access.

```
proxy_host: proxy.my-domain
```

proxy_port

Default: 0
The port number used for HTTP proxy access.

```
proxy_port: 31337
```

proxy_username

Default: ''
The username used for HTTP proxy access.

```
proxy_username: charon
```

proxy_password

Default: ''
The password used for HTTP proxy access.

```
proxy_password: obolus
```

no_proxy

New in version 2019.2.0.
Default: []
List of hosts to bypass HTTP proxy

Note: This key does nothing unless proxy_host etc is configured, it does not support any kind of wildcards.

```
no_proxy: [ '127.0.0.1', 'foo.tld' ]
```
**use_yamlloader_old**

New in version 2019.2.1.
Default: False
Use the pre-2019.2 YAML renderer. Uses legacy YAML rendering to support some legacy inline data structures. See the 2019.2.1 release notes for more details.

```markdown
use_yamlloader_old: False
```

### 5.2.2 Docker Configuration

**docker.update_mine**

New in version 2017.7.8, 2018.3.3.
Changed in version 2019.2.0: The default value is now False
Default: True
If enabled, when containers are added, removed, stopped, started, etc., the `mine` will be updated with the results of `docker.ps verbose=True all=True host=True`. This mine data is used by `mine.get_docker`. Set this option to False to keep Salt from updating the mine with this information.

*Note:* This option can also be set in Grains or Pillar data, with Grains overriding Pillar and the minion config file overriding Grains.

*Note:* Disabling this will of course keep `mine.get_docker` from returning any information for a given minion.

```markdown
docker.update_mine: False
```

**docker.compare_container_networks**

New in version 2018.3.0.
Default: `{ 'static': ['Aliases', 'Links', 'IPAMConfig'], 'automatic': ['IPAddress', 'Gateway', 'GlobalIPv6Address', 'IPv6Gateway'] }`
Specifies which keys are examined by `docker.compare_container_networks`.

*Note:* This should not need to be modified unless new features added to Docker result in new keys added to the network configuration which must be compared to determine if two containers have different network configs. This config option exists solely as a way to allow users to continue using Salt to manage their containers after an API change, without waiting for a new Salt release to catch up to the changes in the Docker API.

```yaml
docker.compare_container_networks:
  static:
    - Aliases
    - Links
```

(continues on next page)
- IPAMConfig
  automatic:
  - IPAddress
  - Gateway
  - GlobalIPv6Address
  - IPv6Gateway

**optimization_order**

Default: $[0, 1, 2]$

In cases where Salt is distributed without .py files, this option determines the priority of optimization level(s) Salt’s module loader should prefer.

Note: This option is only supported on Python 3.5+.

**optimization_order**:

- 2
- 0
- 1

### 5.2.3 Minion Execution Module Management

**disable_modules**

Default: $[]$ (all execution modules are enabled by default)

The event may occur in which the administrator desires that a minion should not be able to execute a certain module. However, the `sys` module is built into the minion and cannot be disabled.

This setting can also tune the minion. Because all modules are loaded into system memory, disabling modules will lower the minion’s memory footprint.

Modules should be specified according to their file name on the system and not by their virtual name. For example, to disable `cmd`, use the string `cmdmod` which corresponds to `salt.modules.cmdmod`.

**disable_modules**:

- test
- solr

**disable_returners**

Default: $[]$ (all returners are enabled by default)

If certain returners should be disabled, this is the place.

**disable_returners**:

- mongo_return
**whitelist_modules**

Default: [] (Module whitelisting is disabled. Adding anything to the config option will cause only the listed modules to be enabled. Modules not in the list will not be loaded.)

This option is the reverse of disable_modules. If enabled, only execution modules in this list will be loaded and executed on the minion.

Note that this is a very large hammer and it can be quite difficult to keep the minion working the way you think it should since Salt uses many modules internally itself. At a bare minimum you need the following enabled or else the minion won’t start.

```yaml
whitelist_modules:
  - cmdmod
  - test
  - config
```

**module_dirs**

Default: []

A list of extra directories to search for Salt modules

```yaml
module_dirs:
  - /var/lib/salt/modules
```

**returner_dirs**

Default: []

A list of extra directories to search for Salt returners

```yaml
returner_dirs:
  - /var/lib/salt/returners
```

**states_dirs**

Default: []

A list of extra directories to search for Salt states

```yaml
states_dirs:
  - /var/lib/salt/states
```
grains_dirs
Default: []
A list of extra directories to search for Salt grains

```bash
grains_dirs:
    - /var/lib/salt/grains
```

render_dirs
Default: []
A list of extra directories to search for Salt renderers

```bash
render_dirs:
    - /var/lib/salt/renderers
```

utils_dirs
Default: []
A list of extra directories to search for Salt utilities

```bash
utils_dirs:
    - /var/lib/salt/utils
```

cython_enable
Default: False
Set this value to true to enable auto-loading and compiling of .pyx modules. This setting requires that gcc and cython are installed on the minion.

```bash
cython_enable: False
```

enable_zip_modules
New in version 2015.8.0.
Default: False
Set this value to true to enable loading of zip archives as extension modules. This allows for packing module code with specific dependencies to avoid conflicts and/or having to install specific modules' dependencies in system libraries.

```bash
enable_zip_modules: False
```
**providers**

Default: (empty)

A module provider can be statically overwritten or extended for the minion via the `providers` option. This can be done *on an individual basis in an SLS file*, or globally here in the minion config, like below.

```yaml
providers:
    service: systemd
```

**modules_max_memory**

Default: -1

Specify a max size (in bytes) for modules on import. This feature is currently only supported on *NIX operating systems and requires psutil.

```yaml
modules_max_memory: -1
```

**extmod_whitelist/extmod_blacklist**

New in version 2017.7.0.

By using this dictionary, the modules that are synced to the minion's extmod cache using `saltutil.sync_*` can be limited. If nothing is set to a specific type, then all modules are accepted. To block all modules of a specific type, whitelist an empty list.

```yaml
extmod_whitelist:
    modules:
      - custom_module
    engines:
      - custom_engine
    pillars: []

extmod_blacklist:
    modules:
      - specific_module
```

Valid options:

- beacons
- clouds
- sdb
- modules
- states
- grains
- renderers
- returners
- proxy
- engines
5.2.4 Top File Settings

These parameters only have an effect if running a masterless minion.

**state_top**

Default: top.sls

The state system uses a "top" file to tell the minions what environment to use and what modules to use. The state_top file is defined relative to the root of the base environment.

```
state_top: top.sls
```

**state_top_saltenv**

This option has no default value. Set it to an environment name to ensure that only the top file from that environment is considered during a highstate.

Note: Using this value does not change the merging strategy. For instance, if `top_file_merging_strategy` is set to `merge`, and `state_top_saltenv` is set to `foo`, then any sections for environments other than `foo` in the top file for the `foo` environment will be ignored. With `state_top_saltenv` set to `base`, all states from all environments in the `base` top file will be applied, while all other top files are ignored. The only way to set `state_top_saltenv` to something other than `base` and not have the other environments in the targeted top file ignored, would be to set `top_file_merging_strategy` to `merge_all`.

```
state_top_saltenv: dev
```

**top_file_merging_strategy**

Changed in version 2016.11.0: A `merge_all` strategy has been added.

Default: merge

When no specific fileserver environment (a.k.a. saltenv) has been specified for a highstate, all environments' top files are inspected. This config option determines how the SLS targets in those top files are handled.

When set to `merge`, the `base` environment's top file is evaluated first, followed by the other environments' top files. The first target expression (e.g. `'*'`) for a given environment is kept, and when the same target expression is used in a different top file evaluated later, it is ignored. Because `base` is evaluated first, it is authoritative. For example, if there is a target for `'*'` for the `foo` environment in both the `base` and `foo` environment's top files, the one in the `foo` environment would be ignored. The environments will be evaluated in no specific order (aside from `base` coming first). For greater control over the order in which the environments are evaluated, use `env_order`. Note that, aside from the `base` environment's top file, any sections in top files that do not match that top file's environment will be ignored. So, for example, a section for the `qa` environment would be ignored if it appears in the `dev` environment's top file. To keep use cases like this from being ignored, use the `merge_all` strategy.
When set to `same`, then for each environment, only that environment's top file is processed, with the others being ignored. For example, only the `dev` environment's top file will be processed for the `dev` environment, and any SLS targets defined for `dev` in the `base` environment's (or any other environment's) top file will be ignored. If an environment does not have a top file, then the top file from the `default_top` config parameter will be used as a fallback.

When set to `merge_all`, then all states in all environments in all top files will be applied. The order in which individual SLS files will be executed will depend on the order in which the top files were evaluated, and the environments will be evaluated in no specific order. For greater control over the order in which the environments are evaluated, use `env_order`.

```yaml
| top_file_merging_strategy: same |
```

**env_order**

Default: `[]`

When `top_file_merging_strategy` is set to `merge`, and no environment is specified for a `highstate`, this config option allows for the order in which top files are evaluated to be explicitly defined.

```yaml
| env_order: |
| - base |
| - dev |
| - qa |
```

**default_top**

Default: `base`

When `top_file_merging_strategy` is set to `same`, and no environment is specified for a `highstate` (i.e. `environment` is not set for the minion), this config option specifies a fallback environment in which to look for a top file if an environment lacks one.

```yaml
| default_top: dev |
```

**startup_states**

Default: `''`

States to run when the minion daemon starts. To enable, set `startup_states` to:

- `highstate`: Execute state.highstate
- `sls`: Read in the sls_list option and execute the named sls files
- `top`: Read top_file option and execute based on that file on the Master

```yaml
| startup_states: '' |
```
**sls_list**

Default: `[]`

List of states to run when the minion starts up if `startup_states` is set to `sls`.

```
sls_list:
  - edit.vim
  - hyper
```

**start_event_grains**

Default: `[]`

List of grains to pass in start event when minion starts up.

```
start_event_grains:
  - machine_id
  - uuid
```

**top_file**

Default: `'`

Top file to execute if `startup_states` is set to `top`.

```
top_file: `'
```

### 5.2.5 State Management Settings

**renderer**

Default: `jinja|yaml`

The default renderer used for local state executions

```
renderer: jinja|json
```

**test**

Default: `False`

Set all state calls to only test if they are going to actually make changes or just post what changes are going to be made.

```
test: False
```
**state_aggregate**

Default: False

Automatically aggregate all states that have support for `mod_aggregate` by setting to `True`.

```
state_aggregate: True
```

Or pass a list of state module names to automatically aggregate just those types.

```
state_aggregate:
  - pkg
```

**state_verbose**

Default: True

Controls the verbosity of state runs. By default, the results of all states are returned, but setting this value to `False` will cause salt to only display output for states that failed or states that have changes.

```
state_verbose: True
```

**state_output**

Default: full

The `state_output` setting controls which results will be output full multi line:

- `full`: each state will be full/terse
- `terse`: only states with errors will be full
- `mixed`: states with changes and errors will be full

`full_id`, `mixed_id`, `changes_id` and `terse_id` are also allowed; when set, the state ID will be used as name in the output.

```
state_output: full
```

**state_output_diff**

Default: False

The `state_output_diff` setting changes whether or not the output from successful states is returned. Useful when even the terse output of these states is cluttering the logs. Set it to `True` to ignore them.

```
state_output_diff: False
```

---

5.2. Configuring the Salt Minion
**state_output_profile**

Default: True

The `state_output_profile` setting changes whether profile information will be shown for each state run.

```
state_output_profile: True
```

**autoload_dynamic_modules**

Default: True

`autoload_dynamic_modules` turns on automatic loading of modules found in the environments on the master. This is turned on by default. To turn off auto-loading modules when states run, set this value to `False`.

```
autoload_dynamic_modules: True
```

**clean_dynamic_modules**

Default: True

`clean_dynamic_modules` keeps the dynamic modules on the minion in sync with the dynamic modules on the master. This means that if a dynamic module is not on the master it will be deleted from the minion. By default this is enabled and can be disabled by changing this value to `False`.

```
clean_dynamic_modules: True
```

**Note:** If `extmod_whitelist` is specified, modules which are not whitelisted will also be cleaned here.

**saltenv**

Changed in version 2018.3.0: Renamed from `environment` to `saltenv`. If `environment` is used, `saltenv` will take its value. If both are used, `environment` will be ignored and `saltenv` will be used.

Normally the minion is not isolated to any single environment on the master when running states, but the environment can be isolated on the minion side by statically setting it. Remember that the recommended way to manage environments is to isolate via the top file.

```
saltenv: dev
```

**lock_saltenv**

New in version 2018.3.0.

Default: False

For purposes of running states, this option prevents using the `saltenv` argument to manually set the environment. This is useful to keep a minion which has the `saltenv` option set to `dev` from running states from an environment other than `dev`.

```
lock_saltenv: True
```
**snapper_states**

Default: False

The `snapper_states` value is used to enable taking snapper snapshots before and after salt state runs. This allows for state runs to be rolled back.

For snapper states to function properly snapper needs to be installed and enabled.

| snapper_states: True |

**snapper_states_config**

Default: root

Snapper can execute based on a snapper configuration. The configuration needs to be set up before snapper can use it. The default configuration is root, this default makes snapper run on SUSE systems using the default configuration set up at install time.

| snapper_states_config: root |

### 5.2.6 File Directory Settings

**file_client**

Default: remote

The client defaults to looking on the master server for files, but can be directed to look on the minion by setting this parameter to local.

| file_client: remote |

**use_master_when_local**

Default: False

When using a local `file_client`, this parameter is used to allow the client to connect to a master for remote execution.

| use_master_when_local: False |

**file_roots**

Default:

| base:  |
| ~ /srv/salt |

When using a local `file_client`, this parameter is used to setup the fileserver's environments. This parameter operates identically to the `master config parameter` of the same name.
```yaml
file_roots:
  base:
    - /srv/salt
  dev:
    - /srv/salt/dev/services
    - /srv/salt/dev/states
  prod:
    - /srv/salt/prod/services
    - /srv/salt/prod/states
```

**fileserver_followsymlinks**

New in version 2014.1.0.

Default: True

By default, the file_server follows symlinks when walking the filesystem tree. Currently this only applies to the default roots fileserver_backend.

```yaml
fileserver_followsymlinks: True
```

**fileserver_ignoresymlinks**

New in version 2014.1.0.

Default: False

If you do not want symlinks to be treated as the files they are pointing to, set `fileserver_ignoresymlinks` to True. By default this is set to False. When set to True, any detected symlink while listing files on the Master will not be returned to the Minion.

```yaml
fileserver_ignoresymlinks: False
```

**fileserver_limit_traversal**

New in version 2014.1.0.

Default: False

By default, the Salt fileserver recurses fully into all defined environments to attempt to find files. To limit this behavior so that the fileserver only traverses directories with SLS files and special Salt directories like _modules, set `fileserver_limit_traversal` to True. This might be useful for installations where a file root has a very large number of files and performance is impacted.

```yaml
fileserver_limit_traversal: False
```
hash_type

Default: sha256

The hash_type is the hash to use when discovering the hash of a file on the local files server. The default is sha256, but md5, sha1, sha224, sha384, and sha512 are also supported.

| hash_type: sha256 |

5.2.7 Pillar Configuration

pillar_roots

Default:

<table>
<thead>
<tr>
<th>base:</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>/srv/pillar</code></td>
</tr>
</tbody>
</table>

When using a local file_client, this parameter is used to setup the pillar environments.

<table>
<thead>
<tr>
<th>pillar_roots:</th>
</tr>
</thead>
<tbody>
<tr>
<td>base:</td>
</tr>
<tr>
<td><code>/srv/pillar</code></td>
</tr>
<tr>
<td>dev:</td>
</tr>
<tr>
<td><code>/srv/pillar/dev</code></td>
</tr>
<tr>
<td>prod:</td>
</tr>
<tr>
<td><code>/srv/pillar/prod</code></td>
</tr>
</tbody>
</table>

on_demand_ext_pillar

New in version 2016.3.6, 2016.11.3, 2017.7.0.

Default: ['libvirt', 'virtkey']

When using a local file_client, this option controls which external pillars are permitted to be used on-demand using pillar.ext.

<table>
<thead>
<tr>
<th>on_demand_ext_pillar:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- libvirt</td>
</tr>
<tr>
<td>- virtkey</td>
</tr>
<tr>
<td>- git</td>
</tr>
</tbody>
</table>

Warning: This will allow a masterless minion to request specific pillar data via pillar.ext, and may be considered a security risk. However, pillar data generated in this way will not affect the in-memory pillar data, so this risk is limited to instances in which states/modules/etc. (built-in or custom) rely upon pillar data generated by pillar.ext.
decrypt_pillar

New in version 2017.7.0.
Default: []
A list of paths to be recursively decrypted during pillar compilation.

```
def decrypt_pillar:
  - 'foo:bar': gpg
  - 'lorem:ipsum:dolor'
```

Entries in this list can be formatted either as a simple string, or as a key/value pair, with the key being the pillar location, and the value being the renderer to use for pillar decryption. If the former is used, the renderer specified by `decrypt_pillar_default` will be used.

decrypt_pillar_delimiter

New in version 2017.7.0.
Default: :

The delimiter used to distinguish nested data structures in the `decrypt_pillar` option.

```
def decrypt_pillar_delimiter: '|

def decrypt_pillar:
  - 'foo|bar': gpg
  - 'lorem|ipsum|dolor'
```

decrypt_pillar_default

New in version 2017.7.0.
Default: gpg
The default renderer used for decryption, if one is not specified for a given pillar key in `decrypt_pillar`.

```
def decrypt_pillar_default: my_custom_renderer
```

decrypt_pillar_renderers

New in version 2017.7.0.
Default: ['gpg']

List of renderers which are permitted to be used for pillar decryption.

```
def decrypt_pillar_renderers:
  - gpg
  - my_custom_renderer
```
**pillarenv**

Default: None

Isolates the pillar environment on the minion side. This functions the same as the environment setting, but for pillar instead of states.

```
pillarenv: dev
```

**pillarenv_from_saltenv**

New in version 2017.7.0.

Default: False

When set to True, the `pillarenv` value will assume the value of the effective saltenv when running states. This essentially makes `salt '*' state.sls mysls saltenv=dev` equivalent to `salt '*' state.sls mysls saltenv=dev pillarenv=dev`. If `pillarenv` is set, either in the minion config file or via the CLI, it will override this option.

```
pillarenv_from_saltenv: True
```

**pillar_raise_on_missing**

New in version 2015.5.0.

Default: False

Set this option to True to force a KeyError to be raised whenever an attempt to retrieve a named value from pillar fails. When this option is set to False, the failed attempt returns an empty string.

**minion_pillar_cache**

New in version 2016.3.0.

Default: False

The minion can locally cache rendered pillar data under `cachedir/pillar`. This allows a temporarily disconnected minion to access previously cached pillar data by invoking salt-call with the --local and --pillar_root=::conf_minion:cachedir/pillar options. Before enabling this setting consider that the rendered pillar may contain security sensitive data. Appropriate access restrictions should be in place. By default the saved pillar data will be readable only by the user account running salt. By default this feature is disabled, to enable set `minion_pillar_cache` to True.

```
minion_pillar_cache: False
```

---

5.2. Configuring the Salt Minion  

183
**file_recv_max_size**

New in version 2014.7.0.

Default: 100

Set a hard-limit on the size of the files that can be pushed to the master. It will be interpreted as megabytes.

```
file_recv_max_size: 100
```

**pass_to_ext_pillars**

Specify a list of configuration keys whose values are to be passed to external pillar functions.

Suboptions can be specified using the ':' notation (i.e. `option:suboption`)

The values are merged and included in the `extra_minion_data` optional parameter of the external pillar function. The `extra_minion_data` parameter is passed only to the external pillar functions that have it explicitly specified in their definition.

If the config contains

```
opt1: value1
opt2:
    subopt1: value2
    subopt2: value3
pass_to_ext_pillars:
    - opt1
    - opt2: subopt1
```

the `extra_minion_data` parameter will be

```
{"opt1": "value1", "opt2": {"subopt1": "value2"}}
```

**ssh_merge_pillar**

New in version 2018.3.2.

Default: True

Merges the compiled pillar data with the pillar data already available globally. This is useful when using `salt-ssh` or `salt-call --local` and overriding the pillar data in a state file:

```
apply_showpillar:
    module.run:
        - name: state.apply
        - mods:
            - showpillar
        - kwargs:
            pillar:
                test: "foo bar"
```

If set to True, the `showpillar` state will have access to the global pillar data.

If set to False, only the overriding pillar data will be available to the `showpillar` state.
5.2.8 Security Settings

open_mode

Default: False

Open mode can be used to clean out the PKI key received from the Salt master, turn on open mode, restart the minion, then turn off open mode and restart the minion to clean the keys.

open_mode: False

master_finger

Default: ''

Fingerprint of the master public key to validate the identity of your Salt master before the initial key exchange. The master fingerprint can be found as master.pub by running "salt-key -F master" on the Salt master.


keysize

Default: 2048

The size of key that should be generated when creating new keys.

keysize: 2048

permissive_pki_access

Default: False

Enable permissive access to the salt keys. This allows you to run the master or minion as root, but have a non-root group be given access to your pki_dir. To make the access explicit, root must belong to the group you've given access to. This is potentially quite insecure.

permissive_pki_access: False

verify_master_pubkey_sign

Default: False

Enables verification of the master-public-signature returned by the master in auth-replies. Please see the tutorial on how to configure this properly Multimaster-PKI with Failover Tutorial

New in version 2014.7.0.

verify_master_pubkey_sign: True

If this is set to True, master_sign_pubkey must be also set to True in the master configuration file.
**master_sign_key_name**

Default: `master_sign`

The filename without the `.pub` suffix of the public key that should be used for verifying the signature from the master. The file must be located in the minion's pki directory.

New in version 2014.7.0.

```
master_sign_key_name: <filename_without_suffix>
```

**autosign_grains**

New in version 2018.3.0.

Default: not defined

The grains that should be sent to the master on authentication to decide if the minion’s key should be accepted automatically.

Please see the *Autoaccept Minions from Grains* documentation for more information.

```
autosign_grains:
  - uuid
  - server_id
```

**always_verify_signature**

Default: False

If `verify_master_pubkey_sign` is enabled, the signature is only verified if the public-key of the master changes. If the signature should always be verified, this can be set to `True`.

New in version 2014.7.0.

```
always_verify_signature: True
```

**cmd_blacklist_glob**

Default: `[]`

If `cmd_blacklist_glob` is enabled then any shell command called over remote execution or via salt-call will be checked against the glob matches found in the `cmd_blacklist_glob` list and any matched shell command will be blocked.

**Note:** This blacklist is only applied to direct executions made by the `salt` and `salt-call` commands. This does NOT blacklist commands called from states or shell commands executed from other modules.

New in version 2016.11.0.

```
.cmd_blacklist_glob:
  - 'rm * '
  - 'cat /etc/* '
```
**cmd_whitelist_glob**

Default: `[]`

If `cmd_whitelist_glob` is enabled then any shell command called over remote execution or via salt-call will be checked against the glob matches found in the `cmd_whitelist_glob` list and any shell command NOT found in the list will be blocked. If `cmd_whitelist_glob` is NOT SET, then all shell commands are permitted.

**Note:** This whitelist is only applied to direct executions made by the `salt` and `salt-call` commands. This does NOT restrict commands called from states or shell commands executed from other modules.

New in version 2016.11.0.

```python
**cmd_whitelist_glob:**
- 'ls *'
- 'cat /etc/fstab'
```

**ssl**

New in version 2016.11.0.

Default: None

TLS/SSL connection options. This could be set to a dictionary containing arguments corresponding to python `ssl` `wrap_socket` method. For details see Tornado and Python documentation.

Note: to set enum arguments values like `cert_reqs` and `ssl_version` use constant names without ssl module prefix: `CERT_REQUIRED` or `PROTOCOL_SSLv23`.

```python
**ssl:**
  - `keyfile`: `<path_to_keyfile>`
  - `certfile`: `<path_to_certfile>`
  - `ssl_version`: `PROTOCOL_TLSv1_2`
```

### 5.2.9 Reactor Settings

**reactor**

Default: `[]`

Defines a salt reactor. See the Reactor documentation for more information.

```python
**reactor:** `[]`
```
**reactor_refresh_interval**

Default: 60

The TTL for the cache of the reactor configuration.

```
reactor_refresh_interval: 60
```

**reactor_worker_threads**

Default: 10

The number of workers for the runner/wheel in the reactor.

```
reactor_worker_threads: 10
```

**reactor_worker_hwm**

Default: 10000

The queue size for workers in the reactor.

```
reactor_worker_hwm: 10000
```

### 5.2.10 Thread Settings

**multiprocessing**

Default: True

If `multiprocessing` is enabled when a minion receives a publication a new process is spawned and the command is executed therein. Conversely, if `multiprocessing` is disabled the new publication will be run executed in a thread.

```
multiprocessing: True
```

**process_count_max**

New in version 2018.3.0.

Default: -1

Limit the maximum amount of processes or threads created by `salt-minion`. This is useful to avoid resource exhaustion in case the minion receives more publications than it is able to handle, as it limits the number of spawned processes or threads. -1 is the default and disables the limit.

```
process_count_max: -1
```
5.2.11 Minion Logging Settings

**log_file**

Default: /var/log/salt/minion

The minion log can be sent to a regular file, local path name, or network location. See also `log_file`.

Examples:

- `log_file: /var/log/salt/minion`
- `log_file: file:///dev/log`
- `log_file: udp://loghost:10514`

**log_level**

Default: warning

The level of messages to send to the console. See also `log_level`.

- `log_level: warning`

**log_level_logfile**

Default: warning

The level of messages to send to the log file. See also `log_level_logfile`. When it is not set explicitly it will inherit the level set by `log_level` option.

- `log_level_logfile: warning`

**log_datefmt**

Default: %H:%M:%S

The date and time format used in console log messages. See also `log_datefmt`.

- `log_datefmt: '%H:%M:%S'`

**log_datefmt_logfile**

Default: %Y-%m-%d %H:%M:%S

The date and time format used in log file messages. See also `log_datefmt_logfile`.

- `log_datefmt_logfile: '%Y-%m-%d %H:%M:%S'`
**log_fmt_console**

Default: `%(levelname)-8s %(message)s`

The format of the console logging messages. See also `log_fmt_console`.

**Note:** Log colors are enabled in `log_fmt_console` rather than the `color` config since the logging system is loaded before the minion config.

Console log colors are specified by these additional formatters:

```markdown
%(colorlevel)s %(colormsg)s
```

Since it is desirable to include the surrounding brackets, `[` and `]`, in the coloring of the messages, these color formatters also include padding as well. Color LogRecord attributes are only available for console logging.

```markdown
log_fmt_console: '%(colorlevel)s %(colormsg)s'
log_fmt_console: '(%(levelname)-8s) %(message)s'
```

**log_fmt_logfile**

Default: `%(asctime)s,%(msecs)03d [%(name)-17s][%(levelname)-8s] %(message)s`

The format of the log file logging messages. See also `log_fmt_logfile`.

```markdown
log_fmt_logfile: '%(asctime)s,%(msecs)03d [%(name)-17s][%(levelname)-8s] %(message)s'
```

**log_granular_levels**

Default: `{}`

This can be used to control logging levels more specifically. See also `log_granular_levels`.

**log_rotate_max_bytes**

Default: `0`

The maximum number of bytes a single log file may contain before it is rotated. A value of 0 disables this feature. Currently only supported on Windows. On other platforms, use an external tool such as `logrotate` to manage log files. `log_rotate_max_bytes`.

**log_rotate_backup_count**

Default: `0`

The number of backup files to keep when rotating log files. Only used if `log_rotate_max_bytes` is greater than 0. Currently only supported on Windows. On other platforms, use an external tool such as `logrotate` to manage log files. `log_rotate_backup_count`
**zmq_monitor**

Default: False

To diagnose issues with minions disconnecting or missing returns, ZeroMQ supports the use of monitor sockets to log connection events. This feature requires ZeroMQ 4.0 or higher.

To enable ZeroMQ monitor sockets, set `zmq_monitor` to 'True' and log at a debug level or higher.

A sample log event is as follows:

```
[DEBUG] ZeroMQ event: {'endpoint': 'tcp://127.0.0.1:4505', 'event': 512, 'value': 27, 'description': 'EVENT_DISCONNECTED'}
```

All events logged will include the string `ZeroMQ event`. A connection event should be logged as the minion starts up and initially connects to the master. If not, check for debug log level and that the necessary version of ZeroMQ is installed.

**tcp_authentication_retries**

Default: 5

The number of times to retry authenticating with the salt master when it comes back online.

ZeroMQ does a lot to make sure when connections come back online that they reauthenticate. The tcp transport should try to connect with a new connection if the old one times out on reauthenticating.

-1 for infinite tries.

**failhard**

Default: False

Set the global failhard flag. This informs all states to stop running states at the moment a single state fails

```
failhard: False
```

## 5.2.12 Include Configuration

Configuration can be loaded from multiple files. The order in which this is done is:

1. The minion config file itself
2. The files matching the glob in `default_include`
3. The files matching the glob in `include` (if defined)

Each successive step overrides any values defined in the previous steps. Therefore, any config options defined in one of the `default_include` files would override the same value in the minion config file, and any options defined in `include` would override both.
**default_include**

Default: `minion.d/*`.conf

The minion can include configuration from other files. Per default the minion will automatically include all config files from `minion.d/*`.conf where minion.d is relative to the directory of the minion configuration file.

Note: Salt creates files in the `minion.d` directory for its own use. These files are prefixed with an underscore. A common example of this is the `_schedule.conf` file.

**include**

Default: not defined

The minion can include configuration from other files. To enable this, pass a list of paths to this option. The paths can be either relative or absolute; if relative, they are considered to be relative to the directory the main minion configuration file lives in. Paths can make use of shell-style globbing. If no files are matched by a path passed to this option then the minion will log a warning message.

```yaml
# Include files from a minion.d directory in the same
directory as the minion config file
include: minion.d/*

# Include a single extra file into the configuration
include: /etc/roles/webserver

# Include several files and the minion.d directory
include:
  - extra_config
  - minion.d/*
  - /etc/roles/webserver
```

**5.2.13 Keepalive Settings**

**tcp_keepalive**

Default: True

The tcp keepalive interval to set on TCP ports. This setting can be used to tune Salt connectivity issues in messy network environments with misbehaving firewalls.

```yaml
tcp_keepalive: True
```
**tcp_keepalive_cnt**

Default: -1

Sets the ZeroMQ TCP keepalive count. May be used to tune issues with minion disconnects.

| tcp_keepalive_cnt: | -1 |

**tcp_keepalive_idle**

Default: 300

Sets ZeroMQ TCP keepalive idle. May be used to tune issues with minion disconnects.

| tcp_keepalive_idle: | 300 |

**tcp_keepalive_intvl**

Default: -1

Sets ZeroMQ TCP keepalive interval. May be used to tune issues with minion disconnects.

| tcp_keepalive_intvl: | -1 |

### 5.2.14 Frozen Build Update Settings

These options control how `salt.modules_saltutil.update()` works with esky frozen apps. For more information look at https://github.com/cloudmatrix/esky/.

**update_url**

Default: False (Update feature is disabled)

The url to use when looking for application updates. Esky depends on directory listings to search for new versions. A webserver running on your Master is a good starting point for most setups.

| update_url: | 'http://salt.example.com/minion-updates' |

**update_restart_services**

Default: [] (service restarting on update is disabled)

A list of services to restart when the minion software is updated. This would typically just be a list containing the minion’s service name, but you may have other services that need to go with it.

| update_restart_services: |=['salt-minion'] |
5.2.15 Windows Software Repo Settings

These settings apply to all minions, whether running in masterless or master-minion mode.

**winrepo_cache_expire_min**

New in version 2016.11.0.
Default: 1800
If set to a nonzero integer, then passing `refresh=True` to functions in the `windows pkg module` will not refresh the windows repo metadata if the age of the metadata is less than this value. The exception to this is `pkg.refresh_db`, which will always refresh the metadata, regardless of age.

| winrepo_cache_expire_min: 1800 |

**winrepo_cache_expire_max**

New in version 2016.11.0.
Default: 21600
If the windows repo metadata is older than this value, and the metadata is needed by a function in the `windows pkg module`, the metadata will be refreshed.

| winrepo_cache_expire_max: 86400 |

**winrepo_source_dir**

Default: `salt://win/repo-ng/`
The source location for the winrepo sls files.

| winrepo_source_dir: salt://win/repo-ng/ |

5.2.16 Standalone Minion Windows Software Repo Settings

The following settings are for configuring the Windows Software Repository (winrepo) on a masterless minion. To run in masterless minion mode, set the `file_client` to `local` or run `salt-call` with the `--local` option.

**Important:** These config options are only valid for minions running in masterless mode.
**winrepo_dir**

Changed in version 2015.8.0: Renamed from `win_repo` to `winrepo_dir`. This option did not have a default value until this version.

Default: `C:\salt\srv\salt\win\repo`

Location on the minion `file_roots` where winrepo files are kept. This is also where the `winrepo_remotes` are cloned to by `winrepo.update_git_repos`.

```
winrepo_dir: 'D:\winrepo'
```

**winrepo_dir_ng**

New in version 2015.8.0: A new `ng` repo was added.

Default: `C:\salt\srv\salt\win\repo-ng`

Location on the minion `file_roots` where winrepo files are kept for 2018.8.0 and later minions. This is also where the `winrepo_remotes` are cloned to by `winrepo.update_git_repos`.

```
winrepo_dir_ng: /srv/salt/win/repo-ng
```

**winrepo_cachefile**

Changed in version 2015.8.0: Renamed from `win_repo_cachefile` to `winrepo_cachefile`. Also, this option did not have a default value until this version.

Default: `winrepo.p`

The name of the winrepo cache file. The file will be created at root of the directory specified by `winrepo_dir_ng`.

```
winrepo_cachefile: winrepo.p
```

**winrepo_remotes**

Changed in version 2015.8.0: Renamed from `win_gitrepos` to `winrepo_remotes`. Also, this option did not have a default value until this version.

New in version 2015.8.0.

Default: `['https://github.com/saltstack/salt-winrepo.git']`

List of git repositories to checkout and include in the winrepo

```
winrepo_remotes:
  - https://github.com/saltstack/salt-winrepo.git
```

To specify a specific revision of the repository, prepend a commit ID to the URL of the repository:

```
winrepo_remotes:
  - '<commit_id> https://github.com/saltstack/salt-winrepo.git'
```

Replace `<commit_id>` with the SHA1 hash of a commit ID. Specifying a commit ID is useful in that it allows one to revert back to a previous version in the event that an error is introduced in the latest revision of the repo.

---

5.2. Configuring the Salt Minion
### winrepo_remotes_ng

New in version 2015.8.0: A new `ng` repo was added.

Default: `['https://github.com/saltstack/salt-winrepo-ng.git']`

List of git repositories to checkout and include in the winrepo for 2015.8.0 and later minions.

<table>
<thead>
<tr>
<th>winrepo_remotes_ng:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- <a href="https://github.com/saltstack/salt-winrepo-ng.git">https://github.com/saltstack/salt-winrepo-ng.git</a></td>
</tr>
</tbody>
</table>

To specify a specific revision of the repository, prepend a commit ID to the URL of the repository:

<table>
<thead>
<tr>
<th>winrepo_remotes_ng:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- '&lt;commit_id&gt; <a href="https://github.com/saltstack/salt-winrepo-ng.git">https://github.com/saltstack/salt-winrepo-ng.git</a>'</td>
</tr>
</tbody>
</table>

Replace `<commit_id>` with the SHA1 hash of a commit ID. Specifying a commit ID is useful in that it allows one to revert back to a previous version in the event that an error is introduced in the latest revision of the repo.

### 5.3 Configuring the Salt Proxy Minion

The Salt system is amazingly simple and easy to configure. The two components of the Salt system each have a respective configuration file. The `salt-master` is configured via the master configuration file, and the `salt-proxy` is configured via the proxy configuration file.

See also:

* example proxy minion configuration file

The Salt Minion configuration is very simple. Typically, the only value that needs to be set is the master value so the proxy knows where to locate its master.

By default, the salt-proxy configuration will be in `/etc/salt/proxy`. A notable exception is FreeBSD, where the configuration will be in `/usr/local/etc/salt/proxy`.

#### 5.3.1 Proxy-specific Configuration Options

**add_proxymodule_to_opts**

New in version 2015.8.2.

Changed in version 2016.3.0.

Default: `False`

Add the proxymodule LazyLoader object to opts.

| add_proxymodule_to_opts: True |
**proxy_merge_grains_in_module**

New in version 2016.3.0.
Changed in version 2017.7.0.
Default: True

If a proxymodule has a function called `grains`, then call it during regular grains loading and merge the results with the proxy's grains dictionary. Otherwise it is assumed that the module calls the grains function in a custom way and returns the data elsewhere.

```
proxy_merge_grains_in_module: False
```

**proxy_keep_alive**

New in version 2017.7.0.
Default: True

Whether the connection with the remote device should be restarted when dead. The proxy module must implement the `alive` function, otherwise the connection is considered alive.

```
proxy_keep_alive: False
```

**proxy_keep_alive_interval**

New in version 2017.7.0.
Default: 1

The frequency of keepalive checks, in minutes. It requires the `proxy_keep_alive` option to be enabled (and the proxy module to implement the `alive` function).

```
proxy_keep_alive_interval: 5
```

**proxy_always_alive**

New in version 2017.7.0.
Default: True

Whether the proxy should maintain the connection with the remote device. Similarly to `proxy_keep_alive`, this option is very specific to the design of the proxy module. When `proxy_always_alive` is set to False, the connection with the remote device is not maintained and has to be closed after every command.

```
proxy_always_alive: False
```

---

5.3. Configuring the Salt Proxy Minion 197
**proxy_merge_pillar_in_opts**

New in version 2017.7.3.
Default: False.

Whether the pillar data to be merged into the proxy configuration options. As multiple proxies can run on the same server, we may need different configuration options for each, while there's one single configuration file. The solution is merging the pillar data of each proxy minion into the opts.

```
proxy_merge_pillar_in_opts: True
```

**proxy_deep_merge_pillar_in_opts**

New in version 2017.7.3.
Default: False.

Deep merge of pillar data into configuration opts. This option is evaluated only when `proxy_merge_pillar_in_opts` is enabled.

**proxy_merge_pillar_in_opts_strategy**

New in version 2017.7.3.
Default: smart.

The strategy used when merging pillar configuration into opts. This option is evaluated only when `proxy_merge_pillar_in_opts` is enabled.

**proxy_mines_pillar**

New in version 2017.7.3.
Default: True.

Allow enabling mine details using pillar data. This evaluates the mine configuration under the pillar, for the following regular minion options that are also equally available on the proxy minion: `mine_interval`, and `mine_functions`.

### 5.4 Configuration file examples

- Example master configuration file
- Example minion configuration file
- Example proxy minion configuration file
5.4.1 Example master configuration file

```plaintext
##### Primary configuration settings #####
#################################################################
# This configuration file is used to manage the behavior of the Salt Master.
# Values that are commented out but have an empty line after the comment are # defaults that do not need to be set in the config. If there is no blank line # after the comment then the value is presented as an example and is not the # default.

# Per default, the master will automatically include all config files # from master.d/*.conf (master.d is a directory in the same directory # as the main master config file).
#default_include: master.d/*.conf

# The address of the interface to bind to:
#interface: 0.0.0.0

# Whether the master should listen for IPv6 connections. If this is set to True, # the interface option must be adjusted, too. (For example: "interface: '::'") #ipv6: False

# The tcp port used by the publisher:
#publish_port: 4505

# The user under which the salt master will run. Salt will update all # permissions to allow the specified user to run the master. The exception is # the job cache, which must be deleted if this user is changed. If the # modified files cause conflicts, set verify_env to False. #user: root

# Tell the master to also use salt-ssh when running commands against minions. #enable_ssh_minions: False

# The port used by the communication interface. The ret (return) port is the # interface used for the file server, authentication, job returns, etc. #ret_port: 4506

# Specify the location of the daemon process ID file: #pidfile: /var/run/salt-master.pid

# The root directory prepended to these options: pki_dir, cachedir, # sock_dir, log_file, autosign_file, autoreject_file, extension_modules, # key_logfile, pidfile, autosign_grains_dir: #root_dir: /

# The path to the master's configuration file. #conf_file: /etc/salt/master

# Directory used to store public key data: #pki_dir: /etc/salt/pki/master

# Key cache. Increases master speed for large numbers of accepted # keys. Available options: 'sched'. (Updates on a fixed schedule.) # Note that enabling this feature means that minions will not be # available to target for up to the length of the maintanence loop # which by default is 60s.
```
(continues on next page)
#key_cache: ''

# Directory to store job and cache data:
# This directory may contain sensitive data and should be protected accordingly.
#
#cachedir: /var/cache/salt/master

# Directory for custom modules. This directory can contain subdirectories for
# each of Salt's module types such as "runners", "output", "wheel", "modules",
# "states", "returners", "engines", "utils", etc.
#extension_modules: /var/cache/salt/master/extmods

# Directory for custom modules. This directory can contain subdirectories for
# each of Salt's module types such as "runners", "output", "wheel", "modules",
# "states", "returners", "engines", "utils", etc.
# Like 'extension_modules' but can take an array of paths
#module_dirs: []

# Verify and set permissions on configuration directories at startup:
#verify_env: True

# Set the number of hours to keep old job information in the job cache:
#keep_jobs: 24

# The number of seconds to wait when the client is requesting information
# about running jobs.
#gather_job_timeout: 10

# Set the default timeout for the salt command and api. The default is 5
# seconds.
#timeout: 5

# The loop_interval option controls the seconds for the master's maintenance
# process check cycle. This process updates file server backends, cleans the
# job cache and executes the scheduler.
#loop_interval: 60

# Set the default outputter used by the salt command. The default is "nested".
#output: nested

# To set a list of additional directories to search for salt outputters, set the
# outputter_dirs option.
#outputter_dirs: []

# Set the default output file used by the salt command. Default is to output
# to the CLI and not to a file. Functions the same way as the "--out-file"
# CLI option, only sets this to a single file for all salt commands.
#output_file: None

# Return minions that timeout when running commands like test.ping
#show_timeout: True

# Tell the client to display the jid when a job is published.
#show_jid: False

# By default, output is colored. To disable colored output, set the color value
# to False.
color: True

# Do not strip off the colored output from nested results and state outputs
# (true by default).
strip_colors: False

# To display a summary of the number of minions targeted, the number of
# minions returned, and the number of minions that did not return, set the
# cli_summary value to True. (False by default.)
cli_summary: False

# Set the directory used to hold unix sockets:
sock_dir: /var/run/salt/master

# The master can take a while to start up when lspci and/or dmidecode is used
# to populate the grains for the master. Enable if you want to see GPU hardware
# data for your master.
enable_gpu_grains: False

# The master maintains a job cache. While this is a great addition, it can be
# a burden on the master for larger deployments (over 5000 minions).
# Disabling the job cache will make previously executed jobs unavailable to
# the jobs system and is not generally recommended.
job_cache: True

# Cache minion grains, pillar and mine data via the cache subsystem in the
# cachedir or a database.
minion_data_cache: True

# Cache subsystem module to use for minion data cache.
cache: localfs
# Enables a fast in-memory cache booster and sets the expiration time.
memcache_expire_seconds: 0
# Set a memcache limit in items (bank + key) per cache storage (driver + driver_opts).
memcache_max_items: 1024
# Each time a cache storage got full cleanup all the expired items not just the
# _oldest one.
memcache_full_cleanup: False
# Enable collecting the memcache stats and log it on `debug` log level.
memcache_debug: False

# Store all returns in the given returner.
# Setting this option requires that any returner-specific configuration also
# be set. See various returners in salt/returners for details on required
# configuration values. (See also, event_return_queue, and event_return_queue_max_
# _seconds below.)
event_return: mysql

# On busy systems, enabling event_returns can cause a considerable load on
# the storage system for returners. Events can be queued on the master and
# stored in a batched fashion using a single transaction for multiple events.
# By default, events are not queued.
event_return_queue: 0
In some cases enabling event return queueing can be very helpful, but the bus may not be busy enough to flush the queue consistently. Setting this to a reasonable value (1-30 seconds) will cause the queue to be flushed when the oldest event is older than `event_return_queue_max_seconds` regardless of how many events are in the queue.

```
event_return_queue_max_seconds: 0
```

Only return events matching tags in a whitelist, supports glob matches.

```
event_return_whitelist:
  - salt/master/a_tag
  - salt/run/*/ret
```

Store all event returns **except** the tags in a blacklist, supports globs.

```
event_return_blacklist:
  - salt/master/not_this_tag
  - salt/wheel/*/ret
```

Passing very large events can cause the minion to consume large amounts of memory. This value tunes the maximum size of a message allowed onto the master event bus. The value is expressed in bytes.

```
max_event_size: 1048576
```

Windows platforms lack posix IPC and must rely on slower TCP based inter-process communications. Set `ipc_mode` to `tcp` on such systems.

```
ipc_mode: tcp
```

Overwrite the default tcp ports used by the minion when `ipc_mode` is set to `tcp`

```
tcp_master_pub_port: 4510
tcp_master_pull_port: 4511
```

By default, the master AES key rotates every 24 hours. The next command following a key rotation will trigger a key refresh from the minion which may result in minions which do not respond to the first command after a key refresh.

```
To tell the master to ping all minions immediately after an AES key refresh, set `ping_on_rotate` to True. This should mitigate the issue where a minion does not appear to initially respond after a key is rotated.
```

```
Note that `ping_on_rotate` may cause high load on the master immediately after the key rotation event as minions reconnect. Consider this carefully if this salt master is managing a large number of minions.
```

```
If disabled, it is recommended to handle this event by listening for the 'aes_key_rotate' event with the 'key' tag and acting appropriately.
```

```
ping_on_rotate: False
```

By default, the master deletes its cache of minion data when the key for that minion is removed. To preserve the cache after key deletion, set `preserve_minion_cache` to True.

```
preserve_minion_cache: False
```

WARNING: This may have security implications if compromised minions auth with a previous deleted minion ID.
# Allow or deny minions from requesting their own key revocation
#allow_minion_key_revoke: True

# If max_minions is used in large installations, the master might experience
# high-load situations because of having to check the number of connected
# minions for every authentication. This cache provides the minion-ids of
# all connected minions to all MWorker-processes and greatly improves the
# performance of max_minions.
# con_cache: False

# The master can include configuration from other files. To enable this,
# pass a list of paths to this option. The paths can be either relative or
# absolute; if relative, they are considered to be relative to the directory
# the main master configuration file lives in (this file). Paths can make use
# of shell-style globbing. If no files are matched by a path passed to this
# option, then the master will log a warning message.
# include:

##### Large-scale tuning settings #####
##########################################

# Max open files

# Each minion connecting to the master uses AT LEAST one file descriptor, the
# master subscription connection. If enough minions connect you might start
# seeing on the console (and then salt-master crashes):
# Too many open files (tcp_listener.cpp:335)
# Aborted (core dumped)

# By default this value will be the one of `ulimit -Hn`, ie, the hard limit for
# max open files.
#
# If you wish to set a different value than the default one, uncomment and
# configure this setting. Remember that this value CANNOT be higher than the
# hard limit. Raising the hard limit depends on your OS and/or distribution,
# a good way to find the limit is to search the internet. For example:
# raise max open files hard limit debian
#
#max_open_files: 100000

# The number of worker threads to start. These threads are used to manage
# return calls made from minions to the master. If the master seems to be
# running slowly, increase the number of threads. This setting can not be
# set lower than 3.
#worker_threads: 5

# Set the ZeroMQ high water marks
# http://api.zeromq.org/3-2:zmq-setsockopt

# The listen queue size / backlog
# zmq_backlog: 1000
# The publisher interface ZeroMQPubServerChannel
# pub_hwm: 1000
# The master may allocate memory per-event and not
# reclaim it.
# To set a high-water mark for memory allocation, use
# ipc_write_buffer to set a high-water mark for message
# buffering.
# Value: In bytes. Set to 'dynamic' to have Salt select
# a value for you. Default is disabled.
# ipc_write_buffer: 'dynamic'

# These two batch settings, batch_safe_limit and batch_safe_size, are used to
# automatically switch to a batch mode execution. If a command would have been
# sent to more than <batch_safe_limit> minions, then run the command in
# batches of <batch_safe_size>. If no batch_safe_size is specified, a default
# of 8 will be used. If no batch_safe_limit is specified, then no automatic
# batching will occur.
#batch_safe_limit: 100
#batch_safe_size: 8

# Master stats enables stats events to be fired from the master at close
# to the defined interval
#master_stats: False
#master_stats_event_iter: 60

##### Security settings #####
##########################################
# Enable passphrase protection of Master private key. Although a string value
# is acceptable; passwords should be stored in an external vaulting mechanism
# and retrieved via sdb. See https://docs.saltstack.com/en/latest/topics/sdb/.
# Passphrase protection is off by default but an example of an sdb profile and
# query is as follows.
# masterkeyring:
#   driver: keyring
#   service: system
# #
#   key_pass: sdb://masterkeyring/key_pass

# Enable passphrase protection of the Master signing_key. This only applies if
# master_sign_pubkey is set to True. This is disabled by default.
# master_sign_pubkey: True
# signing_key_pass: sdb://masterkeyring/signing_pass

# Enable "open mode", this mode still maintains encryption, but turns off
# authentication, this is only intended for highly secure environments or for
# the situation where your keys end up in a bad state. If you run in open mode
# you do so at your own risk!
#open_mode: False

# Enable auto_accept, this setting will automatically accept all incoming
# public keys from the minions. Note that this is insecure.
#auto_accept: False
# The size of key that should be generated when creating new keys.
#keysize: 2048

# Time in minutes that an incoming public key with a matching name found in
# pki_dir/minion_autosign/keyid is automatically accepted. Expired autosign keys
# are removed when the master checks the minion_autosign directory.
# 0 equals no timeout
# autosign_timeout: 120

# If the autosign_file is specified, incoming keys specified in the
# autosign_file will be automatically accepted. This is insecure. Regular
# expressions as well as globing lines are supported. The file must be readonly
# except for the owner. Use permissive_pki_access to allow the group write access.
#autosign_file: /etc/salt/autosign.conf

# Works like autosign_file, but instead allows you to specify minion IDs for
# which keys will automatically be rejected. Will override both membership in
# the autosign_file and the auto_accept setting.
#autoreject_file: /etc/salt/autoreject.conf

# If the autosign_grains_dir is specified, incoming keys from minions with grain
# values matching those defined in files in this directory will be accepted
# automatically. This is insecure. Minions need to be configured to send the grains.
#autosign_grains_dir: /etc/salt/autosign_grains

# Enable permissive access to the salt keys. This allows you to run the
# master or minion as root, but have a non-root group be given access to
# your pki_dir. To make the access explicit, root must belong to the group
# you've given access to. This is potentially quite insecure. If an autosign_file
# is specified, enabling permissive_pki_access will allow group access to that
# specific file.
#permissive_pki_access: False

# Allow users on the master access to execute specific commands on minions.
# This setting should be treated with care since it opens up execution
# capabilities to non root users. By default this capability is completely
# disabled.
#publisher_acl:
#  larry:
#   - test.ping
#   - network.*
#
# Blacklist any of the following users or modules
#
# This example would blacklist all non sudo users, including root from
# running any commands. It would also blacklist any use of the "cmd"
# module. This is completely disabled by default.
#
#
# Check the list of configured users in client ACL against users on the
# system and throw errors if they do not exist.
#client_acl_verify: True
#
#publisher_acl_blacklist:
# users:
# - root
# - ^(?!=sudo_).*$' # all non sudo users
# modules:
# - cmd

# Enforce publisher_acl & publisher_acl_blacklist when users have sudo
# access to the salt command.
#
#sudo_acl: False

# The external auth system uses the Salt auth modules to authenticate and
# validate users to access areas of the Salt system.
#external_auth:
#  # pam:
#  #   fred:
#  #  - test.*
#  # Time (in seconds) for a newly generated token to live. Default: 12 hours
token_expire: 43200
#  # Allow eauth users to specify the expiry time of the tokens they generate.
#  # A boolean applies to all users or a dictionary of whitelisted eauth backends
#  # and usernames may be given.
#  token_expire_user_override:
#    # pam:
#    #   fred
#    #   tom
#    # ldap:
#    #   gary
#token_expire_user_override: False

# Set to True to enable keeping the calculated user's auth list in the token
# file. This is disabled by default and the auth list is calculated or requested
# from the eauth driver each time.
#keep_acl_in_token: False

# Auth subsystem module to use to get authorized access list for a user. By default it
# 's
# the same module used for external authentication.
eauth_acl_module: django

# Allow minions to push files to the master. This is disabled by default, for
# security purposes.
#file_recv: False

# Set a hard-limit on the size of the files that can be pushed to the master.
# It will be interpreted as megabytes. Default: 100
#file_recv_max_size: 100

# Signature verification on messages published from the master.
# This causes the master to cryptographically sign all messages published to its event
# bus, and minions then verify that signature before acting on the message.
#
# This is False by default.
# Note that to facilitate interoperability with masters and minions that are different
# versions, if sign_pub_messages is True but a message is received by a minion with
# no signature, it will still be accepted, and a warning message will be logged.
# Conversely, if sign_pub_messages is False, but a minion receives a signed
# message it will be accepted, the signature will not be checked, and a warning
# message will be logged. This behavior went away in Salt 2014.1.0 and these two situations
# will cause minion to throw an exception and drop the message.
# sign_pub_messages: False

# Signature verification on messages published from minions
# This requires that minions cryptographically sign the messages they
# publish to the master. If minions are not signing, then log this information
# at loglevel 'INFO' and drop the message without acting on it.
# require_minion_sign_messages: False
# The below will drop messages when their signatures do not validate.
# Note that when this option is False but 'require_minion_sign_messages' is True
# minions MUST sign their messages but the validity of their signatures
# is ignored.
# These two config options exist so a Salt infrastructure can be moved
# to signing minion messages gradually.
# drop_messages_signature_fail: False

# Use TLS/SSL encrypted connection between master and minion.
# Can be set to a dictionary containing keyword arguments corresponding to Python's
# 'ssl.wrap_socket' method.
# Default is None.
#ssl:
#  keyfile: <path_to_keyfile>
#  certfile: <path_to_certfile>
#  ssl_version: PROTOCOL_TLSv1_2

##### Salt-SSH Configuration #####

# Define the default salt-ssh roster module to use
#roster: flat

# Pass in an alternative location for the salt-ssh `flat` roster file
#roster_file: /etc/salt/roster

# Define locations for `flat` roster files so they can be chosen when using Salt API.
# An administrator can place roster files into these locations. Then when
# calling Salt API, parameter `roster_file` should contain a relative path to
# these locations. That is, "roster_file=/foo/roster" will be resolved as
# "/etc/salt/roster.d/foo/roster" etc. This feature prevents passing insecure
# custom rosters through the Salt API.
#
#rosters:
#  - /etc/salt/roster.d
#  - /opt/salt/some/more/rosters

# The ssh password to log in with.
#ssh_passwd: ''

# The target system's ssh port number.
#ssh_port: 22

# Comma-separated list of ports to scan.
#ssh_scan_ports: 22

# Scanning socket timeout for salt-ssh.
#ssh_scan_timeout: 0.01

# Boolean to run command via sudo.
#ssh_sudo: False

# Boolean to run ssh_pre_flight script defined in roster. By default
# the script will only run if the thin_dir does not exist on the targeted
# minion. This forces the script to run regardless of the thin dir existing
# or not.
#ssh_run_pre_flight: True

# Number of seconds to wait for a response when establishing an SSH connection.
#ssh_timeout: 60

# The user to log in as.
#ssh_user: root

# The log file of the salt-ssh command:
#ssh_log_file: /var/log/salt/ssh

# Pass in minion option overrides that will be inserted into the SHIM for
# salt-ssh calls. The local minion config is not used for salt-ssh. Can be
# overridden on a per-minion basis in the roster (`minion_opts`)
#ssh_minion_opts:
# gpg_keydir: /root/gpg

# Set this to True to default to using ~/.ssh/id_rsa for salt-ssh
# authentication with minions
#ssh_use_home_key: False

# Set this to True to default salt-ssh to run with `--o IdentitiesOnly=yes`
# This option is intended for situations where the ssh-agent offers many
# different identities and allows ssh to ignore those identities and use the
# only one specified in options.
#ssh_identities_only: False

# List-only nodegroups for salt-ssh. Each group must be formed as either a
# comma-separated list, or a YAML list. This option is useful to group minions
# into easy-to-target groups when using salt-ssh. These groups can then be
# targeted with the normal -N argument to salt-ssh.
#ssh_list_nodegroups: {}

# salt-ssh has the ability to update the flat roster file if a minion is not
# found in the roster. Set this to True to enable it.
#ssh_update_roster: False

#### Master Module Management ####

### Master Module Management ###

# Manage how master side modules are loaded.
# Add any additional locations to look for master runners:
#runner_dirs: []

# Add any additional locations to look for master utils:
#utils_dirs: []

# Enable Cython for master side modules:
cython_enable: False

##### State System settings #####
##########################################
# The state system uses a "top" file to tell the minions what environment to
# use and what modules to use. The state_top file is defined relative to the
# root of the base environment as defined in "File Server settings" below.
#state_top: top.sls

# The master_tops option replaces the external_nodes option by creating
# a plugable system for the generation of external top data. The external_nodes
# option is deprecated by the master_tops option.
#
# To gain the capabilities of the classic external_nodes system, use the
# following configuration:
# master_tops:
#   ext_nodes: <Shell command which returns yaml>
#
#master_tops: {}  

# The renderer to use on the minions to render the state data
#renderer: jinja|yaml

# Default Jinja environment options for all templates except sls templates
#jinja_env:
#   block_start_string: '{%'
#   block_end_string: '%}'}
#   variable_start_string: '{' 
#   variable_end_string: '}'
#   comment_start_string: '{#'
#   comment_end_string: '#}'}
#   line_statement_prefix:
#   line_comment_prefix:
#   trim_blocks: False
#   lstrip_blocks: False
#   newline_sequence: '\n'
#   keep_trailing_newline: False

# Jinja environment options for sls templates
#jinja_sls_env:
#   block_start_string: '{%'
#   block_end_string: '%}'}
#   variable_start_string: '{' 
#   variable_end_string: '}'
#   comment_start_string: '{#'
#   comment_end_string: '#}'}
#   line_statement_prefix:
#   line_comment_prefix:
#   trim_blocks: False
#   lstrip_blocks: False
#   newline_sequence: '\n'
#   keep_trailing_newline: False

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# trim_blocks: False
# lstrip_blocks: False
# newline_sequence: '\n'
# keep_trailing_newline: False

# The failhard option tells the minions to stop immediately after the first
# failure detected in the state execution, defaults to False
# failhard: False

# The state_verbose and state_output settings can be used to change the way
# state system data is printed to the display. By default all data is printed.
# The state_verbose setting can be set to True or False, when set to False
# all data that has a result of True and no changes will be suppressed.
# state_verbose: True

# The state_output setting controls which results will be output full multi line
# full, terse - each state will be full/terse
# mixed - only states with errors will be full
# changes - states with changes and errors will be full
# full_id, mixed_id, changes_id and terse_id are also allowed;
# when set, the state ID will be used as name in the output
# state_output: full

# The state_output_diff setting changes whether or not the output from
# successful states is returned. Useful when even the terse output of these
# states is cluttering the logs. Set it to True to ignore them.
# state_output_diff: False

# The state_output_profile setting changes whether profile information
# will be shown for each state run.
# state_output_profile: True

# Automatically aggregate all states that have support for mod_aggregate by
# setting to 'True'. Or pass a list of state module names to automatically
# aggregate just those types.
# state_aggregate:
# - pkg
#
# state_aggregate: False

# Send progress events as each function in a state run completes execution
# by setting to 'True'. Progress events are in the format
# 'salt/job/<JID>/prog/<MID>/<RUN NUM>'
# state_events: False

### File Server settings ###

Salt runs a lightweight file server written in zeromq to deliver files to
minions. This file server is built into the master daemon and does not
require a dedicated port.

The file server works on environments passed to the master, each environment
can have multiple root directories, the subdirectories in the multiple file
roots cannot match, otherwise the downloaded files will not be able to be
reliably ensured. A base environment is required to house the top file.
# Example:
# file_roots:
#  base:
#   - /srv/salt/
#  dev:
#   - /srv/salt/dev/services
#   - /srv/salt/dev/states
#  prod:
#   - /srv/salt/prod/services
#   - /srv/salt/prod/states
#
# master_roots:
#  base:
#    - /srv/salt-
#    
# The master_roots setting configures a master-only copy of the file_roots dictionary, used by the state compiler.
#master_roots:
#  base:
#    - /srv/salt-master

# When using multiple environments, each with their own top file, the default behaviour is an unordered merge. To prevent top files from being merged together and instead to only use the top file from the requested environment, set this value to 'same'.
top_file_merging_strategy: merge

# To specify the order in which environments are merged, set the ordering in the env_order option. Given a conflict, the last matching value will win.
#env_order: ['base', 'dev', 'prod']

# If top_file_merging_strategy is set to 'same' and an environment does not contain a top file, the top file in the environment specified by default_top will be used instead.
#default_top: base

# The hash_type is the hash to use when discovering the hash of a file on the master server. The default is sha256, but md5, sha1, sha224, sha384 and sha512 are also supported.
#hash_type: sha256

# WARNING: While md5 and sha1 are also supported, do not use them due to the high chance of possible collisions and thus security breach.
#
# Prior to changing this value, the master should be stopped and all Salt caches should be cleared.
#hash_type: sha256

# The buffer size in the file server can be adjusted here:
#file_buffer_size: 1048576

# A regular expression (or a list of expressions) that will be matched against the file path before syncing the modules and states to the minions. This includes files affected by the file.recurse state.
# For example, if you manage your custom modules and states in subversion

(continues on next page)
# and don't want all the '.svn' folders and content synced to your minions,
# you could set this to '/\.svn($|/)'. By default nothing is ignored.
#file_ignore_regex:
# - '/\.svn($|/)'
# - '/\.git($|/)'

# A file glob (or list of file globs) that will be matched against the file
# path before syncing the modules and states to the minions. This is similar
# to file_ignore_regex above, but works on globs instead of regex. By default
# nothing is ignored.
#file_ignore_glob:
# - '*.pyc'
# - '*/somefolder/*.bak'
# - '*.swp'

# File Server Backend
#
# Salt supports a modular fileserver backend system, this system allows
# the salt master to link directly to third party systems to gather and
# manage the files available to minions. Multiple backends can be
# configured and will be searched for the requested file in the order in which
# they are defined here. The default setting only enables the standard backend
# "roots" which uses the "file_roots" option.
#fileserver_backend:
# - roots
#
# To use multiple backends list them in the order they are searched:
#fileserver_backend:
# - git
# - roots
#
# Uncomment the line below if you do not want the file_server to follow
# symlinks when walking the filesystem tree. This is set to True by default. Currently this only applies to the default roots
#fileserver_followsymlinks: False
#
# Uncomment the line below if you do not want symlinks to be treated as the files they are pointing to. By default this is set to False. By uncommenting the line below, any detected symlink while listing files on the Master will not be returned to the Minion.
#fileserver_ignoresymlinks: True
#
# By default, the Salt fileserver recurses fully into all defined environments
# to attempt to find files. To limit this behavior so that the fileserver only
# traverses directories with SLS files and special Salt directories like _modules,
# enable the option below. This might be useful for installations where a file root
# has a very large number of files and performance is impacted. Default is False.
#fileserver_limit_traversal: False
#
# The fileserver can fire events off every time the fileserver is updated,
# these are disabled by default, but can be easily turned on by setting this flag to True
#fileserver_events: False
#
# Git File Server Backend Configuration
Optional parameter used to specify the provider to be used for 
gitfs. Must be either pygit2 or gitpython. If unset, both will be tried (in that 
order), and the first one with a compatible version installed will be the 
provider that is used.

```
#gitfs_provider: pygit2
```

Along with `gitfs_password`, is used to authenticate to HTTPS remotes.

```
# gitfs_password: ''
```

Along with `gitfs_user`, is used to authenticate to HTTPS remotes. 
This parameter is not required if the repository does not use authentication.

```
#gitfs_user: ''
```

By default, Salt will not authenticate to an HTTP (non-HTTPS) remote. 
This parameter enables authentication over HTTP. Enable this at your own risk.

```
#gitfs_insecure_auth: False
```

Along with `gitfs_privkey` (and optionally `gitfs_passphrase`), is used to 
authenticate to SSH remotes. This parameter (or its per-remote counterpart) 
is required for SSH remotes.

```
#gitfs_privkey: ''
```

Along with `gitfs_pubkey` (and optionally `gitfs_passphrase`), is used to 
authenticate to SSH remotes. This parameter (or its per-remote counterpart) 
is required for SSH remotes.

```
#gitfs_pubkey: ''
```

This parameter is optional, required only when the SSH key being used to 
authenticate is protected by a passphrase.

```
#gitfs_passphrase: ''
```

When using the git fileserver backend at least one git remote needs to be 
defined. The user running the salt master will need read access to the repo.

```
# The repos will be searched in order to find the file requested by a client 
# and the first repo to have the file will return it. 
# When using the git backend branches and tags are translated into salt 
# environments. 
# Note: file:// repos will be treated as a remote, so refs you want used must 
# exist in that repo as *local* refs. 
#gitfs_remotes:
```

```
# - git://github.com/saltstack/salt-states.git
# - file:///var/git/saltmaster
```

The `gitfs_ssl_verify` option specifies whether to ignore ssl certificate 
errors when contacting the gitfs backend. You might want to set this to 
false if you're using a git backend that uses a self-signed certificate but 
keep in mind that setting this flag to anything other than the default of True 
is a security concern, you may want to try using the ssh transport.

```
#gitfs_ssl_verify: True
```

The `gitfs_root` option gives the ability to serve files from a subdirectory 
within the repository. The path is defined relative to the root of the 
repository and defaults to the repository root.
#gitfs_root: somefolder/otherfolder
#
# The refs specs fetched by gitfs remotes
#gitfs_refspecs:
# - '+refs/heads/*:refs/remotes/origin/*'
# - '+refs/tags/*:refs/tags/*'
#
#
##### Pillar settings #####
####################################
# Salt Pillars allow for the building of global data that can be made selectively
# available to different minions based on minion grain filtering. The Salt
# Pillar is laid out in the same fashion as the file server, with environments,
# a top file and sls files. However, pillar data does not need to be in the
# highstate format, and is generally just key/value pairs.
#pillar_roots:
# base:
# - /srv/pillar
#
#ext_pillar:
# - hiera: /etc/hiera.yaml
# - cmd_yaml: cat /etc/salt/yaml

# A list of paths to be recursively decrypted during pillar compilation.
# Entries in this list can be formatted either as a simple string, or as a
# key/value pair, with the key being the pillar location, and the value being
# the renderer to use for pillar decryption. If the former is used, the
# renderer specified by decrypt_pillar_default will be used.
#decrypt_pillar:
# - 'foo:bar': gpg
# - 'lorem:ipsum:dolor'

# The delimiter used to distinguish nested data structures in the
# decrypt_pillar option.
#decrypt_pillar_delimiter: ':'

# The default renderer used for decryption, if one is not specified for a given
# pillar key in decrypt_pillar.
#decrypt_pillar_default: gpg

# List of renderers which are permitted to be used for pillar decryption.
#decrypt_pillar_renderers:
# - gpg

# The ext_pillar_first option allows for external pillar sources to populate
# before file system pillar. This allows for targeting file system pillar from
# ext_pillar.
#ext_pillar_first: False

# The external pillars permitted to be used on-demand using pillar.ext
#on_demand_ext_pillar:
# - libvirt
# - virtkey

# The pillar_gitfs_ssl_verify option specifies whether to ignore ssl certificate
# errors when contacting the pillar gitfs backend. You might want to set this to
# false if you're using a git backend that uses a self-signed certificate but
# keep in mind that setting this flag to anything other than the default of True
# is a security concern, you may want to try using the ssh transport.
pillar_gitfs_ssl_verify: True

# The pillar_opts option adds the master configuration file data to a dict in
# the pillar called "master". This is used to set simple configurations in the
# master config file that can then be used on minions.
pillar_opts: False

# The pillar_safe_render_error option prevents the master from passing pillar
# render errors to the minion. This is set on by default because the error could
# contain templating data which would give that minion information it shouldn't
# have, like a password! When set true the error message will only show:
# Rendering SLS 'my.sls' failed. Please see master log for details.
pillar_safe_render_error: True

# The pillar_source_merging_strategy option allows you to configure merging strategy
# between different sources. It accepts five values: none, recurse, aggregate,
# overwrite,
# or smart. None will not do any merging at all. Recurse will merge recursively
# mapping of data.
# Aggregate instructs aggregation of elements between sources that use the 
# yamlex
# renderer. Overwrite
# will overwrite elements according the order in which they are processed. This is
# behavior of the 2014.1 branch and earlier. Smart guesses the best strategy based
# on the "renderer" setting and is the default value.
pillar_source_merging_strategy: smart

# Recursively merge lists by aggregating them instead of replacing them.
pillar_merge_lists: False

# Set this option to True to force the pillarenv to be the same as the effective
# saltenv when running states. If pillarenv is specified this option will be
# ignored.
pillarenv_from_saltenv: False

# Set this option to 'True' to force a 'KeyError' to be raised whenever an
# attempt to retrieve a named value from pillar fails. When this option is set
# to 'False', the failed attempt returns an empty string. Default is 'False'.
pillar_raise_on_missing: False

# Git External Pillar (git_pillar) Configuration Options
#
# Specify the provider to be used for git_pillar. Must be either pygit2 or
# gitpython. If unset, then both will be tried in that same order, and the
# first one with a compatible version installed will be the provider that
# is used.
git_pillar_provider: pygit2

# If the desired branch matches this value, and the environment is omitted
# from the git_pillar configuration, then the environment for that git_pillar
# remote will be base.
git_pillar_base: master

5.4. Configuration file examples
# If the branch is omitted from a git_pillar remote, then this branch will
# be used instead
#git_pillar_branch: master

# Environment to use for git_pillar remotes. This is normally derived from
# the branch/tag (or from a per-remote env parameter), but if set this will
# override the process of deriving the env from the branch/tag name.
#git_pillar_env: ''

# Path relative to the root of the repository where the git_pillar top file
# and SLS files are located.
#git_pillar_root: ''

# Specifies whether or not to ignore SSL certificate errors when contacting
# the remote repository.
#git_pillar_ssl_verify: False

# When set to False, if there is an update/checkout lock for a git_pillar
# remote and the pid written to it is not running on the master, the lock
# file will be automatically cleared and a new lock will be obtained.
#git_pillar_global_lock: True

# Git External Pillar Authentication Options
#
# Along with git_pillar_password, is used to authenticate to HTTPS remotes.
#git_pillar_user: ''

# Along with git_pillar_user, is used to authenticate to HTTPS remotes.
# This parameter is not required if the repository does not use authentication.
#git_pillar_password: ''

# By default, Salt will not authenticate to an HTTP (non-HTTPS) remote.
# This parameter enables authentication over HTTP.
#git_pillar_insecure_auth: False

# Along with git_pillar_privkey (and optionally git_pillar_passphrase),
# is used to authenticate to SSH remotes.
#git_pillar_pubkey: ''

# Along with git_pillar_pubkey (and optionally git_pillar_passphrase),
# is used to authenticate to SSH remotes.
#git_pillar_privkey: ''

# This parameter is optional, required only when the SSH key being used
# to authenticate is protected by a passphrase.
#git_pillar_passphrase: ''

# The refspecs fetched by git_pillar remotes
#git_pillar_refspecs:
# - '+refs/heads/*:refs/remotes/origin/*'
# - '+refs/tags/*:refs/tags/*'

# A master can cache pillars locally to bypass the expense of having to render them
# for each minion on every request. This feature should only be enabled in cases
# where pillar rendering time is known to be unsatisfactory and any attendant security
# concerns about storing pillars in a master cache have been addressed.
# When enabling this feature, be certain to read through the additional `pillar_cache` configuration options to fully understand the tunable parameters and their implications.

# Note: setting `pillar_cache: True` has no effect on targeting Minions with Pillars. See https://docs.saltstack.com/en/latest/topics/targeting/pillar.html

#pillar_cache: False
# If and only if a master has set `pillar_cache: True`, the cache TTL controls the amount of time, in seconds, before the cache is considered invalid by a master and a fresh pillar is recompiled and stored.
#pillar_cache_ttl: 3600

# If and only if a master has set `pillar_cache: True`, one of several storage providers can be utilized.

# `disk`: The default storage backend. This caches rendered pillars to the master cache. Rendered pillars are serialized and deserialized as msgpack structures for speed. Note that pillars are stored UNENCRYPTED. Ensure that the master cache has permissions set appropriately. (Some defaults are provided.)

# memory: [EXPERIMENTAL] An optional backend for pillar caches which uses a pure-Python in-memory data structure for maximal performance. There are several caveats, however. First, because each master worker contains its own in-memory cache, there is no guarantee of cache consistency between minion requests. This works best in situations where the pillar rarely if ever changes. Secondly, and perhaps more importantly, this means that unencrypted pillars will be accessible to any process which can examine the memory of the `salt-master`! This may represent a substantial security risk.

#pillar_cache_backend: disk

# A master can also cache GPG data locally to bypass the expense of having to render them for each minion on every request. This feature should only be enabled in cases where pillar rendering time is known to be unsatisfactory and any attendant security concerns about storing decrypted GPG data in a master cache have been addressed.

# When enabling this feature, be certain to read through the additional `gpg_cache` configuration options to fully understand the tunable parameters and their implications.

#gpg_cache: False
# If and only if a master has set `gpg_cache: True`, the cache TTL controls the amount of time, in seconds, before the cache is considered invalid by a master and a fresh pillar is recompiled and stored.
# pillar is recompiled and stored.
gpg_cache_ttl: 86400

# If and only if a master has set `gpg_cache: True`, one of several storage providers
# can be utilized. Available options are the same as `pillar_cache_backend`.
gpg_cache_backend: disk

##### Reactor Settings #####

# Define a salt reactor. See https://docs.saltstack.com/en/latest/topics/reactor/
reactor: []

# Set the TTL for the cache of the reactor configuration.
reactor_refresh_interval: 60

# Configure the number of workers for the runner/wheel in the reactor.
reactor_worker_threads: 10

# Define the queue size for workers in the reactor.
reactor_worker_hwm: 10000

##### Syndic settings #####

# The Salt syndic is used to pass commands through a master from a higher
# master. If this is a master that will have
# syndic servers(s) below it, then set the "order_masters" setting to True.
# If this is a master that will be running a syndic daemon for passthrough, then
# the "syndic_master" setting needs to be set to the location of the master server
# to receive commands from.

# Set the order_masters setting to True if this master will command lower
# masters' syndic interfaces.
order_masters: False

# If this master will be running a salt syndic daemon, syndic_master tells
# this master where to receive commands from.
syndic_master: masterofmasters

# This is the 'ret_port' of the MasterOfMaster:
syndic_master_port: 4506

# PID file of the syndic daemon:
syndic_pidfile: /var/run/salt-syndic.pid

# The log file of the salt-syndic daemon:
syndic_log_file: /var/log/salt/syndic

# The behaviour of the multi-syndic when connection to a master of masters failed.
# Can specify `"random"` (default) or `"ordered"`. If set to `"random"`, masters
# will be iterated in random order. If `"ordered"` is specified, the configured
# order will be used.
syndic_failover: random

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The number of seconds for the salt client to wait for additional syndics to check in with their lists of expected minions before giving up. 

```
syndic_wait: 5
```

#### Peer Publish settings ####

Salt minions can send commands to other minions, but only if the minion is allowed to. By default "Peer Publication" is disabled, and when enabled it is enabled for specific minions and specific commands. This allows secure compartmentalization of commands based on individual minions.

The configuration uses regular expressions to match minions and then a list of regular expressions to match functions. The following will allow the minion authenticated as foo.example.com to execute functions from the test and pkg modules.

```
peer:
  foo.example.com:
    - test.*
    - pkg.*

This will allow all minions to execute all commands:

```
peer:
  .*:
    - *
```

This is not recommended, since it would allow anyone who gets root on any single minion to instantly have root on all of the minions!

Minions can also be allowed to execute runners from the salt master. Since executing a runner from the minion could be considered a security risk, it needs to be enabled. This setting functions just like the peer setting except that it opens up runners instead of module functions.

```
peer_run:
  .*:
    - *
```

To enable just the manage.up runner for the minion foo.example.com:

```
peer_run:
  foo.example.com:
    - manage.up
```

#### Mine settings ####

Restrict mine.get access from minions. By default any minion has a full access to get all mine data from master cache. In acl definition below, only pcre matches are allowed.

```
mine_get:
  .*
    - *
```

The example below enables minion foo.example.com to get 'network.interfaces' mine
# data only, minions web* to get all network.* and disk.* mine data and all other
# minions won't get any mine data.
# mine_get:
# foo.example.com:
# - network.interfaces
# web.*:
# - network.*
# - disk.*

##### Logging settings #####

# The location of the master log file
# The master log can be sent to a regular file, local path name, or network
# location. Remote logging works best when configured to use rsyslogd(8) (e.g.:
# `file:///dev/log`), with rsyslogd(8) configured for network logging. The URI
# format is: <file|udp|tcp>://<host|socketpath>:<port-if-required>/<log-facility>
#log_file: /var/log/salt/master
#log_file: file:///dev/log
#log_file: udp://loghost:10514

#log_file: /var/log/salt/master
#key_logfile: /var/log/salt/key

# The level of messages to send to the console.
# One of 'garbage', 'trace', 'debug', 'info', 'warning', 'error', 'critical'.
# The following log levels are considered INSECURE and may log sensitive data:
# ['garbage', 'trace', 'debug']
#log_level: warning

# The level of messages to send to the log file.
# One of 'garbage', 'trace', 'debug', 'info', 'warning', 'error', 'critical'.
# If using 'log_granular_levels' this must be set to the highest desired level.
#log_level_logfile: warning

# The date and time format used in log messages. Allowed date/time formatting
# can be seen here: http://docs.python.org/library/time.html#time.strftime
#log_datefmt: '%H:%M:%S'
#log_datefmt_logfile: '%Y-%m-%d %H:%M:%S'

# The format of the console logging messages. Allowed formatting options can
# be seen here: http://docs.python.org/library/logging.html#logrecord-attributes
#
# Console log colors are specified by these additional formatters:
# %(colorlevel)s %colormsg)s
# Since it is desirable to include the surrounding brackets, '[ ' and ']', in
# the coloring of the messages, these color formatters also include padding as
# well. Color LogRecord attributes are only available for console logging.
#
#log_fmt_console: '%(colorlevel)s %(colormsg)s'
#log_fmt_console: '%(levelname)-8s %(message)s'

#log_fmt_logfile: '%(asctime)s,%(msecs)03d [%(name)-17s][%(levelname)-8s] %(message)s'

# This can be used to control logging levels more specifically. This
# example sets the main salt library at the 'warning' level, but sets
# 'salt.modules' to log at the 'debug' level:
# log_granular_levels:
#   'salt': 'warning'
#   'salt.modules': 'debug'
# log_granular_levels: {}

##### Node Groups ######

Node groups allow for logical groupings of minion nodes. A group consists of
# a group name and a compound target. Nodgroups can reference other nodegroups
# with 'N@' classifier. Ensure that you do not have circular references.

nodegroups:

#group1: 'L@foo.domain.com,bar.domain.com,baz.domain.com or bl*domain.com'
#group2: 'G@os:Debian and foo.domain.com'
#group3: 'G@os:Debian and N@group1'
#group4:
# - 'G@foo:bar'
# - 'or'
# - 'G@foo:baz'

##### Range Cluster settings ######

The range server (and optional port) that serves your cluster information

range_server: range:80

##### Windows Software Repo settings ######

Location of the repo on the master:
winrepo_dir_ng: '/srv/salt/win/repo-ng'

List of git repositories to include with the local repo:
winrepo_remotes_ng:
- 'https://github.com/saltstack/salt-winrepo-ng.git'

##### Windows Software Repo settings - Pre 2015.8 ######

Legacy repo settings for pre-2015.8 Windows minions.

Location of the repo on the master:
winrepo_dir: '/srv/salt/win/repo'
# Location of the master's repo cache file:
# winrepo_mastercachefile: '/srv/salt/win/repo/winrepo.p'
#
# List of git repositories to include with the local repo:
# winrepo_remotes:
# - 'https://github.com/saltstack/salt-winrepo.git'
#
# The refspecs fetched by winrepo remotes
# winrepo_refspecs:
# - '+refs/heads/*:refs/remotes/origin/*'
# - '+refs/tags/*:refs/tags/*'
#
##### Returner settings ######
############################################
# Which returner(s) will be used for minion's result:
#return: mysql

###### Miscellaneous settings ######
############################################
# Default match type for filtering events tags: startswith, endswith, find, regex,→fnmatch
#event_match_type: startswith

# Save runner returns to the job cache
#runner_returns: True

# Permanently include any available Python 3rd party modules into thin and minimal→Salt
# when they are generated for Salt-SSH or other purposes.
# The modules should be named by the names they are actually imported inside the→Python.
# The value of the parameters can be either one module or a comma separated list of→them.
#thin_extra_mods: foo,bar
#min_extra_mods: foo,bar,baz

##### Keepalive settings ######
############################################
# Warning: Failure to set TCP keepalives on the salt-master can result in
# not detecting the loss of a minion when the connection is lost or when
# its host has been terminated without first closing the socket.
# Salt's Presence System depends on this connection status to know if a minion
# is "present".
# ZeroMQ now includes support for configuring SO_KEEPALIVE if supported by
# the OS. If connections between the minion and the master pass through
# a state tracking device such as a firewall or VPN gateway, there is
# the risk that it could tear down the connection the master and minion
# without informing either party that their connection has been taken away.
# Enabling TCP Keepalives prevents this from happening.

# Overall state of TCP Keepalives, enable (1 or True), disable (0 or False)
# or leave to the OS defaults (~1), on Linux, typically disabled. Default True,→enabled.
#tcp_keepalive: True

# How long before the first keepalive should be sent in seconds. Default 300
# to send the first keepalive after 5 minutes, OS default (-1) is typically 7200 seconds
# on Linux see /proc/sys/net/ipv4/tcp_keepalive_time.
#tcp_keepalive_idle: 300

# How many lost probes are needed to consider the connection lost. Default -1
# to use OS defaults, typically 9 on Linux, see /proc/sys/net/ipv4/tcp_keepalive_probes.
#tcp_keepalive_cnt: -1

# How often, in seconds, to send keepalives after the first one. Default -1 to
# use OS defaults, typically 75 seconds on Linux, see /proc/sys/net/ipv4/tcp_keepalive_intvl.
#tcp_keepalive_intvl: -1

##### NetAPI settings #####

# Allow the raw_shell parameter to be used when calling Salt SSH client via API
#netapi_allow_raw_shell: True

## 5.4.2 Example minion configuration file ##

##### Primary configuration settings #####

# This configuration file is used to manage the behavior of the Salt Minion.
# With the exception of the location of the Salt Master Server, values that are
# commented out but have an empty line after the comment are defaults that need
# not be set in the config. If there is no blank line after the comment, the
# value is presented as an example and is not the default.

# Per default the minion will automatically include all config files
# from minion.d/*.conf (minion.d is a directory in the same directory
# as the main minion config file).
#default_include: minion.d/*.conf

# Set the location of the salt master server. If the master server cannot be
# resolved, then the minion will fail to start.
#master: salt

# Set http proxy information for the minion when doing requests
#proxy_host:
#proxy_port:
#proxy_username:
#proxy_password:

# List of hosts to bypass HTTP proxy. This key does nothing unless proxy_host etc is
# configured, it does not support any kind of wildcards.
#no_proxy: []

# If multiple masters are specified in the 'master' setting, the default behavior
# is to always try to connect to them in the order they are listed. If random_master
# is set to True, the order will be randomized upon Minion startup instead. This can
# be helpful in distributing the load of many minions executing salt-call requests,
# for example, from a cron job. If only one master is listed, this setting is ignored
# and a warning will be logged.
#random_master: False

# NOTE: Deprecated in Salt 2019.2.0. Use 'random_master' instead.
#master_shuffle: False

# Minions can connect to multiple masters simultaneously (all masters
# are "hot"), or can be configured to failover if a master becomes
# unavailable. Multiple hot masters are configured by setting this
# value to "str". Failover masters can be requested by setting
# to "failover". MAKE SURE TO SET master_alive_interval if you are
# using failover.
# Setting master_type to 'disable' lets you have a running minion (with engines and
# beacons) without a master connection
# master_type: str

# Poll interval in seconds for checking if the master is still there. Only
# respected if master_type above is "failover". To disable the interval entirely,
# set the value to -1. (This may be necessary on machines which have high numbers
# of TCP connections, such as load balancers.)
# master_alive_interval: 30

# If the minion is in multi-master mode and the master_type configuration option
# is set to "failover", this setting can be set to "True" to force the minion
# to fail back to the first master in the list if the first master is back online.
#master_failback: False

# If the minion is in multi-master mode, the "master_type" configuration is set to
# "failover", and the "master_failback" option is enabled, the master failback
# interval can be set to ping the top master with this interval, in seconds.
#master_failback_interval: 0

# Set whether the minion should connect to the master via IPv6:
#ipv6: False

# Set the number of seconds to wait before attempting to resolve
# the master hostname if name resolution fails. Defaults to 30 seconds.
# Set to zero if the minion should shutdown and not retry.
# retry_dns: 30

# Set the number of times to attempt to resolve
# the master hostname if name resolution fails. Defaults to None,
# which will attempt the resolution indefinitely.
# retry_dns_count: 3

# Set the port used by the master reply and authentication server.
#master_port: 4506

# The user to run salt.
#user: root

# The user to run salt remote execution commands as via sudo. If this option is
# enabled then sudo will be used to change the active user executing the remote

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# command. If enabled the user will need to be allowed access via the sudoers
# file for the user that the salt minion is configured to run as. The most
# common option would be to use the root user. If this option is set the user
# option should also be set to a non-root user. If migrating from a root minion
# to a non root minion the minion cache should be cleared and the minion pki
# directory will need to be changed to the ownership of the new user.
#sudo_user: root

# Specify the location of the daemon process ID file.
#pidfile: /var/run/salt-minion.pid

# The root directory prepended to these options: pki_dir, cachedir, log_file,
# sock_dir, pidfile.
#root_dir: /

# The path to the minion's configuration file.
#conf_file: /etc/salt/minion

# The directory to store the pki information in
#pki_dir: /etc/salt/pki/minion

# Explicitly declare the id for this minion to use, if left commented the id
# will be the hostname as returned by the python call: socket.getfqdn()
# Since salt uses detached ids it is possible to run multiple minions on the
# same machine but with different ids, this can be useful for salt compute
# clusters.
#id:

# Cache the minion id to a file when the minion's id is not statically defined
# in the minion config. Defaults to "True". This setting prevents potential
# problems when automatic minion id resolution changes, which can cause the
# minion to lose connection with the master. To turn off minion id caching,
# set this config to ``False``.
#minion_id_caching: True

# Convert minion id to lowercase when it is being generated. Helpful when some
# hosts get the minion id in uppercase. Cached ids will remain the same and
# not converted. For example, Windows minions often have uppercase minion
# names when they are set up but not always. To turn on, set this config to
# ``True``.
#minion_id_lowercase: False

# Append a domain to a hostname in the event that it does not exist. This is
# useful for systems where socket.getfqdn() does not actually result in a
# FQDN (for instance, Solaris).
#append_domain:

# Custom static grains for this minion can be specified here and used in SLS
# files just like all other grains. This example sets 4 custom grains, with
# the 'roles' grain having two values that can be matched against.
#grains:
# roles:
#   - webserver
#   - memcache
# deployment: datacenter4
# cabinet: 13

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# cache_data: 14-15
# Where cache data goes.
# This data may contain sensitive data and should be protected accordingly.
# cachedir: /var/cache/salt/minion

# Append minion id to these directories. Helps with
# multiple proxies and minions running on the same machine.
# Allowed elements in the list: pki_dir, cachedir, extension_modules
# Normally not needed unless running several proxies and/or minions on the same
# machine.
# Defaults to ['cachedir'] for proxies, [] (empty list) for regular minions
# append_minionid_config_dirs:

# Verify and set permissions on configuration directories at startup.
# verify_env: True

# The minion can locally cache the return data from jobs sent to it, this
# can be a good way to keep track of jobs the minion has executed
# (on the minion side). By default this feature is disabled, to enable, set
# cache_jobs to True.
# cache_jobs: False

# Set the directory used to hold unix sockets.
# sock_dir: /var/run/salt/minion

# In order to calculate the fqdns grain, all the IP addresses from the minion
# are processed with underlying calls to `socket.gethostbyaddr` which can take
# 5 seconds to be released (after reaching `socket.timeout`) when there is no
# fqdn for that IP. These calls to `socket.gethostbyaddr` are processed
# asynchronously, however, it still adds 5 seconds every time grains are
# generated if an IP does not resolve. In Windows grains are regenerated each
# time a new process is spawned. Therefore, the default for Windows is `False`.
# All other OSes default to `True`
# enable_fqdns_grains: True

# The minion can take a while to start up when lspci and/or dmidecode is used
# to populate the grains for the minion. Set this to False if you do not need
# GPU hardware grains for your minion.
# enable_gpu_grains: True

# Set the default outputter used by the salt-call command. The default is
# "nested".
# output: nested

# To set a list of additional directories to search for salt outputters, set the
# outputter_dirs option.
# outputter_dirs: []

# By default output is colored. To disable colored output, set the color value
# to False.
# color: True

# Do not strip off the colored output from nested results and state outputs
# (true by default).
# strip_colors: False

(continues on next page)
# Backup files that are replaced by file.managed and file.recurse under
# 'cachedir'/file_backup relative to their original location and appended
# with a timestamp. The only valid setting is "minion". Disabled by default.
#
# Alternatively this can be specified for each file in state files:
# /etc/ssh/sshd_config:
# file.managed:
#   - source: salt://ssh/sshd_config
#   - backup: minion
#
#backup_mode: minion

# When waiting for a master to accept the minion's public key, salt will
# continuously attempt to reconnect until successful. This is the time, in
# seconds, between those reconnection attempts.
#acceptance_wait_time: 10

# If this is nonzero, the time between reconnection attempts will increase by
# acceptance_wait_time seconds per iteration, up to this maximum. If this is
# set to zero, the time between reconnection attempts will stay constant.
#acceptance_wait_time_max: 0

# If the master rejects the minion's public key, retry instead of exiting.
# Rejected keys will be handled the same as waiting on acceptance.
#rejected_retry: False

# When the master key changes, the minion will try to re-auth itself to receive
# the new master key. In larger environments this can cause a SYN flood on the
# master because all minions try to re-auth immediately. To prevent this and
# have a minion wait for a random amount of time, use this optional parameter.
# The wait-time will be a random number of seconds between 0 and the defined value.
#random_reauth_delay: 60

# To avoid overloading a master when many minions startup at once, a randomized
# delay may be set to tell the minions to wait before connecting to the master.
# This value is the number of seconds to choose from for a random number. For
# example, setting this value to 60 will choose a random number of seconds to delay
# on startup between zero seconds and sixty seconds. Setting to '0' will disable
# this feature.
#random_startup_delay: 0

# When waiting for a master to accept the minion's public key, salt will
# continuously attempt to reconnect until successful. This is the timeout value,
# in seconds, for each individual attempt. After this timeout expires, the minion
# will wait for acceptance_wait_time seconds before trying again. Unless your master
# is under unusually heavy load, this should be left at the default.
#auth_timeout: 60

# Number of consecutive SaltReqTimeoutError that are acceptable when trying to
# authenticate.
#auth_tries: 7

# The number of attempts to connect to a master before giving up.
# Set this to -1 for unlimited attempts. This allows for a master to have

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# downtime and the minion to reconnect to it later when it comes back up.
# In 'failover' mode, it is the number of attempts for each set of masters.
# In this mode, it will cycle through the list of masters for each attempt.
#
# This is different than auth_tries because auth_tries attempts to
# retry auth attempts with a single master. auth_tries is under the
# assumption that you can connect to the master but not gain
# authorization from it. master_tries will still cycle through all
# the masters in a given try, so it is appropriate if you expect
# occasional downtime from the master(s).
# master_tries: 1
#
# If authentication fails due to SaltReqTimeoutError during a ping_interval,
# cause sub minion process to restart.
# auth_safemode: False
#
# Ping Master to ensure connection is alive (minutes).
# ping_interval: 0
#
# To auto recover minions if master changes IP address (DDNS)
# auth_tries: 10
# auth_safemode: False
# ping_interval: 2
#
# Minions won't know master is missing until a ping fails. After the ping fail,
# the minion will attempt authentication and likely fails out and cause a restart.
# When the minion restarts it will resolve the masters IP and attempt to reconnect.
#
# If you don't have any problems with syn-floods, don't bother with the
# three recon_* settings described below, just leave the defaults!
#
# The ZeroMQ pull-socket that binds to the masters publishing interface tries
# to reconnect immediately, if the socket is disconnected (for example if
# the master processes are restarted). In large setups this will have all
# minions reconnect immediately which might flood the master (the ZeroMQ-default
# is usually a 100ms delay). To prevent this, these three recon_* settings
# can be used.
# recon_default: the interval in milliseconds that the socket should wait before
# trying to reconnect to the master (1000ms = 1 second)
#
# recon_max: the maximum time a socket should wait. each interval the time to wait
# is calculated by doubling the previous time. if recon_max is reached,
# it starts again at recon_default. Short example:
#
# reconnect 1: the socket will wait 'recon_default' milliseconds
# reconnect 2: 'recon_default' * 2
# reconnect 3: ('recon_default' * 2) * 2
# reconnect 4: value from previous interval * 2
# reconnect 5: value from previous interval * 2
# reconnect x: if value >= recon_max, it starts again with recon_default
#
# recon_randomize: generate a random wait time on minion start. The wait time will
# be a random value between recon_default and recon_default +
# recon_max. Having all minions reconnect with the same recon_default
# and recon_max value kind of defeats the purpose of being able to
# change these settings. If all minions have the same values and your
# setup is quite large (several thousand minions), they will still
# flood the master. The desired behavior is to have timeframe within
# all minions try to reconnect.
#
# Example on how to use these settings. The goal: have all minions reconnect within a
# 60 second timeframe on a disconnect.
# recon_default: 1000
# recon_max: 59000
# recon_randomize: True
#
# Each minion will have a randomized reconnect value between 'recon_default' and 'recon_default + recon_max', which in this example means between 1000ms
# 60000ms (or between 1 and 60 seconds). The generated random-value will be
# doubled after each attempt to reconnect. Lets say the generated random
# value is 11 seconds (or 11000ms).
# reconnect 1: wait 11 seconds
# reconnect 2: wait 22 seconds
# reconnect 3: wait 33 seconds
# reconnect 4: wait 44 seconds
# reconnect 5: wait 55 seconds
# reconnect 6: wait time is bigger than 60 seconds (recon_default + recon_max)
# reconnect 7: wait 11 seconds
# reconnect 8: wait 22 seconds
# reconnect 9: wait 33 seconds
# reconnect x: etc.
#
# In a setup with ~6000 hosts these settings would average the reconnects
# to about 100 per second and all hosts would be reconnected within 60 seconds.
# recon_default: 100
# recon_max: 5000
# recon_randomize: False
#
# The loop_interval sets how long in seconds the minion will wait between
# evaluating the scheduler and running cleanup tasks. This defaults to 1
# second on the minion scheduler.
#loop_interval: 1
#
# Some installations choose to start all job returns in a cache or a returner
# and forgo sending the results back to a master. In this workflow, jobs
# are most often executed with --async from the Salt CLI and then results
# are evaluated by examining job caches on the minions or any configured returners.
# WARNING: Setting this to False will **disable** returns back to the master.
#pub_ret: True
#
# The grains can be merged, instead of overridden, using this option.
# This allows custom grains to defined different subvalues of a dictionary
# grain. By default this feature is disabled, to enable set grains_deep_merge
# to `True`
#grains_deep_merge: False
#
# The grains_refresh_every setting allows for a minion to periodically check
# its grains to see if they have changed and, if so, to inform the master
# of the new grains. This operation is moderately expensive, therefore
# care should be taken not to set this value too low.
# Note: This value is expressed in __minutes__!
# A value of 10 minutes is a reasonable default.
# If the value is set to zero, this check is disabled.
grains_refresh_every: 1

# Cache grains on the minion. Default is False.
grains_cache: False

# Cache rendered pillar data on the minion. Default is False.
# This may cause 'cachedir'/pillar to contain sensitive data that should be
# protected accordingly.
#minion_pillar_cache: False

# Grains cache expiration, in seconds. If the cache file is older than this
# number of seconds then the grains cache will be dumped and fully re-populated
# with fresh data. Defaults to 5 minutes. Will have no effect if 'grains_cache'
# is not enabled.
grains_cache_expiration: 300

# Determines whether or not the salt minion should run scheduled mine updates.
# Defaults to "True". Set to "False" to disable the scheduled mine updates
# (this essentially just does not add the mine update function to the minion's
# scheduler).
#mine_enabled: True

# Determines whether or not scheduled mine updates should be accompanied by a job
# return for the job cache. Defaults to "False". Set to "True" to include job
# returns in the job cache for mine updates.
#mine_return_job: False

# Example functions that can be run via the mine facility
# NO mine functions are established by default.
# Note these can be defined in the minion's pillar as well.
mine_functions:
  # test.ping: []
  # network.ip_addrs:
    # interface: eth0
    # cidr: '10.0.0.0/8'

# The number of minutes between mine updates.
mine_interval: 60

# Windows platforms lack posix IPC and must rely on slower TCP based inter-
# process communications. ipc_mode is set to 'tcp' on such systems.
#ipc_mode: ipc

# Overwrite the default tcp ports used by the minion when ipc_mode is set to 'tcp'
tcp_pub_port: 4510
tcp_pull_port: 4511

# Passing very large events can cause the minion to consume large amounts of
# memory. This value tunes the maximum size of a message allowed onto the
# minion event bus. The value is expressed in bytes.
#max_event_size: 1048576

# When a minion starts up it sends a notification on the event bus with a tag that looks like this: `salt/minion/<minion_id>/start`. For historical reasons the minion also sends a similar event with an event tag like this: `minion_start`. This duplication can cause a lot of clutter on the event bus when there are many minions. Set `enable_legacy_startup_events: False` in the minion config to ensure only the `salt/minion/<minion_id>/start` events are sent. Beginning with the `Sodium` Salt release this option will default to `False`

#enable_legacy_startup_events: True

# To detect failed master(s) and fire events on connect/disconnect, set #master_alive_interval to the number of seconds to poll the masters for #connection events.

#master_alive_interval: 30

# The minion can include configuration from other files. To enable this, #pass a list of paths to this option. The paths can be either relative or absolute; if relative, they are considered to be relative to the directory the main minion configuration file lives in (this file). Paths can make use of shell-style globbing. If no files are matched by a path passed to this option then the minion will log a warning message.

# Include a config file from some other path:

#include: /etc/salt/extra_config

# Include config from several files and directories:

#include:
# - /etc/salt/extra_config
# - /etc/roles/webserver

# The syndic minion can verify that it is talking to the correct master via the key fingerprint of the higher-level master with the "syndic_finger" config.

tsycic_finger: ''

##### Minion module management #####
##########################################

# Disable specific modules. This allows the admin to limit the level of access the master has to the minion. The default here is the empty list, below is an example of how this needs to be formatted in the config file

disable_modules:
# - cmdmod
# - test

disable_returners: []

# This is the reverse of disable_modules. The default, like disable_modules, is the empty list, but if this option is set to *anything* then *only* those modules will load.
# Note that this is a very large hammer and it can be quite difficult to keep the minion working the way you think it should since Salt uses many modules internally itself. At a bare minimum
you need the following enabled or else the minion won't start.
#whitelist_modules:
# - cmdmod
# - test
# - config

# Modules can be loaded from arbitrary paths. This enables the easy deployment
# of third party modules. Modules for returners and minions can be loaded.
# Specify a list of extra directories to search for minion modules and
# returners. These paths must be fully qualified!
#module_dirs: []
#returner_dirs: []
#states_dirs: []
#render_dirs: []
#utils_dirs: []

# A module provider can be statically overwritten or extended for the minion
# via the providers option, in this case the default module will be
# overwritten by the specified module. In this example the pkg module will
# be provided by the yumpkg5 module instead of the system default.
#providers:
# pkg: yumpkg5
#
# Enable Cython modules searching and loading. (Default: False)
#cython_enable: False
#
# Specify a max size (in bytes) for modules on import. This feature is currently
# only supported on *nix operating systems and requires psutil.
#modules_max_memory: -1

##### State Management Settings #####
###########################################
# The default renderer to use in SLS files. This is configured as a
# pipe-delimited expression. For example, jinja|yaml will first run jinja
# templating on the SLS file, and then load the result as YAML. This syntax is
# documented in further depth at the following URL:
#
# https://docs.saltstack.com/en/latest/ref/renderers/#composing-renderers
#
# NOTE: The "shebang" prefix (e.g. "#!/jinaj|yaml") described in the
# documentation linked above is for use in an SLS file to override the default
# renderer, it should not be used when configuring the renderer here.
#
#renderer: jinja|yaml
#
# The failhard option tells the minions to stop immediately after the first
# failure detected in the state execution. Defaults to False.
#failhard: False
#
# Reload the modules prior to a highstate run.
#autoload_dynamic_modules: True
#
# clear_dynamic_modules keeps the dynamic modules on the minion in sync with
# the dynamic modules on the master, this means that if a dynamic module is
# not on the master it will be deleted from the minion. By default, this is
# enabled and can be disabled by changing this value to False.
#clean_dynamic_modules: True
#
# Renamed from `environment` to `saltenv`. If `environment` is used, `saltenv` will take its value. If both are used, `environment` will be ignored and `saltenv` will be used.
# Normally the minion is not isolated to any single environment on the master when running states, but the environment can be isolated on the minion side by statically setting it. Remember that the recommended way to manage environments is to isolate via the top file.
#saltenv: None
#
# Isolates the pillar environment on the minion side. This functions the same as the environment setting, but for pillar instead of states.
#pillarenv: None
#
# Set this option to True to force the pillarenv to be the same as the effective saltenv when running states. Note that if pillarenv is specified, this option will be ignored.
#pillarenv_from_saltenv: False
#
# Set this option to 'True' to force a 'KeyError' to be raised whenever an attempt to retrieve a named value from pillar fails. When this option is set to 'False', the failed attempt returns an empty string. Default is 'False'.
#pillar_raise_on_missing: False
#
# If using the local file directory, then the state top file name needs to be defined, by default this is top.sls.
#state_top: top.sls
#
# Run states when the minion daemon starts. To enable, set startup_states to:
# 'highstate' -- Execute state.highstate
# 'sls' -- Read in the sls_list option and execute the named sls files
# 'top' -- Read top_file option and execute based on that file on the Master
#startup_states: ''
#
# List of states to run when the minion starts up if startup_states is 'sls':
#sls_list:
#  - edit.vim
#  - hyper
#
# List of grains to pass in start event when minion starts up:
#start_event_grains:
#  - machine_id
#  - uuid
#
# Top file to execute if startup_states is 'top':
#top_file: '
#
# Automatically aggregate all states that have support for mod_aggregate by setting to True. Or pass a list of state module names to automatically aggregate just those types.
#
#state_aggregate:
#  - pkg

#state_aggregate: False

# Disable requisites during state runs by specifying a single requisite
# or a list of requisites to disable.
#
# disabled_requisites: require_in
#
# disabled_requisites:
#  - require
#  - require_in

##### File Directory Settings ######

The Salt Minion can redirect all file server operations to a local directory, allowing for the same state tree that is on the master to be used if copied completely onto the minion. This is a literal copy of the settings on the master but used to reference a local directory on the minion.

Set the file client. The client defaults to looking on the master server for files, but can be directed to look at the local file directory setting defined below by setting it to “local”. Setting a local file_client runs the minion in masterless mode.

#file_client: remote

The file directory works on environments passed to the minion, each environment can have multiple root directories, the subdirectories in the multiple file roots cannot match, otherwise the downloaded files will not be able to be reliably ensured. A base environment is required to house the top file.

# Example:
# file_roots:
#  base:
#    - /srv/salt/
#  dev:
#    - /srv/salt/dev/services
#    - /srv/salt/dev/states
#  prod:
#    - /srv/salt/prod/services
#    - /srv/salt/prod/states
#
#file_roots:
# base:
#  - /srv/salt

Uncomment the line below if you do not want the file_server to follow symlinks when walking the filesystem tree. This is set to True by default. Currently this only applies to the default roots fileserver_backend.

#fileserver_followsymlinks: False

Uncomment the line below if you do not want symlinks to be treated as the files they are pointing to. By default this is set to False. By uncommenting the line below, any detected symlink while listing files on the Master will not be returned to the Minion.

#fileserver_ignoresymlinks: True

# By default, the Salt fileserver recurses fully into all defined environments
# to attempt to find files. To limit this behavior so that the fileserver only
# traverses directories with SLS files and special Salt directories like _modules,
# enable the option below. This might be useful for installations where a file root
# has a very large number of files and performance is negatively impacted. Default
# is False.
#fileserver_limit_traversal: False

# The hash_type is the hash to use when discovering the hash of a file on
# the local fileserver. The default is sha256, but md5, sha1, sha224, sha384
# and sha512 are also supported.
# WARNING: While md5 and sha1 are also supported, do not use them due to the
# high chance of possible collisions and thus security breach.
# Warning: Prior to changing this value, the minion should be stopped and all
# Salt caches should be cleared.
#hash_type: sha256

# The Salt pillar is searched for locally if file_client is set to local. If
# this is the case, and pillar data is defined, then the pillar_roots need to
# also be configured on the minion:
#pillar_roots:
#  base:
#    - /srv/pillar

# Set a hard-limit on the size of the files that can be pushed to the master.
# It will be interpreted as megabytes. Default: 100
#file_recv_max_size: 100

# Security settings

# Enable "open mode", this mode still maintains encryption, but turns off
# authentication, this is only intended for highly secure environments or for
# the situation where your keys end up in a bad state. If you run in open mode
# you do so at your own risk!
#open_mode: False

# The size of key that should be generated when creating new keys.
#keysize: 2048

# Enable permissive access to the salt keys. This allows you to run the
# master or minion as root, but have a non-root group be given access to
# your pki_dir. To make the access explicit, root must belong to the group
# you've given access to. This is potentially quite insecure.
#permissive_pki_access: False

# The state_verbose and state_output settings can be used to change the way
# state system data is printed to the display. By default all data is printed.
# The state_verbose setting can be set to True or False, when set to False
# all data that has a result of True and no changes will be suppressed.
#state_verbose: True

# The state_output setting controls which results will be output full multi line
# full, terse - each state will be full/terse
# mixed - only states with errors will be full

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# changes - states with changes and errors will be full
# full_id, mixed_id, changes_id and terse_id are also allowed;
# when set, the state ID will be used as name in the output
#state_output: full

# The state_output_diff setting changes whether or not the output from
# successful states is returned. Useful when even the terse output of these
# states is cluttering the logs. Set it to True to ignore them.
#state_output_diff: False

# The state_output_profile setting changes whether profile information
# will be shown for each state run.
#state_output_profile: True

# Fingerprint of the master public key to validate the identity of your Salt master
# before the initial key exchange. The master fingerprint can be found by running
# "salt-key -f master.pub" on the Salt master.
#master_finger: ''

# Use TLS/SSL encrypted connection between master and minion.
# Can be set to a dictionary containing keyword arguments corresponding to Python's
# 'ssl.wrap_socket' method.
# Default is None.
#ssl:
#    # keyfile: <path_to_keyfile>
#    # certfile: <path_to_certfile>
#    # ssl_version: PROTOCOL_TLSv1_2

# Grains to be sent to the master on authentication to check if the minion's key
# will be accepted automatically. Needs to be configured on the master.
#autosign_grains:
#    # - uuid
#    # - server_id

#### Reactor Settings ####

# Define a salt reactor. See https://docs.saltstack.com/en/latest/topics/reactor/
#reactor: []

#Set the TTL for the cache of the reactor configuration.
#reactor_refresh_interval: 60

#Configure the number of workers for the runner/wheel in the reactor.
#reactor_worker_threads: 10

#Define the queue size for workers in the reactor.
#reactor_worker_hwm: 10000

#### Thread settings ####

# Disable multiprocessing support, by default when a minion receives a
# publication a new process is spawned and the command is executed therein.
#WARNING: Disabling multiprocessing may result in substantial slowdowns

(continues on next page)
# when processing large pillars. See https://github.com/saltstack/salt/issues/38758
# for a full explanation.
#multiprocessing: True

# Limit the maximum amount of processes or threads created by salt-minion.
# This is useful to avoid resource exhaustion in case the minion receives more
# publications than it is able to handle, as it limits the number of spawned
# processes or threads. -1 is the default and disables the limit.
#process_count_max: -1

##### Logging settings #####
##########################################
# The location of the minion log file
# The minion log can be sent to a regular file, local path name, or network
# location. Remote logging works best when configured to use rsyslogd(8) (e.g.: #
# `file:///dev/log``), with rsyslogd(8) configured for network logging. The URI
# format is: <file|udp|tcp>://<host|socketpath>:<port-if-required>/<log-facility>
#log_file: /var/log/salt/minion
#log_file: file:///dev/log
#log_file: udp://loghost:10514
#
#log_file: /var/log/salt/minion
#key_logfile: /var/log/salt/key

# The level of messages to send to the console.
# One of 'garbage', 'trace', 'debug', 'info', 'warning', 'error', 'critical'.
#
# The following log levels are considered INSECURE and may log sensitive data:
# ['garbage', 'trace', 'debug']
#
# Default: 'warning'
#log_level: warning

# The level of messages to send to the log file.
# One of 'garbage', 'trace', 'debug', 'info', 'warning', 'error', 'critical'.
# If using 'log_granular_levels' this must be set to the highest desired level.
# Default: 'warning'
#log_level_logfile:

# The date and time format used in log messages. Allowed date/time formatting
# can be seen here: http://docs.python.org/library/time.html#time.strftime
#log_datefmt: '%H:%M:%S'
#log_datefmt_logfile: '%Y-%m-%d %H:%M:%S'

# The format of the console logging messages. Allowed formatting options can
# be seen here: http://docs.python.org/library/logging.html#logrecord-attributes
#
# Console log colors are specified by these additional formatters:
#
# %%(colorlevel)s
# %%(colormessage)s
# %%(colorprocess)s
# %%(colormsg)s
#
# Since it is desirable to include the surrounding brackets, '[' and ']', in

(continues on next page)
# the coloring of the messages, these color formatters also include padding as well. Color LogRecord attributes are only available for console logging.
#
#log_fmt_console: '%(colorlevel)s %(colormsg)s'
#log_fmt_console: '%(levelname)-8s %(message)s'
#
#log_fmt_logfile: '%(asctime)s,%(msecs)03d [%(name)-17s][%(levelname)-8s]%(message)s'

# This can be used to control logging levels more specifically. This example sets the main salt library at the 'warning' level, but sets 'salt.modules' to log at the 'debug' level:
#log_granular_levels:
#  'salt': 'warning'
#  'salt.modules': 'debug'
#
#log_granular_levels: {}

# To diagnose issues with minions disconnecting or missing returns, ZeroMQ supports the use of monitor sockets to log connection events. This feature requires ZeroMQ 4.0 or higher.
#
# To enable ZeroMQ monitor sockets, set 'zmq_monitor' to 'True' and log at a debug level or higher.
#
# A sample log event is as follows:
#
# [DEBUG ] ZeroMQ event: {'endpoint': 'tcp://127.0.0.1:4505', 'event': 512, 'value': 27, 'description': 'EVENT_DISCONNECTED'}
#
# All events logged will include the string 'ZeroMQ event'. A connection event should be logged as the minion starts up and initially connects to the master. If not, check for debug log level and that the necessary version of ZeroMQ is installed.
#
#zmq_monitor: False

# Number of times to try to authenticate with the salt master when reconnecting to the master
#tcp_authentication_retries: 5

####### Module configuration #######
###########################################
# Salt allows for modules to be passed arbitrary configuration data, any data passed here in valid yaml format will be passed on to the salt minion modules for use. It is STRONGLY recommended that a naming convention be used in which the module name is followed by a . and then the value. Also, all top level data must be applied via the yaml dict construct, some examples:
#
# You can specify that all modules should run in test mode:
#test: True
#
# A simple value for the test module:
#test.foo: foo
#
# A list for the test module:
#test.bar: [baz, quo]
# A dict for the test module:
#test.baz: {spam: sausage, cheese: bread}
#

###### Update settings ######

# Using the features in Esky, a salt minion can both run as a frozen app and
# be updated on the fly. These options control how the update process
# (saltutil.update()) behaves.
#
# The url for finding and downloading updates. Disabled by default.
#update_url: False
#
# The list of services to restart after a successful update. Empty by default.
#update_restart_services: []

###### Keepalive settings ######

# ZeroMQ now includes support for configuring SO_KEEPALIVE if supported by
# the OS. If connections between the minion and the master pass through
# a state tracking device such as a firewall or VPN gateway, there is
# the risk that it could tear down the connection the master and minion
# without informing either party that their connection has been taken away.
# Enabling TCP Keepalives prevents this from happening.
#
# Overall state of TCP Keepalives, enable (1 or True), disable (0 or False)
# or leave to the OS defaults (-1), on Linux, typically disabled. Default True,
#tcp_keepalive: True
#
# How long before the first keepalive should be sent in seconds. Default 300
# to send the first keepalive after 5 minutes, OS default (-1) is typically 7200
# on Linux see /proc/sys/net/ipv4/tcp_keepalive_time.
#tcp_keepalive_idle: 300
#
# How many lost probes are needed to consider the connection lost. Default -1
# to use OS defaults, typically 9 on Linux, see /proc/sys/net/ipv4/tcp_keepalive
# probes.
#tcp_keepalive_cnt: -1
#
# How often, in seconds, to send keepalives after the first one. Default -1 to
# use OS defaults, typically 75 seconds on Linux, see
# /proc/sys/net/ipv4/tcp_keepalive_intvl.
#tcp_keepalive_intvl: -1

###### Windows Software settings ######

# Location of the repository cache file on the master:
#win_repo_cachefile: 'salt://win/repo/winrepo.p'

###### Returner settings ######

(continues on next page)
# Default Minion returners. Can be a comma delimited string or a list:
#
#return: mysql
#
#return: mysql,slack,redis
#
#return:
# - mysql
# - hipchat
# - slack

##### Miscellaneous settings #####

# Default match type for filtering events tags: startswith, endswith, find, regex,
# fnmatch
#event_match_type: startswith

5.4.3 Example proxy minion configuration file

##### Primary configuration settings #####

# This configuration file is used to manage the behavior of all Salt Proxy
# Minions on this host.
# With the exception of the location of the Salt Master Server, values that are
# commented out but have an empty line after the comment are defaults that need
# not be set in the config. If there is no blank line after the comment, the
# value is presented as an example and is not the default.

# Per default the minion will automatically include all config files
# from minion.d/*.conf (minion.d is a directory in the same directory
# as the main minion config file).
#default_include: minion.d/*.conf

# Backwards compatibility option for proxymodules created before 2015.8.2
# This setting will default to 'False' in the 2016.3.0 release
# Setting this to True adds proxymodules to the __opts__ dictionary.
# This breaks several Salt features (basically anything that serializes
# __opts__ over the wire) but retains backwards compatibility.
#add_proxymodule_to_opts: True

# Set the location of the salt master server. If the master server cannot be
# resolved, then the minion will fail to start.
#master: salt

# If a proxymodule has a function called 'grains', then call it during
# regular grains loading and merge the results with the proxy's grains
# dictionary. Otherwise it is assumed that the module calls the grains
# function in a custom way and returns the data elsewhere
#
# Default to False for 2016.3 and 2016.11. Switch to True for 2017.7.0.
#proxy_merge_grains_in_module: True

# If a proxymodule has a function called 'alive' returning a boolean
flag reflecting the state of the connection with the remove device, when this option is set as True, a scheduled job on the proxy will try restarting the connection. The polling frequency depends on the next option, 'proxy_keep_alive_interval'. Added in 2017.7.0.

```
# proxy_keep_alive: True
```

The polling interval (in minutes) to check if the underlying connection with the remote device is still alive. This option requires 'proxy_keep_alive' to be configured as True and the proxymodule to implement the 'alive' function. Added in 2017.7.0.

```
# proxy_keep_alive_interval: 1
```

By default, any proxy opens the connection with the remote device when initialized. Some proxymodules allow through this option to open/close the session per command. This requires the proxymodule to have this capability. Please consult the documentation to see if the proxy type used can be that flexible. Added in 2017.7.0.

```
# proxy_always_alive: True
```

If multiple masters are specified in the 'master' setting, the default behavior is to always try to connect to them in the order they are listed. If random_master is set to True, the order will be randomized instead. This can be helpful in distributing the load of many minions executing salt-call requests, for example, from a cron job. If only one master is listed, this setting is ignored and a warning will be logged.

```
#random_master: False
```

Minions can connect to multiple masters simultaneously (all masters are "hot"), or can be configured to failover if a master becomes unavailable. Multiple hot masters are configured by setting this value to "str". Failover masters can be requested by setting to "failover". MAKE SURE TO SET master_alive_interval if you are using failover.

```
# master_type: str
```

Poll interval in seconds for checking if the master is still there. Only respected if master_type above is "failover".

```
# master_alive_interval: 30
```

Set whether the minion should connect to the master via IPv6:

```
#ipv6: False
```

Set the number of seconds to wait before attempting to resolve the master hostname if name resolution fails. Defaults to 30 seconds. Set to zero if the minion should shutdown and not retry.

```
#retry_dns: 30
```

Set the port used by the master reply and authentication server.

```
#master_port: 4506
```

The user to run salt.

```
#user: root
```

Setting sudo_user will cause salt to run all execution modules under an sudo to the user given in sudo_user. The user under which the salt minion process
`# itself runs will still be that provided in the user config above, but all
# execution modules run by the minion will be rerouted through sudo.
# sudo_user: saltdev`

`# Specify the location of the daemon process ID file.
# pidfile: /var/run/salt-minion.pid`

`# The root directory prepended to these options: pki_dir, cachedir, log_file,
# sock_dir, pidfile.
# root_dir: /

# The directory to store the pki information in
# pki_dir: /etc/salt/pki/minion`

`# Where cache data goes.
# This data may contain sensitive data and should be protected accordingly.
# cachedir: /var/cache/salt/minion`

`# Append minion_id to these directories. Helps with
# multiple proxies and minions running on the same machine.
# Allowed elements in the list: pki_dir, cachedir, extension_modules
# Normally not needed unless running several proxies and/or minions on the same
# machine
# Defaults to ['cachedir'] for proxies, [] (empty list) for regular minions
# append_minionid_config_dirs:
# - cachedir`

`# Verify and set permissions on configuration directories at startup.
# verify_env: True`

`# The minion can locally cache the return data from jobs sent to it, this
# can be a good way to keep track of jobs the minion has executed
# (on the minion side). By default this feature is disabled, to enable, set
# cache_jobs to True.
# cache_jobs: False`

`# Set the directory used to hold unix sockets.
# sock_dir: /var/run/salt/minion`

`# Set the default outputter used by the salt-call command. The default is
# "nested".
# output: nested
#
# By default output is colored. To disable colored output, set the color value
# to False.
# color: True`

`# Do not strip off the colored output from nested results and state outputs
# (true by default).
# strip_colors: False`

`# Backup files that are replaced by file.managed and file.recurse under
# 'cachedir'/file_backup relative to their original location and appended
# with a timestamp. The only valid setting is "minion". Disabled by default."
Salt Documentation, Release 3002.5

# Alternatively this can be specified for each file in state files:
# /etc/ssh/sshd_config:
# file.managed:
#   - source: salt://ssh/sshd_config
#   - backup: minion
# backup_mode: minion

# When waiting for a master to accept the minion's public key, salt will
# continuously attempt to reconnect until successful. This is the time, in
# seconds, between those reconnection attempts.
# acceptance_wait_time: 10

# If this is nonzero, the time between reconnection attempts will increase by
# acceptance_wait_time seconds per iteration, up to this maximum. If this is
# set to zero, the time between reconnection attempts will stay constant.
# acceptance_wait_time_max: 0

# If the master rejects the minion's public key, retry instead of exiting.
# Rejected keys will be handled the same as waiting on acceptance.
# rejected_retry: False

# When the master key changes, the minion will try to re-auth itself to receive
# the new master key. In larger environments this can cause a SYN flood on the
# master because all minions try to re-auth immediately. To prevent this and
# have a minion wait for a random amount of time, use this optional parameter.
# The wait-time will be a random number of seconds between 0 and the defined value.
# random_reauth_delay: 60

# When waiting for a master to accept the minion's public key, salt will
# continuously attempt to reconnect until successful. This is the timeout value,
# in seconds, for each individual attempt. After this timeout expires, the minion
# will wait for acceptance_wait_time seconds before trying again. Unless your master
# is under unusually heavy load, this should be left at the default.
# auth_timeout: 60

# Number of consecutive SaltReqTimeoutError that are acceptable when trying to
# authenticate.
# auth_tries: 7

# If authentication fails due to SaltReqTimeoutError during a ping_interval,
# cause sub minion process to restart.
# auth_safemode: False

# Ping Master to ensure connection is alive (minutes).
# ping_interval: 0

# To auto recover minions if master changes IP address (DDNS)
#   auth_tries: 10
#   auth_safemode: False
#   ping_interval: 90

# Minions won't know master is missing until a ping fails. After the ping fail,
# the minion will attempt authentication and likely fails out and cause a restart.
# When the minion restarts it will resolve the masters IP and attempt to reconnect.

5.4. Configuration file examples 243
# If you don't have any problems with syn-floods, don't bother with the
# three recon_* settings described below, just leave the defaults!
#
# The ZeroMQ pull-socket that binds to the masters publishing interface tries
# to reconnect immediately, if the socket is disconnected (for example if
# the master processes are restarted). In large setups this will have all
# minions reconnect immediately which might flood the master (the ZeroMQ-default
# is usually a 100ms delay). To prevent this, these three recon_* settings
# can be used.
# recon_default: the interval in milliseconds that the socket should wait before
# trying to reconnect to the master (1000ms = 1 second)
# recon_max: the maximum time a socket should wait. each interval the time to wait
# is calculated by doubling the previous time. if recon_max is reached,
# it starts again at recon_default. Short example:
# reconnect 1: the socket will wait 'recon_default' milliseconds
# reconnect 2: 'recon_default' * 2
# reconnect 3: ('recon_default' * 2) * 2
# reconnect 4: value from previous interval * 2
# reconnect 5: value from previous interval * 2
# reconnect x: if value >= recon_max, it starts again with recon_default
#
# recon_randomize: generate a random wait time on minion start. The wait time will
# be a random value between recon_default and recon_default +
# recon_max. Having all minions reconnect with the same recon_default
# and recon_max value kind of defeats the purpose of being able to
# change these settings. If all minions have the same values and your
# setup is quite large (several thousand minions), they will still
# flood the master. The desired behavior is to have timeframe within
# all minions try to reconnect.
#
# Example on how to use these settings. The goal: have all minions reconnect within a
# 60 second timeframe on a disconnect.
# recon_default: 1000
# recon_max: 59000
# recon_randomize: True
#
# Each minion will have a randomized reconnect value between 'recon_default'
# and 'recon_default + recon_max', which in this example means between 1000ms
# 60000ms (or between 1 and 60 seconds). The generated random-value will be
# doubled after each attempt to reconnect. Lets say the generated random
# value is 11 seconds (or 11000ms).
# reconnect 1: wait 11 seconds
# reconnect 2: wait 22 seconds
# reconnect 3: wait 33 seconds
# reconnect 4: wait 44 seconds
# reconnect 5: wait 55 seconds
# reconnect 6: wait time is bigger than 60 seconds (recon_default + recon_max)
# reconnect 7: wait 11 seconds
# reconnect 8: wait 22 seconds
# reconnect 9: wait 33 seconds
# reconnect x: etc.
#
# In a setup with ~6000 thousand hosts these settings would average the reconnects
# to about 100 per second and all hosts would be reconnected within 60 seconds.
# recon_default: 100
# recon_max: 5000
# recon_randomize: False
#
# The loop_interval sets how long in seconds the minion will wait between
# evaluating the scheduler and running cleanup tasks. This defaults to a
# sane 60 seconds, but if the minion scheduler needs to be evaluated more
# often lower this value
#loop_interval: 60

# The grains_refresh_every setting allows for a minion to periodically check
# its grains to see if they have changed and, if so, to inform the master
# of the new grains. This operation is moderately expensive, therefore
# care should be taken not to set this value too low.
#
# Note: This value is expressed in __minutes__!
#
# A value of 10 minutes is a reasonable default.
#
# If the value is set to zero, this check is disabled.
#grains_refresh_every: 1

# Cache grains on the minion. Default is False.
#grains_cache: False

# Grains cache expiration, in seconds. If the cache file is older than this
# number of seconds then the grains cache will be dumped and fully re-populated
# with fresh data. Defaults to 5 minutes. Will have no effect if 'grains_cache'
# is not enabled.
#grains_cache_expiration: 300

# Windows platforms lack posix IPC and must rely on slower TCP based inter-
# process communications. Set ipc_mode to 'tcp' on such systems
#ipc_mode: ipc

# Overwrite the default tcp ports used by the minion when in tcp mode
#tcp_pub_port: 4510
#tcp_pull_port: 4511

# Passing very large events can cause the minion to consume large amounts of
# memory. This value tunes the maximum size of a message allowed onto the
# minion event bus. The value is expressed in bytes.
#max_event_size: 1048576

# To detect failed master(s) and fire events on connect/disconnect, set
# master_alive_interval to the number of seconds to poll the masters for
# connection events.
#
#master_alive_interval: 30

# The minion can include configuration from other files. To enable this,
# pass a list of paths to this option. The paths can be either relative or
# absolute; if relative, they are considered to be relative to the directory
# the main minion configuration file lives in (this file). Paths can make use

---

5.4. Configuration file examples 245
# of shell-style globbing. If no files are matched by a path passed to this
# option then the minion will log a warning message.
#
# Include a config file from some other path:
# include: /etc/salt/extra_config
#
# Include config from several files and directories:
# include:
# - /etc/salt/extra_config
# - /etc/roles/webserver
#
#
##### Minion module management #####
##########################################
# Disable specific modules. This allows the admin to limit the level of
# access the master has to the minion.
#disable_modules: [cmd,test]
#disable_returners: []
#
# Modules can be loaded from arbitrary paths. This enables the easy deployment
# of third party modules. Modules for returners and minions can be loaded.
# Specify a list of extra directories to search for minion modules and
# returners. These paths must be fully qualified!
#module_dirs: []
#returner_dirs: []
#states_dirs: []
#render_dirs: []
#utils_dirs: []
#
# A module provider can be statically overwritten or extended for the minion
# via the providers option, in this case the default module will be
# overwritten by the specified module. In this example the pkg module will
# be provided by the yumpkg5 module instead of the system default.
#providers:
# pkg: yumpkg5
#
# Enable Cython modules searching and loading. (Default: False)
#cython_enable: False
#
# Specify a max size (in bytes) for modules on import. This feature is currently
# only supported on *nix operating systems and requires psutil.
#modules_max_memory: -1

##### State Management Settings #####
#########################################
# The default renderer to use in SLS files. This is configured as a
# pipe-delimited expression. For example, jinja|yaml will first run jinja
# templating on the SLS file, and then load the result as YAML. This syntax is
# documented in further depth at the following URL:
#
# https://docs.saltstack.com/en/latest/ref/renderers/#composing-renderers
#
# NOTE: The "shebang" prefix (e.g. "#!jinja|yaml") described in the
# documentation linked above is for use in an SLS file to override the default
# renderer, it should not be used when configuring the renderer here.
#
#renderer: jinja|yaml
#
# The failhard option tells the minions to stop immediately after the first
# failure detected in the state execution. Defaults to False.
#failhard: False
#
# Reload the modules prior to a highstate run.
#autoload_dynamic_modules: True
#
# clean_dynamic_modules keeps the dynamic modules on the minion in sync with
# the dynamic modules on the master, this means that if a dynamic module is
# not on the master it will be deleted from the minion. By default, this is
# enabled and can be disabled by changing this value to False.
#clean_dynamic_modules: True
#
# Normally, the minion is not isolated to any single environment on the master
# when running states, but the environment can be isolated on the minion side
# by statically setting it. Remember that the recommended way to manage
# environments is to isolate via the top file.
#environment: None
#
# If using the local file directory, then the state top file name needs to be
# defined, by default this is top.sls.
#state_top: top.sls
#
# Run states when the minion daemon starts. To enable, set startup_states to:
# 'highstate' -- Execute state.highstate
# 'sls' -- Read in the sls_list option and execute the named sls files
# 'top' -- Read top_file option and execute based on that file on the Master
#startup_states: ''
#
# List of states to run when the minion starts up if startup_states is 'sls':
#sls_list:
# - edit.vim
# - hyper
#
# Top file to execute if startup_states is 'top':
#top_file: ''

# Automatically aggregate all states that have support for mod_aggregate by
# setting to True. Or pass a list of state module names to automatically
# aggregate just those types.
#
#state_aggregate:
# - pkg
#
#state_aggregate: False

### File Directory Settings ###

The Salt Minion can redirect all file server operations to a local directory,
this allows for the same state tree that is on the master to be used if
抄Licensed completely onto the minion. This is a literal copy of the settings on
the master but used to reference a local directory on the minion.
Set the file client. The client defaults to looking on the master server for files, but can be directed to look at the local file directory setting defined below by setting it to "local". Setting a local file_client runs the minion in masterless mode.

```
#file_client: remote
```

The file directory works on environments passed to the minion, each environment can have multiple root directories, the subdirectories in the multiple file roots cannot match, otherwise the downloaded files will not be able to be reliably ensured. A base environment is required to house the top file. Example:

```
#file_roots:
# base:
#   - /srv/salt/
#   - /srv/salt/dev/services
#   - /srv/salt/dev/states
# prod:
#   - /srv/salt/prod/services
#   - /srv/salt/prod/states
```

By default, the Salt fileserver recurses fully into all defined environments to attempt to find files. To limit this behavior so that the fileserver only traverses directories with SLS files and special Salt directories like _modules, enable the option below. This might be useful for installations where a file root has a very large number of files and performance is negatively impacted. Default is False.

```
#fileservers_limit_traversal: False
```

The hash_type is the hash to use when discovering the hash of a file in the local fileserver. The default is sha256 but sha224, sha384 and sha512 are also supported.

```
#hash_type: sha256
```

The Salt pillar is searched for locally if file_client is set to local. If this is the case, and pillar data is defined, then the pillar_roots need to also be configured on the minion:

```
pillar_roots:
# base:
#   - /srv/pillar
```

(continues on next page)
##### Security settings #####

# Enable "open mode", this mode still maintains encryption, but turns off
# authentication, this is only intended for highly secure environments or for
# the situation where your keys end up in a bad state. If you run in open mode
# you do so at your own risk!
#ifndef open_mode: False

# Enable permissive access to the salt keys. This allows you to run the
# master or minion as root, but have a non-root group be given access to
# your pki_dir. To make the access explicit, root must belong to the group
# you've given access to. This is potentially quite insecure.
#ifndef permissive_pki_access: False

# The state_verbose and state_output settings can be used to change the way
# state system data is printed to the display. By default all data is printed.
# The state_verbose setting can be set to True or False, when set to False
# all data that has a result of True and no changes will be suppressed.
#ifndef state_verbose: True

# The state_output setting controls which results will be output full multi line
# full, terse - each state will be full/terse
# mixed - only states with errors will be full
# changes - states with changes and errors will be full
# full_id, mixed_id, changes_id and terse_id are also allowed;
# when set, the state ID will be used as name in the output
#ifndef state_output: full

# The state_output_diff setting changes whether or not the output from
# successful states is returned. Useful when even the terse output of these
# states is cluttering the logs. Set it to True to ignore them.
#ifndef state_output_diff: False

# The state_output_profile setting changes whether profile information
# will be shown for each state run.
#ifndef state_output_profile: True

# Fingerprint of the master public key to validate the identity of your Salt master
# before the initial key exchange. The master fingerprint can be found by running
# "salt-key -F master" on the Salt master.
#ifndef master_finger: ''

##### Thread settings #####

# Disable multiprocessing support, by default when a minion receives a
# publication a new process is spawned and the command is executed therein.
#ifndef multiprocessing: True

##### Logging settings #####

# The location of the minion log file
# The minion log can be sent to a regular file, local path name, or network
# location. Remote logging works best when configured to use rsyslogd(8) (e.g.:
# `file:///dev/log`), with rsyslogd(8) configured for network logging. The URI

(continues on next page)
The level of messages to send to the console.
One of 'garbage', 'trace', 'debug', 'info', 'warning', 'error', 'critical'.
The following log levels are considered INSECURE and may log sensitive data:
['garbage', 'trace', 'debug']
Default: 'warning'

The level of messages to send to the log file.
One of 'garbage', 'trace', 'debug', 'info', 'warning', 'error', 'critical'.
If using 'log_granular_levels' this must be set to the highest desired level.
Default: 'warning'

The date and time format used in log messages. Allowed date/time formatting
can be seen here: http://docs.python.org/library/time.html#time.strftime

The format of the console logging messages. Allowed formatting options can
be seen here: http://docs.python.org/library/logging.html#logrecord-attributes

Console log colors are specified by these additional formatters:

Since it is desirable to include the surrounding brackets, '[' and ']', in
the coloring of the messages, these color formatters also include padding as
well. Color LogRecord attributes are only available for console logging.

This can be used to control logging levels more specifically. This
example sets the main salt library at the 'warning' level, but sets
'salt.modules' to log at the 'debug' level:

log_granular_levels:
'salt': 'warning'
'salt.modules': 'debug'

log_granular_levels: {}
# To diagnose issues with minions disconnecting or missing returns, ZeroMQ # supports the use of monitor sockets # to log connection events. This # feature requires ZeroMQ 4.0 or higher.

# To enable ZeroMQ monitor sockets, set 'zmq_monitor' to 'True' and log at a # debug level or higher.

# A sample log event is as follows:

# [DEBUG ] ZeroMQ event: {'endpoint': 'tcp://127.0.0.1:4505', 'event': 512, # 'value': 27, 'description': 'EVENT_DISCONNECTED'}

# All events logged will include the string 'ZeroMQ event'. A connection event # should be logged on the as the minion starts up and initially connects to the # master. If not, check for debug log level and that the necessary version of # ZeroMQ is installed.

# zmq_monitor: False

### Module configuration ###

Salt allows for modules to be passed arbitrary configuration data, any data # passed here in valid yaml format will be passed on to the salt minion modules # for use. It is STRONGLY recommended that a naming convention be used in which # the module name is followed by a . and then the value. Also, all top level # data must be applied via the yaml dict construct, some examples:

# You can specify that all modules should run in test mode:

test: True

# A simple value for the test module:

test.foo: foo

# A list for the test module:

test.bar: [baz,quo]

# A dict for the test module:

test.baz: {spam: sausage, cheese: bread}

### Update settings ###

Using the features in Esky, a salt minion can both run as a frozen app and # be updated on the fly. These options control how the update process # (saltutil.update()) behaves.

# The url for finding and downloading updates. Disabled by default.

update_url: False

# The list of services to restart after a successful update. Empty by default.

update_restart_services: []

### Keepalive settings ###

ZeroMQ now includes support for configuring SO_KEEPALIVE if supported by

5.4. Configuration file examples
# the OS. If connections between the minion and the master pass through
# a state tracking device such as a firewall or VPN gateway, there is
# the risk that it could tear down the connection the master and minion
# without informing either party that their connection has been taken away.
# Enabling TCP Keepalives prevents this from happening.

# Overall state of TCP Keepalives, enable (1 or True), disable (0 or False)
# or leave to the OS defaults (-1), on Linux, typically disabled. Default True,
# enabled.
#tcp_keepalive: True

# How long before the first keepalive should be sent in seconds. Default 300
# to send the first keepalive after 5 minutes, OS default (-1) is typically 7200
# seconds
# on Linux see /proc/sys/net/ipv4/tcp_keepalive_time.
#tcp_keepalive_idle: 300

# How many lost probes are needed to consider the connection lost. Default -1
# to use OS defaults, typically 9 on Linux, see /proc/sys/net/ipv4/tcp_keepalive_
# probes.
#tcp_keepalive_cnt: -1

# How often, in seconds, to send keepalives after the first one. Default -1 to
# use OS defaults, typically 75 seconds on Linux, see
# /proc/sys/net/ipv4/tcp_keepalive_intvl.
#tcp_keepalive_intvl: -1

############ Windows Software settings ############
# Location of the repository cache file on the master:
#win_repo_cachefile: 'salt://win/repo/winrepo.p'

############ Returner settings ############
# Which returner(s) will be used for minion's result:
#return: mysql

## 5.5 Minion Blackout Configuration

New in version 2016.3.0.

Salt supports minion blackouts. When a minion is in blackout mode, all remote execution commands are disabled. This allows production minions to be put "on hold", eliminating the risk of an untimely configuration change.

Minion blackouts are configured via a special pillar key, `minion_blackout`. If this key is set to `True`, then the minion will reject all incoming commands, except for `saltutil.refresh_pillar`. (The exception is important, so minions can be brought out of blackout mode)

Salt also supports an explicit whitelist of additional functions that will be allowed during blackout. This is configured with the special pillar key `minion_blackout_whitelist`, which is formed as a list:

```yaml
minion_blackout_whitelist:
- test.version
```
5.6 Access Control System

New in version 0.10.4.

Salt maintains a standard system used to open granular control to non administrative users to execute Salt commands. The access control system has been applied to all systems used to configure access to non administrative control interfaces in Salt.

These interfaces include, the peer system, the external auth system and the publisher acl system.

The access control system mandated a standard configuration syntax used in all of the three aforementioned systems. While this adds functionality to the configuration in 0.10.4, it does not negate the old configuration.

Now specific functions can be opened up to specific minions from specific users in the case of external auth and publisher ACLs, and for specific minions in the case of the peer system.

5.6.1 Publisher ACL system

The salt publisher ACL system is a means to allow system users other than root to have access to execute select salt commands on minions from the master.

Note: publisher_acl is useful for allowing local system users to run Salt commands without giving them root access. If you can log into the Salt master directly, then publisher_acl allows you to use Salt without root privileges. If the local system is configured to authenticate against a remote system, like LDAP or Active Directory, then publisher_acl will interact with the remote system transparently.

external_auth is useful for salt-api or for making your own scripts that use Salt's Python API. It can be used at the CLI (with the -a flag) but it is more cumbersome as there are more steps involved. The only time it is useful at the CLI is when the local system is not configured to authenticate against an external service but you still want Salt to authenticate against an external service.

For more information and examples, see this Access Control System section.

The publisher ACL system is configured in the master configuration file via the publisher_acl configuration option. Under the publisher_acl configuration option the users open to send commands are specified and then a list of the minion functions which will be made available to specified user. Both users and functions could be specified by exact match, shell glob or regular expression. This configuration is much like the external_auth configuration:

```
publisher_acl:
    # Allow thatch to execute anything.
    thatch:
        - .*
    # Allow fred to use test and pkg, but only on "web*" minions.
    fred:
        - web*:
            - test.*
            - pkg.*
    # Allow admin and managers to use saltutil module functions
    admin|manager_.*:
```

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Permission Issues

Directories required for `publisher_acl` must be modified to be readable by the users specified:

```
chmod 755 /var/cache/salt /var/cache/salt/master /var/cache/salt/master/jobs /var/run/
       salt /var/run/salt/master
```

**Note:** In addition to the changes above you will also need to modify the permissions of `/var/log/salt` and the existing log file to be writable by the user(s) which will be running the commands. If you do not wish to do this then you must disable logging or Salt will generate errors as it cannot write to the logs as the system users.

If you are upgrading from earlier versions of salt you must also remove any existing user keys and re-start the Salt master:

```
rm /var/cache/salt/.*key
service salt-master restart
```

Whitelist and Blacklist

Salt's authentication systems can be configured by specifying what is allowed using a whitelist, or by specifying what is disallowed using a blacklist. If you specify a whitelist, only specified operations are allowed. If you specify a blacklist, all operations are allowed except those that are blacklisted.

See `publisher_acl` and `publisher_acl_blacklist`.

5.6.2 External Authentication System

Salt's External Authentication System (eAuth) allows for Salt to pass through command authorization to any external authentication system, such as PAM or LDAP.

**Note:** eAuth using the PAM external auth system requires salt-master to be run as root as this system needs root access to check authentication.

**Note:** `publisher_acl` is useful for allowing local system users to run Salt commands without giving them root access. If you can log into the Salt master directly, then `publisher_acl` allows you to use Salt without root
privileges. If the local system is configured to authenticate against a remote system, like LDAP or Active Directory, then `publisher_acl` will interact with the remote system transparently.

`external_auth` is useful for `salt-api` or for making your own scripts that use Salt’s Python API. It can be used at the CLI (with the `-a` flag) but it is more cumbersome as there are more steps involved. The only time it is useful at the CLI is when the local system is not configured to authenticate against an external service but you still want Salt to authenticate against an external service.

For more information and examples, see this Access Control System section.

---

**External Authentication System Configuration**

The external authentication system allows for specific users to be granted access to execute specific functions on specific minions. Access is configured in the master configuration file and uses the *access control system*:

```
external_auth:
  pam:
    thatch:
    - 'web*':
      - test.*
      - network.*
    steve|admin.*:
      - *
```

The above configuration allows the user `thatch` to execute functions in the test and network modules on the minions that match the `web*` target. Users `steve` and the users whose logins start with `admin`, are granted unrestricted access to minion commands.

Salt respects the current PAM configuration in place, and uses the `login` service to authenticate.

**Note:** The PAM module does not allow authenticating as `root`.

**Note:** state.sls and state.highstate will return “Failed to authenticate!” if the request timeout is reached. Use `-t` flag to increase the timeout.

To allow access to *wheel modules* or *runner modules* the following @ syntax must be used:

```
external_auth:
  pam:
    thatch:
    - '@wheel'   # to allow access to all wheel modules
    - '@runner'  # to allow access to all runner modules
    - '@jobs'    # to allow access to the jobs runner and/or wheel module
```

**Note:** The runner/wheel markup is different, since there are no minions to scope the acl to.

**Note:** Globs will not match wheel or runners! They must be explicitly allowed with @wheel or @runner.
Warning: All users that have external authentication privileges are allowed to run `saltutil.findjob`. Be aware that this could inadvertently expose some data such as minion IDs.

Matching syntax

The structure of the `external_auth` dictionary can take the following shapes. User and function matches are exact matches, shell glob patterns or regular expressions; minion matches are compound targets.

By user:

```yaml
external_auth:
  <eauth backend>:
    <user or group%>:
      - <regex to match function>
```

By user, by minion:

```yaml
external_auth:
  <eauth backend>:
    <user or group%>:
      <minion compound target>:
        - <regex to match function>
```

By user, by runner/wheel:

```yaml
external_auth:
  <eauth backend>:
    <user or group%>:
      <@runner or @wheel>:
        - <regex to match function>
```

By user, by runner+wheel module:

```yaml
external_auth:
  <eauth backend>:
    <user or group%>:
      <@module_name>:
        - <regex to match function without module_name>
```

Groups

To apply permissions to a group of users in an external authentication system, append a % to the ID:

```yaml
external_auth:  
  pam:
    admins%:
      - '*':
        - 'pkg.*'
```
Limiting by function arguments

Positional arguments or keyword arguments to functions can also be whitelisted.

New in version 2016.3.0.

```python
external_auth:
    pam:
        my_user:
            - '.*':
                - 'my_mod.*':
                    args:
                        - 'a.*'
                        - 'b.*'
                    kwargs:
                        'kwa': 'kwa.*'
                        'kwb': 'kwb'
                - '@runner':
                - 'runner_mod.*':
                    args:
                        - 'a.*'
                        - 'b.*'
                    kwargs:
                        'kwa': 'kwa.*'
                        'kwb': 'kwb'
```

The rules:

1. The arguments values are matched as regexp.
2. If arguments restrictions are specified the only matched are allowed.
3. If an argument isn’t specified any value is allowed.
4. To skip an arg use "everything" regexp .*. I.e. if arg0 and arg2 should be limited but arg1 and other arguments could have any value use:

```python
args:
    - 'value0'
    - '.',
    - 'value2'
```

Usage

The external authentication system can then be used from the command-line by any user on the same system as the master with the -a option:

```
$ salt -a pam web\* test.version
```

The system will ask the user for the credentials required by the authentication system and then publish the command.
Tokens

With external authentication alone, the authentication credentials will be required with every call to Salt. This can be alleviated with Salt tokens.

Tokens are short term authorizations and can be easily created by just adding a `-T` option when authenticating:

```
$ salt -T -a pam web\* test.version
```

Now a token will be created that has an expiration of 12 hours (by default). This token is stored in a file named `salt_token` in the active user's home directory.

Once the token is created, it is sent with all subsequent communications. User authentication does not need to be entered again until the token expires.

Token expiration time can be set in the Salt master config file.

LDAP and Active Directory

Note: LDAP usage requires that you have installed python-ldap.

Salt supports both user and group authentication for LDAP (and Active Directory accessed via its LDAP interface)

OpenLDAP and similar systems

LDAP configuration happens in the Salt master configuration file.

Server configuration values and their defaults:

```yaml
# Server to auth against
auth.ldap.server: localhost

# Port to connect via
auth.ldap.port: 389

# Use TLS when connecting
auth.ldap.tls: False

# Use STARTTLS when connecting
auth.ldap.starttls: False

# LDAP scope level, almost always 2
auth.ldap.scope: 2

# Server specified in URI format
auth.ldap.uri: '' # Overrides .ldap.server, .ldap.port, .ldap.tls above

# Verify server's TLS certificate
auth.ldap.no_verify: False

# Bind to LDAP anonymously to determine group membership
# Active Directory does not allow anonymous binds without special configuration
# In addition, if auth.ldap.anonymous is True, empty bind passwords are not permitted.
auth.ldap.anonymous: False
```

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# FOR TESTING ONLY, this is a VERY insecure setting.
# If this is True, the LDAP bind password will be ignored and
# access will be determined by group membership alone with
# the group memberships being retrieved via anonymous bind
auth.ldap.auth_by_group_membership_only: False

# Require authenticating user to be part of this Organizational Unit
# This can be blank if your LDAP schema does not use this kind of OU
auth.ldap.groupou: 'Groups'

# Object Class for groups. An LDAP search will be done to find all groups of this
# class to which the authenticating user belongs.
auth.ldap.groupclass: 'posixGroup'

# Unique ID attribute name for the user
auth.ldap.accountattributename: 'memberUid'

# These are only for Active Directory
auth.ldap.activedirectory: False
auth.ldap.persontype: 'person'

auth.ldap.minion_stripdomains: []

# Redhat Identity Policy Audit
auth.ldap.freeipa: False

Authenticating to the LDAP Server

There are two phases to LDAP authentication. First, Salt authenticates to search for a users' Distinguished Name
and group membership. The user it authenticates as in this phase is often a special LDAP system user with read-only
access to the LDAP directory. After Salt searches the directory to determine the actual user's DN and groups, it
re-authenticates as the user running the Salt commands.

If you are already aware of the structure of your DNs and permissions in your LDAP store are set such that users
can look up their own group memberships, then the first and second users can be the same. To tell Salt this is the
case, omit the auth.ldap.bindpw parameter. Note this is not the same thing as using an anonymous bind. Most
LDAP servers will not permit anonymous bind, and as mentioned above, if auth.ldap.anonymous is False you cannot
use an empty password.

You can template the binddn like this:

auth.ldap.basedn: dc=saltstack,dc=com
auth.ldap.binddn: uid={{ username }},cn=users,cn=accounts,dc=saltstack,dc=com

Salt will use the password entered on the salt command line in place of the bindpw.

To use two separate users, specify the LDAP lookup user in the binddn directive, and include a bindpw like so

auth.ldap.binddn: uid=ldaplookup,cn=sysaccounts,cn=etc,dc=saltstack,dc=com
auth.ldap.bindpw: mypassword

As mentioned before, Salt uses a filter to find the DN associated with a user. Salt substitutes the {{ username }} value for the username when querying LDAP
auth.ldap.filter: uid={{ username }}

Determining Group Memberships (OpenLDAP / non-Active Directory)

For OpenLDAP, to determine group membership, one can specify an OU that contains group data. This is prepended to the basedn to create a search path. Then the results are filtered against auth.ldap.groupclass, default posixGroup, and the account’s ‘name’ attribute, memberUid by default.

auth.ldap.groupou: Groups

Note that as of 2017.7, auth.ldap.groupclass can refer to either a groupclass or an objectClass. For some LDAP servers (notably OpenLDAP without the memberOf overlay enabled) to determine group membership we need to know both the objectClass and the memberUid attributes. Usually for these servers you will want a auth.ldap.groupclass of posixGroup and an auth.ldap.groupattribute of memberUid.

LDAP servers with the memberOf overlay will have entries similar to auth.ldap.groupclass: person and auth.ldap.groupattribute: memberOf.

When using the ldap('DC=domain,DC=com') eauth operator, sometimes the records returned from LDAP or Active Directory have fully-qualified domain names attached, while minion IDs instead are simple hostnames. The parameter below allows the administrator to strip off a certain set of domain names so the hostnames looked up in the directory service can match the minion IDs.

auth.ldap.minion_stripdomains: ['.external.bigcorp.com', '.internal.bigcorp.com']

Determining Group Memberships (Active Directory)

Active Directory handles group membership differently, and does not utilize the groupou configuration variable. AD needs the following options in the master config:

auth.ldap.activedirectory: True
auth.ldap.filter: sAMAccountName={{username}}
auth.ldap.accountattributename: sAMAccountName
auth.ldap.groupclass: group
auth.ldap.persontype: person

To determine group membership in AD, the username and password that is entered when LDAP is requested as the eAuth mechanism on the command line is used to bind to AD’s LDAP interface. If this fails, then it doesn’t matter what groups the user belongs to, he or she is denied access. Next, the distinguishedName of the user is looked up with the following LDAP search:

(&(<value of auth.ldap.accountattributename>={{username}}))
  (objectClass=<value of auth.ldap.persontype>)
)

This should return a distinguishedName that we can use to filter for group membership. Then the following LDAP query is executed:

(&(<member=<distinguishedName from search above>))
  (objectClass=<value of auth.ldap.groupclass>)
)
To configure a LDAP group, append a % to the ID:

```
external_auth:
  ldap:
    test_ldap_user:  
      - *:
        - test.ping
```

In addition, if there are a set of computers in the directory service that should be part of the eAuth definition, they can be specified like this:

```
external_auth:
  ldap:
    test_ldap_group%:  
      - *:
        - test.echo
```

The string inside ldap() above is any valid LDAP/AD tree limiter. OU= in particular is permitted as long as it would return a list of computer objects.

### 5.6.3 Peer Communication

Salt 0.9.0 introduced the capability for Salt minions to publish commands. The intent of this feature is not for Salt minions to act as independent brokers one with another, but to allow Salt minions to pass commands to each other.

In Salt 0.10.0 the ability to execute runners from the master was added. This allows for the master to return collective data from runners back to the minions via the peer interface.

The peer interface is configured through two options in the master configuration file. For minions to send commands from the master the peer configuration is used. To allow for minions to execute runners from the master the peer_run configuration is used.

Since this presents a viable security risk by allowing minions access to the master publisher the capability is turned off by default. The minions can be allowed access to the master publisher on a per minion basis based on regular expressions. Minions with specific ids can be allowed access to certain Salt modules and functions.

**Peer Configuration**

The configuration is done under the peer setting in the Salt master configuration file, here are a number of configuration possibilities.

The simplest approach is to enable all communication for all minions, this is only recommended for very secure environments.

```
peer:
  .*:
    - .*
```

This configuration will allow minions with IDs ending in example.com access to the test, ps, and pkg module functions.
The configuration logic is simple, a regular expression is passed for matching minion ids, and then a list of expressions matching minion functions is associated with the named minion. For instance, this configuration will also allow minions ending with foo.org access to the publisher.

```
peer:
  .*example.com:
    - test.*
    - ps.*
    - pkg.*
  .*foo.org:
    - test.*
    - ps.*
    - pkg.*
```

**Note:** Functions are matched using regular expressions.

### Peer Runner Communication

Configuration to allow minions to execute runners from the master is done via the `peer_run` option on the master. The `peer_run` configuration follows the same logic as the `peer` option. The only difference is that access is granted to runner modules.

To open up access to all minions to all runners:

```
peer_run:
  .*:
    - .*
```

This configuration will allow minions with IDs ending in example.com access to the manage and jobs runner functions.

```
peer_run:
  .*example.com:
    - manage.*
    - jobs.*
```

**Note:** Functions are matched using regular expressions.
Using Peer Communication

The publish module was created to manage peer communication. The publish module comes with a number of functions to execute peer communication in different ways. Currently there are three functions in the publish module. These examples will show how to test the peer system via the salt-call command.

To execute test.version on all minions:

```
# salt-call publish.publish * test.version
```

To execute the manage.up runner:

```
# salt-call publish.runner manage.up
```

To match minions using other matchers, use `tgt_type`:

```
# salt-call publish.publish 'webserv* and not G@os:Ubuntu' test.version tgt_type='compound'
```

Note: In pre-2017.7.0 releases, use `expr_form` instead of `tgt_type`.

5.6.4 When to Use Each Authentication System

`publisher_acl` is useful for allowing local system users to run Salt commands without giving them root access. If you can log into the Salt master directly, then `publisher_acl` allows you to use Salt without root privileges. If the local system is configured to authenticate against a remote system, like LDAP or Active Directory, then `publisher_acl` will interact with the remote system transparently.

`external_auth` is useful for `salt-api` or for making your own scripts that use Salt's Python API. It can be used at the CLI (with the `-a` flag) but it is more cumbersome as there are more steps involved. The only time it is useful at the CLI is when the local system is not configured to authenticate against an external service but you still want Salt to authenticate against an external service.

5.6.5 Examples

The access controls are manifested using matchers in these configurations:

```
publisher_acl:
  fred:
    - web/*:
      - pkg.list_pkgs
      - test.*
      - apache.*
```

In the above example, fred is able to send commands only to minions which match the specified glob target. This can be expanded to include other functions for other minions based on standard targets (all matchers are supported except the compound one).

```
external_auth:
  pam:
    dave:
      - test.version
      - mongo/*:
```

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The above allows for all minions to be hit by test.version by dave, and adds a few functions that dave can execute on other minions. It also allows steve unrestricted access to salt commands.

Note: Functions are matched using regular expressions.

5.7 Job Management

New in version 0.9.7.

Since Salt executes jobs running on many systems, Salt needs to be able to manage jobs running on many systems.

5.7.1 The Minion proc System

Salt Minions maintain a proc directory in the Salt cachedir. The proc directory maintains files named after the executed job ID. These files contain the information about the current running jobs on the minion and allow for jobs to be looked up. This is located in the proc directory under the cachedir, with a default configuration it is under /var/cache/salt/{master|minion}/proc.

5.7.2 Functions in the saltutil Module

Salt 0.9.7 introduced a few new functions to the saltutil module for managing jobs. These functions are:

1. running Returns the data of all running jobs that are found in the proc directory.
2. find_job Returns specific data about a certain job based on job id.
3. signal_job Allows for a given jid to be sent a signal.
4. term_job Sends a termination signal (SIGTERM, 15) to the process controlling the specified job.
5. kill_job Sends a kill signal (SIGKILL, 9) to the process controlling the specified job.

These functions make up the core of the back end used to manage jobs at the minion level.
5.7.3 The jobs Runner

A convenience runner front end and reporting system has been added as well. The jobs runner contains functions to make viewing data easier and cleaner.

The jobs runner contains a number of functions...

**active**

The active function runs saltutil.running on all minions and formats the return data about all running jobs in a much more usable and compact format. The active function will also compare jobs that have returned and jobs that are still running, making it easier to see what systems have completed a job and what systems are still being waited on.

```
# salt-run jobs.active
```

**lookup_jid**

When jobs are executed the return data is sent back to the master and cached. By default it is cached for 24 hours, but this can be configured via the `keep_jobs` option in the master configuration. Using the lookup_jid runner will display the same return data that the initial job invocation with the salt command would display.

```
# salt-run jobs.lookup_jid <job id number>
```

**list_jobs**

Before finding a historic job, it may be required to find the job id. `list_jobs` will parse the cached execution data and display all of the job data for jobs that have already, or partially returned.

```
# salt-run jobs.list_jobs
```

5.7.4 Scheduling Jobs

Salt's scheduling system allows incremental executions on minions or the master. The schedule system exposes the execution of any execution function on minions or any runner on the master.

Scheduling can be enabled by multiple methods:

- **schedule** option in either the master or minion config files. These require the master or minion application to be restarted in order for the schedule to be implemented.

- Minion pillar data. Schedule is implemented by refreshing the minion's pillar data, for example by using `saltutil.refresh_pillar`.

- The `schedule state` or `schedule module`

**Note:** The scheduler executes different functions on the master and minions. When running on the master the functions reference runner functions, when running on the minion the functions specify execution functions.

A scheduled run has no output on the minion unless the config is set to info level or higher. Refer to `minion-logging-settings`.

States are executed on the minion, as all states are. You can pass positional arguments and provide a YAML dict of named arguments.

5.7. Job Management
**Schedule by Date and Time**

New in version 2014.7.0.

Frequency of jobs can also be specified using date strings supported by the Python `dateutil` library. This requires the Python `dateutil` library to be installed.

```python
schedule:
  job1:
    function: state.sls
    seconds: 3600
    args:
    - httpd
    kwargs:
      test: True
      when: 5:00pm
```

This will schedule the command: `state.sls httpd test=True` at 5:00 PM minion localtime.
**schedule:**

```yaml
job1:
  function: state.sls
  args:
  - httpd
  kwargs:
    test: True
  when:
  - Monday 5:00pm
  - Tuesday 3:00pm
  - Wednesday 5:00pm
  - Thursday 3:00pm
  - Friday 5:00pm
```

This will schedule the command: `state.sls httpd test=True` at 5:00 PM on Monday, Wednesday and Friday, and 3:00 PM on Tuesday and Thursday.

```yaml
schedule:
  job1:
    function: state.sls
    args:
    - httpd
    kwargs:
      test: True
    when:
    - 'tea time'
```

**whens:**

```yaml
  tea time: 1:40pm
  deployment time: Friday 5:00pm
```

The Salt scheduler also allows custom phrases to be used for the `when` parameter. These `whens` can be stored as either pillar values or grain values.

```yaml
schedule:
  job1:
    function: state.sls
    seconds: 3600
    args:
    - httpd
    kwargs:
      test: True
    range:
      start: 8:00am
      end: 5:00pm
```

This will schedule the command: `state.sls httpd test=True` every 3600 seconds (every hour) between the hours of 8:00 AM and 5:00 PM. The range parameter must be a dictionary with the date strings using the `dateutil` format.

(continues on next page)
Using the invert option for range, this will schedule the command `state.sls httpd test=True` every 3600 seconds (every hour) until the current time is between the hours of 8:00 AM and 5:00 PM. The range parameter must be a dictionary with the date strings using the `dateutil` format.

```
kwvars:
  test: True
range:
  invert: True
  start: 8:00am
  end: 5:00pm
```

This will schedule the function `pkg.install` to be executed once at the specified time. The schedule entry `job1` will not be removed after the job completes, therefore use `schedule.delete` to manually remove it afterwards.

```
schedule:
  job1:
    function: pkg.install
    kwvars:
      pkgs: [{'bar': '1.2.3'}]
      refresh: true
    once: '2016-01-07T14:30:00'
```

The default date format is ISO 8601 but can be overridden by also specifying the `once_fmt` option, like this:

```
schedule:
  job1:
    function: test.ping
    once: 2015-04-22T20:21:00
    once_fmt: '%Y-%m-%dT%H:%M:%S'
```

### Maximum Parallel Jobs Running

New in version 2014.7.0.

The scheduler also supports ensuring that there are no more than N copies of a particular routine running. Use this for jobs that may be long-running and could step on each other or pile up in case of infrastructure outage.

The default for `maxrunning` is 1.

```
schedule:
  long_running_job:
    function: big_file_transfer
    jid_include: True
    maxrunning: 1
```
Cron-like Schedule

New in version 2014.7.0.

```
schedule:
  job1:
    function: state.sls
    cron: '*/15 * * * *
    args: - httpd
    kwargs: test: True
```

The scheduler also supports scheduling jobs using a cron like format. This requires the Python croniter library.

Job Data Return

New in version 2015.5.0.

By default, data about jobs runs from the Salt scheduler is returned to the master. Setting the return_job parameter to False will prevent the data from being sent back to the Salt master.

```
schedule:
  job1:
    function: scheduled_job_function
    return_job: False
```

Job Metadata

New in version 2015.5.0.

It can be useful to include specific data to differentiate a job from other jobs. Using the metadata parameter special values can be associated with a scheduled job. These values are not used in the execution of the job, but can be used to search for specific jobs later if combined with the return_job parameter. The metadata parameter must be specified as a dictionary, otherwise it will be ignored.

```
schedule:
  job1:
    function: scheduled_job_function
    metadata:
      foo: bar
```

Run on Start

New in version 2015.5.0.

By default, any job scheduled based on the startup time of the minion will run the scheduled job when the minion starts up. Sometimes this is not the desired situation. Using the run_on_start parameter set to False will cause the scheduler to skip this first run and wait until the next scheduled run:

```
schedule:
  job1:
    function: state.sls
    seconds: 3600
```
Until and After

New in version 2015.8.0.

Using the until argument, the Salt scheduler allows you to specify an end time for a scheduled job. If this argument is specified, jobs will not run once the specified time has passed. Time should be specified in a format supported by the dateutil library. This requires the Python dateutil library to be installed.

Using the after argument, the Salt scheduler allows you to specify an start time for a scheduled job. If this argument is specified, jobs will not run until the specified time has passed. Time should be specified in a format supported by the dateutil library. This requires the Python dateutil library to be installed.

Scheduling States

Using the until argument, the Salt scheduler allows you to specify an end time for a scheduled job. If this argument is specified, jobs will not run once the specified time has passed. Time should be specified in a format supported by the dateutil library. This requires the Python dateutil library to be installed.

Using the after argument, the Salt scheduler allows you to specify an start time for a scheduled job. If this argument is specified, jobs will not run until the specified time has passed. Time should be specified in a format supported by the dateutil library. This requires the Python dateutil library to be installed.
Scheduling Highstates

To set up a highstate to run on a minion every 60 minutes set this in the minion config or pillar:

```yaml
schedule:
  highstate:
    function: state.highstate
    minutes: 60
```

Time intervals can be specified as seconds, minutes, hours, or days.

Scheduling Runners

Runner executions can also be specified on the master within the master configuration file:

```yaml
schedule:
  run_my_orch:
    function: state.orchestrate
    hours: 6
    splay: 600
    args:
      - orchestration.my_orch
```

The above configuration is analogous to running `salt-run state.orch orchestration.my_orch` every 6 hours.

Scheduler With Returner

The scheduler is also useful for tasks like gathering monitoring data about a minion, this schedule option will gather status data and send it to a MySQL returner database:

```yaml
schedule:
  uptime:
    function: status.uptime
    seconds: 60
    returner: mysql
  meminfo:
    function: status.meminfo
    minutes: 5
    returner: mysql
```

Since specifying the returner repeatedly can be tiresome, the `schedule_returner` option is available to specify one or a list of global returners to be used by the minions when scheduling.

5.8 Managing the Job Cache

The Salt Master maintains a job cache of all job executions which can be queried via the jobs runner. This job cache is called the Default Job Cache.
5.8.1 Default Job Cache

A number of options are available when configuring the job cache. The default caching system uses local storage on the Salt Master and can be found in the job cache directory (on Linux systems this is typically `/var/cache/salt/master/jobs`). The default caching system is suitable for most deployments as it does not typically require any further configuration or management.

The default job cache is a temporary cache and jobs will be stored for 24 hours. If the default cache needs to store jobs for a different period the time can be easily adjusted by changing the `keep_jobs` parameter in the Salt Master configuration file. The value passed in is measured via hours:

```plaintext
keep_jobs: 24
```

Reducing the Size of the Default Job Cache

The Default Job Cache can sometimes be a burden on larger deployments (over 5000 minions). Disabling the job cache will make previously executed jobs unavailable to the jobs system and is not generally recommended. Normally it is wise to make sure the master has access to a faster IO system or a tmpfs is mounted to the jobs dir.

However, you can disable the `job_cache` by setting it to `False` in the Salt Master configuration file. Setting this value to `False` means that the Salt Master will no longer cache minion returns, but a JID directory and `jid` file for each job will still be created. This JID directory is necessary for checking for and preventing JID collisions.

The default location for the job cache is in the `/var/cache/salt/master/jobs/` directory.

Setting the `job_cache` to `False` in addition to setting the `keep_jobs` option to a smaller value, such as 1, in the Salt Master configuration file will reduce the size of the Default Job Cache, and thus the burden on the Salt Master.

Note: Changing the `keep_jobs` option sets the number of hours to keep old job information and defaults to 24 hours. Do not set this value to 0 when trying to make the cache cleaner run more frequently, as this means the cache cleaner will never run.

5.8.2 Additional Job Cache Options

Many deployments may wish to use an external database to maintain a long term register of executed jobs. Salt comes with two main mechanisms to do this, the master job cache and the external job cache.

See *Storing Job Results in an External System*.

5.9 Storing Job Results in an External System

After a job executes, job results are returned to the Salt Master by each Salt Minion. These results are stored in the Default Job Cache.

In addition to the Default Job Cache, Salt provides two additional mechanisms to send job results to other systems (databases, local syslog, and others):

- External Job Cache
- Master Job Cache

The major difference between these two mechanism is from where results are returned (from the Salt Master or Salt Minion). Configuring either of these options will also make the Jobs Runner functions to automatically query the remote stores for information.
5.9.1 External Job Cache - Minion-Side Returner

When an External Job Cache is configured, data is returned to the Default Job Cache on the Salt Master like usual, and then results are also sent to an External Job Cache using a Salt returner module running on the Salt Minion.

- Advantages: Data is stored without placing additional load on the Salt Master.
- Disadvantages: Each Salt Minion connects to the external job cache, which can result in a large number of connections. Also requires additional configuration to get returner module settings on all Salt Minions.

5.9.2 Master Job Cache - Master-Side Returner

New in version 2014.7.0.

Instead of configuring an External Job Cache on each Salt Minion, you can configure the Master Job Cache to send job results from the Salt Master instead. In this configuration, Salt Minions send data to the Default Job Cache as usual, and then the Salt Master sends the data to the external system using a Salt returner module running on the Salt Master.

- Advantages: A single connection is required to the external system. This is preferred for databases and similar systems.
• Disadvantages: Places additional load on your Salt Master.

5.9.3 Configure an External or Master Job Cache

Step 1: Understand Salt Returners

Before you configure a job cache, it is essential to understand Salt returner modules ("returners"). Returners are pluggable Salt Modules that take the data returned by jobs, and then perform any necessary steps to send the data to an external system. For example, a returner might establish a connection, authenticate, and then format and transfer data.

The Salt Returner system provides the core functionality used by the External and Master Job Cache systems, and the same returners are used by both systems.

Salt currently provides many different returners that let you connect to a wide variety of systems. A complete list is available at all Salt returners. Each returner is configured differently, so make sure you read and follow the instructions linked from that page.

For example, the MySQL returner requires:

• A database created using provided schema (structure is available at MySQL returner)
• A user created with privileges to the database
• Optional SSL configuration

A simpler returner, such as Slack or HipChat, requires:

• An API key/version
• The target channel/room
• The username that should be used to send the message

Step 2: Configure the Returner

After you understand the configuration and have the external system ready, the configuration requirements must be declared.

External Job Cache

The returner configuration settings can be declared in the Salt Minion configuration file, the Minion’s pillar data, or the Minion’s grains.

If external_job_cache configuration settings are specified in more than one place, the options are retrieved in the following order. The first configuration location that is found is the one that will be used.

• Minion configuration file
• Minion’s grains
• Minion’s pillar data
Master Job Cache

The returner configuration settings for the Master Job Cache should be declared in the Salt Master's configuration file.

Configuration File Examples

MySQL requires:

```yaml
mysql.host: 'salt
mysql.user: 'salt
mysql.pass: 'salt
mysql.db: 'salt
mysql.port: 3306
```

Slack requires:

```yaml
slack.channel: 'channel'
slack.api_key: 'key'
slack.from_name: 'name'
```

After you have configured the returner and added settings to the configuration file, you can enable the External or Master Job Cache.

Step 3: Enable the External or Master Job Cache

Configuration is a single line that specifies an already-configured returner to use to send all job data to an external system.

External Job Cache

To enable a returner as the External Job Cache (Minion-side), add the following line to the Salt Master configuration file:

```yaml
ext_job_cache: <returner>
```

For example:

```yaml
ext_job_cache: mysql
```

Note: When configuring an External Job Cache (Minion-side), the returner settings are added to the Minion configuration file, but the External Job Cache setting is configured in the Master configuration file.
Master Job Cache

To enable a returner as a Master Job Cache (Master-side), add the following line to the Salt Master configuration file:

```
master_job_cache: <returner>
```

For example:

```
master_job_cache: mysql
```

Verify that the returner configuration settings are in the Master configuration file, and be sure to restart the salt-master service after you make configuration changes. (service salt-master restart).

5.10 Logging

The salt project tries to get the logging to work for you and help us solve any issues you might find along the way.

If you want to get some more information on the nitty-gritty of salt's logging system, please head over to the logging development document, if all you're after is salt's logging configurations, please continue reading.

5.10.1 Log Levels

The log levels are ordered numerically such that setting the log level to a specific level will record all log statements at that level and higher. For example, setting `log_level: error` will log statements at `error`, `critical`, and `quiet` levels, although nothing should be logged at `quiet` level.

Most of the logging levels are defined by default in Python's logging library and can be found in the official Python documentation. Salt uses some more levels in addition to the standard levels. All levels available in salt are shown in the table below.

<table>
<thead>
<tr>
<th>Level</th>
<th>Numeric value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>quiet</td>
<td>1000</td>
<td>Nothing should be logged at this level</td>
</tr>
<tr>
<td>critical</td>
<td>50</td>
<td>Critical errors</td>
</tr>
<tr>
<td>error</td>
<td>40</td>
<td>Errors</td>
</tr>
<tr>
<td>warning</td>
<td>30</td>
<td>Warnings</td>
</tr>
<tr>
<td>info</td>
<td>20</td>
<td>Normal log information</td>
</tr>
<tr>
<td>profile</td>
<td>15</td>
<td>Profiling information on salt performance</td>
</tr>
<tr>
<td>debug</td>
<td>10</td>
<td>Information useful for debugging both salt implementations and salt code</td>
</tr>
<tr>
<td>trace</td>
<td>5</td>
<td>More detailed code debugging information</td>
</tr>
<tr>
<td>garbage</td>
<td>1</td>
<td>Even more debugging information</td>
</tr>
<tr>
<td>all</td>
<td>0</td>
<td>Everything</td>
</tr>
</tbody>
</table>

Note: Python dependencies used by salt may define and use additional logging levels. For example, the Python 2 version of the multiprocessing standard Python library uses the levels subwarning, 25 and subdebug, 5.
5.10.2 Available Configuration Settings

log_file

The log records can be sent to a regular file, local path name, or network location. Remote logging works best when configured to use rsyslogd(8) (e.g.: file:///dev/log), with rsyslogd(8) configured for network logging. The format for remote addresses is:

```
<file|udp|tcp>://<host|socketpath>:<port-if-required>/<log-facility>
```

Where log-facility is the symbolic name of a syslog facility as defined in the SysLogHandler documentation. It defaults to LOG_USER.

Default: Dependent of the binary being executed, for example, for salt-master, /var/log/salt/master.

Examples:

- `log_file: /var/log/salt/master`
- `log_file: /var/log/salt/minion`
- `log_file: file:///dev/log`
- `log_file: file:///dev/log/LOG_DAEMON`
- `log_file: udp://loghost:10514`

log_level

Default: warning

The level of log record messages to send to the console. One of all, garbage, trace, debug, profile, info, warning, error, critical, quiet.

```
log_level: warning
```

Note: Add log_level: quiet in salt configuration file to completely disable logging. In case of running salt in command line use --log-level=quiet instead.

log_level_logfile

Default: info

The level of messages to send to the log file. One of all, garbage, trace, debug, profile, info, warning, error, critical, quiet.

```
log_level_logfile: warning
```
log_datefmt

Default: %H:%M:%S

The date and time format used in console log messages. Allowed date/time formatting matches those used in `time.strftime()`.

```
log_datefmt: '%H:%M:%S'
```

log_datefmt_logfile

Default: %Y-%m-%d %H:%M:%S

The date and time format used in log file messages. Allowed date/time formatting matches those used in `time.strftime()`.

```
log_datefmt_logfile: '%Y-%m-%d %H:%M:%S'
```

log_fmt_console

Default: [%levelname)-8s] %(message)s

The format of the console logging messages. All standard python logging `LogRecord` attributes can be used. Salt also provides these custom LogRecord attributes to colorize console log output:

```
%(colorlevel)s    # log level name colorized by level
%(colormodule)s   # colorized module name
%(colorprocess)s  # colorized process number
%(colormsg)s      # log message colorized by level
```

Note: The %(colorlevel)s, %(colormodule)s, and %(colorprocess)s LogRecord attributes also include padding and enclosing brackets, [ and ] to match the default values of their collateral non-colorized LogRecord attributes.

```
log_fmt_console: '(%levelname)-8s] %(message)s'
```

log_fmt_logfile

Default: %(asctime)s,%(msecs)03d [%name]-17s][%(levelname)-8s] %(message)s

The format of the log file logging messages. All standard python logging `LogRecord` attributes can be used. Salt also provides these custom LogRecord attributes that include padding and enclosing brackets [ and ]:

```
%(bracketlevel)s   # equivalent to [%levelname)-8s]
%(bracketmodule)s  # equivalent to [%name]-17s]
%(bracketprocess)s # equivalent to [%process]5s]
```

```
log_fmt_logfile: '(%asctime)s,%(msecs)03d [%name]-17s][%(levelname)-8s] %(message)s'
```
**log_granular_levels**

Default: `{}`  
This can be used to control logging levels more specifically, based on log call name. The example sets the main salt library at the 'warning' level, sets `salt.modules` to log at the `debug` level, and sets a custom module to the `all` level:

```
log_granular_levels:
  'salt': 'warning'
  'salt.modules': 'debug'
  'salt.loader.saltmaster.ext.module.custom_module': 'all'
```

**log_fmt_jid**

Default: `[JID: %(jid)s]`  
The format of the JID when added to logging messages.

```
log_fmt_jid: '[JID: %(jid)s]'
```

**External Logging Handlers**

Besides the internal logging handlers used by salt, there are some external which can be used, see the external logging handlers document.

### 5.11 External Logging Handlers

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fluent_mod</td>
<td></td>
</tr>
<tr>
<td>log4mongo_mod</td>
<td>Log4Mongo Logging Handler</td>
</tr>
<tr>
<td>logstash_mod</td>
<td></td>
</tr>
<tr>
<td>sentry_mod</td>
<td></td>
</tr>
</tbody>
</table>

#### 5.11.1 salt.log.handlers.log4mongo_mod

**Log4Mongo Logging Handler**

This module provides a logging handler for sending salt logs to MongoDB
Configuration

In the salt configuration file (e.g. /etc/salt/{master,minion}):

```
log4mongo_handler:
  host: mongodb_host
  port: 27017
  database_name: logs
  collection: salt_logs
  username: logging
  password: reindeerflotilla
  write_concern: 0
  log_level: warning
```

Log Level

If not set, the log_level will be set to the level defined in the global configuration file setting.

Inspiration

This work was inspired by the Salt logging handlers for LogStash and Sentry and by the log4mongo Python implementation.

5.12 salt.log.handlers.fluent_mod

5.13 salt.log.handlers.logstash_mod

5.14 salt.log.handlers.sentry_mod

5.15 Salt File Server

Salt comes with a simple file server suitable for distributing files to the Salt minions. The file server is a stateless ZeroMQ server that is built into the Salt master.

The main intent of the Salt file server is to present files for use in the Salt state system. With this said, the Salt file server can be used for any general file transfer from the master to the minions.

5.15.1 File Server Backends

In Salt 0.12.0, the modular fileserver was introduced. This feature added the ability for the Salt Master to integrate different file server backends. File server backends allow the Salt file server to act as a transparent bridge to external resources. A good example of this is the git backend, which allows Salt to serve files sourced from one or more git repositories, but there are several others as well. Click here for a full list of Salt's fileserver backends.
Enabling a Fileserver Backend

Fileserver backends can be enabled with the `fileserver_backend` option.

```yaml
fileserver_backend:
  - git
```

See the documentation for each backend to find the correct value to add to `fileserver_backend` in order to enable them.

Using Multiple Backends

If `fileserver_backend` is not defined in the Master config file, Salt will use the `roots` backend, but the `fileserver_backend` option supports multiple backends. When more than one backend is in use, the files from the enabled backends are merged into a single virtual filesystem. When a file is requested, the backends will be searched in order for that file, and the first backend to match will be the one which returns the file.

```yaml
fileserver_backend:
  - roots
  - git
```

With this configuration, the environments and files defined in the `file_roots` parameter will be searched first, and if the file is not found then the git repositories defined in `gitfs_remotes` will be searched.

Defining Environments

Just as the order of the values in `fileserver_backend` matters, so too does the order in which different sources are defined within a fileserver environment. For example, given the below `file_roots` configuration, if both `/srv/salt/dev/foo.txt` and `/srv/salt/prod/foo.txt` exist on the Master, then `salt://foo.txt` in the `dev` environment would point to `/srv/salt/dev/foo.txt` in the `dev` environment, but it would point to `/srv/salt/prod/foo.txt` in the `base` environment.

```yaml
file_roots:
  base:
    - /srv/salt/prod
  qa:
    - /srv/salt/qa
    - /srv/salt/prod
  dev:
    - /srv/salt/dev
    - /srv/salt/qa
    - /srv/salt/prod
```

Similarly, when using the `git` backend, if both repositories defined below have a `hotfix23` branch/tag, and both of them also contain the file `bar.txt` in the root of the repository at that branch/tag, then `salt://bar.txt` in the `hotfix23` environment would be served from the first repository.

```yaml
gitfs_remotes:
  - https://mydomain.tld/repos/first.git
  - https://mydomain.tld/repos/second.git
```

Note: Environments map differently based on the fileserver backend. For instance, the mappings are explicitly defined in `roots` backend, while in the VCS backends (git, hg, svn) the environments are created from
branches/tags/bookmarks/etc. For the minion backend, the files are all in a single environment, which is specified by the minionfs_env option.

See the documentation for each backend for a more detailed explanation of how environments are mapped.

### 5.15.2 Requesting Files from Specific Environments

The Salt fileserver supports multiple environments, allowing for SLS files and other files to be isolated for better organization.

For the default backend (called roots), environments are defined using the roots option. Other backends (such as gitfs) define environments in their own ways. For a list of available fileserver backends, see here.

**Querystring Syntax**

Any salt:// file URL can specify its fileserver environment using a querystring syntax, like so:

```
salt://path/to/file?saltenv=foo
```

In Reactor configurations, this method must be used to pull files from an environment other than base.

**In States**

Minions can be instructed which environment to use both globally, and for a single state, and multiple methods for each are available:

**Globally**

A minion can be pinned to an environment using the environment option in the minion config file.

Additionally, the environment can be set for a single call to the following functions:

- state.apply
- state.highstate
- state.sls
- state.top

**Note:** When the saltenv parameter is used to trigger a highstate using either state.apply or state.highstate, only states from that environment will be applied.
On a Per-State Basis

Within an individual state, there are two ways of specifying the environment. The first is to add a `saltenv` argument to the state. This example will pull the file from the `config` environment:

```
/etc/foo/bar.conf:
    file.managed:
        - source: salt://foo/bar.conf
        - user: foo
        - mode: 600
        - saltenv: config
```

Another way of doing the same thing is to use the `querystring syntax` described above:

```
/etc/foo/bar.conf:
    file.managed:
        - source: salt://foo/bar.conf?saltenv=config
        - user: foo
        - mode: 600
```

**Note**: Specifying the environment using either of the above methods is only necessary in cases where a state from one environment needs to access files from another environment. If the SLS file containing this state was in the `config` environment, then it would look in that environment by default.

### 5.15.3 File Server Configuration

The Salt file server is a high performance file server written in ZeroMQ. It manages large files quickly and with little overhead, and has been optimized to handle small files in an extremely efficient manner.

The Salt file server is an environment aware file server. This means that files can be allocated within many root directories and accessed by specifying both the file path and the environment to search. The individual environments can span across multiple directory roots to create overlays and to allow for files to be organized in many flexible ways.

**Environments**

The Salt file server defaults to the mandatory `base` environment. This environment **MUST** be defined and is used to download files when no environment is specified.

Environments allow for files and sls data to be logically separated, but environments are not isolated from each other. This allows for logical isolation of environments by the engineer using Salt, but also allows for information to be used in multiple environments.

---

5.15. Salt File Server 283
Directory Overlay

The `environment` setting is a list of directories to publish files from. These directories are searched in order to find the specified file and the first file found is returned.

This means that directory data is prioritized based on the order in which they are listed. In the case of this `file_roots` configuration:

```
file_roots:
  base:
    - /srv/salt/base
    - /srv/salt/failover
```

If a file's URI is `salt://httpd/httpd.conf`, it will first search for the file at `/srv/salt/base/httpd/httpd.conf`. If the file is found there it will be returned. If the file is not found there, then `/srv/salt/failover/httpd/httpd.conf` will be used for the source.

This allows for directories to be overlaid and prioritized based on the order they are defined in the configuration.

It is also possible to have `file_roots` which supports multiple environments:

```
file_roots:
  base:
    - /srv/salt/base
  dev:
    - /srv/salt/dev
    - /srv/salt/base
  prod:
    - /srv/salt/prod
    - /srv/salt/base
```

This example ensures that each environment will check the associated environment directory for files first. If a file is not found in the appropriate directory, the system will default to using the base directory.

Local File Server

New in version 0.9.8.

The file server can be rerouted to run from the minion. This is primarily to enable running Salt states without a Salt master. To use the local file server interface, copy the file server data to the minion and set the `file_roots` option on the minion to point to the directories copied from the master. Once the minion `file_roots` option has been set, change the `file_client` option to local to make sure that the local file server interface is used.

5.15.4 The `cp` Module

The cp module is the home of minion side file server operations. The cp module is used by the Salt state system, salt-cp, and can be used to distribute files presented by the Salt file server.
Escaping Special Characters

The `salt://` url format can potentially contain a query string, for example `salt://dir/file.txt?saltenv=base`. You can prevent the fileclient/fileserver from interpreting `?` as the initial token of a query string by referencing the file with `salt://|` rather than `salt:///`.

```
/etc/marathon/conf/?checkpoint:
    file.managed:
        - source: salt://|hw/config/?checkpoint
        - makedirs: True
```

Environments

Since the file server is made to work with the Salt state system, it supports environments. The environments are defined in the master config file and when referencing an environment the file specified will be based on the root directory of the environment.

get_file

The `cp.get_file` function can be used on the minion to download a file from the master, the syntax looks like this:

```
salt '*' cp.get_file salt://vimrc /etc/vimrc
```

This will instruct all Salt minions to download the vimrc file and copy it to `/etc/vimrc`

Template rendering can be enabled on both the source and destination file names like so:

```
salt '*' cp.get_file "salt://{{grains.os}}/vimrc" /etc/vimrc template=jinja
```

This example would instruct all Salt minions to download the vimrc from a directory with the same name as their OS grain and copy it to `/etc/vimrc`

For larger files, the `cp.get_file` module also supports gzip compression. Because gzip is CPU-intensive, this should only be used in scenarios where the compression ratio is very high (e.g. pretty-printed JSON or YAML files).

To use compression, use the `gzip` named argument. Valid values are integers from 1 to 9, where 1 is the lightest compression and 9 the heaviest. In other words, 1 uses the least CPU on the master (and minion), while 9 uses the most.

```
salt '*' cp.get_file salt://vimrc /etc/vim/vimrc gzip=5
```

Finally, note that by default `cp.get_file` does not create new destination directories if they do not exist. To change this, use the `makedirs` argument:

```
salt '*' cp.get_file salt://vimrc /etc/vim/vimrc makedirs=True
```

In this example, `/etc/vim/` would be created if it didn't already exist.
get_dir

The cp.get_dir function can be used on the minion to download an entire directory from the master. The syntax is very similar to get_file:

```shell
salt '*' cp.get_dir salt://etc/apache2 /etc
```

cp.get_dir supports template rendering and gzip compression arguments just like get_file:

```shell
salt '*' cp.get_dir salt://etc/{{pillar.webserver}} /etc gzip=5 template=jinja
```

5.15.5 File Server Client Instance

A client instance is available which allows for modules and applications to be written which make use of the Salt file server.

The file server uses the same authentication and encryption used by the rest of the Salt system for network communication.

fileclient Module

The `salt/fileclient.py` module is used to set up the communication from the minion to the master. When creating a client instance using the fileclient module, the minion configuration needs to be passed in. When using the fileclient module from within a minion module the built in `__opts__` data can be passed:

```python
import salt.minion
import salt.fileclient

def get_file(path, dest, saltenv="base"):
    """
    Used to get a single file from the Salt master
    """
    # CLI Example:
    salt '*' cp.get_file salt://vimrc /etc/vimrc
    """
    # Get the fileclient object
    client = salt.fileclient.get_file_client(__opts__)
    # Call get_file
    return client.get_file(path, dest, False, saltenv)
```

Creating a fileclient instance outside of a minion module where the `__opts__` data is not available, it needs to be generated:

```python
import salt.fileclient
import salt.config

def get_file(path, dest, saltenv="base"):
    """
    Used to get a single file from the Salt master
    """
    # Get the configuration data
    opts = salt.config.minion_config("/etc/salt/minion")
    # Get the fileclient object
    (continues on next page)
5.16 Git Fileserver Backend Walkthrough

Note: This walkthrough assumes basic knowledge of Salt. To get up to speed, check out the Salt Walkthrough.

The gitfs backend allows Salt to serve files from git repositories. It can be enabled by adding git to the fileserver_backend list, and configuring one or more repositories in gitfs_remotes. Branches and tags become Salt fileserver environments.

Note: Branching and tagging can result in a lot of potentially-conflicting top files, for this reason it may be useful to set top_file_merging_strategy to same in the minions' config files if the top files are being managed in a GitFS repo.

5.16.1 Installing Dependencies

Both pygit2 and GitPython are supported Python interfaces to git. If compatible versions of both are installed, pygit2 will be preferred. In these cases, GitPython can be forced using the gitfs_provider parameter in the master config file.

Note: It is recommended to always run the most recent version of any the below dependencies. Certain features of GitFS may not be available without the most recent version of the chosen library.

**pygit2**

The minimum supported version of pygit2 is 0.20.3. Availability for this version of pygit2 is still limited, though the SaltStack team is working to get compatible versions available for as many platforms as possible.

For the Fedora/EPEL versions which have a new enough version packaged, the following command would be used to install pygit2:

```bash
# yum install python-pygit2
```

Provided a valid version is packaged for Debian/Ubuntu (which is not currently the case), the package name would be the same, and the following command would be used to install it:

```bash
# apt-get install python-pygit2
```

If pygit2 is not packaged for the platform on which the Master is running, the pygit2 website has installation instructions here. Keep in mind however that following these instructions will install libgit2 and pygit2 without system packages. Additionally, keep in mind that SSH authentication in pygit2 requires libssh2 (not libssh) development libraries to be present before libgit2 is built. On some Debian-based distros pkg-config is also required to link libgit2 with libssh2.
Note: If you are receiving the error "Unsupported URL Protocol" in the Salt Master log when making a connection using SSH, review the libssh2 details listed above.

Additionally, version 0.21.0 of pygit2 introduced a dependency on python-cffi, which in turn depends on newer releases of libffi. Upgrading libffi is not advisable as several other applications depend on it, so on older LTS linux releases pygit2 0.20.3 and libgit2 0.20.0 is the recommended combination.

Warning: pygit2 is actively developed and frequently makes non-backwards-compatible API changes, even in minor releases. It is not uncommon for pygit2 upgrades to result in errors in Salt. Please take care when upgrading pygit2, and pay close attention to the changelog, keeping an eye out for API changes. Errors can be reported on the SaltStack issue tracker.

RedHat Pygit2 Issues

The release of RedHat/CentOS 7.3 upgraded both python-cffi and http-parser, both of which are dependencies for pygit2/libgit2. Both pygit2 and libgit2 packages (which are from the EPEL repository) should be upgraded to the most recent versions, at least to 0.24.2.

The below errors will show up in the master log if an incompatible python-pygit2 package is installed:

```
2017-02-10 09:07:34,892 [salt.utils.gitfs ][ERROR ][11211] Import pygit2 failed:
  → CompileError: command 'gcc' failed with exit status 1
2017-02-10 09:07:34,907 [salt.utils.gitfs ][ERROR ][11211] gitfs is configured but:
  → could not be loaded, are pygit2 and libgit2 installed?
2017-02-10 09:07:34,907 [salt.utils.gitfs ][CRITICAL][11211] No suitable gitfs:
  → provider module is installed.
2017-02-10 09:07:34,912 [salt.master ][CRITICAL][11211] Master failed pre flight:
  → checks, exiting
```

The below errors will show up in the master log if an incompatible libgit2 package is installed:

```
2017-02-15 18:04:45,211 [salt.utils.gitfs ][ERROR ][6211] Error occurred fetching:
  → gitfs remote 'https://foo.com/bar.git': No Content-Type header in response
```

A restart of the salt-master daemon and gitfs cache directory clean up may be required to allow http(s) repositories to continue to be fetched.

GitPython

GitPython 0.3.0 or newer is required to use GitPython for gitfs. For RHEL-based Linux distros, a compatible version is available in EPEL, and can be easily installed on the master using yum:

```
# yum install GitPython
```

Ubuntu 14.04 LTS and Debian Wheezy (7.x) also have a compatible version packaged:

```
# apt-get install python-git
```

GitPython requires the git CLI utility to work. If installed from a system package, then git should already be installed, but if installed via pip then it may still be necessary to install git separately. For MacOS users, GitPython comes bundled in with the Salt installer, but git must still be installed for it to work properly. Git can be installed in several ways, including by installing XCode.
Warning: GitPython advises against the use of its library for long-running processes (such as a salt-master or salt-minion). Please see their warning on potential leaks of system resources: https://github.com/gitpython-developers/GitPython#leakage-of-system-resources.

Warning: Keep in mind that if GitPython has been previously installed on the master using pip (even if it was subsequently uninstalled), then it may still exist in the build cache (typically /tmp/pip-build-root/GitPython) if the cache is not cleared after installation. The package in the build cache will override any requirement specifiers, so if you try upgrading to version 0.3.2.RC1 by running pip install 'GitPython==0.3.2.RC1' then it will ignore this and simply install the version from the cache directory. Therefore, it may be necessary to delete the GitPython directory from the build cache in order to ensure that the specified version is installed.

Warning: GitPython 2.0.9 and newer is not compatible with Python 2.6. If installing GitPython using pip on a machine running Python 2.6, make sure that a version earlier than 2.0.9 is installed. This can be done on the CLI by running pip install 'GitPython<2.0.9', or in a pip.installed state using the following SLS:

```
GitPython:
  pip.installed:
    - name: 'GitPython < 2.0.9'
```

5.16.2 Simple Configuration

To use the gitfs backend, only two configuration changes are required on the master:

1. Include gitfs in the fileserver_backend list in the master config file:

```
fileserver_backend:
  - gitfs
```

Note: git also works here. Prior to the 2018.3.0 release, only git would work.

2. Specify one or more git://, https://, file://, or ssh:// URLs in gitfs_remotes to configure which repositories to cache and search for requested files:

```
gitfs_remotes:
  - https://github.com/saltstack-formulas/salt-formula.git
```

SSH remotes can also be configured using scp-like syntax:

```
gitfs_remotes:
  - git@github.com:user/repo.git
  - ssh://user@domain.tld/path/to/repo.git
```

Information on how to authenticate to SSH remotes can be found here.

3. Restart the master to load the new configuration.
Note: In a master/minion setup, files from a gitfs remote are cached once by the master, so minions do not need direct access to the git repository.

5.16.3 Multiple Remotes

The `gitfs_remotes` option accepts an ordered list of git remotes to cache and search, in listed order, for requested files.

A simple scenario illustrates this cascading lookup behavior:

If the `gitfs_remotes` option specifies three remotes:

```
gitfs_remotes:
  - git://github.com/example/first.git
  - https://github.com/example/second.git
  - file:///root/third
```

And each repository contains some files:

```
first.git:
  top.sls
  edit/vim.sls
  edit/vimrc
  nginx/init.sls

second.git:
  edit/dev_vimrc
  haproxy/init.sls

third:
  haproxy/haproxy.conf
  edit/dev_vimrc
```

Salt will attempt to lookup the requested file from each gitfs remote repository in the order in which they are defined in the configuration. The `git://github.com/example/first.git` remote will be searched first. If the requested file is found, then it is served and no further searching is executed. For example:

- A request for the file `salt://haproxy/init.sls` will be served from the `https://github.com/example/second.git` git repo.
- A request for the file `salt://haproxy/haproxy.conf` will be served from the `file:///root/third` repo.

Note: This example is purposefully contrived to illustrate the behavior of the gitfs backend. This example should not be read as a recommended way to lay out files and git repos.

The `file://` prefix denotes a git repository in a local directory. However, it will still use the given `file://` URL as a remote, rather than copying the git repo to the salt cache. This means that any refs you want accessible must exist as local refs in the specified repo.

Warning: Salt versions prior to 2014.1.0 are not tolerant of changing the order of remotes or modifying the URI of existing remotes. In those versions, when modifying remotes it is a good idea to remove the gitfs cache directory (`/var/cache/salt/master/gitfs`) before restarting the salt-master service.
## 5.16.4 Per-remote Configuration Parameters

New in version 2014.7.0.

The following master config parameters are global (that is, they apply to all configured gitfs remotes):

- `gitfs_base`
- `gitfs_root`
- `gitfs_ssl_verify`
- `gitfs_mountpoint` *(new in 2014.7.0)*
- `gitfs_user` *(pygit2 only, new in 2014.7.0)*
- `gitfs_password` *(pygit2 only, new in 2014.7.0)*
- `gitfs_insecure_auth` *(pygit2 only, new in 2014.7.0)*
- `gitfs_pubkey` *(pygit2 only, new in 2014.7.0)*
- `gitfs_privkey` *(pygit2 only, new in 2014.7.0)*
- `gitfs_passphrase` *(pygit2 only, new in 2014.7.0)*
- `gitfs_refspecs` *(new in 2017.7.0)*
- `gitfs_disable_saltenv_mapping` *(new in 2018.3.0)*
- `gitfs_ref_types` *(new in 2018.3.0)*
- `gitfs_update_interval` *(new in 2018.3.0)*

**Note:** pygit2 only supports disabling SSL verification in versions 0.23.2 and newer.

These parameters can now be overridden on a per-remote basis. This allows for a tremendous amount of customization. Here's some example usage:

```yaml
# In master configuration file

gitfs_provider: pygit2

# Per-remote configuration

gitfs_base: develop

# Example gitfs_remotes for a remote

gitfs_remotes:
- https://foo.com/foo.git
  - root: salt
  - mountpoint: salt://bar
  - base: salt-base
  - ssl_verify: False
  - update_interval: 120
- https://foo.com/bar.git:
  - name: second_bar_repo
  - root: other/salt
  - mountpoint: salt://other/bar
  - base: salt-base
  - ref_types:
    - branch
- http://foo.com/baz.git:
  - root: salt/states
  - user: joe
  - password: mysupersecretpassword
  - insecure_auth: True
```

(continues on next page)
The URL of a remote which has per-remote configuration must be suffixed with a colon.

2. Per-remote configuration parameters are named like the global versions, with the gitfs_ removed from the beginning. The exception being the name, saltenv, and all_saltenvs parameters, which are only available to per-remote configurations.

The all_saltenvs parameter is new in the 2018.3.0 release.

In the example configuration above, the following is true:

1. The first and fourth gitfs remotes will use the develop branch/tag as the base environment, while the second and third will use the salt-base branch/tag as the base environment.
2. The first remote will serve all files in the repository. The second remote will only serve files from the salt directory (and its subdirectories). The third remote will only server files from the other/salt directory (and its subdirectories), while the fourth remote will only serve files from the salt/states directory (and its subdirectories).
3. The third remote will only serve files from branches, and not from tags or SHAs.
4. The fourth remote will only have two saltenvs available: base (pointed at develop), and foo (pointed at foo).
5. The first and fourth remotes will have files located under the root of the Salt files server namespace (salt://). The files from the second remote will be located under salt://bar, while the files from the third remote will be located under salt://other/bar.
6. The second and third remotes reference the same repository and unique names need to be declared for duplicate gitfs remotes.
7. The fourth remote overrides the default behavior of not authenticating to insecure (non-HTTPS) remotes.
8. Because all_saltenvs is configured for the fifth remote, files from the branch/tag master will appear in every file server environment.

**Note:** The use of http:// (instead of https://) is permitted here only because authentication is not being used. Otherwise, the insecure_auth parameter must be used (as in the fourth remote) to force Salt to authenticate to an http:// remote.

9. The first remote will wait 120 seconds between updates instead of 60.
5.16.5 Per-Saltenv Configuration Parameters

New in version 2016.11.0.

For more granular control, Salt allows the following three things to be overridden for individual saltenvs within a given repo:

- The mountpoint
- The root
- The branch/tag to be used for a given saltenv

Here is an example:

```
gitfs_root: salt

gitfs_saltenv:
  - dev:
    - mountpoint: salt://gitfs-dev
    - ref: develop

gitfs_remotes:
  - https://foo.com/bar.git:
    - saltenv:
      - staging:
        - ref: qa
      - mountpoint: salt://bar-staging
      - dev:
        - ref: development
  - https://foo.com/baz.git:
    - saltenv:
      - staging:
        - mountpoint: salt://baz-staging
```

Given the above configuration, the following is true:

1. For all gitfs remotes, files for the `dev` saltenv will be located under `salt://gitfs-dev`.
2. For the `dev` saltenv, files from the first remote will be sourced from the `development` branch, while files from the second remote will be sourced from the `develop` branch.
3. For the `staging` saltenv, files from the first remote will be located under `salt://bar-staging`, while files from the second remote will be located under `salt://baz-staging`.
4. For all gitfs remotes, and in all saltenvs, files will be served from the `salt` directory (and its subdirectories).

5.16.6 Custom Refspecs

New in version 2017.7.0.

GitFS will by default fetch remote branches and tags. However, sometimes it can be useful to fetch custom refs (such as those created for GitHub pull requests). To change the refspecs GitFS fetches, use the `gitfs_refspecs` config option:

```
gitfs_refspecs:
  - '+refs/heads/*:refs/remotes/origin/*'
  - '+refs/tags/*:refs/tags/*'
  - '+refs/pull/*/head:refs/remotes/origin/pr/*'
  - '+refs/pull/*/merge:refs/remotes/origin/merge/*'
```
In the above example, in addition to fetching remote branches and tags, GitHub’s custom refs for pull requests and merged pull requests will also be fetched. These special head refs represent the head of the branch which is requesting to be merged, and the merge refs represent the result of the base branch after the merge.

**Important:** When using custom refspecs, the destination of the fetched refs must be under refs/remotes/origin/, preferably in a subdirectory like in the example above. These custom refspecs will map as environment names using their relative path underneath refs/remotes/origin/. For example, assuming the configuration above, the head branch for pull request 12345 would map to fileserver environment pr/12345 (slash included).

Refspecs can be configured on a *per-remote basis*. For example, the below configuration would only alter the default refspecs for the second GitFS remote. The first remote would only fetch branches and tags (the default).

```bash
# gitfs_remotes:
- https://domain.tld/foo.git
- https://domain.tld/bar.git:
  - refspecs:
    - '+refs/heads/*:refs/remotes/origin/*'
    - '+refs/tags/*:refs/tags/*'
    - '+refs/pull/*/head:refs/remotes/origin/pr/*'
    - '+refs/pull/*/merge:refs/remotes/origin/merge/*'
```

### 5.16.7 Global Remotes

New in version 2018.3.0: for all_saltenvs, 3001 for fallback

The **all_saltenvs** per-remote configuration parameter overrides the logic Salt uses to map branches/tags to fileserver environments (i.e. saltenvs). This allows a single branch/tag to appear in *all* GitFS saltenvs.

**Note:** **all_saltenvs** only works *within* GitFS. That is, files in a branch configured using **all_saltenvs** will not show up in a fileserver environment defined via some other fileserver backend (e.g. **file_roots**).

The **fallback** global or per-remote configuration can also be used.

This is very useful in particular when working with salt formulas. Prior to the addition of this feature, it was necessary to push a branch/tag to the remote repo for each saltenv in which that formula was to be used. If the formula needed to be updated, this update would need to be reflected in all of the other branches/tags. This is both inconvenient and not scalable.

With **all_saltenvs**, it is now possible to define your formula once, in a single branch.

```bash
# gitfs_remotes:
- http://foo.com/quux.git:
  - all_saltenvs: anything
```

If you want to also test working branches of the formula repository, use **fallback**:

```bash
# gitfs_remotes:
- http://foo.com/quux.git:
  - fallback: anything
```
5.16.8 Update Intervals

Prior to the 2018.3.0 release, GitFS would update its fileserver backends as part of a dedicated "maintenance" process, in which various routine maintenance tasks were performed. This tied the update interval to the `loop_interval` config option, and also forced all fileservers to update at the same interval.

Now it is possible to make GitFS update at its own interval, using `gitfs_update_interval`:

<table>
<thead>
<tr>
<th><code>gitfs_update_interval</code></th>
<th>180</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>gitfs_remotes</code></td>
<td></td>
</tr>
<tr>
<td>- <a href="https://foo.com/foo.git">https://foo.com/foo.git</a></td>
<td></td>
</tr>
<tr>
<td>- <a href="https://foo.com/bar.git">https://foo.com/bar.git</a>:</td>
<td></td>
</tr>
<tr>
<td>- <code>update_interval</code>: 120</td>
<td></td>
</tr>
</tbody>
</table>

Using the above configuration, the first remote would update every three minutes, while the second remote would update every two minutes.

5.16.9 Configuration Order of Precedence

The order of precedence for GitFS configuration is as follows (each level overrides all levels below it):

1. Per-saltenv configuration (defined under a per-remote `saltenv` param)

| `gitfs_remotes` |
| - https://foo.com/bar.git: |
|   - `saltenv` |
|     - `dev`: |
|       - `mountpoint`: salt://bar |

2. Global per-saltenv configuration (defined in `gitfs_saltenv`)

| `gitfs_saltenv` |
| - `dev`: |
|   - `mountpoint`: salt://bar |

3. Per-remote configuration parameter

| `gitfs_remotes` |
| - https://foo.com/bar.git: |
|   - `mountpoint`: salt://bar |

4. Global configuration parameter

| `gitfs_mountpoint`: salt://bar |

Note: The one exception to the above is when `all_saltenvs` is used. This value overrides all logic for mapping branches/tags to fileserver environments. So, even if `gitfs_saltenv` is used to globally override the mapping for a given saltenv, `all_saltenvs` would take precedence for any remote which uses it.

It's important to note however that any `root` and `mountpoint` values configured in `gitfs_saltenv` (or per-saltenv configuration) would be unaffected by this.
5.16.10 Serving from a Subdirectory

The `gitfs_root` parameter allows files to be served from a subdirectory within the repository. This allows for only part of a repository to be exposed to the Salt fileserver.

Assume the below layout:

```
.gitignore
README.txt
foo/
  foo/bar/
  foo/bar/one.txt
  foo/bar/two.txt
  foo/bar/three.txt
  foo/baz/
  foo/baz/top.sls
  foo/baz/edit/vim.sls
  foo/baz/edit/vimrc
  foo/baz/nginx/init.sls
```

The below configuration would serve only the files under `foo/baz`, ignoring the other files in the repository:

```
gitfs_remotes:
  - git://mydomain.com/stuff.git

gitfs_root: foo/baz
```

The root can also be configured on a *per-remote basis*.

5.16.11 Mountpoints

New in version 2014.7.0.

The `gitfs_mountpoint` parameter will prepend the specified path to the files served from gitfs. This allows an existing repository to be used, rather than needing to reorganize a repository or design it around the layout of the Salt fileserver.

Before the addition of this feature, if a file being served up via gitfs was deeply nested within the root directory (for example, `salt://webapps/foo/files/foo.conf`, it would be necessary to ensure that the file was properly located in the remote repository, and that all of the parent directories were present (for example, the directories `webapps/foo/files/` would need to exist at the root of the repository).

The below example would allow for a file `foo.conf` at the root of the repository to be served up from the Salt fileserver path `salt://webapps/foo/files/foo.conf`.

```
gitfs_remotes:
  - https://mydomain.com/stuff.git

gitfs_mountpoint: salt://webapps/foo/files
```

Mountpoints can also be configured on a *per-remote basis*. 
5.16.12 Using gitfs in Masterless Mode

Since 2014.7.0, gitfs can be used in masterless mode. To do so, simply add the gitfs configuration parameters (and set `fileserver_backend`) in the _minion_ config file instead of the master config file.

5.16.13 Using gitfs Alongside Other Backends

Sometimes it may make sense to use multiple backends; for instance, if `sls` files are stored in git but larger files are stored directly on the master.

The cascading lookup logic used for multiple remotes is also used with multiple backends. If the `fileserver_backend` option contains multiple backends:

```yaml
fileserver_backend:
  - roots
  - git
```

Then the `roots` backend (the default backend of files in `/srv/salt`) will be searched first for the requested file; then, if it is not found on the master, each configured git remote will be searched.

Note: This can be used together with `file_roots` accepting `__env__` as a catch-all environment, since 2018.3.5 and 2019.2.1:

```yaml
file_roots:
  base: 
    - /srv/salt
  __env__:
    - /srv/salt
```

5.16.14 Branches, Environments, and Top Files

When using the GitFS backend, branches, and tags will be mapped to environments using the branch/tag name as an identifier.

There is one exception to this rule: the `master` branch is implicitly mapped to the `base` environment.

So, for a typical `base`, `qa`, `dev` setup, the following branches could be used:

```
master
qa
dev
```

`top.sls` files from different branches will be merged into one at runtime. Since this can lead to overly complex configurations, the recommended setup is to have a separate repository, containing only the `top.sls` file with just one single `master` branch.

To map a branch other than `master` as the `base` environment, use the `gitfs_base` parameter:

```
gitfs_base: salt-base
```

The base can also be configured on a per-remote basis.
5.16.15 Environment Whitelist/Blacklist

New in version 2014.7.0.

The `gitfs_saltenv_whitelist` and `gitfs_saltenv_blacklist` parameters allow for greater control over which branches/tags are exposed as fileserver environments. Exact matches, globs, and regular expressions are supported, and are evaluated in that order. If using a regular expression, ^ and $ must be omitted, and the expression must match the entire branch/tag.

```
- base
- v1.*
- 'mybranch\d+'
```

Note: `v1.*`, in this example, will match as both a glob and a regular expression (though it will have been matched as a glob, since globs are evaluated before regular expressions).

The behavior of the blacklist/whitelist will differ depending on which combination of the two options is used:

- If only `gitfs_saltenv_whitelist` is used, then only branches/tags which match the whitelist will be available as environments
- If only `gitfs_saltenv_blacklist` is used, then the branches/tags which match the blacklist will **not** be available as environments
- If both are used, then the branches/tags which match the whitelist, but do **not** match the blacklist, will be available as environments.

5.16.16 Authentication

**pygit2**

New in version 2014.7.0.

Both HTTPS and SSH authentication are supported as of version 0.20.3, which is the earliest version of pygit2 supported by Salt for gitfs.

Note: The examples below make use of per-remote configuration parameters, a feature new to Salt 2014.7.0. More information on these can be found [here](#).

**HTTPS**

For HTTPS repositories which require authentication, the username and password can be provided like so:

```
- https://domain.tld/myrepo.git:
  - **user**: git
  - **password**: mypassword
```

If the repository is served over HTTP instead of HTTPS, then Salt will by default refuse to authenticate to it. This behavior can be overridden by adding an `insecure_auth` parameter:
SSH

SSH repositories can be configured using the ssh:// protocol designation, or using scp-like syntax. So, the following two configurations are equivalent:

```plaintext
- ssh://git@github.com/user/repo.git
- git@github.com:user/repo.git
```

Both `gitfs_pubkey` and `gitfs_privkey` (or their per-remote counterparts) must be configured in order to authenticate to SSH-based repos. If the private key is protected with a passphrase, it can be configured using `gitfs_passphrase` (or simply `passphrase` if being configured per-remote). For example:

```plaintext
gitfs_remotes:
  - git@github.com:user/repo.git:
    - pubkey: /root/.ssh/id_rsa.pub
    - privkey: /root/.ssh/id_rsa
    - passphrase: myawesomepassphrase
```

Finally, the SSH host key must be added to the known_hosts file.

**Note:** There is a known issue with public-key SSH authentication to Microsoft Visual Studio (VSTS) with pygit2. This is due to a bug or lack of support for VSTS in older libssh2 releases. Known working releases include libssh2 1.7.0 and later, and known incompatible releases include 1.5.0 and older. At the time of this writing, 1.6.0 has not been tested.

Since upgrading libssh2 would require rebuilding many other packages (curl, etc.), followed by a rebuild of libgit2 and a reinstall of pygit2, an easier workaround for systems with older libssh2 is to use GitPython with a passphraseless key for authentication.

GitPython

HTTPS

For HTTPS repositories which require authentication, the username and password can be configured in one of two ways. The first way is to include them in the URL using the format `https://<user>:<password>@<url>`, like so:

```plaintext
gitfs_remotes:
  - https://git:mypassword@domain.tld/myrepo.git
```

The other way would be to configure the authentication in `~/.netrc`:

```plaintext
machine domain.tld
login git
password mypassword
```
If the repository is served over HTTP instead of HTTPS, then Salt will by default refuse to authenticate to it. This behavior can be overridden by adding an `insecure_auth` parameter:

```yaml
gitfs_remotes:
  - http://git:mypassword@domain.tld/insecure_repo.git:
    insecure_auth: True
```

**SSH**

Only passphrase-less SSH public key authentication is supported using GitPython. The `auth` parameters (pubkey, privkey, etc.) shown in the pygit2 authentication examples above do not work with GitPython.

```yaml
gitfs_remotes:
  - ssh://git@github.com/example/salt-states.git
```

Since GitPython wraps the git CLI, the private key must be located in `~/.ssh/id_rsa` for the user under which the Master is running, and should have permissions of 0600. Also, in the absence of a user in the repo URL, GitPython will (just as SSH does) attempt to login as the current user (in other words, the user under which the Master is running, usually `root`).

If a key needs to be used, then `~/.ssh/config` can be configured to use the desired key. Information on how to do this can be found by viewing the manpage for `ssh_config`. Here's an example entry which can be added to the `~/.ssh/config` to use an alternate key for gitfs:

```plaintext
Host github.com
  IdentityFile /root/.ssh/id_rsa_gitfs

StrictHostKeyChecking no
```

The `Host` parameter should be a hostname (or hostname glob) that matches the domain name of the git repository.

It is also necessary to *add the SSH host key to the known_hosts file*. The exception to this would be if strict host key checking is disabled, which can be done by adding `StrictHostKeyChecking no` to the entry in `~/.ssh/config`:

```plaintext
Host github.com
  IdentityFile /root/.ssh/id_rsa_gitfs
  StrictHostKeyChecking no
```

However, this is generally regarded as insecure, and is not recommended.

### Adding the SSH Host Key to the known_hosts File

To use SSH authentication, it is necessary to have the remote repository's SSH host key in the `~/.ssh/known_hosts` file. If the master is also a minion, this can be done using the `ssh.set_known_host` function:

```bash
# salt mymaster ssh.set_known_host user=root hostname=github.com
```

(continues on next page)
If not, then the easiest way to add the key is to su to the user (usually root) under which the salt-master runs and attempt to login to the server via SSH:

```
$ su -
Password:
# ssh github.com
```

It doesn't matter if the login was successful, as answering yes will write the fingerprint to the known_hosts file.

### Verifying the Fingerprint

To verify that the correct fingerprint was added, it is a good idea to look it up. One way to do this is to use nmap:

```
$ nmap -p 22 github.com --script ssh-hostkey
```

```
Starting Nmap 5.51 ( http://nmap.org ) at 2014-08-18 17:47 CDT
Nmap scan report for github.com (192.30.252.129)
Host is up (0.17s latency).
Not shown: 996 filtered ports
PORT STATE SERVICE
22/tcp open ssh
80/tcp open http
443/tcp open https
9418/tcp open git
Nmap done: 1 IP address (1 host up) scanned in 28.78 seconds
```

Another way is to check one's own known_hosts file, using this one-liner:

```
$ ssh-keygen -l -f /dev/stdin <<<`ssh-keyscan github.com 2>/dev/null` | awk '{print $2}'
```

**Warning:** AWS tracks usage of nmap and may flag it as abuse. On AWS hosts, the ssh-keygen method is recommended for host key verification.

5.16.17 Refreshing gitfs Upon Push

By default, Salt updates the remote fileserver backends every 60 seconds. However, if it is desirable to refresh quicker than that, the Reactor System can be used to signal the master to update the fileserver on each push, provided that the git server is also a Salt minion. There are three steps to this process:

1. On the master, create a file /srv/reactor/update_fileserver.sls, with the following contents:
   ```
   update_fileserver:
   runner.fileserver.update
   ```

2. Add the following reactor configuration to the master config file:
   ```
   reactor:
   - 'salt/fileserver/gitfs/update':
     - /srv/reactor/update_fileserver.sls
   ```

3. On the git server, add a post-receive hook
   a. If the user executing git push is the same as the minion user, use the following hook:
   ```
   #!/usr/bin/env sh
   salt-call event.fire_master update salt/fileserver/gitfs/update
   ```
   b. To enable other git users to run the hook after a push, use sudo in the hook script:
   ```
   #!/usr/bin/env sh
   sudo -u root salt-call event.fire_master update salt/fileserver/gitfs/update
   ```

4. If using sudo in the git hook (above), the policy must be changed to permit all users to fire the event. Add the following policy to the sudoers file on the git server.
   ```
   Cmnd_Alias SALT_GIT_HOOK = /bin/salt-call event.fire_master update salt/fileserver/gitfs/update
   Defaults!SALT_GIT_HOOK !requiretty
   ALL ALL=(root) NOPASSWD: SALT_GIT_HOOK
   ```

The update argument right after event.fire_master in this example can really be anything, as it represents the data being passed in the event, and the passed data is ignored by this reactor.

Similarly, the tag name salt/fileserver/gitfs/update can be replaced by anything, so long as the usage is consistent.

The root user name in the hook script and sudo policy should be changed to match the user under which the minion is running.
5.16.18 Using Git as an External Pillar Source

The git external pillar (a.k.a. git_pillar) has been rewritten for the 2015.8.0 release. This rewrite brings with it pygit2 support (allowing for access to authenticated repositories), as well as more granular support for per-remote configuration. This configuration schema is detailed here.

5.16.19 Why aren't my custom modules/states/etc. syncing to my Minions?

In versions 0.16.3 and older, when using the git fileserver backend, certain versions of GitPython may generate errors when fetching, which Salt fails to catch. While not fatal to the fetch process, these interrupt the fileserver update that takes place before custom types are synced, and thus interrupt the sync itself. Try disabling the git fileserver backend in the master config, restarting the master, and attempting the sync again.

This issue is worked around in Salt 0.16.4 and newer.

5.17 MinionFS Backend Walkthrough

New in version 2014.1.0.

---

**Note:** This walkthrough assumes basic knowledge of Salt and cp.push. To get up to speed, check out the Salt Walkthrough.

---

Sometimes it is desirable to deploy a file located on one minion to one or more other minions. This is supported in Salt, and can be accomplished in two parts:

1. Minion support for pushing files to the master (using cp.push)
2. The minionfs fileserver backend

This walkthrough will show how to use both of these features.

5.17.1 Enabling File Push

To set the master to accept files pushed from minions, the file_recv option in the master config file must be set to True (the default is False).

| file_recv: True |

---

**Note:** This change requires a restart of the salt-master service.
5.17.2 Pushing Files

Once this has been done, files can be pushed to the master using the `cp.push` function:

```
salt 'minion-id' cp.push /path/to/the/file
```

This command will store the file in a subdirectory named `minions` under the master's `cachedir`. On most masters, this path will be `/var/cache/salt/master/minions`. Within this directory will be one directory for each minion which has pushed a file to the master, and underneath that the full path to the file on the minion. So, for example, if a minion with an ID of `dev1` pushed a file `/var/log/myapp.log` to the master, it would be saved to `/var/cache/salt/master/minions/dev1/var/log/myapp.log`.

5.17.3 Serving Pushed Files Using MinionFS

While it is certainly possible to add `/var/cache/salt/master/minions` to the master's `file_roots` and serve these files, it may only be desirable to expose files pushed from certain minions. Adding `/var/cache/salt/master/minions/<minion-id>` for each minion that needs to be exposed can be cumbersome and prone to errors.

Enter `minionfs`. This fileserver backend will make files pushed using `cp.push` available to the Salt fileserver, and provides an easy mechanism to restrict which minions' pushed files are made available.

**Simple Configuration**

To use the `minionfs` backend, add `minionfs` to the list of backends in the `fileserver_backend` configuration option on the master:

```
file_recv: True

fileserver_backend:
  - roots
  - minionfs
```

**Note:** `minion` also works here. Prior to the 2018.3.0 release, only `minion` would work.

Also, as described earlier, `file_recv: True` is needed to enable the master to receive files pushed from minions. As always, changes to the master configuration require a restart of the `salt-master` service.

Files made available via `minionfs` are by default located at `salt://<minion-id>/path/to/file`. Think back to the earlier example, in which `dev1` pushed a file `/var/log/myapp.log` to the master. With `minionfs` enabled, this file would be addressable in Salt at `salt://dev1/var/log/myapp.log`.

If many minions have pushed to the master, this will result in many directories in the root of the Salt fileserver. For this reason, it is recommended to use the `minionfs_mountpoint` config option to organize these files underneath a subdirectory:

```
minionfs_mountpoint: salt://minionfs
```

Using the above mountpoint, the file in the example would be located at `salt://minionfs/dev1/var/log/myapp.log`. 
Restricting Certain Minions’ Files from Being Available Via MinionFS

A whitelist and blacklist can be used to restrict the minions whose pushed files are available via minionfs. These lists can be managed using the minionfs_whitelist and minionfs_blacklist config options. Click the links for both of them for a detailed explanation of how to use them.

A more complex configuration example, which uses both a whitelist and blacklist, can be found below:

```yaml
file_recv: True

fileserver_backend:
  - roots
  - minionfs

minionfs_mountpoint: salt://minionfs

minionfs_whitelist:
  - host04
  - web*
  - 'mail\d+.domain\tld'

minionfs_blacklist:
  - web21
```

Potential Concerns

- There is no access control in place to restrict which minions have access to files served up by minionfs. All minions will have access to these files.
- Unless the minionfs_whitelist and/or minionfs_blacklist config options are used, all minions which push files to the master will have their files made available via minionfs.

5.18 Salt Package Manager

The Salt Package Manager, or SPM, enables Salt formulas to be packaged to simplify distribution to Salt masters. The design of SPM was influenced by other existing packaging systems including RPM, Yum, and Pacman.
Note: The previous diagram shows each SPM component as a different system, but this is not required. You can build packages and host the SPM repo on a single Salt master if you'd like.

Packaging System

The packaging system is used to package the state, pillar, file templates, and other files used by your formula into a single file. After a formula package is created, it is copied to the Repository System where it is made available to Salt masters.

See Building SPM Packages

Repo System

The Repo system stores the SPM package and metadata files and makes them available to Salt masters via http(s), ftp, or file URLs. SPM repositories can be hosted on a Salt Master, a Salt Minion, or on another system.

See Distributing SPM Packages

Salt Master

SPM provides Salt master settings that let you configure the URL of one or more SPM repos. You can then quickly install packages that contain entire formulas to your Salt masters using SPM.

See Installing SPM Packages

Contents
5.18.1 Building SPM Packages

The first step when using Salt Package Manager is to build packages for each of the formulas that you want to distribute. Packages can be built on any system where you can install Salt.

Package Build Overview

To build a package, all state, pillar, jinja, and file templates used by your formula are assembled into a folder on the build system. These files can be cloned from a Git repository, such as those found at the saltstack-formulas organization on GitHub, or copied directly to the folder.

The following diagram demonstrates a typical formula layout on the build system:

In this example, all formula files are placed in a myapp-formula folder. This is the folder that is targeted by the spm build command when this package is built.

Within this folder, pillar data is placed in a pillar.example file at the root, and all state, jinja, and template files are placed within a subfolder that is named after the application being packaged. State files are typically contained within a subfolder, similar to how state files are organized in the state tree. Any non-pillar files in your package that are not contained in a subfolder are placed at the root of the spm state tree.

Additionally, a FORMULA file is created and placed in the root of the folder. This file contains package metadata that is used by SPM.

Package Installation Overview

When building packages, it is useful to know where files are installed on the Salt master. During installation, all files except pillar.example and FORMULA are copied directly to the spm state tree on the Salt master (located at \srv\spm\salt).

If a pillar.example file is present in the root, it is renamed to <formula name>.sls.orig and placed in the pillar_path.
**Building an SPM Formula Package**

1. Assemble formula files in a folder on the build system.
2. Create a `FORMULA` file and place it in the root of the package folder.
3. Run `spm build <folder name>`. The package is built and placed in the `/srv/spm_build` folder.

```bash
spm build /path/to/salt-packages-source/myapp-formula
```

4. Copy the `.spm` file to a folder on the repository system.
Types of Packages

SPM supports different types of packages. The function of each package is denoted by its name. For instance, packages which end in -formula are considered to be Salt States (the most common type of formula). Packages which end in -conf contain configuration which is to be placed in the /etc/salt/ directory. Packages which do not contain one of these names are treated as if they have a -formula name.

formula

By default, most files from this type of package live in the /srv/spm/salt/ directory. The exception is the pillar.example file, which will be renamed to <package_name>.sls and placed in the pillar directory (/srv/spm/pillar/ by default).

reactor

By default, files from this type of package live in the /srv/spm/reactor/ directory.

conf

The files in this type of package are configuration files for Salt, which normally live in the /etc/salt/ directory. Configuration files for packages other than Salt can and should be handled with a Salt State (using a formula type of package).

Technical Information

Packages are built using BZ2-compressed tarballs. By default, the package database is stored using the sqlite3 driver (see Loader Modules below).

Support for these are built into Python, and so no external dependencies are needed.

All other files belonging to SPM use YAML, for portability and ease of use and maintainability.

SPM-Specific Loader Modules

SPM was designed to behave like traditional package managers, which apply files to the filesystem and store package metadata in a local database. However, because modern infrastructures often extend beyond those use cases, certain parts of SPM have been broken out into their own set of modules.

Package Database

By default, the package database is stored using the sqlite3 module. This module was chosen because support for SQLite3 is built into Python itself.

Please see the SPM Development Guide for information on creating new modules for package database management.
Package Files

By default, package files are installed using the `local` module. This module applies files to the local filesystem, on the machine that the package is installed on.

Please see the *SPM Development Guide* for information on creating new modules for package file management.

5.18.2 Distributing SPM Packages

SPM packages can be distributed to Salt masters over HTTP(S), FTP, or through the file system. The SPM repo can be hosted on any system where you can install Salt. Salt is installed so you can run the `spm create_repo` command when you update or add a package to the repo. SPM repos do not require the salt-master, salt-minion, or any other process running on the system.

Note: If you are hosting the SPM repo on a system where you can not or do not want to install Salt, you can run the `spm create_repo` command on the build system and then copy the packages and the generated `SPM-METADATA` file to the repo. You can also install SPM files *directly on a Salt master*, bypassing the repository completely.

Setting up a Package Repository

After packages are built, the generated SPM files are placed in the `srv/spm_build` folder.

Where you place the built SPM files on your repository server depends on how you plan to make them available to your Salt masters.

You can share the `srv/spm_build` folder on the network, or copy the files to your FTP or Web server.

Adding a Package to the repository

New packages are added by simply copying the SPM file to the repo folder, and then generating repo metadata.

Generate Repo Metadata

Each time you update or add an SPM package to your repository, issue an `spm create_repo` command:

```
spm create_repo /srv/spm_build
```

SPM generates the repository metadata for all of the packages in that directory and places it in an `SPM-METADATA` file at the folder root. This command is used even if repository metadata already exists in that directory.

5.18.3 Installing SPM Packages

SPM packages are installed to your Salt master, where they are available to Salt minions using all of Salt’s package management functions.
Configuring Remote Repositories

Before SPM can use a repository, two things need to happen. First, the Salt master needs to know where the repository is through a configuration process. Then it needs to pull down the repository metadata.

Repository Configuration Files

Repositories are configured by adding each of them to the /etc/salt/spm.repos.d/spm.repo file on each Salt master. This file contains the name of the repository, and the link to the repository:

```yaml
my_repo:
  url: https://spm.example.com/
```

For HTTP/HTTPS Basic authorization you can define credentials:

```yaml
my_repo:
  url: https://spm.example.com/
  username: user
  password: pass
```

Beware of unauthorized access to this file, please set at least 0640 permissions for this configuration file:

The URL can use http, https, ftp, or file.

```yaml
my_repo:
  url: file:///srv/spm_build
```

Updating Local Repository Metadata

After the repository is configured on the Salt master, repository metadata is downloaded using the `spm update_repo` command:

```bash
spm update_repo
```

Note: A file for each repo is placed in /var/cache/salt/spm on the Salt master after you run the `update_repo` command. If you add a repository and it does not seem to be showing up, check this path to verify that the repository was found.

Update File Roots

SPM packages are installed to the `srv/spm/salt` folder on your Salt master. This path needs to be added to the file roots on your Salt master manually.

```yaml
file_roots:
  base:
    1. /srv/salt
    2. /srv/spm/salt
```

Restart the salt-master service after updating the `file_roots` setting.
Installing Packages

To install a package, use the `spm install` command:

```bash
spm install apache
```

**Warning:** Currently, SPM does not check to see if files are already in place before installing them. That means that existing files will be overwritten without warning.

Installing directly from an SPM file

You can also install SPM packages using a local SPM file using the `spm local install` command:

```bash
spm local install /srv/spm/apache-201506-1.spm
```

An SPM repository is not required when using `spm local install`.

Pillars

If an installed package includes Pillar data, be sure to target the installed pillar to the necessary systems using the pillar Top file.

Removing Packages

Packages may be removed after they are installed using the `spm remove` command.

```bash
spm remove apache
```

If files have been modified, they will not be removed. Empty directories will also be removed.

5.18.4 SPM Configuration

There are a number of options that are specific to SPM. They may be configured in the `master` configuration file, or in SPM's own `spm` configuration file (normally located at `/etc/salt/spm`). If configured in both places, the `spm` file takes precedence. In general, these values will not need to be changed from the defaults.

`spm_logfile`

Default: `/var/log/salt/spm`

Where SPM logs messages.
spm_repos_config
Default: /etc/salt/spm.repos
SPM repositories are configured with this file. There is also a directory which corresponds to it, which ends in .d. For instance, if the filename is /etc/salt/spm.repos, the directory will be /etc/salt/spm.repos.d/.

spm_cache_dir
Default: /var/cache/salt/spm
When SPM updates package repository metadata and downloads packaged, they will be placed in this directory. The package database, normally called packages.db, also lives in this directory.

spm_db
Default: /var/cache/salt/spm/packages.db
The location and name of the package database. This database stores the names of all of the SPM packages installed on the system, the files that belong to them, and the metadata for those files.

spm_build_dir
Default: /srv/spm_build
When packages are built, they will be placed in this directory.

spm_build_exclude
Default: ['.git']
When SPM builds a package, it normally adds all files in the formula directory to the package. Files listed here will be excluded from that package. This option requires a list to be specified.

```
spm_build_exclude:
  - .git
  - .svn
```

Types of Packages

SPM supports different types of formula packages. The function of each package is denoted by its name. For instance, packages which end in -formula are considered to be Salt States (the most common type of formula). Packages which end in -conf contain configuration which is to be placed in the /etc/salt/ directory. Packages which do not contain one of these names are treated as if they have a -formula name.
formula

By default, most files from this type of package live in the /srv/spm/salt/ directory. The exception is the pillar.example file, which will be renamed to <package_name>.sls and placed in the pillar directory (/srv/spm/pillar/ by default).

reactor

By default, files from this type of package live in the /srv/spm/reactor/ directory.

conf

The files in this type of package are configuration files for Salt, which normally live in the /etc/salt/ directory. Configuration files for packages other than Salt can and should be handled with a Salt State (using a formula type of package).

5.18.5 FORMULA File

In addition to the formula itself, a FORMULA file must exist which describes the package. An example of this file is:

```plaintext
name: apache
os: RedHat, Debian, Ubuntu, SUSE, FreeBSD
os_family: RedHat, Debian, Suse, FreeBSD
version: 201506
release: 2
summary: Formula for installing Apache
description: Formula for installing Apache
```

Required Fields

This file must contain at least the following fields:

name

The name of the package, as it will appear in the package filename, in the repository metadata, and the package database. Even if the source formula has -formula in its name, this name should probably not include that. For instance, when packaging the apache-formula, the name should be set to apache.

os

The value of the os grain that this formula supports. This is used to help users know which operating systems can support this package.
**os_family**

The value of the `os_family` grain that this formula supports. This is used to help users know which operating system families can support this package.

**version**

The version of the package. While it is up to the organization that manages this package, it is suggested that this version is specified in a `YYYYMM` format. For instance, if this version was released in June 2015, the package version should be `201506`. If multiple releases are made in a month, the `release` field should be used.

**minimum_version**

Minimum recommended version of Salt to use this formula. Not currently enforced.

**release**

This field refers primarily to a release of a version, but also to multiple versions within a month. In general, if a version has been made public, and immediate updates need to be made to it, this field should also be updated.

**summary**

A one-line description of the package.

**description**

A more detailed description of the package which can contain more than one line.

**Optional Fields**

The following fields may also be present.

**top_level_dir**

This field is optional, but highly recommended. If it is not specified, the package name will be used.

Formula repositories typically do not store `.sls` files in the root of the repository; instead they are stored in a subdirectory. For instance, an `apache-formula` repository would contain a directory called `apache`, which would contain an `init.sls`, plus a number of other related files. In this instance, the `top_level_dir` should be set to `apache`.

Files outside the `top_level_dir`, such as `README.rst`, `FORMULA`, and `LICENSE` will not be installed. The exceptions to this rule are files that are already treated specially, such as `pillar.example` and `_modules/`. 

5.18. Salt Package Manager 315
dependencies

A comma-separated list of packages that must be installed along with this package. When this package is installed, SPM will attempt to discover and install these packages as well. If it is unable to, then it will refuse to install this package.

This is useful for creating packages which tie together other packages. For instance, a package called wordpress-mariadb-apache would depend upon wordpress, mariadb, and apache.

optional

A comma-separated list of packages which are related to this package, but are neither required nor necessarily recommended. This list is displayed in an informational message when the package is installed to SPM.

recommended

A comma-separated list of optional packages that are recommended to be installed with the package. This list is displayed in an informational message when the package is installed to SPM.

files

A files section can be added, to specify a list of files to add to the SPM. Such a section might look like:

```
files:
- _pillar
- FORMULA
- _runners
- d|mymodule/index.rst
- r|README.rst
```

When files are specified, then only those files will be added to the SPM, regardless of what other files exist in the directory. They will also be added in the order specified, which is useful if you have a need to lay down files in a specific order.

As can be seen in the example above, you may also tag files as being a specific type. This is done by pre-pending a filename with its type, followed by a pipe (|) character. The above example contains a document file and a readme.

The available file types are:

- c: config file
- d: documentation file
- g: ghost file (i.e. the file contents are not included in the package payload)
- l: license file
- r: readme file
- s: SLS file
- m: Salt module

The first 5 of these types (c, d, g, l, r) will be placed in /usr/share/salt/spm/ by default. This can be changed by setting an spm_share_dir value in your /etc/salt/spm configuration file.

The last two types (s and m) are currently ignored, but they are reserved for future use.
Pre and Post States

It is possible to run Salt states before and after installing a package by using pre and post states. The following sections may be declared in a FORMULA:

- `pre_local_state`
- `pre_tgt_state`
- `post_local_state`
- `post_tgt_state`

Sections with `pre` in their name are evaluated before a package is installed and sections with `post` are evaluated after a package is installed. `local` states are evaluated before `tgt` states.

Each of these sections needs to be evaluated as text, rather than as YAML. Consider the following block:

```
pre_local_state: >
  echo test > /tmp/spmtest:
  cmd:
    - run
```

Note that this declaration uses `>` after `pre_local_state`. This is a YAML marker that marks the next multi-line block as text, including newlines. It is important to use this marker whenever declaring `pre` or `post` states, so that the text following it can be evaluated properly.

local States

`local` states are evaluated locally; this is analogous to issuing a state run using a `salt-call --local` command. These commands will be issued on the local machine running the `spm` command, whether that machine is a master or a minion.

`local` states do not require any special arguments, but they must still use the `>` marker to denote that the state is evaluated as text, not a data structure.

```
pre_local_state: >
  echo test > /tmp/spmtest:
  cmd:
    - run
```

tgt States

`tgt` states are issued against a remote target. This is analogous to issuing a state using the `salt` command. As such it requires that the machine that the `spm` command is running on is a master.

Because `tgt` states require that a target be specified, their code blocks are a little different. Consider the following state:

```
pre_tgt_state:
  tgt: '*'
  data: >
    echo test > /tmp/spmtest:
    cmd:
      - run
```
With tgt states, the state data is placed under a data section, inside the *_tgt_state code block. The target is of course specified as a tgt and you may also optionally specify a tgt_type (the default is glob).
You still need to use the > marker, but this time it follows the data line, rather than the *_tgt_state line.

**Templatting States**

The reason that state data must be evaluated as text rather than a data structure is because that state data is first processed through the rendering engine, as it would be with a standard state run.

This means that you can use Jinja or any other supported renderer inside of Salt. All formula variables are available to the renderer, so you can reference FORMULA data inside your state if you need to:

```yaml
pre_tgt_state:
  tgt: '*
  data: >
    echo {{ name }} > /tmp/spmtest:
    cmd:
      - run
```

You may also declare your own variables inside the FORMULA. If SPM doesn’t recognize them then it will ignore them, so there are no restrictions on variable names, outside of avoiding reserved words.

By default the renderer is set to jinja|yaml. You may change this by changing the renderer setting in the FORMULA itself.

**Building a Package**

Once a FORMULA file has been created, it is placed into the root of the formula that is to be turned into a package. The spm build command is used to turn that formula into a package:

```
spm build /path/to/saltstack-formulas/apache-formula
```

The resulting file will be placed in the build directory. By default this directory is located at /srv/spm/.

**Loader Modules**

When an execution module is placed in `<file_roots>/_modules/` on the master, it will automatically be synced to minions, the next time a sync operation takes place. Other modules are also propagated this way: state modules can be placed in _states/, and so on.

When SPM detects a file in a package which resides in one of these directories, that directory will be placed in `<file_roots>` instead of in the formula directory with the rest of the files.
Removing Packages

Packages may be removed once they are installed using the `spm remove` command.

```bash
spm remove apache
```

If files have been modified, they will not be removed. Empty directories will also be removed.

Technical Information

Packages are built using BZ2-compressed tarballs. By default, the package database is stored using the `sqlite3` driver (see Loader Modules below).

Support for these are built into Python, and so no external dependencies are needed.

All other files belonging to SPM use YAML, for portability and ease of use and maintainability.

SPM-Specific Loader Modules

SPM was designed to behave like traditional package managers, which apply files to the filesystem and store package metadata in a local database. However, because modern infrastructures often extend beyond those use cases, certain parts of SPM have been broken out into their own set of modules.

Package Database

By default, the package database is stored using the `sqlite3` module. This module was chosen because support for SQLite3 is built into Python itself.

Please see the SPM Development Guide for information on creating new modules for package database management.

Package Files

By default, package files are installed using the `local` module. This module applies files to the local filesystem, on the machine that the package is installed on.

Please see the `SPM Development Guide` for information on creating new modules for package file management.

Types of Packages

SPM supports different types of formula packages. The function of each package is denoted by its name. For instance, packages which end in `-formula` are considered to be Salt States (the most common type of formula). Packages which end in `-conf` contain configuration which is to be placed in the `/etc/salt/` directory. Packages which do not contain one of these names are treated as if they have a `-formula` name.
formula

By default, most files from this type of package live in the /srv/spm/salt/ directory. The exception is the pillar.example file, which will be renamed to <package_name>.sls and placed in the pillar directory (/srv/spm/pillar/ by default).

reactor

By default, files from this type of package live in the /srv/spm/reactor/ directory.

conf

The files in this type of package are configuration files for Salt, which normally live in the /etc/salt/ directory. Configuration files for packages other than Salt can and should be handled with a Salt State (using a formula type of package).

5.18.6 SPM Development Guide

This document discusses developing additional code for SPM.

SPM-Specific Loader Modules

SPM was designed to behave like traditional package managers, which apply files to the filesystem and store package metadata in a local database. However, because modern infrastructures often extend beyond those use cases, certain parts of SPM have been broken out into their own set of modules.

Each function that accepts arguments has a set of required and optional arguments. Take note that SPM will pass all arguments in, and therefore each function must accept each of those arguments. However, arguments that are marked as required are crucial to SPM’s core functionality, while arguments that are marked as optional are provided as a benefit to the module, if it needs to use them.

Package Database

By default, the package database is stored using the sqlite3 module. This module was chosen because support for SQLite3 is built into Python itself.

Modules for managing the package database are stored in the salt/spm/pkgdb/ directory. A number of functions must exist to support database management.

init()

Get a database connection, and initialize the package database if necessary.

This function accepts no arguments. If a database is used which supports a connection object, then that connection object is returned. For instance, the sqlite3 module returns a connect() object from the sqlite3 library:

```python
def myfunc():
    conn = sqlite3.connect(__opts__['spm_db'], isolation_level=None)
    ...
    return conn
```
SPM itself will not use this connection object; it will be passed in as-is to the other functions in the module. Therefore, when you set up this object, make sure to do so in a way that is easily usable throughout the module.

**info()**

Return information for a package. This generally consists of the information that is stored in the `FORMULA` file in the package.

The arguments that are passed in, in order, are `package` (required) and `conn` (optional).

- **package** is the name of the package, as specified in the `FORMULA`. `conn` is the connection object returned from `init()`.

**list_files()**

Return a list of files for an installed package. Only the filename should be returned, and no other information.

The arguments that are passed in, in order, are `package` (required) and `conn` (optional).

- **package** is the name of the package, as specified in the `FORMULA`. `conn` is the connection object returned from `init()`.

**register_pkg()**

Register a package in the package database. Nothing is expected to be returned from this function.

The arguments that are passed in, in order, are `name` (required), `formula_def` (required), and `conn` (optional).

- **name** is the name of the package, as specified in the `FORMULA`. `formula_def` is the contents of the `FORMULA` file, as a `dict`. `conn` is the connection object returned from `init()`.

**register_file()**

Register a file in the package database. Nothing is expected to be returned from this function.

The arguments that are passed in are `name` (required), `member` (required), `path` (required), `digest` (optional), and `conn` (optional).

- **name** is the name of the package.
- **member** is a `tarfile` object for the package file. It is included, because it contains most of the information for the file.
- **path** is the location of the file on the local filesystem.
- **digest** is the SHA1 checksum of the file.
- **conn** is the connection object returned from `init()`.
unregister_pkg()

Unregister a package from the package database. This usually only involves removing the package's record from the database. Nothing is expected to be returned from this function.

The arguments that are passed in, in order, are name (required) and conn (optional).

name is the name of the package, as specified in the FORMULA. conn is the connection object returned from init().

unregister_file()

Unregister a package from the package database. This usually only involves removing the package's record from the database. Nothing is expected to be returned from this function.

The arguments that are passed in, in order, are name (required), pkg (optional) and conn (optional).

name is the path of the file, as it was installed on the filesystem.

pkg is the name of the package that the file belongs to.

conn is the connection object returned from init().

db_exists()

Check to see whether the package database already exists. This is the path to the package database file. This function will return True or False.

The only argument that is expected is db_, which is the package database file.

Package Files

By default, package files are installed using the local module. This module applies files to the local filesystem, on the machine that the package is installed on.

Modules for managing the package database are stored in the salt/spm/pkgfiles/ directory. A number of functions must exist to support file management.

init()

Initialize the installation location for the package files. Normally these will be directory paths, but other external destinations such as databases can be used. For this reason, this function will return a connection object, which can be a database object. However, in the default local module, this object is a dict containing the paths. This object will be passed into all other functions.

Three directories are used for the destinations: formula_path, pillar_path, and reactor_path.

formula_path is the location of most of the files that will be installed. The default is specific to the operating system, but is normally /srv/salt/.

pillar_path is the location that the pillar.example file will be installed to. The default is specific to the operating system, but is normally /srv/pillar/.

reactor_path is the location that reactor files will be installed to. The default is specific to the operating system, but is normally /srv/reactor/.
check_existing()

Check the filesystem for existing files. All files for the package will be checked, and if any are existing, then this function will normally state that SPM will refuse to install the package.

This function returns a list of the files that exist on the system.

The arguments that are passed into this function are, in order: package (required), pkg_files (required), formula_def (formula_def), and conn (optional).

package is the name of the package that is to be installed.

pkg_files is a list of the files to be checked.

formula_def is a copy of the information that is stored in the FORMULA file.

conn is the file connection object.

install_file()

Install a single file to the destination (normally on the filesystem). Nothing is expected to be returned from this function.

This function returns the final location that the file was installed to.

The arguments that are passed into this function are, in order, package (required), formula_tar (required), member (required), formula_def (required), and conn (optional).

package is the name of the package that is to be installed.

formula_tar is the tarfile object for the package. This is passed in so that the function can call formula_tar.extract() for the file.

member is the tarfile object which represents the individual file. This may be modified as necessary, before being passed into formula_tar.extract().

formula_def is a copy of the information from the FORMULA file.

conn is the file connection object.

remove_file()

Remove a single file from file system. Normally this will be little more than an os.remove(). Nothing is expected to be returned from this function.

The arguments that are passed into this function are, in order, path (required) and conn (optional).

path is the absolute path to the file to be removed.

conn is the file connection object.
hash_file()

Returns the hexdigest hash value of a file.

The arguments that are passed into this function are, in order, path (required), hashobj (required), and conn (optional).

path is the absolute path to the file.

hashobj is a reference to hashlib.sha1(), which is used to pull the hexdigest() for the file.

conn is the file connection object.

This function will not generally be more complex than:

```python
def hash_file(path, hashobj, conn=None):
    with salt.utils.files.fopen(path, "r") as f:
        hashobj.update(f.read())
    return hashobj.hexdigest()
```

path_exists()

Check to see whether the file already exists on the filesystem. Returns True or False.

This function expects a path argument, which is the absolute path to the file to be checked.

path_isdir()

Check to see whether the path specified is a directory. Returns True or False.

This function expects a path argument, which is the absolute path to be checked.

5.19 Storing Data in Other Databases

The SDB interface is designed to store and retrieve data that, unlike pillars and grains, is not necessarily minion-specific. The initial design goal was to allow passwords to be stored in a secure database, such as one managed by the keyring package, rather than as plain-text files. However, as a generic database interface, it could conceptually be used for a number of other purposes.

SDB was added to Salt in version 2014.7.0.

5.19.1 SDB Configuration

In order to use the SDB interface, a configuration profile must be set up. To be available for master commands, such as runners, it needs to be configured in the master configuration. For modules executed on a minion, it can be set either in the minion configuration file, or as a pillar. The configuration stanza includes the name/ID that the profile will be referred to as, a driver setting, and any other arguments that are necessary for the SDB module that will be used. For instance, a profile called mykeyring, which uses the system service in the keyring module would look like:

```yaml
mykeyring:
    driver: keyring
    service: system
```
It is recommended to keep the name of the profile simple, as it is used in the SDB URI as well.

### 5.19.2 SDB URIs

SDB is designed to make small database queries (hence the name, SDB) using a compact URL. This allows users to reference a database value quickly inside a number of Salt configuration areas, without a lot of overhead. The basic format of an SDB URI is:

```
sdb://<profile>/<args>
```

The profile refers to the configuration profile defined in either the master or the minion configuration file. The args are specific to the module referred to in the profile, but will typically only need to refer to the key of a key/value pair inside the database. This is because the profile itself should define as many other parameters as possible.

For example, a profile might be set up to reference credentials for a specific OpenStack account. The profile might look like:

```
kevinopenstack:
  driver: keyring
  service: salt.cloud.openstack.kevin
```

And the URI used to reference the password might look like:

```
sdb://kevinopenstack/password
```

### 5.19.3 Getting, Setting and Deleting SDB Values

Once an SDB driver is configured, you can use the `sdb` execution module to get, set and delete values from it. There are two functions that may appear in most SDB modules: `get`, `set` and `delete`.

Getting a value requires only the SDB URI to be specified. To retrieve a value from the `kevinopenstack` profile above, you would use:

```
salt-call sdb.get sdb://kevinopenstack/password
```

**Warning:** The vault driver previously only supported splitting the path and key with a question mark. This has since been deprecated in favor of using the standard `/` to split the path and key. The use of the questions mark will still be supported to ensure backwards compatibility, but please use the preferred method using `/`. The deprecated approach required the full path to where the key is stored, followed by a question mark, followed by the key to be retrieved. If you were using a profile called `myvault`, you would use a URI that looks like:

```
salt-call sdb.get 'sdb://myvault/secret/salt?saltstack'
```

Instead of the above please use the preferred URI using `/` instead:

```
salt-call sdb.get 'sdb://myvault/secret/salt/saltstack'
```

Setting a value uses the same URI as would be used to retrieve it, followed by the value as another argument.

```
salt-call sdb.set 'sdb://myvault/secret/salt/saltstack' 'super awesome'
```

Deleting values (if supported by the driver) is done pretty much the same way as getting them. Provided that you have a profile called `mykvstore` that uses a driver allowing to delete values you would delete a value as shown below:
```bash
salt-call sdb.delete 'sdb://mykvstore/foobar'
```

The `sdb.get`, `sdb.set` and `sdb.delete` functions are also available in the runner system:

```bash
salt-run sdb.get 'sdb://myvault/secret/salt/saltstack'
salt-run sdb.set 'sdb://myvault/secret/salt/saltstack' 'super awesome'
salt-run sdb.delete 'sdb://mykvstore/foobar'
```

## 5.19.4 Using SDB URIs in Files

SDB URIs can be used in both configuration files, and files that are processed by the renderer system (jinja, mako, etc.). In a configuration file (such as `/etc/salt/master`, `/etc/salt/minion`, `/etc/salt/cloud`, etc.), make an entry as usual, and set the value to the SDB URI. For instance:

<table>
<thead>
<tr>
<th>mykey: sdb://myetcd/mykey</th>
</tr>
</thead>
</table>

To retrieve this value using a module, the module in question must use the `config.get` function to retrieve configuration values. This would look something like:

```bash
def __salt__
    config.get
    mykey
```

Templating renderers use a similar construct. To get the `mykey` value from above in Jinja, you would use:

```jinja
{{ salt['config.get']('mykey') }}
```

When retrieving data from configuration files using `config.get`, the SDB URI need only appear in the configuration file itself.

If you would like to retrieve a key directly from SDB, you would call the `sdb.get` function directly, using the SDB URI. For instance, in Jinja:

```jinja
{{ salt['sdb.get']('sdb://myetcd/mykey') }}
```

When writing Salt modules, it is not recommended to call `sdb.get` directly, as it requires the user to provide values in SDB, using a specific URI. Use `config.get` instead.

## 5.19.5 Writing SDB Modules

There is currently one function that MUST exist in any SDB module (`get()`), one that SHOULD exist (`set_()`), and one that MAY exist (`delete()`). If using a `set_()` function, a `__func_alias__` dictionary MUST be declared in the module as well:

```python
__func_alias__ = {
    "set_": "set",
}
```

This is because `set` is a Python built-in, and therefore functions should not be created which are called `set()`. The `__func_alias__` functionality is provided via Salt’s loader interfaces, and allows legally-named functions to be referred to using names that would otherwise be unwise to use.

The `get()` function is required, as it will be called via functions in other areas of the code which make use of the `sdb://` URI. For example, the `config.get` function in the `config` execution module uses this function.

The `set_()` function may be provided, but is not required, as some sources may be read-only, or may be otherwise unwise to access via a URI (for instance, because of SQL injection attacks).
The `delete()` function may be provided as well, but is not required, as many sources may be read-only or restrict such operations.

A simple example of an SDB module is `salt/sdb/keyring_db.py`, as it provides basic examples of most, if not all, of the types of functionality that are available not only for SDB modules, but for Salt modules in general.

### 5.20 Running the Salt Master/Minion as an Unprivileged User

While the default setup runs the master and minion as the root user, some may consider it an extra measure of security to run the master as a non-root user. Keep in mind that doing so does not change the master's capability to access minions as the user they are running as. Due to this many feel that running the master as a non-root user does not grant any real security advantage which is why the master has remained as root by default.

**Note:** Some of Salt's operations cannot execute correctly when the master is not running as root, specifically the pam external auth system, as this system needs root access to check authentication.

As of Salt 0.9.10 it is possible to run Salt as a non-root user. This can be done by setting the `user` parameter in the master configuration file, and restarting the `salt-master` service.

The minion has its own `user` parameter as well, but running the minion as an unprivileged user will keep it from making changes to things like users, installed packages, etc. unless access controls (sudo, etc.) are setup on the minion to permit the non-root user to make the needed changes.

In order to allow Salt to successfully run as a non-root user, ownership, and permissions need to be set such that the desired user can read from and write to the following directories (and their subdirectories, where applicable):

- `/etc/salt`
- `/var/cache/salt`
- `/var/log/salt`
- `/var/run/salt`

Ownership can be easily changed with `chown`, like so:

```
# chown -R user /etc/salt /var/cache/salt /var/log/salt /var/run/salt
```

**Warning:** Running either the master or minion with the `root_dir` parameter specified will affect these paths, as will setting options like `pki_dir`, `cachedir`, `log_file`, and other options that normally live in the above directories.

### 5.21 Using cron with Salt

The Salt Minion can initiate its own highstate using the `salt-call` command.

```
$ salt-call state.apply
```

This will cause the minion to check in with the master and ensure it is in the correct "state".

---

5.20. Running the Salt Master/Minion as an Unprivileged User 327
5.22 Use cron to initiate a highstate

If you would like the Salt Minion to regularly check in with the master you can use cron to run the `salt-call` command:

```
0 0 * * * salt-call state.apply
```

The above cron entry will run a highstate every day at midnight.

**Note:** When executing Salt using cron, keep in mind that the default PATH for cron may not include the path for any scripts or commands used by Salt, and it may be necessary to set the PATH accordingly in the crontab:

```
PATH=/bin:/sbin:/usr/bin:/usr/sbin:/usr/local/bin:/usr/local/sbin:/opt/bin
0 0 * * * salt-call state.apply
```

5.23 Hardening Salt

This topic contains tips you can use to secure and harden your Salt environment. How you best secure and harden your Salt environment depends heavily on how you use Salt, where you use Salt, how your team is structured, where you get data from, and what kinds of access (internal and external) you require.

**Important:** The guidance here should be taken in combination with Salt Best Practices.

**Important:** Refer to the Receiving security announcements documentation in order to stay updated and secure.

**Warning:** For historical reasons, Salt requires PyCrypto as a "lowest common denominator". However, PyCrypto is unmaintained and best practice is to manually upgrade to use a more maintained library such as PyCryptodome. See Issue #52674 and Issue #54115 for more info.

5.23.1 General hardening tips

- Restrict who can directly log into your Salt master system.
- Use SSH keys secured with a passphrase to gain access to the Salt master system.
- Track and secure SSH keys and any other login credentials you and your team need to gain access to the Salt master system.
- Use a hardened bastion server or a VPN to restrict direct access to the Salt master from the internet.
- Don’t expose the Salt master any more than what is required.
- Harden the system as you would with any high-priority target.
- Keep the system patched and up-to-date.
- Use tight firewall rules. Pay particular attention to TCP/4505 and TCP/4506 on the salt master and avoid exposing these ports unnecessarily.
5.23.2 Salt hardening tips

**Warning:** Grains can be set by users that have access to the minion configuration files on the local system, making them less secure than other identifiers in Salt. Avoid storing sensitive data, such as passwords or keys, on minions. Instead, make use of Storing Static Data in the Pillar and/or Storing Data in Other Databases.

**Important:** Jinja supports a secure, sandboxed template execution environment that Salt takes advantage of. Other text Renderers do not support this functionality, so Salt highly recommends usage of jinja/jinja|yaml.

- Subscribe to salt-users or salt-announce so you know when new Salt releases are available.
- Keep your systems up-to-date with the latest patches.
- Use Salt’s Client ACL system to avoid having to give out root access in order to run Salt commands.
- Use Salt’s Client ACL system to restrict which users can run what commands.
- Use external Pillar to pull data into Salt from external sources so that non-sysadmins (other teams, junior admins, developers, etc) can provide configuration data without needing access to the Salt master.
- Make heavy use of SLS files that are version-controlled and go through a peer-review/code-review process before they’re deployed and run in production. This is good advice even for “one-off” CLI commands because it helps mitigate typos and mistakes.
- Use salt-api, SSL, and restrict authentication with the external auth system if you need to expose your Salt master to external services.
- Make use of Salt’s event system and reactor to allow minions to signal the Salt master without requiring direct access.
- Run the salt-master daemon as non-root.
- Disable which modules are loaded onto minions with the disable_modules setting. (for example, disable the cmd module if it makes sense in your environment.)
- Look through the fully-commented sample master and minion config files. There are many options for securing an installation.
- Run masterless-mode minions on particularly sensitive minions. There is also Salt SSH or the modules.sudo if you need to further restrict a minion.
- Monitor specific security related log messages. Salt salt-master logs attempts to access methods which are not exposed to network clients. These log messages are logged at the error log level and start with Requested method not exposed.

5.23.3 Rotating keys

There are several reasons to rotate keys. One example is exposure or a compromised key. An easy way to rotate a key is to remove the existing keys and let the salt-master or salt-minion process generate new keys on restart.
Rotate a minion key

Run the following on the Salt minion:

```
salt-call saltutil.regen_keys
systemctl stop salt-minion
```

Run the following on the Salt master:

```
salt-key -d <minion-id>
```

Run the following on the Salt minion:

```
systemctl start salt-minion
```

Run the following on the Salt master:

```
salt-key -a <minion-id>
```

Rotate a master key

Run the following on the Salt master:

```
systemctl stop salt-master
rm <pki_dir>/master.{{pem,pub}}
systemctl start salt-master
```

Run the following on the Salt minion:

```
run <pki_dir>/minion_master.pub
systemctl start salt-minion
```

5.24 Security disclosure policy

email  security@saltstack.com

gpg key ID  4EA0793D

gpg key fingerprint  8ABE 4EFC F0F4 B24B FF2A AF90 D570 F2D3 4EA0 793D

gpg public key:

```
-----BEGIN PGP PUBLIC KEY BLOCK-----
mQINBF015mMBEADa3CfQwk5ED9wAQ8fFDku277CegG3U1hVGdcxqKNvcblwoKCb  
hRKu9ihga09V99uV2glwggji1I/z6lyWqdaD37YXG/gTL+9Md+qDSea0a/9eg  
7+y+g4+FFv9HMuLurjRVlofUn50j/1ZgUywbxwEybutuzvFVTszn+DFVwTH34Qoh  
QiuNzQCSezLhh8zq9LqkNy1IZQ01ZIUrYpafspH6GBHIC8EmsBFgYiNVnVcUFH  
u0r4j1Rav+621EtDGz50t35+NJI8pkaC/dDKjURcuiV6bhmeSpNzlXXuhw6f29  
Vhag53hVGGNQxLRTxNEM86HEFp+4zQ8m/wRDrGX5IAHsdESdH+HljDVlYAAa/ttP  
/UcL2fgpTnDVKH0A00E51sQ87ZHv6aw3jGliveq18zfsLaag7rw1TuuHyGLOPkd  
t5PAjsS5R3K176phq16bTO15910dSdgzUhZChWUX1VSti1D1jCvy00LMOGS5  
AEYXuWYP7KgujZCDRaTNqRDdgPd93Mh9JI8UmKzXDUg1jdzVpPjYGFaWytkY8lsc
```

(continues on next page)
The SaltStack Security Team is available at security@saltstack.com for security-related bug reports or questions. We request the disclosure of any security-related bugs or issues be reported non-publicly until such time as the issue can be resolved and a security-fix release can be prepared. At that time we will release the fix and make a public announcement.

The SaltStack Security Team is available at security@saltstack.com for security-related bug reports or questions. We request the disclosure of any security-related bugs or issues be reported non-publicly until such time as the issue can be resolved and a security-fix release can be prepared. At that time we will release the fix and make a public announcement.
announcement with upgrade instructions and download locations.

5.24.1 Security response procedure

SaltStack takes security and the trust of our customers and users very seriously. Our disclosure policy is intended to resolve security issues as quickly and safely as is possible.

1. A security report sent to security@saltstack.com is assigned to a team member. This person is the primary contact for questions and will coordinate the fix, release, and announcement.

2. The reported issue is reproduced and confirmed. A list of affected projects and releases is made.

3. Fixes are implemented for all affected projects and releases that are actively supported. Back-ports of the fix are made to any old releases that are actively supported.

4. Packagers are notified via the salt-packagers mailing list that an issue was reported and resolved, and that an announcement is incoming.

5. A new release is created and pushed to all affected repositories. The release documentation provides a full description of the issue, plus any upgrade instructions or other relevant details.

6. An announcement is made to the salt-users and salt-announce mailing lists. The announcement contains a description of the issue and a link to the full release documentation and download locations.

5.24.2 Receiving security announcements

The following mailing lists, per the previous tasks identified in our response procedure, will receive security-relevant notifications:

- salt-packagers
- salt-users
- salt-announce

In addition to the mailing lists, SaltStack also provides the following resources:

- SaltStack Security Announcements landing page
- SaltStack Security RSS Feed
- SaltStack Community Slack Workspace

5.25 Salt Transport

One of fundamental features of Salt is remote execution. Salt has two basic "channels" for communicating with minions. Each channel requires a client (minion) and a server (master) implementation to work within Salt. These pairs of channels will work together to implement the specific message passing required by the channel interface.
5.25.1 Pub Channel

The pub channel, or publish channel, is how a master sends a job (payload) to a minion. This is a basic pub/sub paradigm, which has specific targeting semantics. All data which goes across the publish system should be encrypted such that only members of the Salt cluster can decrypt the publishes.

5.25.2 Req Channel

The req channel is how the minions send data to the master. This interface is primarily used for fetching files and returning job returns. The req channels have two basic interfaces when talking to the master. `send` is the basic method that guarantees the message is encrypted at least so that only minions attached to the same master can read it-- but no guarantee of minion-master confidentiality, whereas the `crypted_transfer_decode_dictentry` method does guarantee minion-master confidentiality.

Zeromq Transport

**Note:** Zeromq is the current default transport within Salt

Zeromq is a messaging library with bindings into many languages. Zeromq implements a socket interface for message passing, with specific semantics for the socket type.

Pub Channel

The pub channel is implemented using zeromq's pub/sub sockets. By default we don't use zeromq's filtering, which means that all publish jobs are sent to all minions and filtered minion side. Zeromq does have publisher side filtering which can be enabled in salt using `zmq_filtering`.

Req Channel

The req channel is implemented using zeromq's req/rep sockets. These sockets enforce a send/recv pattern, which forces salt to serialize messages through these socket pairs. This means that although the interface is asynchronous on the minion we cannot send a second message until we have received the reply of the first message.

TCP Transport

The tcp transport is an implementation of Salt's channels using raw tcp sockets. Since this isn't using a pre-defined messaging library we will describe the wire protocol, message semantics, etc. in this document.

The tcp transport is enabled by changing the `transport` setting to `tcp` on each Salt minion and Salt master.

```markdown
transport: tcp
```

**Warning:** We currently recommend that when using Syndics that all Masters and Minions use the same transport. We're investigating a report of an error when using mixed transport types at very heavy loads.
Wire Protocol

This implementation over TCP focuses on flexibility over absolute efficiency. This means we are okay to spend a couple of bytes of wire space for flexibility in the future. That being said, the wire framing is quite efficient and looks like:

```
msgpack({'head': SOMEHEADER, 'body': SOMEBODY})
```

Since msgpack is an iterably parsed serialization, we can simply write the serialized payload to the wire. Within that payload we have two items "head" and "body". Head contains header information (such as "message id"). The Body contains the actual message that we are sending. With this flexible wire protocol we can implement any message semantics that we’d like-- including multiplexed message passing on a single socket.

TLS Support

New in version 2016.11.1.

The TCP transport allows for the master/minion communication to be optionally wrapped in a TLS connection. Enabling this is simple, the master and minion need to be using the tcp connection, then the `ssl` option is enabled. The `ssl` option is passed as a dict and corresponds to the options passed to the Python `ssl.wrap_socket` <https://docs.python.org/3/library/ssl.html#ssl.wrap_socket> function.

A simple setup looks like this, on the Salt Master add the `ssl` option to the master configuration file:

```
ssl:
   keyfile: <path_to_keyfile>
   certfile: <path_to_certfile>
   ssl_version: PROTOCOL_TLSv1_2
```

The minimal `ssl` option in the minion configuration file looks like this:

```
ssl: True
# Versions below 2016.11.4:
ssl: {}
```

Specific options can be sent to the minion also, as defined in the Python `ssl.wrap_socket` function.

Note: While setting the `ssl_version` is not required, we recommend it. Some older versions of python do not support the latest TLS protocol and if this is the case for your version of python we strongly recommend upgrading your version of Python.

Crypto

The current implementation uses the same crypto as the zeromq transport.
Pub Channel

For the pub channel we send messages without "message ids" which the remote end interprets as a one-way send.

**Note:** As of today we send all publishes to all minions and rely on minion-side filtering.

Req Channel

For the req channel we send messages with a "message id". This "message id" allows us to multiplex messages across the socket.

## 5.26 Master Tops System

In 0.10.4 the `external_nodes` system was upgraded to allow for modular subsystems to be used to generate the top file data for a highstate run on the master.

The old `external_nodes` option has been removed. The master tops system provides a pluggable and extendable replacement for it, allowing for multiple different subsystems to provide top file data.

Using the new `master_top` option is simple:

```
master_top:
  ext_nodes: cobbler-external-nodes
```

for Cobbler or:

```
master_top:
  reclass:
    inventory_base_uri: /etc/reclass
    classes_uri: roles
```

for Reclass.

```
master_top:
  varstack: /path/to/the/config/file/varstack.yaml
```

for Varstack.

It's also possible to create custom `master_top` modules. Simply place them into `salt://_tops` in the Salt fileserver and use the `saltutil.sync_top` runner to sync them. If this runner function is not available, they can manually be placed into `extmods/tops`, relative to the master cachedir (in most cases the full path will be `/var/cache/salt/master/extmods/tops`).

Custom tops modules are written like any other execution module, see the source for the two modules above for examples of fully functional ones. Below is a bare-bones example:

```
/etc/salt/master:
  master_top:
    customtop: True
```

customtop.py: (custom master_top module)
```python
import logging
import sys

# Define the module's virtual name
__virtualname__ = "customtop"

log = logging.getLogger(__name__)

def __virtual__():
    return __virtualname__

def top(**kwargs):
    log.debug("Calling top in customtop")
    return {"base": ["test"]}
```

`salt minion state.show_top` should then display something like:

```sh
$ salt minion state.show_top
minion
    --------
    base:
      - test
```

**Note:** If a master_tops module returns top file data for a given minion, it will be added to the states configured in the top file. It will *not* replace it altogether. The 2018.3.0 release adds additional functionality allowing a minion to treat master_tops as the single source of truth, irrespective of the top file.

## 5.27 Returners

By default the return values of the commands sent to the Salt minions are returned to the Salt master, however anything at all can be done with the results data.

By using a Salt returner, results data can be redirected to external data-stores for analysis and archival.

Returners pull their configuration values from the Salt minions. Returners are only configured once, which is generally at load time.

The returner interface allows the return data to be sent to any system that can receive data. This means that return data can be sent to a Redis server, a MongoDB server, a MySQL server, or any system.

See also:

* Full list of built-in returners*
5.27.1 Using Returners

All Salt commands will return the command data back to the master. Specifying returners will ensure that the data is also sent to the specified returner interfaces.

Specifying what returners to use is done when the command is invoked:

```
salt '*' test.version --return redis_return
```

This command will ensure that the redis_return returner is used.

It is also possible to specify multiple returners:

```
salt '*' test.version --return mongo_return,redis_return,cassandra_return
```

In this scenario all three returners will be called and the data from the test.version command will be sent out to the three named returners.

5.27.2 Writing a Returner

Returners are Salt modules that allow the redirection of results data to targets other than the Salt Master.

Returners Are Easy To Write!

Writing a Salt returner is straightforward.

A returner is a Python module containing at minimum a `returner` function. Other optional functions can be included to add support for `master_job_cache`, `Storing Job Results in an External System`, and `Event Returners`.

`returner` The `returner` function must accept a single argument. The argument contains return data from the called minion function. If the minion function `test.version` is called, the value of the argument will be a dictionary. Run the following command from a Salt master to get a sample of the dictionary:

```
salt-call --local --metadata test.version --out=pprint
```

```python
import redis
import salt.utils.json

def returner(ret):
    
    """Return information to a redis server"
    ""
    
    # Get a redis connection
    serv = redis.Redis(host="redis-serv.example.com", port=6379, db="0")
    serv.sadd("%(id)s:jobs" % ret, ret["jid"])
    serv.set("%(jid)s:%(id)s" % ret, salt.utils.json.dumps(ret["return"]))
    serv.sadd("jobs", ret["jid"])
    serv.sadd(ret["jid"], ret["id"])
```

The above example of a returner set to send the data to a Redis server serializes the data as JSON and sets it in redis.
Using Custom Returner Modules

Place custom returners in a `_returners/` directory within the `file_roots` specified by the master config file. Custom returners are distributed when any of the following are called:

- `state.apply`
- `saltutil.sync_returners`
- `saltutil.sync_all`

Any custom returners which have been synced to a minion that are named the same as one of Salt’s default set of returners will take the place of the default returner with the same name.

Naming the Returner

Note that a returner’s default name is its filename (i.e. `foo.py` becomes returner `foo`), but that its name can be overridden by using a `__virtual__ function`. A good example of this can be found in the `redis` returner, which is named `redis_return.py` but is loaded as simply `redis`:

```python
try:
    import redis
    HAS_REDIS = True
except ImportError:
    HAS_REDIS = False
__virtualname__ = "redis"

def __virtual__():
    if not HAS_REDIS:
        return False
    return __virtualname__
```

Master Job Cache Support

`master_job_cache`, Storing Job Results in an External System, and Event Returners. Salt’s `master_job_cache` allows returners to be used as a pluggable replacement for the Default Job Cache. In order to do so, a returner must implement the following functions:

Note: The code samples contained in this section were taken from the cassandra_cql returner.

`prep_jid` Ensures that job ids (jid) don’t collide, unless `passed_jid` is provided.

`nocache` is an optional boolean that indicates if return data should be cached. `passed_jid` is a caller provided jid which should be returned unconditionally.

```python
def prep_jid(nocache, passed_jid=None):
    # pylint: disable=unused-argument
    """
    Do any work necessary to prepare a JID, including sending a custom id
    """
    return passed_jid if passed_jid is not None else salt.utils.jid.gen_jid()
```
**save_load** Save job information. The jid is generated by `prep_jid` and should be considered a unique identifier for the job. The jid, for example, could be used as the primary/unique key in a database. The load is what is returned to a Salt master by a minion. minions is a list of minions that the job was run against. The following code example stores the load as a JSON string in the salt.jids table.

```python
import salt.utils.json

def save_load(jid, load, minions=None):
    
    # cassandra_cql.cql_query may raise a CommandExecutionError
    try:
        query = """INSERT INTO salt.jids (jid, load) VALUES ('{0}', '{1}');""".format(jid, salt.utils.json.dumps(load))
        __salt__['cassandra_cql.cql_query'](query)
    except CommandExecutionError:
        log.critical("Could not save load in jids table.")
        raise
    except Exception as e:
        log.critical("Unexpected error while inserting into jids: {0}".format(e))
        raise

get_load must accept a job id (jid) and return the job load stored by `save_load`, or an empty dictionary when not found.

```python
def get_load(jid):
    
    # cassandra_cql.cql_query may raise a CommandExecutionError
    try:
        query = """SELECT load FROM salt.jids WHERE jid = '{0}';""".format(jid)
        data = __salt__['cassandra_cql.cql_query'](query)
        if data:
            load = data[0].get("load")
            if load:
                ret = json.loads(load)
    except CommandExecutionError:
        log.critical("Could not get load from jids table.")
        raise
    except Exception as e:
        log.critical("Unexpected error while getting load from jids: {0}".format(str(e)))
```

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External Job Cache Support

Salt’s *Storing Job Results in an External System* extends the `master_job_cache`. External Job Cache support requires the following functions in addition to what is required for Master Job Cache support:

**get_jid** Return a dictionary containing the information (load) returned by each minion when the specified job id was executed.

Sample:

```json
{
    "local": {
        "master_minion": {
            "fun_args": [],
            "jid": "20150330121011408195",
            "return": "2018.3.4",
            "retcode": 0,
            "success": true,
            "cmd": "_return",
            "_stamp": "2015-03-30T12:10:12.708663",
            "fun": "test.version",
            "id": "master_minion"
        }
    }
}
```

**get_fun** Return a dictionary of minions that called a given Salt function as their last function call.

Sample:

```json
{
    "local": {
        "minion1": "test.version",
        "minion3": "test.version",
        "minion2": "test.version"
    }
}
```

**get_jids** Return a list of all job ids.

Sample:

```json
{
    "local": [
        "20150330121011408195",
        "20150330195922139916"
    ]
}
```

**get_minions** Returns a list of minions

Sample:
Please refer to one or more of the existing returners (i.e. mysql, cassandra_cql) if you need further clarification.

**Event Support**

An `event_return` function must be added to the returner module to allow events to be logged from a master via the returner. A list of events are passed to the function by the master.

The following example was taken from the MySQL returner. In this example, each event is inserted into the salt_events table keyed on the event tag. The tag contains the jid and therefore is guaranteed to be unique.

```python
import salt.utils.json

def event_return(events):
    """
    Return event to mysql server
    Requires that configuration be enabled via 'event_return'
    option in master config.
    """
    with _get_serv(events, commit=True) as cur:
        for event in events:
            tag = event.get("tag", "")
            data = event.get("data", "")
            sql = """"INSERT INTO `salt_events` (`tag`, `data`, `master_id` ) VALUES (%s, %s, %s)"""
            cur.execute(sql, (tag, salt.utils.json.dumps(data), __opts__['id']))
```

**Testing the Returner**

The `ret.get_jids`, `ret.get_load`, `ret.get_jid`, and `event_return` functions can be tested by configuring the `master_job_cache` and `Event Returners` in the master config file and submitting a job to `test.version` each minion from the master.

Once you have successfully exercised the Master Job Cache functions, test the External Job Cache functions using the `ret` execution module.

```bash
salt-call ret.get_jids cassandra_cql --output=json
salt-call ret.get_fun cassandra_cql test.version --output=json
salt-call ret.get_minions cassandra_cql --output=json
salt-call ret.get_jid cassandra_cql 20150330121011408195 --output=json
```
## 5.27.3 Event Returners

For maximum visibility into the history of events across a Salt infrastructure, all events seen by a salt master may be logged to one or more returners.

To enable event logging, set the `event_return` configuration option in the master config to the returner(s) which should be designated as the handler for event returns.

**Note:** Not all returners support event returns. Verify a returner has an `event_return()` function before using.

**Note:** On larger installations, many hundreds of events may be generated on a busy master every second. Be certain to closely monitor the storage of a given returner as Salt can easily overwhelm an underpowered server with thousands of returns.

## 5.27.4 Full List of Returners

### returner modules

<table>
<thead>
<tr>
<th>Returner Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>appoptics_return</code></td>
<td>Salt returner to return highstate stats to AppOptics Metrics</td>
</tr>
<tr>
<td><code>carbon_return</code></td>
<td>Take data from salt and &quot;return&quot; it into a carbon receiver</td>
</tr>
<tr>
<td><code>cassandra_cql_return</code></td>
<td>Return data to a Cassandra ColumnFamily</td>
</tr>
<tr>
<td><code>cassandra_return</code></td>
<td></td>
</tr>
<tr>
<td><code>couchbase_return</code></td>
<td></td>
</tr>
<tr>
<td><code>couchdb_return</code></td>
<td></td>
</tr>
<tr>
<td><code>django_return</code></td>
<td>A returner that will inform a Django system that returns are available using Django's signal system.</td>
</tr>
<tr>
<td><code>elasticsearch_return</code></td>
<td></td>
</tr>
<tr>
<td><code>etcd_return</code></td>
<td></td>
</tr>
<tr>
<td><code>highstate_return</code></td>
<td></td>
</tr>
<tr>
<td><code>influxdb_return</code></td>
<td></td>
</tr>
<tr>
<td><code>kafka_return</code></td>
<td></td>
</tr>
<tr>
<td><code>librato_return</code></td>
<td>Salt returner to return highstate stats to Librato</td>
</tr>
<tr>
<td><code>local</code></td>
<td>The local returner is used to test the returner interface, it just prints the return data to the console to verify that it is being passed properly</td>
</tr>
<tr>
<td><code>local_cache</code></td>
<td></td>
</tr>
<tr>
<td><code>mattermost_returner</code></td>
<td></td>
</tr>
<tr>
<td><code>memcache_return</code></td>
<td></td>
</tr>
<tr>
<td><code>mongo_future_return</code></td>
<td>Return data to a mongodb server</td>
</tr>
<tr>
<td><code>mongo_return</code></td>
<td>Return data to a mongodb server</td>
</tr>
<tr>
<td><code>multi_returner</code></td>
<td></td>
</tr>
<tr>
<td><code>mysql</code></td>
<td></td>
</tr>
<tr>
<td><code>nagios_nrdp_return</code></td>
<td>Return salt data to Nagios</td>
</tr>
<tr>
<td><code>odbc</code></td>
<td></td>
</tr>
<tr>
<td><code>pgjsonb</code></td>
<td>Return data to a PostgreSQL server with json data stored in Pg's jsonb data type</td>
</tr>
</tbody>
</table>

continues on next page
<table>
<thead>
<tr>
<th>Returner</th>
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</tr>
</thead>
<tbody>
<tr>
<td>postgres</td>
<td></td>
</tr>
<tr>
<td>postgres_local_cache</td>
<td></td>
</tr>
<tr>
<td>pushover_returner</td>
<td>Return salt data via pushover (<a href="http://www.pushover.net">http://www.pushover.net</a>)</td>
</tr>
<tr>
<td>rawfile_json</td>
<td></td>
</tr>
<tr>
<td>redis_return</td>
<td></td>
</tr>
<tr>
<td>sentry_return</td>
<td>Salt returner that reports execution results back to sentry.</td>
</tr>
<tr>
<td>slack_returner</td>
<td></td>
</tr>
<tr>
<td>slack_webhook_return</td>
<td></td>
</tr>
<tr>
<td>smtp_return</td>
<td>Return data by SMS.</td>
</tr>
<tr>
<td>splunk</td>
<td></td>
</tr>
<tr>
<td>sqlite3_return</td>
<td></td>
</tr>
<tr>
<td>syslog_return</td>
<td></td>
</tr>
<tr>
<td>telegram_return</td>
<td>Return salt data via Telegram.</td>
</tr>
<tr>
<td>xmpp_return</td>
<td>Return salt data via xmpp.</td>
</tr>
<tr>
<td>zabbix_return</td>
<td>Return salt data to Zabbix</td>
</tr>
</tbody>
</table>

**salt.returners.appoptics_return**

Salt returner to return highstate stats to AppOptics Metrics

To enable this returner the minion will need the AppOptics Metrics client importable on the Python path and the following values configured in the minion or master config.

The AppOptics python client can be found at:

https://github.com/appoptics/python-appoptics-metrics

```
appoptics.api_token: abc12345def
```

An example configuration that returns the total number of successes and failures for your salt highstate runs (the default) would look like this:

```
return: appoptics
appoptics.api_token: <token string here>
```

The returner publishes the following metrics to AppOptics:

- saltstack.failed
- saltstack.passed
- saltstack.retcode
- saltstack.runtime
- saltstack.total

You can add a tags section to specify which tags should be attached to all metrics created by the returner.

```
apoptics.tags:
  host_hostname_alias: <the minion ID - matches @host>
  tier: <the tier/etc. of this node>
  cluster: <the cluster name, etc.>
```

5.27. Returners
If no tags are explicitly configured, then the tag key `host_hostname_alias` will be set, with the minion's `id` grain being the value.

In addition to the requested tags, for a highstate run each of these will be tagged with the `key:value` of `state_type: highstate`.

In order to return metrics for `state.sls` runs (distinct from highstates), you can specify a list of state names to the key `appoptics.sls_states` like so:

```
appoptics.sls_states:
  - role_salt_master.netapi
  - role_redis.config
  - role_smarty.dummy
```

This will report success and failure counts on runs of the `role_salt_master.netapi`, `role_redis.config`, and `role_smarty.dummy` states in addition to highstates.

This will report the same metrics as above, but for these runs the metrics will be tagged with `state_type: sls` and `state_name` set to the name of the state that was invoked, e.g. `role_salt_master.netapi`.

```
salt.returners.appoptics_return.returner(ret)
```

Parse the return data and return metrics to AppOptics.

For each state that's provided in the configuration, return tagged metrics for the result of that state if it's present.

```
salt.returners.carbon_return
```

Take data from salt and "return" it into a carbon receiver

Add the following configuration to the minion configuration file:

```
carbon.host: <server ip address>
carbon.port: 2003
```

Errors when trying to convert data to numbers may be ignored by setting `carbon.skip_on_error` to `True`:

```
carbon.skip_on_error: True
```

By default, data will be sent to carbon using the plaintext protocol. To use the pickle protocol, set `carbon.mode` to `pickle`:

```
carbon.mode: pickle
```

You can also specify the pattern used for the metric base path (except for virt modules metrics):

```
carbon.metric_base_pattern: carbon.[minion_id].[module].[function]
```

These tokens can used: `[module]`: salt module `[function]`: salt function `[minion_id]`: minion id

Default is: `carbon.metric_base_pattern: [module].[function].[minion_id]`

Carbon settings may also be configured as:

```
carbon:
  host: <server IP or hostname>
  port: <carbon port>
  skip_on_error: True
  mode: (pickle|text)
  metric_base_pattern: <pattern> | [module].[function].[minion_id]
```
Alternative configuration values can be used by pre-facing the configuration. Any values not found in the alternative configuration will be pulled from the default location:

```yaml
alternative.carbon:
  host: <server IP or hostname>
  port: <carbon port>
  skip_on_error: True
  mode: (pickle|text)
```

To use the carbon returner, append `--return carbon` to the salt command.

```bash
salt '*' test.ping --return carbon
```

To use the alternative configuration, append `--return_config alternative` to the salt command.

New in version 2015.5.0.

```bash
salt '*' test.ping --return carbon --return_config alternative
```

To override individual configuration items, append `--return_kwargs` `{key: value}` to the salt command.

New in version 2016.3.0.

```bash
salt '*' test.ping --return carbon --return_kwargs "{"skip_on_error": False}"
```

```python
salt.returners.carbon_return.event_return(events)
Return event data to remote carbon server
  Provide a list of events to be stored in carbon
```

```python
salt.returners.carbon_return.prep_jid(nocache=False, passed_jid=None)
Do any work necessary to prepare a JID, including sending a custom id
```

```python
salt.returners.carbon_return.returner(ret)
Return data to a remote carbon server using the text metric protocol
  Each metric will look like:

  [module].[function].[minion_id].[metric path [...]].[metric name]
```

```python
salt.returners.cassandra_return
Return data to a Cassandra ColumnFamily
Here's an example Keyspace / ColumnFamily setup that works with this returner:

```bash
create keyspace salt;
use salt;
create column family returns
  with key_validation_class='UTF8Type'
  and comparator='UTF8Type'
  and default_validation_class='UTF8Type';
```

Required python modules: pycassa

To use the cassandra returner, append `--return cassandra` to the salt command. ex:

```bash
salt '*' test.ping --return cassandra
```
salt.returners.cassandra_return.prep_jid(nocache=False, passed_jid=None)
Do any work necessary to prepare a JID, including sending a custom id

salt.returners.cassandra_return.returner(ret)
Return data to a Cassandra ColumnFamily

salt.returners.django_return

A returner that will inform a Django system that returns are available using Django's signal system.
https://docs.djangoproject.com/en/dev/topics/signals/

It is up to the Django developer to register necessary handlers with the signals provided by this returner and process returns as necessary.

The easiest way to use signals is to import them from this returner directly and then use a decorator to register them.
An example Django module that registers a function called 'returner_callback' with this module's 'returner' function:

```python
import salt.returners.django_return
from django.dispatch import receiver

@receiver(salt.returners.django_return, sender=returner)
def returner_callback(sender, ret):
    print('I received {0} from {1}'.format(ret, sender))
```

salt.returners.django_return.prep_jid(nocache=False, passed_jid=None)
Do any work necessary to prepare a JID, including sending a custom ID

salt.returners.django_return.returner(ret)
Signal a Django server that a return is available

salt.returners.django_return.save_load(jid, load, minions=None)
Save the load to the specified jid

salt.returners.librato_return

Salt returner to return highstate stats to Librato

To enable this returner the minion will need the Librato client importable on the Python path and the following values configured in the minion or master config.

The Librato python client can be found at: https://github.com/librato/python-librato

| librato.email: | example@librato.com |
| librato.api_token: | abc12345def |

This return supports multi-dimension metrics for Librato. To enable support for more metrics, the tags JSON object can be modified to include other tags.

Adding EC2 Tags example: If ec2_tags:region were desired within the tags for multi-dimension. The tags could be modified to include the ec2 tags. Multiple dimensions are added simply by adding more tags to the submission.

```python
pillar_data = __salt__['pillar.raw']()  
q.add(metric.name, value, tags={"Name": ret['id'], 'Region': pillar_data['ec2_tags']["Name"]})
```

salt.returners.librato_return.returner(ret)
Parse the return data and return metrics to Librato.
salt.returners.local

The local returner is used to test the returner interface, it just prints the return data to the console to verify that it is being passed properly.

To use the local returner, append `--return local` to the salt command. ex:

```
salt '*' test.ping --return local
```

salt.returners.local.event_return(event)

Print event return data to the terminal to verify functionality

salt.returners.local.returner(ret)

Print the return data to the terminal to verify functionality

salt.returners.mongo_future_return

Return data to a mongodb server

Required python modules: pymongo

This returner will send data from the minions to a MongoDB server. MongoDB server can be configured by using host, port, db, user and password settings or by connection string URI (for pymongo > 2.3). To configure the settings for your MongoDB server, add the following lines to the minion config files:

```
mongo.db: <database name>
mongo.host: <server ip address>
mongo.user: <MongoDB username>
mongo.password: <MongoDB user password>
mongo.port: 27017
```

Or single URI:

```
mongo.uri: URI
```

where uri is in the format:

```
mongodb://[username:password@]host1[:port1][,host2[:port2],...[,hostN[:portN]]][/][database][?options]
```

Example:

```
mongodb://db1.example.net:27017/mydatabase
mongodb://db1.example.net:27017,db2.example.net:2500/?replicaSet=test
mongodb://db1.example.net:27017,db2.example.net:2500/?replicaSet=test&connectTimeoutMS=300000
```

More information on URI format can be found in https://docs.mongodb.com/manual/reference/connection-string/

You can also ask for indexes creation on the most common used fields, which should greatly improve performance. Indexes are not created by default.

```
mongo.indexes: true
```

Alternative configuration values can be used by prefacing the configuration. Any values not found in the alternative configuration will be pulled from the default location:
alternative.mongo.db: <database name>
alternative.mongo.host: <server ip address>
alternative.mongo.user: <MongoDB username>
alternative.mongo.password: <MongoDB user password>
alternative.mongo.port: 27017

Or single URI:

alternative.mongo.uri: URI

This mongo returner is being developed to replace the default mongodb returner in the future and should not be considered API stable yet.

To use the mongo returner, append '--return mongo' to the salt command.

```
salt '*' test.ping --return mongo
```

To use the alternative configuration, append '--return_config alternative' to the salt command.

New in version 2015.5.0.

```
salt '*' test.ping --return mongo --return_config alternative
```

To override individual configuration items, append --return_kwargs '{"key": "value"}' to the salt command.

New in version 2016.3.0.

```
salt '*' test.ping --return mongo --return_kwargs '{"db": "another-salt"}'
```

salt.returners.mongo_future_return.event_return(events)
Return events to Mongodb server

salt.returners.mongo_future_return.get_fun(fun)
Return the most recent jobs that have executed the named function

salt.returners.mongo_future_return.get_jid(jid)
Return the return information associated with a jid

salt.returners.mongo_future_return.get_jids()
Return a list of job ids

salt.returners.mongo_future_return.get_load(jid)
Return the load associated with a given job id

salt.returners.mongo_future_return.get_minions()
Return a list of minions

salt.returners.mongo_future_return.prep_jid(nocache=False, passed_jid=None)
Do any work necessary to prepare a JID, including sending a custom id

salt.returners.mongo_future_return.returner(ret)
Return data to a mongodb server

salt.returners.mongo_future_return.save_load(jid, load, minions=None)
Save the load for a given job id
salt.returners.mongo_return

Return data to a mongodb server

Required python modules: pymongo

This returner will send data from the minions to a MongoDB server. To configure the settings for your MongoDB server, add the following lines to the minion config files.

```
mongo.db: <database name>
mongo.host: <server ip address>
mongo.user: <MongoDB username>
mongo.password: <MongoDB user password>
mongo.port: 27017
```

Alternative configuration values can be used by prefacing the configuration. Any values not found in the alternative configuration will be pulled from the default location.

```
alternative.mongo.db: <database name>
alternative.mongo.host: <server ip address>
alternative.mongo.user: <MongoDB username>
alternative.mongo.password: <MongoDB user password>
alternative.mongo.port: 27017
```

To use the mongo returner, append `--return mongo` to the salt command.

```
salt '*' test.ping --return mongo_return
```

To use the alternative configuration, append `--return_config alternative` to the salt command.

New in version 2015.5.0.

```
salt '*' test.ping --return mongo_return --return_config alternative
```

To override individual configuration items, append `--return_kwargs` to the salt command.

New in version 2016.3.0.

```
salt '*' test.ping --return mongo --return_kwargs 'db: another-salt'
```

```
salt '*' test.ping --return mongo --return_kwargs 'db: another-salt'
```

```
salt.returners.mongo_return.get_fun(fun)
  Return the most recent jobs that have executed the named function
```

```
salt.returners.mongo_return.get_jid(jid)
  Return the return information associated with a jid
```

```
salt.returners.mongo_return.prep_jid(nocache=False, passed_jid=None)
  Do any work necessary to prepare a JID, including sending a custom id
```

```
salt.returners.mongo_return.returner(ret)
  Return data to a mongodb server
```
salt.returners.nagios_nrdp_return

Return salt data to Nagios

The following fields can be set in the minion conf file:

- **nagios.url** (required)
- **nagios.token** (required)
- **nagios.service** (optional)
- **nagios.check_type** (optional)

Alternative configuration values can be used by prefacing the configuration. Any values not found in the alternative configuration will be pulled from the default location:

- **nagios.url**
- **nagios.token**
- **nagios.service**

Nagios settings may also be configured as:

```yaml
nagios:
  url: http://localhost/nrdp
  token: r4nd0mt0k3n
  service: service

alternative.nagios:
  url: http://localhost/nrdp
  token: r4nd0mt0k3n
  service: another-service-check
```

To use the Nagios returner, append `--return nagios` to the salt command. ex:

```
salt '*' test.ping --return nagios
```

To use the alternative configuration, append `--return_config alternative` to the salt command. ex:

```
salt '*' test.ping --return nagios --return_config alternative
```

To override individual configuration items, append `--return_kwargs` to the salt command.

```
salt '*' test.ping --return nagios --return_kwargs '{"service": "service-name"}"
```

New in version 2016.3.0.

```
salt '*' test.ping --return nagios --return_kwargs '{"service": "service-name"}"
```

**Returner**

Send a message to Nagios with the data
salt.returners.pgjsonb

Return data to a PostgreSQL server with json data stored in Pg's jsonb data type

maintainer Dave Boucha <dave@saltstack.com>, Seth House <shouse@saltstack.com>, C. R. Oldham <cr@saltstack.com>
maturity Stable
depends python-psycopg2
platform all

Note: There are three PostgreSQL returners. Any can function as an external master job cache, but each has different features. SaltStack recommends returners.pgjsonb if you are working with a version of PostgreSQL that has the appropriate native binary JSON types. Otherwise, review returners.postgres and returners.postgres_local_cache to see which module best suits your particular needs.

To enable this returner, the minion will need the python client for PostgreSQL installed and the following values configured in the minion or master config. These are the defaults:

```python
returner.pgjsonb.host: 'salt'
returner.pgjsonb.user: 'salt'
returner.pgjsonb.pass: 'salt'
returner.pgjsonb.db: 'salt'
returner.pgjsonb.port: 5432
```

SSL is optional. The defaults are set to None. If you do not want to use SSL, either exclude these options or set them to None.

```python
returner.pgjsonb.sslmode: None
returner.pgjsonb.sslcert: None
returner.pgjsonb.sslkey: None
returner.pgjsonb.sslrootcert: None
returner.pgjsonb.sslcrl: None
```

New in version 2017.5.0.

Alternative configuration values can be used by prefacing the configuration with alternative. Any values not found in the alternative configuration will be pulled from the default location. As stated above, SSL configuration is optional. The following ssl options are simply for illustration purposes:

```python
alternative.pgjsonb.host: 'salt'
alternative.pgjsonb.user: 'salt'
alternative.pgjsonb.pass: 'salt'
alternative.pgjsonb.db: 'salt'
alternative.pgjsonb.port: 5432
alternative.pgjsonb.ssl_ca: '/etc/pki/mysql/certs/localhost.pem'
alternative.pgjsonb.ssl_cert: '/etc/pki/mysql/certs/localhost.crt'
alternative.pgjsonb.ssl_key: '/etc/pki/mysql/certs/localhost.key'
```

Should you wish the returner data to be cleaned out every so often, set keep_jobs to the number of hours for the jobs to live in the tables. Setting it to 0 or leaving it unset will cause the data to stay in the tables.

Should you wish to archive jobs in a different table for later processing, set archive_jobs to True. Salt will create 3 archive tables:

- jids_archive
• salt_returns_archive
• salt_events_archive

and move the contents of jids, salt_returns, and salt_events that are more than keep_jobs hours old to these tables.

New in version 2019.2.0.

Use the following Pg database schema:

```sql
CREATE DATABASE salt
    WITH ENCODING 'utf-8';

-- Table structure for table `jids`

DROP TABLE IF EXISTS jids;
CREATE TABLE jids (  
jid varchar(255) NOT NULL primary key,
load jsonb NOT NULL
);
CREATE INDEX idx_jids_jsonb on jids
    USING gin (load)
    WITH (fastupdate=on);

-- Table structure for table `salt_returns`

DROP TABLE IF EXISTS salt_returns;
CREATE TABLE salt_returns (  
fun varchar(50) NOT NULL,
jid varchar(255) NOT NULL,
return jsonb NOT NULL,
id varchar(255) NOT NULL,
success varchar(10) NOT NULL,
full_ret jsonb NOT NULL,
alter_time TIMESTAMP WITH TIME ZONE DEFAULT NOW());
CREATE INDEX idx_salt_returns_id ON salt_returns (id);
CREATE INDEX idx_salt_returns_jid ON salt_returns (jid);
CREATE INDEX idx_salt_returns_fun ON salt_returns (fun);
CREATE INDEX idx_salt_returns_return ON salt_returns
    USING gin (return) with (fastupdate=on);
CREATE INDEX idx_salt_returns_full_ret ON salt_returns
    USING gin (full_ret) with (fastupdate=on);

-- Table structure for table `salt_events`

DROP TABLE IF EXISTS salt_events;
DROP SEQUENCE IF EXISTS seq_salt_events_id;
CREATE SEQUENCE seq_salt_events_id;
CREATE TABLE salt_events (  
id BIGINT NOT NULL UNIQUE DEFAULT nextval('seq_salt_events_id'),
tag varchar(255) NOT NULL,
data jsonb NOT NULL,
(continues on next page)
CREATE INDEX idx_salt_events_tag ON salt_events (tag);
CREATE INDEX idx_salt_events_data ON salt_events
    USING gin (data) WITH (fastupdate=on);

Required python modules: Psycopg2
To use this returner, append --return pgjsonb to the salt command.

salt '*' test.ping --return pgjsonb

To use the alternative configuration, append --return_config alternative to the salt command.
New in version 2015.5.0.

salt '*' test.ping --return pgjsonb --return_config alternative

To override individual configuration items, append --return_kwargs '{"key": "value"}' to the salt command.
New in version 2016.3.0.

salt '*' test.ping --return pgjsonb --return_kwargs '{"db": "another-salt"}"

salt.returners.pgjsonb.clean_old_jobs()
    Called in the master’s event loop every loop_interval. Archives and/or deletes the events and job details from
    the database. :return:

salt.returners.pgjsonb.event_return(events)
    Return event to Pg server
    Requires that configuration be enabled via 'event_return' option in master config.

salt.returners.pgjsonb.get_fun(fun)
    Return a dict of the last function called for all minions

salt.returners.pgjsonb.get_jid(jid)
    Return the information returned when the specified job id was executed

salt.returners.pgjsonb.get_jids()
    Return a list of all job ids

salt.returners.pgjsonb.get_load(jid)
    Return the load data that marks a specified jid

salt.returners.pgjsonb.get_minions()
    Return a list of minions

salt.returners.pgjsonb.prep_jid(nocache=False, passed_jid=None)
    Do any work necessary to prepare a JID, including sending a custom id

salt.returners.pgjsonb.returner(ret)
    Return data to a Pg server

salt.returners.pgjsonb.save_load(jid, load, minions=None)
    Save the load to the specified jid id

5.27. Returners
**salt.returners.pushover_returner**

Return salt data via pushover ([http://www.pushover.net](http://www.pushover.net))

New in version 2016.3.0.

The following fields can be set in the minion conf file:

```
pushover.user (required)
pushover.token (required)
pushover.title (optional)
pushover.device (optional)
pushover.priority (optional)
pushover.expire (optional)
pushover.retry (optional)
pushover.profile (optional)
```

**Note:** The **user** here is your **user key**, not the email address you use to login to pushover.net.

Alternative configuration values can be used by prefacing the configuration. Any values not found in the alternative configuration will be pulled from the default location:

```
alternative.pushover.user
alternative.pushover.token
alternative.pushover.title
alternative.pushover.device
alternative.pushover.priority
alternative.pushover.expire
alternative.pushover.retry
```

PushOver settings may also be configured as:

```python
pushover:
  user: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  token: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  title: Salt Returner
  device: phone
  priority: -1
  expire: 3600
  retry: 5

alternative.pushover:
  user: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  token: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  title: Salt Returner
  device: phone
  priority: 1
  expire: 4800
  retry: 2

pushover_profile:
  pushover.token: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

pushover:
  user: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  profile: pushover_profile
```

(continues on next page)
alternative.pushover:
    user: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
    profile: pushover_profile

To use the PushOver returner, append `--return pushover` to the salt command. ex:

```bash
.salt '* test.ping --return pushover
```

To use the alternative configuration, append `--return_config alternative` to the salt command. ex:

```bash
.salt '* test.ping --return pushover --return_config alternative
```

To override individual configuration items, append `--return_kwargs '{"key": "value"}'` to the salt command.

```bash
.salt '* test.ping --return pushover --return_kwargs '{"title": "Salt is awesome!"}'
```

`salt.returners.pushover_returner.returner(ret)`

Send an PushOver message with the data

`salt.returners.sentry_return`

Salt returner that reports execution results back to sentry. The returner will inspect the payload to identify errors and flag them as such.

Pillar needs something like:

```yaml
raven:
  servers:
  - http://192.168.1.1
  - https://sentry.example.com
  public_key: deadbeefdeadbeefdeadbeefdeadbeef
d  secret_key: beefdeadbeefdeadbeefdeadbeefdead
  project: 1
  tags:
    - os
    - master
    - saltversion
    - cpuarch
```

or using a dsn:

```yaml
raven:
  dsn: https://aaaa:bbbb@app.getsentry.com/12345
  tags:
    - os
    - master
    - saltversion
    - cpuarch
```

https://pypi.python.org/pypi/raven must be installed.

The pillar can be hidden on sentry return by setting hide_pillar: true.
The tags list (optional) specifies grains items that will be used as sentry tags, allowing tagging of events in the sentry ui.

To report only errors to sentry, set `report_errors_only: true`.

```python
salt.returners.sentry_return.prep_jid(nocache=False, passed_jid=None)
```

Do any work necessary to prepare a JID, including sending a custom id

```python
salt.returners.sentry_return.returner(ret)
```

Log outcome to sentry. The returner tries to identify errors and report them as such. All other messages will be reported at info level. Failed states will be appended as separate list for convenience.

**salt.returners.sms_return**

Return data by SMS.

New in version 2015.5.0.

- **Maintainer**: Damian Myerscough
- **Maturity**: new
- **Depends**: twilio
- **Platform**: all

To enable this returner the minion will need the python twilio library installed and the following values configured in the minion or master config:

```
twilio.sid: 'XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
twilio.token: 'XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'
twilio.to: '+1415XXXXXXX'
twilio.from: '+1650XXXXXXX'
```

To use the sms returner, append '--return sms' to the salt command.

```
salt '*' test.ping --return sms
```

```python
salt.returners.sms_return.returner(ret)
```

Return a response in an SMS message

**salt.returners.telegram_return**

Return salt data via Telegram.

The following fields can be set in the minion conf file:

```
television.chat_id (required)
television.token (required)
```

Telegram settings may also be configured as:

```
television:
    chat_id: 000000000
    token: 000000000:XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
```

To use the Telegram return, append '--return telegram' to the salt command.
salt '.*' test.ping --return telegram

salt.returners.telegram_return.returner(ret)
   Send a Telegram message with the data.
   
   Parameters ret -- The data to be sent.
   
   Returns Boolean if message was sent successfully.

salt.returners.xmpp_return

Return salt data via xmpp

   depends sleekxmpp >= 1.3.1

The following fields can be set in the minion conf file:

xmpp.jid (required)
xmpp.password (required)
xmpp.recipient (required)
xmpp.profile (optional)

Alternative configuration values can be used by prefacing the configuration. Any values not found in the alternative configuration will be pulled from the default location:

xmpp.jid
xmpp.password
xmpp.recipient
xmpp.profile

XMPP settings may also be configured as:

xmpp:
   jid: user@xmpp.domain.com/resource
   password: password
   recipient: user@xmpp.example.com

alternative.xmpp:
   jid: user@xmpp.domain.com/resource
   password: password
   recipient: someone@xmpp.example.com

xmpp_profile:
   xmpp.jid: user@xmpp.domain.com/resource
   xmpp.password: password

xmpp:
   profile: xmpp_profile
   recipient: user@xmpp.example.com

alternative.xmpp:
   profile: xmpp_profile
   recipient: someone-else@xmpp.example.com

To use the XMPP returner, append '--return xmpp' to the salt command.

salt '.*' test.ping --return xmpp

5.27. Returners
To use the alternative configuration, append `--return_config alternative` to the salt command.

New in version 2015.5.0.

```
salt '*' test.ping --return xmpp --return_config alternative
```

To override individual configuration items, append `--return_kwargs '{"key": "value"}'` to the salt command.

New in version 2016.3.0.

```
salt '*' test.ping --return xmpp --return_kwargs '{"recipient": "someone-else@xmpp.example.com"}'
```

class salt.returners.xmpp_return.SendMsgBot(jid, password, recipient, msg)

    start(event)

salt.returners.xmpp_return.returner(ret)
    Send an xmpp message with the data

salt.returners.zabbix_return

Return salt data to Zabbix

The following Type: "Zabbix trapper" with "Type of information" Text items are required:

<table>
<thead>
<tr>
<th>Key:</th>
<th>salt.trap.info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key:</td>
<td>salt.trap.warning</td>
</tr>
<tr>
<td>Key:</td>
<td>salt.trap.high</td>
</tr>
</tbody>
</table>

To use the Zabbix returner, append `--return zabbix` to the salt command. ex:

```
salt '*' test.ping --return zabbix
```

salt.returners.zabbix_return.returner(ret)
salt.returners.zabbix_return.save_load(jid, load, minions=none)
    Included for API consistency
salt.returners.zabbix_return.zabbix_send(key, output)
salt.returners.zabbix_return.zbx()

## 5.28 Renderers

The Salt state system operates by gathering information from common data types such as lists, dictionaries, and strings that would be familiar to any developer.

Salt Renderers translate input from the format in which it is written into Python data structures.

The default renderer is set in the master/minion configuration file using the `renderer` config option, which defaults to `jinja|yaml`.  

---
5.28.1 Two Kinds of Renderers

Renderers fall into one of two categories, based on what they output: text or data. The one exception to this would be the pure python renderer, which can be used in either capacity.

Text Renderers

Important: Jinja supports a secure, sandboxed template execution environment that Salt takes advantage of. Other text Renderers do not support this functionality, so Salt highly recommends usage of jinja/jinja|yaml.

A text renderer returns text. These include templating engines such as jinja, mako, and genshi, as well as the gpg renderer. The following are all text renderers:

- aws_kms
- cheetah
- genshi
- gpg
- jinja
- mako
- nacl
- pass
- py
- wempy

Data Renderers

A data renderer returns a Python data structure (typically a dictionary). The following are all data renderers:

- dson
- hjson
- json5
- json
- pydsl
- pyobjects
- py
- stateconf
- yaml
- yaml
5.28.2 Overriding the Default Renderer

It can sometimes be beneficial to write an SLS file using a renderer other than the default one. This can be done by using a "shebang"-like syntax on the first line of the SLS file:

Here is an example of using the pure python renderer to install a package:

```
#!py

def run():
    """Install version 1.5-1.el7 of package "python-foo"
    """
    return {
        "include": ["python"],
        "python-foo": {
            "pkg.installed": [{"version": "1.5-1.el7"}],
        },
    }
```

This would be equivalent to the following:

```
include:
    - python

python-foo:
    pkg.installed:
        - version: '1.5-1.el7'
```

5.28.3 Composing Renderers (a.k.a. The "Render Pipeline")

A render pipeline can be composed from other renderers by connecting them in a series of "pipes" (i.e. `|`). The renderers will be evaluated from left to right, with each renderer receiving the result of the previous renderer's execution.

Take for example the default renderer (`jinja|yaml`). The file is evaluated first a jinja template, and the result of that template is evaluated as a YAML document.

Other render pipeline combinations include:

- `yaml` Just YAML, no templating.
- `mako|yaml` This passes the input to the mako renderer, with its output fed into the yaml renderer.
- `jinja|mako|yaml` This one allows you to use both jinja and mako templating syntax in the input and then parse the final rendered output as YAML.

The following is a contrived example SLS file using the `jinja|mako|yaml` render pipeline:

```
#!jinja|mako|yaml

An_Example:
    cmd.run:
        - name: |
            echo "Using Salt ${grains['saltversion']}" \
            "from path {{grains['saltpath']}}."
        - cwd: /

    {%doc%} ${{...}} is Mako's notation, and so is this comment. {%enddoc%}
    {# Similarly, {{...}} is Jinja's notation, and so is this comment. #}
```
Important: Keep in mind that not all renderers can be used alone or with any other renderers. For example, text renderers shouldn't be used alone as their outputs are just strings, which still need to be parsed by another renderer to turn them into Python data structures.

For example, it would not make sense to use `yaml`|`jinja` because the output of the `yaml` renderer is a Python data structure, and the `jinja` renderer only accepts text as input.

Therefore, when combining renderers, you should know what each renderer accepts as input and what it returns as output. One way of thinking about it is that you can chain together multiple text renderers, but the pipeline must end in a data renderer. Similarly, since the text renderers in Salt don't accept data structures as input, a text renderer should usually not come after a data renderer. It's technically possible to write a renderer that takes a data structure as input and returns a string, but no such renderer is distributed with Salt.

### 5.28.4 Writing Renderers

A custom renderer must be a Python module which implements a `render` function. This function must implement three positional arguments:

1. `data` - Can be called whatever you like. This is the input to be rendered.
2. `saltenv`  
3. `sls`

The first is the important one, and the 2nd and 3rd must be included since Salt needs to pass this info to each render, even though it is only used by template renderers.

Renderers should be written so that the `data` argument can accept either strings or file-like objects as input. For example:

```python
import mycoolmodule
from salt.ext import six

def render(data, saltenv="base", sls="", **kwargs):
    if not isinstance(data, six.string_types):
        # Read from file-like object
        data = data.read()

    return mycoolmodule.do_something(data)
```

Custom renderers should be placed within `salt://_renderers/`, so that they can be synced to minions. They are synced when any of the following are run:

- `state.apply`
- `saltutil.sync_renderers`
- `saltutil.sync_all`

Any custom renderers which have been synced to a minion, that are named the same as one of Salt's default set of renderers, will take the place of the default renderer with the same name.

Note: Renderers can also be synced from `salt://_renderers/` to the Master using either the `saltutil.sync_renderers` or `saltutil.sync_all` runner function.
5.28.5 Examples

The best place to find examples of renderers is in the Salt source code. Documentation for renderers included with Salt can be found here:

https://github.com/saltstack/salt/blob/master/salt/renderers

Here is a simple YAML renderer example:

```python
import salt.utils.yaml
from salt.utils.yamlloader import SaltYamlSafeLoader
from salt.ext import six

def render(yaml_data, saltenv='', sls='', **kws):
    if not isinstance(yaml_data, six.string_types):
        yaml_data = yaml_data.read()
    data = salt.utils.yaml.safe_load(yaml_data)
    return data if data else {}
```

5.28.6 Full List of Renderers

renderer modules

Important: Jinja supports a secure, sandboxed template execution environment that Salt takes advantage of. Other text Renderers do not support this functionality, so Salt highly recommends usage of jinja/jinja|yaml.

<table>
<thead>
<tr>
<th>Renderer</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>aws_kms</td>
<td></td>
</tr>
<tr>
<td>cheetah</td>
<td>Cheetah Renderer for Salt</td>
</tr>
<tr>
<td>dson</td>
<td>DSON Renderer for Salt</td>
</tr>
<tr>
<td>genshi</td>
<td>Genshi Renderer for Salt</td>
</tr>
<tr>
<td>gpg</td>
<td></td>
</tr>
<tr>
<td>hjjson</td>
<td>hjson renderer for Salt</td>
</tr>
<tr>
<td>jinja</td>
<td></td>
</tr>
<tr>
<td>json</td>
<td>JSON (JavaScript Object Notation) <a href="http://json.org">http://json.org</a> is a subset of JavaScript syntax (ECMA-262 3rd edition) used as a lightweight data interchange format.</td>
</tr>
<tr>
<td>json5</td>
<td>JSON5 Renderer for Salt</td>
</tr>
<tr>
<td>mako</td>
<td></td>
</tr>
<tr>
<td>msgpack</td>
<td></td>
</tr>
<tr>
<td>nacl</td>
<td></td>
</tr>
<tr>
<td>pass</td>
<td></td>
</tr>
<tr>
<td>py</td>
<td></td>
</tr>
<tr>
<td>pydsl</td>
<td></td>
</tr>
<tr>
<td>pyobjects</td>
<td></td>
</tr>
<tr>
<td>stateconf</td>
<td></td>
</tr>
<tr>
<td>tomlmod</td>
<td></td>
</tr>
<tr>
<td>wempy</td>
<td></td>
</tr>
<tr>
<td>yaml</td>
<td></td>
</tr>
<tr>
<td>yamlex</td>
<td></td>
</tr>
</tbody>
</table>
salt.renderers.aws_kms

Renderer that will decrypt ciphers encrypted using AWS KMS Envelope Encryption.

Any key in the data to be rendered can be a urlsafe_b64encoded string, and this renderer will attempt to decrypt it before passing it off to Salt. This allows you to safely store secrets in source control, in such a way that only your Salt master can decrypt them and distribute them only to the minions that need them.

The typical use-case would be to use ciphers in your pillar data, and keep the encrypted data key on your master. This way developers with appropriate AWS IAM privileges can add new secrets quickly and easily.

This renderer requires the boto3 Python library.

Setup

First, set up your AWS client. For complete instructions on configuration the AWS client, please read the boto3 configuration documentation. By default, this renderer will use the default AWS profile. You can override the profile name in salt configuration. For example, if you have a profile in your aws client configuration named "salt", you can add the following salt configuration:

```yaml
aws_kms:
  profile_name: salt
```

The rest of these instructions assume that you will use the default profile for key generation and setup. If not, export AWS_PROFILE and set it to the desired value.

Once the aws client is configured, generate a KMS customer master key and use that to generate a local data key.

```bash
# data_key=$(aws kms generate-data-key --key-id your-key-id --key-spec AES_256
--query 'CiphertextBlob' --output text)
# echo 'aws_kms:'
# echo ' data_key: !!binary "%s"' "data_key" >> config/master
```

To apply the renderer on a file-by-file basis add the following line to the top of any pillar with gpg data in it:

```yaml
#!yaml|aws_kms
```

Now with your renderer configured, you can include your ciphers in your pillar data like so:

```yaml
a-secret: gAAAAABaj5uzShPI3PEz6nL5Vhk2eEHxGXSZj8g71B84CZsVjAAtDFY1mfjNRL-
         _1Su9YVvkUzNjI4lHCJFfXQdnCTwczBYtKy0Pa7R102s10Wn1tF0tbRwk=
```

**salt.renderers.aws_kms.render**(data, saltenv='base', sls='', argline='', **kwargs)

Decrypt the data to be rendered that was encrypted using AWS KMS envelope encryption.
salt.renderers.cheetah

Cheetah Renderer for Salt

salt.renderers.cheetah.render(cheetah_data, saltenv='base', sls='', method='xml', **kws)

Render a Cheetah template.

Return type  A Python data structure

salt.renderers.dson

DSON Renderer for Salt

This renderer is intended for demonstration purposes. Information on the DSON spec can be found here.

This renderer requires Dogeon (installable via pip)

salt.renderers.dson.render(dson_input, saltenv='base', sls='', **kwargs)

Accepts DSON data as a string or as a file object and runs it through the JSON parser.

Return type  A Python data structure

salt.renderers.genshi

Genshi Renderer for Salt

salt.renderers.genshi.render(genshi_data, saltenv='base', sls='', method='xml', **kws)

Render a Genshi template. A method should be passed in as part of the kwargs. If no method is passed in, xml is assumed. Valid methods are:

Note that the text method will call NewTextTemplate. If oldtext is desired, it must be called explicitly

Return type  A Python data structure

salt.renderers.hjson

hjson renderer for Salt

See the hjson documentation for more information

salt.renderers.hjson.render(hjson_data, saltenv='base', sls='', **kwargs)

Accepts HJSON as a string or as a file object and runs it through the HJSON parser.

Return type  A Python data structure

salt.renderers.json5

JSON5 Renderer for Salt

New in version 2016.3.0.

JSON5 is an unofficial extension to JSON. See http://json5.org/ for more information.

This renderer requires the json5 python bindings, installable via pip.

salt.renderers.json5.render(json_data, saltenv='base', sls='', **kwargs)

Accepts JSON as a string or as a file object and runs it through the JSON parser.
**Return type**  A Python data structure
This section describes the fundamental components and concepts that you need to understand to use Salt.

6.1 Grains

Salt comes with an interface to derive information about the underlying system. This is called the grains interface, because it presents salt with grains of information. Grains are collected for the operating system, domain name, IP address, kernel, OS type, memory, and many other system properties.

The grains interface is made available to Salt modules and components so that the right salt minion commands are automatically available on the right systems.

Grain data is relatively static, though if system information changes (for example, if network settings are changed), or if a new value is assigned to a custom grain, grain data is refreshed.

Note: Grains resolve to lowercase letters. For example, FOO, and foo target the same grain.

6.1.1 Listing Grains

Available grains can be listed by using the 'grains.ls' module:

```
salt '*' grains.ls
```

Grains data can be listed by using the 'grains.items' module:

```
salt '*' grains.items
```

6.1.2 Using grains in a state

To use a grain in a state you can access it via {{ grains['key'] }}.
6.1.3 Grains in the Minion Config

Grains can also be statically assigned within the minion configuration file. Just add the option `grains` and pass options to it:

```yaml
grains:
  roles:
    - webserver
    - memcache
  deployment: datacenter4
  cabinet: 13
  cab_u: 14-15
```

Then status data specific to your servers can be retrieved via Salt, or used inside of the State system for matching. It also makes it possible to target based on specific data about your deployment, as in the example above.

6.1.4 Grains in `/etc/salt/grains`

If you do not want to place your custom static grains in the minion config file, you can also put them in `/etc/salt/grains` on the minion. They are configured in the same way as in the above example, only without a top-level `grains`: key:

```yaml
roles:
  - webserver
  - memcache
  deployment: datacenter4
  cabinet: 13
  cab_u: 14-15
```

**Note:** Grains in `/etc/salt/grains` are ignored if you specify the same grains in the minion config.

**Note:** Grains are static, and since they are not often changed, they will need a grains refresh when they are updated. You can do this by calling: `salt minion saltutil.refresh_modules`

**Note:** You can equally configure static grains for Proxy Minions. As multiple Proxy Minion processes can run on the same machine, you need to index the files using the Minion ID, under `/etc/salt/proxy.d/<minion ID>/grains`. For example, the grains for the Proxy Minion `router1` can be defined under `/etc/salt/proxy.d/router1/grains`, while the grains for the Proxy Minion `switch7` can be put in `/etc/salt/proxy.d/switch7/grains`. 
6.1.5 Matching Grains in the Top File

With correctly configured grains on the Minion, the top file used in Pillar or during Highstate can be made very efficient. For example, consider the following configuration:

```python
'roles:webserver':
    - match: grain
    - state0

'roles:memcache':
    - match: grain
    - state1
    - state2
```

For this example to work, you would need to have defined the grain role for the minions you wish to match.

6.1.6 Writing Grains

**Warning:** Grains can be set by users that have access to the minion configuration files on the local system, making them less secure than other identifiers in Salt. Avoid storing sensitive data, such as passwords or keys, on minions. Instead, make use of Storing Static Data in the Pillar and/or Storing Data in Other Databases.

The grains are derived by executing all of the "public" functions (i.e. those which do not begin with an underscore) found in the modules located in the Salt's core grains code, followed by those in any custom grains modules. The functions in a grains module must return a Python dictionary, where the dictionary keys are the names of grains, and each key's value is that value for that grain.

Custom grains modules should be placed in a subdirectory named _grains located under the file_roots specified by the master config file. The default path would be /srv/salt/_grains. Custom grains modules will be distributed to the minions when state.highstate is run, or by executing the saltutil.sync_grains or saltutil.sync_all functions.

Grains modules are easy to write, and (as noted above) only need to return a dictionary. For example:

```python
def yourfunction():
    # initialize a grains dictionary
    grains = {}
    # Some code for logic that sets grains like
    grains["yourcustomgrain"] = True
    grains["anothergrain"] = "somevalue"
    return grains
```

The name of the function does not matter and will not factor into the grains data at all; only the keys/values returned become part of the grains.
When to Use a Custom Grain

Before adding new grains, consider what the data is and remember that grains should (for the most part) be static data.

If the data is something that is likely to change, consider using Pillar or an execution module instead. If it’s a simple set of key/value pairs, pillar is a good match. If compiling the information requires that system commands be run, then putting this information in an execution module is likely a better idea.

Good candidates for grains are data that is useful for targeting minions in the top file or the Salt CLI. The name and data structure of the grain should be designed to support many platforms, operating systems or applications. Also, keep in mind that Jinja templating in Salt supports referencing pillar data as well as invoking functions from execution modules, so there’s no need to place information in grains to make it available to Jinja templates. For example:

```python
...
...
{{ salt['module.function_name']('argument_1', 'argument_2') }}
{{ pillar['my_pillar_key'] }}
...
```

**Warning:** Custom grains will not be available in the top file until after the first highstate. To make custom grains available on a minion’s first highstate, it is recommended to use this example to ensure that the custom grains are synced when the minion starts.

Loading Custom Grains

If you have multiple functions specifying grains that are called from a main function, be sure to prepend grain function names with an underscore. This prevents Salt from including the loaded grains from the grain functions in the final grain data structure. For example, consider this custom grain file:

```python
#!/usr/bin/env python

def _my_custom_grain():
    my_grain = {'foo': 'bar', 'hello': 'world'}
    return my_grain

def main():
    # initialize a grains dictionary
    grains = {}
    grains['my_grains'] = _my_custom_grain()
    return grains
```

The output of this example renders like so:

```bash
# salt-call --local grains.items
local:
    ----------------------
    <Snipped for brevity>
    my_grains:
    ----------------------
    foo:
    bar
```

(continues on next page)
However, if you don’t prepend the `my_custom_grain` function with an underscore, the function will be rendered twice by Salt in the items output: once for the `my_custom_grain` call itself, and again when it is called in the `main` function:

```bash
# salt-call --local grains.items
local:
    ----------
    <Snipped for brevity>
    foo:
        bar
    <Snipped for brevity>
    hello:
        world
    <Snipped for brevity>
    my_grains:
        ----------
        foo:
            bar
        hello:
            world
```

### 6.1.7 Precedence

Core grains can be overridden by custom grains. As there are several ways of defining custom grains, there is an order of precedence which should be kept in mind when defining them. The order of evaluation is as follows:

1. Core grains.
2. Custom grains in `/etc/salt/grains`.
3. Custom grains in `/etc/salt/minion`.
4. Custom grain modules in `_grains` directory, synced to minions.

Each successive evaluation overrides the previous ones, so any grains defined by custom grains modules synced to minions that have the same name as a core grain will override that core grain. Similarly, grains from `/etc/salt/minion` override both core grains and custom grain modules, and grains in `_grains` will override any grains of the same name.

For custom grains, if the function takes an argument `grains`, then the previously rendered grains will be passed in. Because the rest of the grains could be rendered in any order, the only grains that can be relied upon to be passed in are core grains. This was added in the 2019.2.0 release.
6.1.8 Examples of Grains

The core module in the grains package is where the main grains are loaded by the Salt minion and provides the principal example of how to write grains:

https://github.com/saltstack/salt/blob/master/salt/grains/core.py

6.1.9 Syncing Grains

Syncing grains can be done a number of ways. They are automatically synced when state.highstate is called, or (as noted above) the grains can be manually synced and reloaded by calling the saltutil.sync_grains or saltutil.sync_all functions.

Note: When the grains_cache is set to False, the grains dictionary is built and stored in memory on the minion. Every time the minion restarts or saltutil.refresh_grains is run, the grain dictionary is rebuilt from scratch.

6.2 Storing Static Data in the Pillar

Pillar is an interface for Salt designed to offer global values that can be distributed to minions. Pillar data is managed in a similar way as the Salt State Tree.

Pillar was added to Salt in version 0.9.8

Note: Storing sensitive data

Pillar data is compiled on the master. Additionally, pillar data for a given minion is only accessible by the minion for which it is targeted in the pillar configuration. This makes pillar useful for storing sensitive data specific to a particular minion.

6.2.1 Declaring the Master Pillar

The Salt Master server maintains a pillar_roots setup that matches the structure of the file_roots used in the Salt file server. Like file_roots, the pillar_roots option maps environments to directories. The pillar data is then mapped to minions based on matchers in a top file which is laid out in the same way as the state top file. Salt pillars can use the same matcher types as the standard top file.

conf_master:
pillar_roots is configured just like file_roots. For example:

```yaml
pillar_roots:
  base:
    - /srv/pillar
```

This example configuration declares that the base environment will be located in the /srv/pillar directory. It must not be in a subdirectory of the state tree.

The top file used matches the name of the top file used for States, and has the same structure:

/srv/pillar/top.sls
In the above top file, it is declared that in the `base` environment, the glob matching all minions will have the pillar data found in the `packages` pillar available to it. Assuming the `pillar_roots` value of `/srv/pillar` taken from above, the `packages` pillar would be located at `/srv/pillar/packages.sls`.

Any number of matchers can be added to the `base` environment. For example, here is an expanded version of the Pillar top file stated above:

```
/srv/pillar/top.sls:

base:
  '*':
    - packages
  'web*':
    - vim
```

In this expanded top file, minions that match `web*` will have access to the `/srv/pillar/packages.sls` file, as well as the `/srv/pillar/vim.sls` file.

Another example shows how to use other standard top matching types to deliver specific Salt pillar data to minions with different properties.

Here is an example using the `grains` matcher to target pillars to minions by their `os` grain:

```
dev:
  'os:Debian':
    - match: grain
    - servers
```

Pillar definitions can also take a keyword argument `ignore_missing`. When the value of `ignore_missing` is `True`, all errors for missing pillar files are ignored. The default value for `ignore_missing` is `False`.

Here is an example using the `ignore_missing` keyword parameter to ignore errors for missing pillar files:

```
base:
  '*':
    - servers
    - systems
    - ignore_missing: True
```

Assuming that the pillar `servers` exists in the fileserver backend and the pillar `systems` doesn’t, all pillar data from `servers` pillar is delivered to minions and no error for the missing pillar `systems` is noted under the key `_errors` in the pillar data delivered to minions.

Should the `ignore_missing` keyword parameter have the value `False`, an error for the missing pillar `systems` would produce the value `Specified SLS 'servers' in environment 'base' is not available on the salt master` under the key `_errors` in the pillar data delivered to minions.

```
/srv/pillar/packages.sls

{% if grains['os'] == 'RedHat' %}
apache: httpd
git: git
{% endif %}
{% if grains['os'] == 'Debian' %}
apache: apache2
git: git-core
```

(continues on next page)
company: Foo Industries

Important: See Is Targeting using Grain Data Secure? for important security information.

The above pillar sets two key/value pairs. If a minion is running RedHat, then the apache key is set to httpd and the git key is set to the value of git. If the minion is running Debian, those values are changed to apache2 and git-core respectively. All minions that have this pillar targeting to them via a top file will have the key of company with a value of Foo Industries.

Consequently this data can be used from within modules, renderers, State SLS files, and more via the shared pillar dictionary:

```yaml
apache:
pkg.installed:
  - name: {{ pillar['apache'] }}

git:
pkg.installed:
  - name: {{ pillar['git'] }}
```

Finally, the above states can utilize the values provided to them via Pillar. All pillar values targeted to a minion are available via the 'pillar' dictionary. As seen in the above example, Jinja substitution can then be utilized to access the keys and values in the Pillar dictionary.

Note that you cannot just list key/value-information in `top.sls`. Instead, target a minion to a pillar file and then list the keys and values in the pillar. Here is an example top file that illustrates this point:

```yaml
base:
  '*':
    - common_pillar
```

And the actual pillar file at `/srv/pillar/common_pillar.sls`:

```yaml
foo: bar
boo: baz
```

Note: When working with multiple pillar environments, assuming that each pillar environment has its own top file, the jinja placeholder `{{ saltenv }}` can be used in place of the environment name:

```yaml
{{ saltenv }}:
  '*':
    - common_pillar
```

Yes, this is `{{ saltenv }}`, and not `{{ pillarenv }}`. The reason for this is because the Pillar top files are parsed using some of the same code which parses top files when running states, so the pillar environment takes the place of `{{ saltenv }}` in the jinja context.
6.2.2 Dynamic Pillar Environments

If environment `__env__` is specified in `pillar_roots`, all environments that are not explicitly specified in `pillar_roots` will map to the directories from `__env__`. This allows one to use dynamic git branch based environments for state/pillar files with the same file-based pillar applying to all environments. For example:

```yaml
pillar_roots:
  __env__:
    - /srv/pillar
ext_pillar:
  - git:
    - __env__ https://example.com/git-pillar.git
```

New in version 2017.7.5, 2018.3.1.

6.2.3 Pillar Namespace Flattening

The separate pillar SLS files all merge down into a single dictionary of key-value pairs. When the same key is defined in multiple SLS files, this can result in unexpected behavior if care is not taken to how the pillar SLS files are laid out.

For example, given a `top.sls` containing the following:

```yaml
base:
  '*':
    - packages
    - services
```

with `packages.sls` containing:

```yaml
bind: bind9
```

and `services.sls` containing:

```yaml
bind: named
```

Then a request for the `bind` pillar key will only return `named`. The `bind9` value will be lost, because `services.sls` was evaluated later.

**Note:** Pillar files are applied in the order they are listed in the top file. Therefore conflicting keys will be overwritten in a 'last one wins' manner! For example, in the above scenario conflicting key values in `services` will overwrite those in `packages` because it's at the bottom of the list.

It can be better to structure your pillar files with more hierarchy. For example the `package.sls` file could be configured like so:

```yaml
packages:
  bind: bind9
```

This would make the `packages` pillar key a nested dictionary containing a `bind` key.
6.2.4 Pillar Dictionary Merging

If the same pillar key is defined in multiple pillar SLS files, and the keys in both files refer to nested dictionaries, then the content from these dictionaries will be recursively merged.

For example, keeping the top.sls the same, assume the following modifications to the pillar SLS files:

packages.sls:

```
bind:
  package-name: bind9
  version: 9.9.5
```

services.sls:

```
bind:
  port: 53
  listen-on: any
```

The resulting pillar dictionary will be:

```
$ salt-call pillar.get bind
local:
  ---------
  listen-on: any
  package-name: bind9
  port: 53
  version: 9.9.5
```

Since both pillar SLS files contained a bind key which contained a nested dictionary, the pillar dictionary's bind key contains the combined contents of both SLS files' bind keys.

6.2.5 Including Other Pillars

New in version 0.16.0.

Pillar SLS files may include other pillar files, similar to State files. Two syntaxes are available for this purpose. The simple form simply includes the additional pillar as if it were part of the same file:

```
include:
  - users
```

The full include form allows two additional options -- passing default values to the templating engine for the included pillar file as well as an optional key under which to nest the results of the included pillar:

```
include:
  - users:
    defaults:
      sudo: ['bob', 'paul']
    key: users
```

With this form, the included file (users.sls) will be nested within the 'users' key of the compiled pillar. Additionally, the 'sudo' value will be available as a template variable to users.sls.
6.2.6 In-Memory Pillar Data vs. On-Demand Pillar Data

Since compiling pillar data is computationally expensive, the minion will maintain a copy of the pillar data in memory to avoid needing to ask the master to recompile and send it a copy of the pillar data each time pillar data is requested. This in-memory pillar data is what is returned by the pillar.item, pillar.get, and pillar.raw functions.

Also, for those writing custom execution modules, or contributing to Salt's existing execution modules, the in-memory pillar data is available as the __pillar__ dunder dictionary.

The in-memory pillar data is generated on minion start, and can be refreshed using the saltutil.refresh_pillar function:

```
salt '*' saltutil.refresh_pillar
```

This function triggers the minion to asynchronously refresh the in-memory pillar data and will always return None.

In contrast to in-memory pillar data, certain actions trigger pillar data to be compiled to ensure that the most up-to-date pillar data is available. These actions include:

- Running states
- Running pillar.items

Performing these actions will not refresh the in-memory pillar data. So, if pillar data is modified, and then states are run, the states will see the updated pillar data, but pillar.item, pillar.get, and pillar.raw will not see this data unless refreshed using saltutil.refresh_pillar.

6.2.7 How Pillar Environments Are Handled

When multiple pillar environments are used, the default behavior is for the pillar data from all environments to be merged together. The pillar dictionary will therefore contain keys from all configured environments.

The pillarenv minion config option can be used to force the minion to only consider pillar configuration from a single environment. This can be useful in cases where one needs to run states with alternate pillar data, either in a testing/QA environment or to test changes to the pillar data before pushing them live.

For example, assume that the following is set in the minion config file:

```
pillarenv: base
```

This would cause that minion to ignore all other pillar environments besides base when compiling the in-memory pillar data. Then, when running states, the pillarenv CLI argument can be used to override the minion's pillarenv config value:

```
salt '*' state.apply mystates pillarenv=testing
```

The above command will run the states with pillar data sourced exclusively from the testing environment, without modifying the in-memory pillar data.

**Note:** When running states, the pillarenv CLI option does not require a pillarenv option to be set in the minion config file. When pillarenv is left unset, as mentioned above all configured environments will be combined. Running states with pillarenv=testing in this case would still restrict the states' pillar data to just that of the testing pillar environment.

Starting in the 2017.7.0 release, it is possible to pin the pillarenv to the effective saltenv, using the pillarenv_from_saltenv minion config option. When this is set to True, if a specific saltenv is specified

6.2. Storing Static Data in the Pillar
when running states, the pillarenv will be the same. This essentially makes the following two commands equivalent:

```
salt '*' state.apply mystates saltenv=dev
salt '*' state.apply mystates saltenv=dev pillarenv=dev
```

However, if a pillarenv is specified, it will override this behavior. So, the following command will use the qa pillar environment but source the SLS files from the dev saltenv:

```
salt '*' state.apply mystates saltenv=dev pillarenv=qa
```

So, if a pillarenv is set in the minion config file, pillarenv_from_saltenv will be ignored, and passing a pillarenv on the CLI will temporarily override pillarenv_from_saltenv.

### 6.2.8 Viewing Pillar Data

To view pillar data, use the pillar execution module. This module includes several functions, each of them with their own use. These functions include:

- **pillar.item** - Retrieves the value of one or more keys from the in-memory pillar data.
- **pillar.items** - Compiles a fresh pillar dictionary and returns it, leaving the in-memory pillar data untouched. If pillar keys are passed to this function however, this function acts like pillar.item and returns their values from the in-memory pillar data.
- **pillar.raw** - Like pillar.items, it returns the entire pillar dictionary, but from the in-memory pillar data instead of compiling fresh pillar data.
- **pillar.get** - Described in detail below.

### 6.2.9 The pillar.get Function

New in version 0.14.0.

The pillar.get function works much in the same way as the get method in a python dict, but with an enhancement: nested dictionaries can be traversed using a colon as a delimiter.

If a structure like this is in pillar:

```
foo:
    bar:
        baz: qux
```

Extracting it from the raw pillar in an sls formula or file template is done this way:

```
{{ pillar['foo']['bar']['baz'] }}
```

Now, with the new pillar.get function the data can be safely gathered and a default can be set, allowing the template to fall back if the value is not available:

```
{{ salt['pillar.get']('foo:bar:baz', 'qux') }}
```

This makes handling nested structures much easier.

**Note:** pillar.get() vs salt['pillar.get']()
It should be noted that within templating, the pillar variable is just a dictionary. This means that calling pillar.get() inside of a template will just use the default dictionary .get() function which does not include the extra : delimiter functionality. It must be called using the above syntax (salt['pillar.get']('foo:bar:baz', 'qux')) to get the salt function, instead of the default dictionary behavior.

6.2.10 Setting Pillar Data at the Command Line

Pillar data can be set at the command line like the following example:

```
salt '*' state.apply pillar='{"cheese": "spam"}'
```

This will add a pillar key of cheese with its value set to spam.

Note: Be aware that when sending sensitive data via pillar on the command-line that the publication containing that data will be received by all minions and will not be restricted to the targeted minions. This may represent a security concern in some cases.

6.2.11 Pillar Encryption

Salt's renderer system can be used to decrypt pillar data. This allows for pillar items to be stored in an encrypted state, and decrypted during pillar compilation.

Encrypted Pillar SLS

New in version 2017.7.0.

Consider the following pillar SLS file:

```
secrets:
    vault:
        foo: |
        -----BEGIN PGP MESSAGE-----
        hQEMAw2B674HRhwSAQgAhTrN8NizwUv/VunVrqa4/X8t6EUulrnehKcSeb8sZS4th
        WlQz3K2njL4lkUHCQhKzVx/Vo2Zy7zsdDBIFvwoGGfj8+2wjkEDwFmFjG4DEsS74
        ZLRFIF3C1b/09AilQ+oU745skQkU6nEKxqavmKMrO3rv38ZaXCDC470+i2/Hqrp7
        +KWGmaD00422Ja5KRM5D9bQZr9oX7KqnrPG9Iy+Ub3yQS3dsdtqquPwmeIpamEVHB
        VMDNQRjzSezZiKC4kCwm3YqBF76qThzG1VllF5q0zuGI9VkyvLMaLmfHiriqY73
        zBbPzf6Bkp2+Y9qyzuveYMmmwS4sE0uZL/Netq1sWe9JGAW0/0+slQ2Kru9nNww96
        KMDPJRdyj5bRuv8E4hHkkP23KrYr7SuHW2vep70/MVWEJ9uDnegpMLhTWruGngJh
        iFndxegN9w==
        -----END PGP MESSAGE-----
    bar: this was unencrypted already
    baz: |
        -----BEGIN PGP MESSAGE-----
        hQEMAw2B674HRhwSAQf+Ne+IsfP2iCPDrUWc8tsTJrnga47jQvIPCMo+7zJj0Vcqz
        gljUKvMajrbI/jorBwxyAbF+5e7WdG9HHhVnuouwsyTB9rbmzuPqYCJCE+zVqyWF
        9agj+oujcvYIFmH3h7Hy68bdqbxAUKAQbTRHdR253wmaTIC91ZeX8Scj64HFIt7
        Izwk383CRWonEkxJpientApQSFUWNeLUWAgEr/YPNFA3vzPFS/la9x8/z/6o02
        (continues on next page)
```

6.2. Storing Static Data in the Pillar
When the pillar data is compiled, the results will be decrypted:

```shell
# salt myminion pillar.items
myminion:
    secrets:
        vault:
            bar:
                this was unencrypted already
            baz:
                rosebud
            foo:
                supersecret
            qux:
                - foo
                - bar
                - baz
```

Salt must be told what portions of the pillar data to decrypt. This is done using the `decrypt_pillar` config option:

```json
decrypt_pillar:
    - 'secrets:vault': gpg
```

The notation used to specify the pillar item(s) to be decrypted is the same as the one used in `pillar.get` function.

If a different delimiter is needed, it can be specified using the `decrypt_pillar_delimiter` config option:

```json
decrypt_pillar:
    - 'secrets|vault': gpg

decrypt_pillar_delimiter: '|'"
Salt Documentation, Release 3002.5

specified by the decrypt_pillar_default config option, which defaults to gpg. So, the first example above
could be rewritten as:
decrypt_pillar:
- 'secrets:vault'

Encrypted Pillar Data on the CLI
New in version 2016.3.0.
The following functions support passing pillar data on the CLI via the pillar argument:
• pillar.items
• state.apply
• state.highstate
• state.sls
Triggerring decryption of this CLI pillar data can be done in one of two ways:
1. Using the pillar_enc argument:
# salt myminion pillar.items pillar_enc=gpg pillar='{foo: "-----BEGIN PGP MESSAGE,→----\n\nhQEMAw2B674HRhwSAQf+OvPqEdDoA2fk15I5dYUTDoj1yf/pVolAma6iU4v8Zixn\
,→nRDgWsaAnFz99FEiFACsAGDEFdZaVOxG80T0Lj+PnW4pVy0OXmXHnY2KjV9zx8FLS\
,→nQxfvmhRR4t23WSFybozfMm0lsN8r1vfBBjbK+A72l0oxN78d1rybJ6PWNZiXi+aC\
,→nmqIeunIbAKQ21w/OvZHhxH7cnIiGQIHc7N9nQH7ibyoKQzQMSZeilSMGr2abAHun\
,→nmLzscr4wKMb+81Z0/fdBfP6g3bLWMJga3hSzSldU9ovu7KR8rDJI1qOlENj3Wm8C\
,→nwTpDOB33kWIKMqiAjY3JFtb5MCHrafyggwQL7cX1+tI+AbSO6kZpbcDfzetb77LZ\
,→nxc5NWnnGK4pGoqq4MAmZshw98RpecSHKMosto2gtiuWCuo9Zn5cV/FbjZ9CTWrQ=\n=0hO/\n----,→END PGP MESSAGE-----"}'

The newlines in this example are specified using a literal \n. Newlines can be replaced with a literal \n using
sed:
$ echo -n bar | gpg --armor --trust-model always --encrypt -r user@domain.tld |
,→sed ':a;N;$!ba;s/\n/\\n/g'

Note: Using pillar_enc will perform the decryption minion-side, so for this to work it will be necessary
to set up the keyring in /etc/salt/gpgkeys on the minion just as one would typically do on the master.
The easiest way to do this is to first export the keys from the master:
# gpg --homedir /etc/salt/gpgkeys --export-secret-key -a user@domain.tld >/tmp/
,→keypair.gpg

Then, copy the file to the minion, setup the keyring, and import:
#
#
#
#

mkdir -p /etc/salt/gpgkeys
chmod 0700 /etc/salt/gpgkeys
gpg --homedir /etc/salt/gpgkeys --list-keys
gpg --homedir /etc/salt/gpgkeys --import --allow-secret-key-import keypair.gpg

The --list-keys command is run create a keyring in the newly-created directory.
Pillar data which is decrypted minion-side will still be securely transferred to the master, since the data sent
between minion and master is encrypted with the master's public key.
6.2. Storing Static Data in the Pillar

381


2. Use the `decrypt_pillar` option. This is less flexible in that the pillar key passed on the CLI must be pre-configured on the master, but it doesn’t require a keyring to be setup on the minion. One other caveat to this method is that pillar decryption on the master happens at the end of pillar compilation, so if the encrypted pillar data being passed on the CLI needs to be referenced by pillar or ext_pillar during pillar compilation, it must be decrypted minion-side.

Adding New Renderers for Decryption

Those looking to add new renderers for decryption should look at the `gpg` renderer for an example of how to do so. The function that performs the decryption should be recursive and be able to traverse a mutable type such as a dictionary, and modify the values in-place.

Once the renderer has been written, `decrypt_pillar_renderers` should be modified so that Salt allows it to be used for decryption.

If the renderer is being submitted upstream to the Salt project, the renderer should be added in `salt/renderers/`. Additionally, the following should be done:

- Both occurrences of `decrypt_pillar_renderers` in `salt/config/__init__.py` should be updated to include the name of the new renderer so that it is included in the default value for this config option.
- The documentation for the `decrypt_pillar_renderers` config option in the master config file and minion config file should be updated to show the correct new default value.
- The commented example for the `decrypt_pillar_renderers` config option in the master config template should be updated to show the correct new default value.

6.2.12 Binary Data in the Pillar

Salt has partial support for binary pillar data.

**Note:** There are some situations (such as salt-ssh) where only text (ASCII or Unicode) is allowed.

The simplest way to embed binary data in your pillar is to make use of YAML’s built-in binary data type, which requires base64 encoded data.

```
saltPic: !!binary
  !VBO7rKGoAAAANSUhEUgAAAMAAKAAMAA4AC67D+PAAAAABdBTUEAAALG7C/xbQAAAACBjSFJNAA
```

Then you can use it as a `contents_pillar` in a state:

```
/tmp/salt.png:
  file.managed:
    - contents_pillar: salt_pic
```

It is also possible to add ASCII-armored encrypted data to pillars, as mentioned in the Pillar Encryption section.
6.2.13 Master Config in Pillar

For convenience the data stored in the master configuration file can be made available in all minion's pillars. This makes global configuration of services and systems very easy but may not be desired if sensitive data is stored in the master configuration. This option is disabled by default.

To enable the master config from being added to the pillar set `pillar_opts` to `True` in the minion config file:

```
pillar_opts: True
```

6.2.14 Minion Config in Pillar

Minion configuration options can be set on pillars. Any option that you want to modify, should be in the first level of the pillars, in the same way you set the options in the config file. For example, to configure the MySQL root password to be used by MySQL Salt execution module, set the following pillar variable:

```
mysql.pass: hardtoguesspassword
```

6.2.15 Master Provided Pillar Error

By default if there is an error rendering a pillar, the detailed error is hidden and replaced with:

```
Rendering SLS 'my.sls' failed. Please see master log for details.
```

The error is protected because it's possible to contain templating data which would give that minion information it shouldn't know, like a password!

To have the master provide the detailed error that could potentially carry protected data set `pillar_safe_render_error` to `False`:

```
pillow_safe_render_error: False
```

Pillar Walkthrough

Note: This walkthrough assumes that the reader has already completed the initial Salt walkthrough.

Pillars are tree-like structures of data defined on the Salt Master and passed through to minions. They allow confidential, targeted data to be securely sent only to the relevant minion.

Note: Grains and Pillar are sometimes confused, just remember that Grains are data about a minion which is stored or generated from the minion. This is why information like the OS and CPU type are found in Grains. Pillar is information about a minion or many minions stored or generated on the Salt Master.

Pillar data is useful for:

**Highly Sensitive Data:** Information transferred via pillar is guaranteed to only be presented to the minions that are targeted, making Pillar suitable for managing security information, such as cryptographic keys and passwords.

**Minion Configuration:** Minion modules such as the execution modules, states, and returners can often be configured via data stored in pillar.
**Variables:** Variables which need to be assigned to specific minions or groups of minions can be defined in pillar and then accessed inside sls formulas and template files.

**Arbitrary Data:** Pillar can contain any basic data structure in dictionary format, so a key/value store can be defined making it easy to iterate over a group of values in sls formulas.

Pillar is therefore one of the most important systems when using Salt. This walkthrough is designed to get a simple Pillar up and running in a few minutes and then to dive into the capabilities of Pillar and where the data is available.

### Setting Up Pillar

The pillar is already running in Salt by default. To see the minion's pillar data:

```bash
salt '*' pillar.items
```

---

**Note:** Prior to version 0.16.2, this function is named `pillar.data`. This function name is still supported for backwards compatibility.

By default, the contents of the master configuration file are not loaded into pillar for all minions. This default is stored in the `pillar_opts` setting, which defaults to `False`.

The contents of the master configuration file can be made available to minion pillar files. This makes global configuration of services and systems very easy, but note that this may not be desired or appropriate if sensitive data is stored in the master's configuration file. To enable the master configuration file to be available to minion as pillar, set `pillar_opts: True` in the master configuration file, and then for appropriate minions also set `pillar_opts: True` in the minion(s) configuration file.

Similar to the state tree, the pillar is comprised of sls files and has a top file. The default location for the pillar is in `/srv/pillar`.

---

**Note:** The pillar location can be configured via the `pillar_roots` option inside the master configuration file. It must not be in a subdirectory of the state tree or file_roots. If the pillar is under file_roots, any pillar targeting can be bypassed by minions.

To start setting up the pillar, the `/srv/pillar` directory needs to be present:

```bash
mkdir /srv/pillar
```

Now create a simple top file, following the same format as the top file used for states:

```
/srv/pillar/top.sls:
```

```yaml
base:
  '*':
    - data
```

This top file associates the data.sls file to all minions. Now the `/srv/pillar/data.sls` file needs to be populated:

```
/srv/pillar/data.sls:
```

```yaml
info: some data
```

To ensure that the minions have the new pillar data, issue a command to them asking that they fetch their pillars from the master:
Now that the minions have the new pillar, it can be retrieved:

```
salt '*' saltutil.refresh_pillar
```

The key info should now appear in the returned pillar data.

### More Complex Data

Unlike states, pillar files do not need to define formulas. This example sets up user data with a UID:

```
/srv/pillar/users/init.sls:
```

```yaml
users:
  thatch: 1000
  shouse: 1001
  utahdave: 1002
  redbeard: 1003
```

**Note:** The same directory lookups that exist in states exist in pillar, so the file `users/init.sls` can be referenced with `users` in the **top file**.

The top file will need to be updated to include this sls file:

```
/srv/pillar/top.sls:
```

```yaml
base:
  '*':
    - data
    - users
```

Now the data will be available to the minions. To use the pillar data in a state, you can use Jinja:

```
/srv/salt/users/init.sls
```

```jinja
{% for user, uid in pillar.get('users', {}).items() %}
  {{ user }}:
  user.present:
    - uid: {{ uid }}
{% endfor %}
```

This approach allows for users to be safely defined in a pillar and then the user data is applied in an sls file.

### Parameterizing States With Pillar

Pillar data can be accessed in state files to customise behavior for each minion. All pillar (and grain) data applicable to each minion is substituted into the state files through templating before being run. Typical uses include setting directories appropriate for the minion and skipping states that don’t apply.

A simple example is to set up a mapping of package names in pillar for separate Linux distributions:

```
/srv/pillar/pkg/init.sls
```

6.2. Storing Static Data in the Pillar
```python
pkgs:
{%
if grains['os_family'] == 'RedHat'
%}
apache: httpd
vim: vim-enhanced
{%
elif grains['os_family'] == 'Debian'
%}
apache: apache2
vim: vim
{%
elif grains['os'] == 'Arch'
%}
apache: apache
vim: vim
{%
endif
%}

The new pkg sls needs to be added to the top file:
/srv/pillar/top.sls:

```base```
  '*' :
    - data
    - users
    - pkg
```

Now the minions will auto map values based on respective operating systems inside of the pillar, so sls files can be safely parameterized:
/srv/salt/apache/init.sls:

```python
apache:
pkg.installed:
  - name: {{ pillar['pkgs']['apache'] }}
```

Or, if no pillar is available a default can be set as well:

Note: The function `pillar.get` used in this example was added to Salt in version 0.14.0

/srv/salt/apache/init.sls:

```python
apache:
pkg.installed:
  - name: {{ salt['pillar.get']('pkgs:apache', 'httpd') }}
```

In the above example, if the pillar value `pillar['pkgs']['apache']` is not set in the minion's pillar, then the default of `httpd` will be used.

Note: Under the hood, pillar is just a Python dict, so Python dict methods such as `get` and `items` can be used.
Pillar Makes Simple States Grow Easily

One of the design goals of pillar is to make simple sls formulas easily grow into more flexible formulas without refactoring or complicating the states.

A simple formula:
/srv/salt/edit/vim.sls:

```yaml
vim:
  pkg.installed: []
/etc/vimrc:
  file.managed:
    - source: salt://edit/vimrc
    - mode: 644
    - user: root
    - group: root
    - require:
      - pkg: vim
```

Can be easily transformed into a powerful, parameterized formula:
/srv/salt/edit/vim.sls:

```yaml
vim:
  pkg.installed:
    - name: {{ pillar['pkgs']['vim'] }}
/etc/vimrc:
  file.managed:
    - source: {{ pillar['vimrc'] }}
    - mode: 644
    - user: root
    - group: root
    - require:
      - pkg: vim
```

Where the vimrc source location can now be changed via pillar:
/srv/pillar/edit/vim.sls:

```yaml
{# if grains['id'].startswith('dev') #}
vimrc: salt://edit/dev_vimrc
{# elif grains['id'].startswith('qa') #}
vimrc: salt://edit/qa_vimrc
{# else #}
vimrc: salt://edit/vimrc
{# endif #}
```

Ensuring that the right vimrc is sent out to the correct minions.

The pillar top file must include a reference to the new sls pillar file:
/srv/pillar/top.sls:

```yaml
base:
  '*':
    - pkg
    - edit.vim
```

6.2. Storing Static Data in the Pillar
Salt Documentation, Release 3002.5

Setting Pillar Data on the Command Line
Pillar data can be set on the command line when running state.apply <salt.modules.state.apply_()
like so:
salt '*' state.apply pillar='{"foo": "bar"}'
salt '*' state.apply my_sls_file pillar='{"hello": "world"}'

Nested pillar values can also be set via the command line:
salt '*' state.sls my_sls_file pillar='{"foo": {"bar": "baz"}}'

Lists can be passed via command line pillar data as follows:
salt '*' state.sls my_sls_file pillar='{"some_list": ["foo", "bar", "baz"]}'

Note: If a key is passed on the command line that already exists on the minion, the key that is passed in will
overwrite the entire value of that key, rather than merging only the specified value set via the command line.
The example below will swap the value for vim with telnet in the previously specified list, notice the nested pillar
dict:
salt '*' state.apply edit.vim pillar='{"pkgs": {"vim": "telnet"}}'

This will attempt to install telnet on your minions, feel free to uninstall the package or replace telnet value with
anything else.
Note: Be aware that when sending sensitive data via pillar on the command-line that the publication containing
that data will be received by all minions and will not be restricted to the targeted minions. This may represent a
security concern in some cases.

More On Pillar
Pillar data is generated on the Salt master and securely distributed to minions. Salt is not restricted to the pillar sls
files when defining the pillar but can retrieve data from external sources. This can be useful when information about
an infrastructure is stored in a separate location.
Reference information on pillar and the external pillar interface can be found in the Salt documentation:
Pillar
Minion Config in Pillar
Minion configuration options can be set on pillars. Any option that you want to modify, should be in the first level
of the pillars, in the same way you set the options in the config file. For example, to configure the MySQL root
password to be used by MySQL Salt execution module:
mysql.pass: hardtoguesspassword

This is very convenient when you need some dynamic configuration change that you want to be applied on the fly.
For example, there is a chicken and the egg problem if you do this:
388

Chapter 6. Using Salt


The second state will fail, because you changed the root password and the minion didn't notice it. Setting mysql.pass in the pillar, will help to sort out the issue. But always change the root admin password in the first place.

This is very helpful for any module that needs credentials to apply state changes: mysql, keystone, etc.

### 6.3 Targeting Minions

Targeting minions is specifying which minions should run a command or execute a state by matching against hostnames, or system information, or defined groups, or even combinations thereof.

For example the command `salt web1 apache.signal restart` to restart the Apache httpd server specifies the machine `web1` as the target and the command will only be run on that one minion.

Similarly when using States, the following top file specifies that only the `web1` minion should execute the contents of `webserver.sls`:

```yaml
base:
  'web1':
    - webserver
```

The simple target specifications, glob, regex, and list will cover many use cases, and for some will cover all use cases, but more powerful options exist.

#### 6.3.1 Targeting with Grains

The Grains interface was built into Salt to allow minions to be targeted by system properties. So minions running on a particular operating system can be called to execute a function, or a specific kernel.

Calling via a grain is done by passing the `-G` option to salt, specifying a grain and a glob expression to match the value of the grain. The syntax for the target is the grain key followed by a glob expression: "os:Arch".

```bash
salt -G 'os:Fedora' test.version
```

Will return True from all of the minions running Fedora.

To discover what grains are available and what the values are, execute the grains.item salt function:

```bash
salt '*' grains.items
```

More info on using targeting with grains can be found [here.](#)
6.3.2 Compound Targeting

New in version 0.9.5.

Multiple target interfaces can be used in conjunction to determine the command targets. These targets can then be combined using and or or statements. This is well defined with an example:

```
salt -C 'G@os:Debian and webser* or E@db.*' test.version
```

In this example any minion who’s id starts with webser and is running Debian, or any minion who’s id starts with db will be matched.

The type of matcher defaults to glob, but can be specified with the corresponding letter followed by the @ symbol. In the above example a grain is used with G@ as well as a regular expression with E@. The webser* target does not need to be prefaced with a target type specifier because it is a glob.

More info on using compound targeting can be found here.

6.3.3 Node Group Targeting

New in version 0.9.5.

For certain cases, it can be convenient to have a predefined group of minions on which to execute commands. This can be accomplished using what are called nodegroups. Nodegroups allow for predefined compound targets to be declared in the master configuration file, as a sort of shorthand for having to type out complicated compound expressions.

```
nodegroups:
  group1: 'L@foo.domain.com,bar.domain.com,baz.domain.com and bl*.domain.com'
  group2: 'G@os:Debian and foo.domain.com'
  group3: 'G@os:Debian and N@group1'
```

6.3.4 Advanced Targeting Methods

There are many ways to target individual minions or groups of minions in Salt:

**Matching the minion id**

Each minion needs a unique identifier. By default when a minion starts for the first time it chooses its FQDN (fully qualified domain name) as that identifier. The minion id can be overridden via the minion’s id configuration setting.

Tip: minion id and minion keys

The minion id is used to generate the minion's public/private keys and if it ever changes the master must then accept the new key as though the minion was a new host.
Globbing

The default matching that Salt utilizes is shell-style globbing around the minion id. This also works for states in the top file.

Note: You must wrap salt calls that use globbing in single-quotes to prevent the shell from expanding the globs before Salt is invoked.

Match all minions:

```
salt '('* test.version
```

Match all minions in the example.net domain or any of the example domains:

```
salt '*.example.net' test.version
salt '*.example.*' test.version
```

Match all the webN minions in the example.net domain (web1.example.net,web2.example.net...webN.example.net):

```
salt 'web?\.example.net' test.version
```

Match the web1 through web5 minions:

```
salt 'web[1-5]' test.version
```

Match the web1 and web3 minions:

```
salt 'web[1,3]' test.version
```

Match the web-x, web-y, and web-z minions:

```
salt 'web-[x-z]' test.version
```

Note: For additional targeting methods please review the compound matchers documentation.

Regular Expressions

Minions can be matched using Perl-compatible regular expressions (which is globbing on steroids and a ton of caffeine).

Match both web1-prod and web1-devel minions:

```
salt -E 'web1-(prod|devel)' test.version
```

When using regular expressions in a State's top file, you must specify the matcher as the first option. The following example executes the contents of webserver.sls on the above-mentioned minions.

```
base:
  'web1-(prod|devel)):
    - match: pcre
      - webserver
```

6.3. Targeting Minions
Lists

At the most basic level, you can specify a flat list of minion IDs:

```
salt -L 'web1,web2,web3' test.version
```

Targeting using Grains

Grain data can be used when targeting minions.

For example, the following matches all CentOS minions:

```
salt -G 'os:CentOS' test.version
```

Match all minions with 64-bit CPUs, and return number of CPU cores for each matching minion:

```
salt -G 'cpuarch:x86_64' grains.item num_cpus
```

Additionally, globs can be used in grain matches, and grains that are nested in a dictionary can be matched by adding a colon for each level that is traversed. For example, the following will match hosts that have a grain called `ec2_tags`, which itself is a dictionary with a key named `environment`, which has a value that contains the word `production`:

```
salt -G 'ec2_tags:environment:*production*'
```

**Important:** See *Is Targeting using Grain Data Secure?* for important security information.

Targeting using Pillar

Pillar data can be used when targeting minions. This allows for ultimate control and flexibility when targeting minions.

**Note:** To start using Pillar targeting it is required to make a Pillar data cache on Salt Master for each Minion via following commands: `salt '*' saltutil.refresh_pillar` or `salt '*' saltutil.sync_all`. Also Pillar data cache will be populated during the `highstate` run. Once Pillar data changes, you must refresh the cache by running above commands for this targeting method to work correctly.

Example:

```
salt -I 'somekey:specialvalue' test.version
```

Like with *Grains*, it is possible to use globbing as well as match nested values in Pillar, by adding colons for each level that is being traversed. The below example would match minions with a pillar named `foo`, which is a dict containing a key `bar`, with a value beginning with `baz`:

```
salt -I 'foo:bar:baz*' test.version
```
Subnet/IP Address Matching

Minions can easily be matched based on IP address, or by subnet (using CIDR notation).

```
salt -S 192.168.40.20 test.version
salt -S 2001:db8::/64 test.version
```

Ipcidr matching can also be used in compound matches

```
salt -C 'S@10.0.0.0/24 and G@os:Debian' test.version
```

It is also possible to use in both pillar and state-matching

```
'172.16.0.0/12':
  - match: ipcidr
  - internal
```

Compound matchers

Compound matchers allow very granular minion targeting using any of Salt's matchers. The default matcher is a glob match, just as with CLI and top file matching. To match using anything other than a glob, prefix the match string with the appropriate letter from the table below, followed by an @ sign.

<table>
<thead>
<tr>
<th>Letter</th>
<th>Match Type</th>
<th>Example</th>
<th>Alt Delimiter?</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>Grains glob</td>
<td>G@os:Ubuntu</td>
<td>Yes</td>
</tr>
<tr>
<td>E</td>
<td>PCRE Minion ID</td>
<td>E@web\d+.(dev</td>
<td>qa</td>
</tr>
<tr>
<td>P</td>
<td>Grains PCRE</td>
<td>P@os:(RedHat</td>
<td>Fedora</td>
</tr>
<tr>
<td>L</td>
<td>List of minions</td>
<td><a href="mailto:L@minion1.example.com">L@minion1.example.com</a>,minion3.domain.com or bl*.domain.com</td>
<td>No</td>
</tr>
<tr>
<td>I</td>
<td>Pillar glob</td>
<td>I@pdata:foobar</td>
<td>Yes</td>
</tr>
<tr>
<td>J</td>
<td>Pillar PCRE</td>
<td>J@pdata:^(foo</td>
<td>bar)$</td>
</tr>
<tr>
<td>S</td>
<td>Subnet/IP address</td>
<td>S@192.168.1.0/24 or S@192.168.1.100</td>
<td>No</td>
</tr>
<tr>
<td>R</td>
<td>Range cluster</td>
<td>R%@foo.bar</td>
<td>No</td>
</tr>
<tr>
<td>N</td>
<td>Nodegroups</td>
<td>N@group1</td>
<td>No</td>
</tr>
</tbody>
</table>

Matchers can be joined using boolean and, or, and not operators.

For example, the following string matches all Debian minions with a hostname that begins with webserv, as well as any minions that have a hostname which matches the regular expression web-dc1-srv.*:

```
salt -C 'webserv* and G@os:Debian or E@web-dc1-srv.*' test.version
```

That same example expressed in a top file looks like the following:

```
base:
  'webserv* and G@os:Debian or E@web-dc1-srv.*':
    - match: compound
    - webserver
```

New in version 2015.8.0.

Excluding a minion based on its ID is also possible:
Versions prior to 2015.8.0 a leading `not` was not supported in compound matches. Instead, something like the following was required:

```
salt -C '* and not G@kernel:Darwin' test.version
```

Excluding a minion based on its ID was also possible:

```
salt -C '* and not web-dc1-srv' test.version
```

**Precedence Matching**

Matchers can be grouped together with parentheses to explicitly declare precedence amongst groups.

```
salt -C '( ms-1 or G@id:ms-3 ) and G@id:ms-3' test.version
```

**Note:** Be certain to note that spaces are required between the parentheses and targets. Failing to obey this rule may result in incorrect targeting!

**Alternate Delimiters**

New in version 2015.8.0.

Matchers that target based on a key value pair use a colon (:) as a delimiter. Matchers with a Yes in the Alt Delimiters column in the previous table support specifying an alternate delimiter character.

This is done by specifying an alternate delimiter character between the leading matcher character and the @ pattern separator character. This avoids incorrect interpretation of the pattern in the case that : is part of the grain or pillar data structure traversal.

```
salt -C 'J|@foo|bar|^foo:bar$ or J!@gitrepo!https://github.com:example/project.git' test.ping
```

**Node groups**

Nodegroups are declared using a compound target specification. The compound target documentation can be found here.

The `nodegroups` master config file parameter is used to define nodegroups. Here's an example nodegroup configuration within `/etc/salt/master`:

```
nodegroups:
    group1: 'L@foo.domain.com,bar.domain.com,baz.domain.com or bl*.domain.com'
    group2: 'G@os:Debian and foo.domain.com'
    group3: 'G@os:Debian and N@group1'
    group4:
        - 'G@foo:bar'
        - 'or'
        - 'G@foo:baz'
```
Note: The L within group1 is matching a list of minions, while the G in group2 is matching specific grains. See the compound matchers documentation for more details.

As of the 2017.7.0 release of Salt, group names can also be prepended with a dash. This brings the usage in line with many other areas of Salt. For example:

```yaml
nodegroups:
  - group1: 'L@foo.domain.com,bar.domain.com,baz.domain.com or bl*.domain.com'
```

New in version 2015.8.0.

Note: Nodegroups can reference other nodegroups as seen in group3. Ensure that you do not have circular references. Circular references will be detected and cause partial expansion with a logged error message.

New in version 2015.8.0.

Compound nodegroups can be either string values or lists of string values. When the nodegroup is a string value will be tokenized by splitting on whitespace. This may be a problem if whitespace is necessary as part of a pattern. When a nodegroup is a list of strings then tokenization will happen for each list element as a whole.

To match a nodegroup on the CLI, use the -N command-line option:

```bash
salt -N group1 test.version
```

New in version 2019.2.0.

Note: The N@ classifier historically could not be used in compound matches within the CLI or top file, it was only recognized in the nodegroups master config file parameter. As of the 2019.2.0 release, this limitation no longer exists.

To match a nodegroup in your top file, make sure to put - match: nodegroup on the line directly following the nodegroup name.

```yaml
base:
  group1:
    - match: nodegroup
    - webserver
```

Note: When adding or modifying nodegroups to a master configuration file, the master must be restarted for those changes to be fully recognized.

A limited amount of functionality, such as targeting with -N from the command-line may be available without a restart.
Defining Nodegroups as Lists of Minion IDs

A simple list of minion IDs would traditionally be defined like this:

```
nodegroups:
  group1: L@host1,host2,host3
```

They can now also be defined as a YAML list, like this:

```
nodegroups:
  group1:
    - host1
    - host2
    - host3
```

New in version 2016.11.0.

Batch Size

The `-b` (or `--batch-size`) option allows commands to be executed on only a specified number of minions at a time. Both percentages and finite numbers are supported.

```
salt '*' -b 10 test.version
salt -G 'os:RedHat' --batch-size 25% apache.signal restart
```

This will only run test.version on 10 of the targeted minions at a time and then restart apache on 25% of the minions matching `os:RedHat` at a time and work through them all until the task is complete. This makes jobs like rolling web server restarts behind a load balancer or doing maintenance on BSD firewalls using carp much easier with salt.

The batch system maintains a window of running minions, so, if there are a total of 150 minions targeted and the batch size is 10, then the command is sent to 10 minions, when one minion returns then the command is sent to one additional minion, so that the job is constantly running on 10 minions.

New in version 2016.3.

The `--batch-wait` argument can be used to specify a number of seconds to wait after a minion returns, before sending the command to a new minion.

SECO Range

SECO range is a cluster-based metadata store developed and maintained by Yahoo!

The Range project is hosted here:

https://github.com/ytoolshed/range

Learn more about range here:

https://github.com/ytoolshed/range/wiki
Prerequisites

To utilize range support in Salt, a range server is required. Setting up a range server is outside the scope of this document. Apache modules are included in the range distribution.

With a working range server, cluster files must be defined. These files are written in YAML and define hosts contained inside a cluster. Full documentation on writing YAML range files is here:
https://github.com/ytoolshed/range/wiki/%22yamlfile%22-module-file-spec

Additionally, the Python seco range libraries must be installed on the salt master. One can verify that they have been installed correctly via the following command:

```
python -c 'import seco.range'
```

If no errors are returned, range is installed successfully on the salt master.

Preparing Salt

Range support must be enabled on the salt master by setting the hostname and port of the range server inside the master configuration file:

```
range_server: my.range.server.com:80
```

Following this, the master must be restarted for the change to have an effect.

Targeting with Range

Once a cluster has been defined, it can be targeted with a salt command by using the -R or --range flags.

For example, given the following range YAML file being served from a range server:

```
$ cat /etc/range/test.yaml
CLUSTER: host1..100.test.com
APPS:
  - frontend
  - backend
  - mysql
```

One might target host1 through host100 in the test.com domain with Salt as follows:

```
salt --range %test:CLUSTER test.version
```

The following salt command would target three hosts: frontend, backend, and mysql:

```
salt --range %test:APPS test.version
```
6.3.5 Loadable Matchers

New in version 2019.2.0.

Internally targeting is implemented with chunks of code called Matchers. As of the 2019.2.0 release, matchers can be
loaded dynamically. Currently new matchers cannot be created, but existing matchers can have their functionality
altered or extended. For more information on Matchers see

Matchers

New in version 3000.

Matchers are modules that provide Salt's targeting abilities. As of the 3000 release, matchers can be dynamically
loaded. Currently new matchers cannot be created because the required plumbing for the CLI does not exist yet.
Existing matchers may have their functionality altered or extended.

For details of targeting methods, see the Targeting topic.

A matcher module must have a function called match(). This function ends up becoming a method on the Matcher
class. All matcher functions require at least two arguments, self (because the function will be turned into a
method), and tgt, which is the actual target string. The grains and pillar matchers also take a delimiter argument
and should default to DEFAULT_TARGET_DELIM.

Like other Salt loadable modules, modules that override built-in functionality can be placed in file_roots in a
special directory and then copied to the minion through the normal sync process. saltutil.sync_all will
transfer all loadable modules, and the 3000 release introduces saltutil.sync_matchers. For matchers, the
directory is /srv/salt/_matchers (assuming your file_roots is set to the default /srv/salt).

As an example, let's modify the list matcher to have the separator be a '/' instead of the default ','.

```python
from __future__ import absolute_import, print_function, unicode_literals
from salt.ext import six  # pylint: disable=3rd-party-module-not-gated

def match(self, tgt):
    """
    Determines if this host is on the list
    """
    if isinstance(tgt, six.string_types):
        # The stock matcher splits on ','. Change to '/' below.
        tgt = tgt.split("/")
    return bool(self.opts["id"] in tgt)
```

Place this code in a file called list_matcher.py in _matchers in your file_roots. Sync this down to your
minions with saltutil.sync_matchers. Then attempt to match with the following, replacing minionX with
three of your minions.

```bash
salt -L 'minion1/minion2/minion3' test.ping
```

Three of your minions should respond.

The current supported matchers and associated filenames are
6.4 The Salt Mine

The Salt Mine is used to collect arbitrary data from Minions and store it on the Master. This data is then made available to all Minions via the `salt.modules.mine` module.

Mine data is gathered on the Minion and sent back to the Master where only the most recent data is maintained (if long term data is required use returners or the external job cache).

6.4.1 Mine vs Grains

Mine data is designed to be much more up-to-date than grain data. Grains are refreshed on a very limited basis and are largely static data. Mines are designed to replace slow peer publishing calls when Minions need data from other Minions. Rather than having a Minion reach out to all the other Minions for a piece of data, the Salt Mine, running on the Master, can collect it from all the Minions every Mine Interval, resulting in almost fresh data at any given time, with much less overhead.

6.4.2 Mine Functions

To enable the Salt Mine the `mine_functions` option needs to be applied to a Minion. This option can be applied via the Minion’s configuration file, or the Minion’s Pillar. The `mine_functions` option dictates what functions are being executed and allows for arguments to be passed in. The list of functions are available in the `salt.module`. If no arguments are passed, an empty list must be added like in the `test.ping` function in the example below:

```python
mine_functions:
    test.ping: []
    network.ip_addrs:
        interface: eth0
        cidr: 10.0.0.0/8
```

In the example above `salt.modules.network.ip_addrs` has additional filters to help narrow down the results. In the above example IP addresses are only returned if they are on a eth0 interface and in the 10.0.0.0/8 IP range.

Changed in version 3000.

The format to define `mine_functions` has been changed to allow the same format as used for `module.run`. The old format (above) will still be supported.
Minion-side Access Control

New in version 3000.

Mine functions can be targeted to only be available to specific minions. This uses the same targeting parameters as Targeting Minions but with keywords allow_tgt and allow_tgt_type. When a minion requests a function from the salt mine that is not allowed to be requested by that minion (i.e. when looking up the combination of allow_tgt and allow_tgt_type and the requesting minion is not in the list) it will get no data, just as if the requested function is not present in the salt mine.

```python
mine_functions:
    test.ping: []
    network.ip_addrs:
        - interface: eth0
        - cidr: 10.0.0.0/8
    test.arg:
        - isn't
        - this
        - fun
        - this: that
        - salt: stack
```

Mine Functions Aliases

Function aliases can be used to provide friendly names, usage intentions or to allow multiple calls of the same function with different arguments. There is a different syntax for passing positional and key-value arguments. Mixing positional and key-value arguments is not supported.

New in version 2014.7.0.

```python
mine_functions:
    network.ip_addrs:
        - interface: eth0
        - cidr: 10.0.0.0/8
        - allow_tgt: 'G@role:master'
        - allow_tgt_type: 'compound'
```

Changed in version 3000.

With the addition of the module.run-like format for defining mine_functions, the method of adding aliases remains similar. Just add a `mine_function` kwarg with the name of the real function to call, making the key below `mine_functions` the alias:
6.4.3 Mine Interval

The Salt Mine functions are executed when the Minion starts and at a given interval by the scheduler. The default interval is every 60 minutes and can be adjusted for the Minion via the mine_interval option in the minion config:

```
mine_interval: 60
```

6.4.4 Mine in Salt-SSH

As of the 2015.5.0 release of salt, salt-ssh supports mine.get.

Because the Minions cannot provide their own mine_functions configuration, we retrieve the args for specified mine functions in one of three places, searched in the following order:

1. Roster data
2. Pillar
3. Master config

The mine_functions are formatted exactly the same as in normal salt, just stored in a different location. Here is an example of a flat roster containing mine_functions:

```
test:
  host: 194.237.131.248
  user: root
  mine_functions:
    cmd.run: ['echo "hello!"']
    network.ip_addrs:
      interface: eth0
```

Note: Because of the differences in the architecture of salt-ssh, mine.get calls are somewhat inefficient. Salt must make a new salt-ssh call to each of the Minions in question to retrieve the requested data, much like a publish call. However, unlike publish, it must run the requested function as a wrapper function, so we can retrieve the function args from the pillar of the Minion in question. This results in a non-trivial delay in retrieving the requested data.
6.4.5 Minions Targeting with Mine

The `mine.get` function supports various methods of Minions targeting to fetch Mine data from particular hosts, such as glob or regular expression matching on Minion id (name), grains, pillars and compound matches. See the `salt.modules.mine` module documentation for the reference.

Note: Pillar data needs to be cached on Master for pillar targeting to work with Mine. Read the note in relevant section.

6.4.6 Example

One way to use data from Salt Mine is in a State. The values can be retrieved via Jinja and used in the SLS file. The following example is a partial HAProxy configuration file and pulls IP addresses from all Minions with the "web" grain to add them to the pool of load balanced servers.

/srv/pillar/top.sls:

```yaml
base:
  'G@roles:web':
    - web
```

/srv/pillar/web.sls:

```yaml
mine_functions:
  network.ip_addrs: [eth0]
```

Then trigger the minions to refresh their pillar data by running:

```
salt '*' saltutil.refresh_pillar
```

Verify that the results are showing up in the pillar on the minions by executing the following and checking for `network.ip_addrs` in the output:

```
salt '*' pillar.items
```

Which should show that the function is present on the minion, but not include the output:

```
minion1.example.com:
    ----------
    mine_functions:
    ----------
    network.ip_addrs:
      - eth0
```

Mine data is typically only updated on the master every 60 minutes, this can be modified by setting:

```
/etc/salt/minion.d/mine.conf:
```

```yaml
mine_interval: 5
```

To force the mine data to update immediately run:

```
salt '*' mine.update
```

Setup the `salt.states.file.managed` state in `/srv/salt/haproxy.sls`:
### haproxy_config:
*file.managed:*
  - name: /etc/haproxy/config
  - source: salt://haproxy_config
  - template: jinja

Create the Jinja template in /srv/salt/haproxy_config:

```
{% for server, addrs in salt['mine.get']('roles:web', 'network.ip_addrs', tgt_type='grain') | dictsort() %}
server {{ server }} {{ addrs[0] }}:80 check
{% endfor %}
```

In the above example, *server* will be expanded to the *minion_id*.

---

**Note:** The *expr_form* argument will be renamed to *tgt_type* in the 2017.7.0 release of Salt.

---

## 6.5 Runners

Salt runners are convenience applications executed with the *salt-run* command.

Salt runners work similarly to Salt execution modules however they execute on the Salt master itself instead of remote Salt minions.

A Salt runner can be a simple client call or a complex application.

See also:

*The full list of runners*

### 6.5.1 Writing Salt Runners

A Salt runner is written in a similar manner to a Salt execution module. Both are Python modules which contain functions and each public function is a runner which may be executed via the *salt-run* command.

For example, if a Python module named *test.py* is created in the runners directory and contains a function called *foo*, the *test* runner could be invoked with the following command:

```bash
# salt-run test.foo
```

Runners have several options for controlling output.

Any *print* statement in a runner is automatically also fired onto the master event bus where. For example:

```python
def a_runner(outputter=None, display_progress=False):
    print("Hello world")

... 
```

The above would result in an event fired as follows:
A runner may also send a progress event, which is displayed to the user during runner execution and is also passed across the event bus if the `display_progress` argument to a runner is set to True.

A custom runner may send its own progress event by using the `__jid_event__.fire_event()` method as shown here:

```python
if display_progress:
    __jid_event__.fire_event({'message': 'A progress message'}, 'progress')
```

The above would produce output on the console reading: *A progress message* as well as an event on the event similar to:

```
Event fired at Tue Jan 13 15:21:20 2015
***********************
Tag: salt/run/20150113152118341421/progress
Data:
 'message': 'A progress message'}
```

A runner could use the same approach to send an event with a customized tag onto the event bus by replacing the second argument (progress) with whatever tag is desired. However, this will not be shown on the command-line and will only be fired onto the event bus.

### 6.5.2 Synchronous vs. Asynchronous

A runner may be fired asynchronously which will immediately return control. In this case, no output will be display to the user if `salt-run` is being used from the command-line. If used programatically, no results will be returned. If results are desired, they must be gathered either by firing events on the bus from the runner and then watching for them or by some other means.

**Note:** When running a runner in asynchronous mode, the `--progress` flag will not deliver output to the `salt-run` CLI. However, progress events will still be fired on the bus.

In synchronous mode, which is the default, control will not be returned until the runner has finished executing. To add custom runners, put them in a directory and add it to `runner_dirs` in the master configuration file.
6.5.3 Examples

Examples of runners can be found in the Salt distribution:
https://github.com/saltstack/salt/blob/master/salt/runners

A simple runner that returns a well-formatted list of the minions that are responding to Salt calls could look like this:

```
# Import salt modules
import salt.client

def up():
    """
    Print a list of all of the minions that are up
    """
    client = salt.client.LocalClient(__opts__['conf_file'])
    minions = client.cmd('*','test.version', timeout=1)
    for minion in sorted(minions):
        print(minion)
```

6.6 Salt Engines

New in version 2015.8.0.

Salt Engines are long-running, external system processes that leverage Salt.

- Engines have access to Salt configuration, execution modules, and runners (__opts__, __salt__, and __runners__).
- Engines are executed in a separate process that is monitored by Salt. If a Salt engine stops, it is restarted automatically.
- Engines can run on the Salt master and on Salt minions.

Salt engines enhance and replace the external processes functionality.

6.6.1 Configuration

Salt engines are configured under an engines top-level section in your Salt master or Salt minion configuration. Provide a list of engines and parameters under this section.

```
engines:
  - logstash:
      host: log.my_network.com
      port: 5959
      proto: tcp
```

New in version 3000.

Multiple copies of a particular Salt engine can be configured by including the engine_module parameter in the engine configuration.
Salt engines must be in the Salt path, or you can add the engines_dirs option in your Salt master configuration with a list of directories under which Salt attempts to find Salt engines. This option should be formatted as a list of directories to search, such as:

```
engines_dirs:
  - /home/bob/engines
```

### 6.6.2 Writing an Engine

An example Salt engine, [https://github.com/saltstack/salt/blob/master/salt/engines/test.py](https://github.com/saltstack/salt/blob/master/salt/engines/test.py), is available in the Salt source. To develop an engine, the only requirement is that your module implement the `start()` function.

### 6.7 What is YAML and How To Use It

The default renderer for SLS files is the YAML renderer.

#### 6.7.1 What is YAML

What does YAML stand for? It’s an acronym for **YAML Ain’t Markup Language**.

The Official YAML Website defines YAML as:

> ...a human friendly data serialization standard for all programming languages.

However, Salt uses a small subset of YAML that maps over very commonly used data structures, like lists and dictionaries. It is the job of the YAML renderer to take the YAML data structure and compile it into a Python data structure for use by Salt.

#### 6.7.2 Defining YAML

Though YAML syntax may seem daunting and terse at first, there are only three very simple rules to remember when writing YAML for SLS files.
Rule One: Indentation

YAML uses a fixed indentation scheme to represent relationships between data layers. Salt requires that the indentation for each level consists of exactly two spaces. Do not use tabs.

Rule Two: Colons

Python dictionaries are, of course, simply key-value pairs. Users from other languages may recognize this data type as hashes or associative arrays.

Dictionary keys are represented in YAML as strings terminated by a trailing colon. Values are represented by either a string following the colon, separated by a space:

```
my_key: my_value
```

In Python, the above maps to:

```
{"my_key": "my_value"}
```

Alternatively, a value can be associated with a key through indentation.

```
my_key:
  my_value
```

**Note:** The above syntax is valid YAML but is uncommon in SLS files because most often, the value for a key is not singular but instead is a list of values.

In Python, the above maps to:

```
{"my_key": "my_value"}
```

Dictionaries can be nested:

```
first_level_dict_key:
  second_level_dict_key: value_in_second_level_dict
```

And in Python:

```
{"first_level_dict_key": {"second_level_dict_key": "value_in_second_level_dict"}}
```

Rule Three: Dashes

To represent lists of items, a single dash followed by a space is used. Multiple items are a part of the same list as a function of their having the same level of indentation.

```
- list_value_one
- list_value_two
- list_value_three
```

Lists can be the value of a key-value pair. This is quite common in Salt:
my_dictionary:
- list_value_one
- list_value_two
- list_value_three

In Python, the above maps to:

```python
{"my_dictionary": ["list_value_one", "list_value_two", "list_value_three"]}
```

### 6.7.3 Learning more about YAML

One easy way to learn more about how YAML gets rendered into Python data structures is to use an online YAML parser to see the Python output.

Here are some excellent links for experimenting with and referencing YAML:

- Online YAML Parser: Convert YAML to JSON or Python data structures.
- The Official YAML Specification
- The Wikipedia page for YAML

### 6.7.4 Templating

Jinja statements and expressions are allowed by default in SLS files. See *Understanding Jinja*.

### 6.8 Understanding Jinja

Jinja is the default templating language in SLS files.

**Important:** Jinja supports a secure, sandboxed template execution environment that Salt takes advantage of. Other text Renderers do not support this functionality, so Salt highly recommends usage of `jinja`/`jinja|yaml`.

#### 6.8.1 Jinja in States

Jinja is evaluated before YAML, which means it is evaluated before the States are run.

The most basic usage of Jinja in state files is using control structures to wrap conditional or redundant state elements:

```jinja
{% if grains['os'] != 'FreeBSD'%}
tcsh:
    pkg:
        - installed
{% endif %}

motd:
    file.managed:
        {% if grains['os'] == 'FreeBSD'%}
        - name: /etc/motd
        {% elseif grains['os'] == 'Debian'%}
        - name: /etc/motd.tail
        ```
In this example, the first if block will only be evaluated on minions that aren't running FreeBSD, and the second block changes the file name based on the os grain.

Writing if-else blocks can lead to very redundant state files however. In this case, using pillars, or using a previously defined variable might be easier:

```jinja
{% if grains['os'] == 'Debian' %}
  set motd = ['/etc/motd.tail', '/var/run/motd']
{% endif %}

{% for motdfile in motd %}
  file.managed:
    - source: salt://motd
{% endfor %}
```

Using a variable set by the template, the for loop will iterate over the list of MOTD files to update, adding a state block for each file.

The filter_by function can also be used to set variables based on grains:

```jinja
{% set auditd = salt['grains.filter_by']({
  'RedHat': { 'package': 'audit' },
  'Debian': { 'package': 'auditd' },
}) %}
```

6.8.2 Include and Import

Includes and imports can be used to share common, reusable state configuration between state files and between files.

```jinja
{% from 'lib.sls' import test %}
```

This would import the test template variable or macro, not the test state element, from the file lib.sls. In the case that the included file performs checks against grains, or something else that requires context, passing the context into the included file is required:

```jinja
{% from 'lib.sls' import test with context %}
```

Includes must use full paths, like so:
Listing 1: spam/eggs.jinja

{% include 'spam/foobar.jinja' %}

Including Context During Include/Import

By adding with context to the include/import directive, the current context can be passed to an included/imported template.

{% import 'openssl/vars.sls' as ssl with context %}

6.8.3 Macros

Macros are helpful for eliminating redundant code. Macros are most useful as mini-templates to repeat blocks of strings with a few parameterized variables. Be aware that stripping whitespace from the template block, as well as contained blocks, may be necessary to emulate a variable return from the macro.

# init.sls
{% from 'lib.sls' import pythonpkg with context %}

python-virtualenv:
  pkg.installed:
    - name: {{ pythonpkg('virtualenv') }}

python-fabric:
  pkg.installed:
    - name: {{ pythonpkg('fabric') }}

# lib.sls
{% macro pythonpkg(pkg) -%}
  {%- if grains['os'] == 'FreeBSD' -%}
    py27-{{ pkg }}
  {%- else if grains['os'] == 'Debian' -%}
    python-{{ pkg }}
  {%- endif -%}
{% endmacro %}

This would define a macro that would return a string of the full package name, depending on the packaging system's naming convention. The whitespace of the macro was eliminated, so that the macro would return a string without line breaks, using whitespace control.

6.8.4 Template Inheritance

Template inheritance works fine from state files and files. The search path starts at the root of the state tree or pillar.
6.8.5 Errors

Saltstack allows raising custom errors using the `raise` jinja function.

```jinja
{{ raise('Custom Error') }}
```

When rendering the template containing the above statement, a `TemplateError` exception is raised, causing the rendering to fail with the following message:

```
TemplateError: Custom Error
```

6.8.6 Filters

Saltstack extends builtin filters with these custom filters:

**strftime**

Converts any time related object into a time based string. It requires valid strftime directives. An exhaustive list can be found here in the Python documentation.

```jinja
{% set curtime = None | strftime() %}
```

Fuzzy dates require the timelib Python module is installed.

```jinja
{{ "2002/12/25" | strftime("%y") }}
{{ "1040814000" | strftime("%Y-%m-%d") }}
{{ datetime | strftime("%U") }}
{{ "tomorrow" | strftime() }}
```

**sequence**

Ensure that parsed data is a sequence.

**yaml_encode**

Serializes a single object into a YAML scalar with any necessary handling for escaping special characters. This will work for any scalar YAML data type: ints, floats, timestamps, booleans, strings, unicode. It will not work for multi-objects such as sequences or maps.

```jinja
{% set bar = 7 %}
{% set baz = none %}
{% set zip = true %}
{% set zap = 'The word of the day is "salty"!' %}

{% load_yaml as foo %}
bar: {{ bar | yaml_encode }}
baz: {{ baz | yaml_encode }}
zip: {{ zip | yaml_encode }}
zap: {{ zap | yaml_encode }}
{% endload %}
```

In the above case `{{ bar }}` and `{{ foo.bar }}` should be identical and `{{ baz }}` and `{{ foo.baz }}` should be identical.

6.8. Understanding Jinja
yaml_dquote

Serializes a string into a properly-escaped YAML double-quoted string. This is useful when the contents of a string are unknown and may contain quotes or unicode that needs to be preserved. The resulting string will be emitted with opening and closing double quotes.

```plaintext
{% set bar = '"The quick brown fox . . ."' %}
{% set baz = 'The word of the day is "salty".' %}

{% load_yaml as foo %}
bar: {{ bar|yaml_dquote }}
baz: {{ baz|yaml_dquote }}
{% endload %}
```

In the above case {{ bar }} and {{ foo.bar }} should be identical and {{ baz }} and {{ foo.baz }} should be identical. If variable contents are not guaranteed to be a string then it is better to use yaml_encode which handles all YAML scalar types.

yaml_squote

Similar to the yaml_dquote filter but with single quotes. Note that YAML only allows special escapes inside double quotes so yaml_squote is not nearly as useful (viz. you likely want to use yaml_encode or yaml_dquote).

to_bool

New in version 2017.7.0.

Returns the logical value of an element.

Example:

```plaintext
{{ 'yes' | to_bool }}
{{ 'true' | to_bool }}
{{ 1 | to_bool }}
{{ 'no' | to_bool }}
```

Will be rendered as:

```
True
True
True
False
```

exactly_n_true

New in version 2017.7.0.

Tests that exactly N items in an iterable are "truthy" (neither None, False, nor 0).

Example:

```plaintext
{{ ['yes', 0, False, 'True'] | exactly_n_true(2) }}
```

Returns:
**exactly_one_true**

New in version 2017.7.0.

Tests that exactly one item in an iterable is "truthy" (neither None, False, nor 0).

Example:

```python
{{ ['yes', False, 0, None] | exactly_one_true }}
```

Returns:

`True`

**quote**

New in version 2017.7.0.

This text will be wrapped in quotes.

**regex_search**

New in version 2017.7.0.

Scan through string looking for a location where this regular expression produces a match. Returns `None` in case there were no matches found.

Example:

```python
{{ 'abcdefabcdef' | regex_search('BC(.*)', ignorecase=True) }}
```

Returns:

`('defabcdef',)`

**regex_match**

New in version 2017.7.0.

If zero or more characters at the beginning of string match this regular expression, otherwise returns `None`.

Example:

```python
{{ 'abcdefabcdef' | regex_match('BC(.*)', ignorecase=True) }}
```

Returns:

`None`
**regex_replace**

New in version 2017.7.0.
Searches for a pattern and replaces with a sequence of characters.

Example:

```python
{% set my_text = 'yes, this is a TEST' %}
{{ my_text | regex_replace(' ([a-z])', '__\1', ignorecase=True) }}
```

Returns:

yes,____this____is____a____TEST

**uuid**

New in version 2017.7.0.
Return a UUID.

Example:

```python
{{ 'random' | uuid }}
```

Returns:

3652b285-26ad-588e-a5dc-c2ee65edc804

**is_list**

New in version 2017.7.0.
Return if an object is list.

Example:

```python
{{ [1, 2, 3] | is_list }}
```

Returns:

True

**is_iter**

New in version 2017.7.0.
Return if an object is iterable.

Example:

```python
{{ [1, 2, 3] | is_iter }}
```

Returns:
**min**

New in version 2017.7.0.
Return the minimum value from a list.

Example:

```python
{{ [1, 2, 3] | min }}
```

Returns:

1

**max**

New in version 2017.7.0.
Returns the maximum value from a list.

Example:

```python
{{ [1, 2, 3] | max }}
```

Returns:

3

**avg**

New in version 2017.7.0.
Returns the average value of the elements of a list.

Example:

```python
{{ [1, 2, 3] | avg }}
```

Returns:

2

**union**

New in version 2017.7.0.
Return the union of two lists.

Example:

```python
{{ [1, 2, 3] | union([2, 3, 4]) | join(',')) }}
```

Returns:
**intersect**

New in version 2017.7.0.

Return the intersection of two lists.

Example:

```python
{{ [1, 2, 3] | intersect([2, 3, 4]) | join(', ') }}
```

Returns:

2, 3

**difference**

New in version 2017.7.0.

Return the difference of two lists.

Example:

```python
{{ [1, 2, 3] | difference([2, 3, 4]) | join(', ') }}
```

Returns:

1

**symmetric_difference**

New in version 2017.7.0.

Return the symmetric difference of two lists.

Example:

```python
{{ [1, 2, 3] | symmetric_difference([2, 3, 4]) | join(', ') }}
```

Returns:

1, 4

**method_call**

New in version 3001.

Returns a result of object's method call.

Example #1:

```python
{{ [1, 2, 1, 3, 4] | method_call('index', 1, 1, 3) }}
```

Returns:
This filter can be used with the map filter to apply object methods without using loop constructs or temporary variables.

Example #2:

```plaintext
{% set host_list = ['web01.example.com', 'db01.example.com'] %}
{% set host_list_split = [] %}
{% for item in host_list %}
  {% do host_list_split.append(item.split('.', 1)) %}
{% endfor %}
{{ host_list_split }}
```

Example #3:

```plaintext
{{ host_list|map('method_call', 'split', '.', 1)|list }}
```

Return of examples #2 and #3:

```
[['web01', example.com], ['db01', example.com]]
```

**is_sorted**

New in version 2017.7.0.

Return True if an iterable object is already sorted.

Example:

```plaintext
{{ [1, 2, 3] | is_sorted }}
```

Returns:

```
True
```

**compare_lists**

New in version 2017.7.0.

Compare two lists and return a dictionary with the changes.

Example:

```plaintext
{{ [1, 2, 3] | compare_lists([1, 2, 4]) }}
```

Returns:

```
{"new": [4], "old": [3]}
```
**compare_dicts**

New in version 2017.7.0.

Compare two dictionaries and return a dictionary with the changes.

Example:

```python
def compare_dicts(a, b):
    if a != b:
        return {key: value_a if value_a != value_b else value_b for key, value_a, value_b in a.items(), b.items()}
    return None
```

**is_hex**

New in version 2017.7.0.

Return True if the value is hexadecimal.

Example:

```python
is_hex = lambda value: value.startswith('0x')
```

**contains_whitespace**

New in version 2017.7.0.

Return True if a text contains whitespaces.

Example:

```python
contains_whitespace = lambda value: ' ' in value
```

**substring_in_list**

New in version 2017.7.0.

Return True if a substring is found in a list of string values.

Example:

```python
substring_in_list = lambda value, list_value: value in list_value
```
**check whitelist blacklist**

New in version 2017.7.0.

Check a whitelist and/or blacklist to see if the value matches it.

This filter can be used with either a whitelist or a blacklist individually, or a whitelist and a blacklist can be passed simultaneously.

If whitelist is used alone, value membership is checked against the whitelist only. If the value is found, the function returns True. Otherwise, it returns False.

If blacklist is used alone, value membership is checked against the blacklist only. If the value is found, the function returns False. Otherwise, it returns True.

If both a whitelist and a blacklist are provided, value membership in the blacklist will be examined first. If the value is not found in the blacklist, then the whitelist is checked. If the value isn't found in the whitelist, the function returns False.

Whitelist Example:

```
{{ 5 | check_whitelist_blacklist(whitelist=[5, 6, 7]) }}
```

Returns:

True

Blacklist Example:

```
{{ 5 | check_whitelist_blacklist(blacklist=[5, 6, 7]) }}
```

False

**date_format**

New in version 2017.7.0.

Converts unix timestamp into human-readable string.

Example:

```
{{ 1457456400 | date_format }}
{{ 1457456400 | date_format('%d.%m.%Y %H:%M') }}
```

Returns:

2017-03-08
08.03.2017 17:00
**to_num**

New in version 2017.7.0.

New in version 2018.3.0: Renamed from `str_to_num` to `to_num`.

Converts a string to its numerical value.

Example:

```python
{{ '5' | to_num }}
```

Returns:

5

**to_bytes**

New in version 2017.7.0.

Converts string-type object to bytes.

Example:

```python
{{ 'wall of text' | to_bytes }}
```

Note: This option may have adverse effects when using the default renderer, jinja|yaml. This is due to the fact that YAML requires proper handling in regard to special characters. Please see the section on YAML ASCII support in the YAML Idiosyncracies documentation for more information.

**json_encode_list**

New in version 2017.7.0.

New in version 2018.3.0: Renamed from `json_decode_list` to `json_encode_list`. When you encode something you get bytes, and when you decode, you get your locale's encoding (usually a unicode type). This filter was incorrectly-named when it was added. `json_decode_list` will be supported until the Aluminium release.

Deprecated since version 2018.3.3,2019.2.0: The `tojson` filter accomplishes what this filter was designed to do, making this filter redundant.

Recursively encodes all string elements of the list to bytes.

Example:

```python
{{ [1, 2, 3] | json_encode_list }}
```

Returns:

```python
[1, 2, 3]
```
**json_encode_dict**

New in version 2017.7.0.

New in version 2018.3.0: Renamed from `json_decode_dict` to `json_encode_dict`. When you encode something you get bytes, and when you decode, you get your locale's encoding (usually a `unicode` type). This filter was incorrectly-named when it was added. `json_decode_dict` will be supported until the Aluminium release.

Deprecated since version 2018.3.3, 2019.2.0: The `tojson` filter accomplishes what this filter was designed to do, making this filter redundant.

Recursively encodes all string items in the dictionary to bytes.

Example:

Assuming that `pillar['foo']` contains `{u'a': u'\u0414'}`, and your locale is `en_US.UTF-8`:

```
{{ pillar['foo'] | json_encode_dict }}
```

Returns:

```
{"a": "\xd0\x94"}
```

**tojson**

New in version 2018.3.3, 2019.2.0.

Dumps a data structure to JSON.

This filter was added to provide this functionality to hosts which have a Jinja release older than version 2.9 installed. If Jinja 2.9 or newer is installed, then the upstream version of the filter will be used. See the upstream docs for more information.

**random_hash**

New in version 2017.7.0.

New in version 2018.3.0: Renamed from `rand_str` to `random_hash` to more accurately describe what the filter does. `rand_str` will be supported to ensure backwards compatibility but please use the preferred `random_hash`.

Generates a random number between 1 and the number passed to the filter, and then hashes it. The default hash type is the one specified by the minion's `hash_type` config option, but an alternate hash type can be passed to the filter as an argument.

Example:

```
{% set num_range = 99999999 %}
{{ num_range | random_hash }}
{{ num_range | random_hash('sha512') }}
```

Returns:

```
43ec517d68b6edd3015b3edc9a11367b
d94a45ac0f8e3107d237db09d5d195f6a52a0d188bc0284c0763e01eac9f9496fb6a531a296074c87b3540398dace1222b
```
**set_dict_key_value**

New in version 3000.

Allows you to set a value in a nested dictionary without having to worry if all the nested keys actually exist. Missing keys will be automatically created if they do not exist. The default delimiter for the keys is ‘:’, however, with the `delimiter`-parameter, a different delimiter can be specified.

Examples:

Example 1: `{%- set foo = {} %} {{ foo | set_dict_key_value('bar:baz', 42) }}`

Example 2: `{{ {} | set_dict_key_value('bar.baz.qux', 42, delimiter=\'\') }}`

Returns:

Example 1: `{'bar': {'baz': 42}}`

Example 2: `{'bar': {'baz': {'qux': 42}}}`

**append_dict_key_value**

New in version 3000.

Allows you to append to a list nested (deep) in a dictionary without having to worry if all the nested keys (or the list itself) actually exist. Missing keys will automatically be created if they do not exist. The default delimiter for the keys is ‘:’, however, with the `delimiter`-parameter, a different delimiter can be specified.

Examples:

Example 1: `{%- set foo = {'bar': {'baz': [1, 2]}} %} {{ foo | append_dict_key_value('bar:baz', 42) }}`

Example 2: `{%- set foo = {} %} {{ foo | append_dict_key_value('bar:baz.qux', 42) }}`

Returns:

Example 1: `{'bar': {'baz': [1, 2, 42]}}`

Example 2: `{'bar': {'baz': {'qux': [42]}}}`

**extend_dict_key_value**

New in version 3000.

Allows you to extend a list nested (deep) in a dictionary without having to worry if all the nested keys (or the list itself) actually exist. Missing keys will automatically be created if they do not exist. The default delimiter for the keys is ‘:’, however, with the `delimiter`-parameter, a different delimiter can be specified.

Examples:
Example 1: `{%- set foo = {'bar': {'baz': [1, 2]}} %} {{ foo | extend_dict_key_value('bar:baz', [42, 42]) }}

Example 2: `{% set {} | extend_dict_key_value('bar:baz:qux', [42]) %}

Returns:

Example 1: `{'bar': {'baz': [1, 2, 42, 42]}}`

Example 2: `{'bar': {'baz': {'qux': [42]}}}

**update_dict_key_value**

New in version 3000.

Allows you to update a dictionary nested (deep) in another dictionary without having to worry if all the nested keys actually exist. Missing keys will automatically be created if they do not exist. The default delimiter for the keys is `:`, however, with the *delimiter*-parameter, a different delimiter can be specified.

Examples:

Example 1: `{%- set foo = {'bar': {'baz': {'qux': 1}}} %} {{ foo | update_dict_key_value('bar:baz', {'quux': 3}) }}

Example 2: `{{} | update_dict_key_value('bar:baz:qux', {'quux': 3})}`

Example 1: `{'bar': {'baz': {'qux': 1, 'quux': 3}}}

Example 2: `{'bar': {'baz': {'qux': {'quux': 3}}}}`

**md5**

New in version 2017.7.0.

Return the md5 digest of a string.

Example:

```python
{{ '{'random' | md5 }}
```

Returns:

`7ddf32e17a6ac5ce04a8ecbf782ca509`
sha256

New in version 2017.7.0.
Return the sha256 digest of a string.
Example:

```
{{ 'random' | sha256 }}
```

Returns:

`a441b15fe9a3cf56661190a0b93b9dec7d04127288cc87250967cf3b52894d11`

sha512

New in version 2017.7.0.
Return the sha512 digest of a string.
Example:

```
{{ 'random' | sha512 }}
```

Returns:

`811a90e1c8e86c7b4c0eef5b2c0bf0ec1b19c4b1b5a242e6455be93787cb473cb7bc9b0fdeb960d00d5c688c2094dd63c5c9`

base64_encode

New in version 2017.7.0.
Encode a string as base64.
Example:

```
{{ 'random' | base64_encode }}
```

Returns:

`cmFuZG9t`

base64_decode

New in version 2017.7.0.
Decode a base64-encoded string.

```
{{ 'Z2V0IHNhbHRlZA==' | base64_decode }}
```

Returns:

`get salted`
**hmac**

New in version 2017.7.0.
Verify a challenging hmac signature against a string / shared-secret. Returns a boolean value.

Example:

```python
{{ 'get salted' | hmac('shared secret', 'eBWf9bstXg+NiP5AOwppB5HMvZiYMPzEM9W5YmM/AmQ=' ) }}
```

Returns:

```
True
```

**http_query**

New in version 2017.7.0.

Return the HTTP reply object from a URL.

Example:

```python
{{ 'http://jsonplaceholder.typicode.com/posts/1' | http_query }}
```

Returns:

```
{
  'body': '{
    "userId": 1,
    "id": 1,
    "title": "sunt aut facere repellat provident occaecati excepturi option",
    "body": "quia et suscipit\nsuscipit recusandae consequuntur expedita et cum",
    "nreprehenderit molestiae ut ut quas totam\n    \n    nnostrum rerum est autem sunt rem",
    "eveniet architecto"
  }
}
```

**traverse**

New in version 2018.3.3.

Traverse a dict or list using a colon-delimited target string. The target `foo:bar:0` will return `data['foo']['bar'][0]` if this value exists, and will otherwise return the provided default value.

Example:

```python
{{ { 'a1': { 'b1': { 'c1': 'foo'}}, 'a2': 'bar'} | traverse('a1:b1', 'default') }}
```

Returns:

```
{"c1": "foo"}
```

```python
{{ { 'a1': { 'b1': { 'c1': 'foo'}}, 'a2': 'bar'} | traverse('a2:b2', 'default') }}
```

Returns:
"default"

**json_query**

New in version 3000.

A port of Ansible `json_query` Jinja filter to make queries against JSON data using JMESPath language. Could be used to filter pillar data, yaml maps, and together with `http_query`. Depends on the jmespath Python module.

Examples:

**Example 1:**

```python
{{ [1, 2, 3, 4, [5, 6]] | json_query('[]') }}
```

**Example 2:**

```python
{{
  "machines": [
    {"name": "a", "state": "running"},
    {"name": "b", "state": "stopped"},
    {"name": "c", "state": "running"}
  ] | json_query("machines[?state=='running'].name")
}}
```

**Example 3:**

```python
{{
  "services": [
    {"name": "http", "host": "1.2.3.4", "port": 80},
    {"name": "smtp", "host": "1.2.3.5", "port": 25},
    {"name": "ssh", "host": "1.2.3.6", "port": 22},
  ] | json_query("services[].port")
}}
```

Returns:

**Example 1:** [1, 2, 3, 4, 5, 6]
**Example 2:** ['a', 'c']
**Example 3:** [80, 25, 22]

**to_snake_case**

New in version 3000.

Converts a string from camelCase (or CamelCase) to snake_case.

**Example:**

```python
{{ camelsWillLoveThis | to_snake_case }}
```

Returns:

**Example:** camels_will_love_this
**to_camelcase**

New in version 3000.

Converts a string from snake_case to camelCase (or UpperCamelCase if so indicated).

```python
Example 1: {{ snake_case_for_the_win | to_camelcase }}
Example 2: {{ snake_case_for_the_win | to_camelcase(uppercamel=True) }}
```

Returns:

```python
Example 1: snakeCaseForTheWin
Example 2: SnakeCaseForTheWin
```

**Networking Filters**

The following networking-related filters are supported:

**is_ip**

New in version 2017.7.0.

Return if a string is a valid IP Address.

```python
{{ '192.168.0.1' | is_ip }}
```

Additionally accepts the following options:

- global
- link-local
- loopback
- multicast
- private
- public
- reserved
- site-local
- unspecified

Example - test if a string is a valid loopback IP address.

```python
{{ '192.168.0.1' | is_ip(options='loopback') }}
```
**is_ipv4**

New in version 2017.7.0.

Returns if a string is a valid IPv4 address. Supports the same options as `is_ip`.

```
{ '192.168.0.1' | is_ipv4 }
```

**is_ipv6**

New in version 2017.7.0.

Returns if a string is a valid IPv6 address. Supports the same options as `is_ip`.

```
{ 'fe80::' | is_ipv6 }
```

**ipaddr**

New in version 2017.7.0.

From a list, returns only valid IP entries. Supports the same options as `is_ip`. The list can contain also IP interfaces/networks.

Example:

```
{ ['192.168.0.1', 'foo', 'bar', 'fe80::'] | ipaddr }
```

Returns:

```
['192.168.0.1', 'fe80::']
```

**ipv4**

New in version 2017.7.0.

From a list, returns only valid IPv4 entries. Supports the same options as `is_ip`. The list can contain also IP interfaces/networks.

Example:

```
{ ['192.168.0.1', 'foo', 'bar', 'fe80::'] | ipv4 }
```

Returns:

```
['192.168.0.1']
```
**ipv6**

New in version 2017.7.0.

From a list, returns only valid IPv6 entries. Supports the same options as `is_ip`. The list can contain also IP interfaces/networks.

Example:

```yaml
{{ ["192.168.0.1", 'foo', 'bar', 'fe80::'] | ipv6 }}
```

Returns:

`["fe80::"]`

**network_hosts**

New in version 2017.7.0.

Return the list of hosts within a network. This utility works for both IPv4 and IPv6.

Note: When running this command with a large IPv6 network, the command will take a long time to gather all of the hosts.

Example:

```yaml
{{ '192.168.0.1/30' | network_hosts }}
```

Returns:

`["192.168.0.1", "192.168.0.2"]`

**network_size**

New in version 2017.7.0.

Return the size of the network. This utility works for both IPv4 and IPv6.

Example:

```yaml
{{ '192.168.0.1/8' | network_size }}
```

Returns:

`16777216`
**gen_mac**

New in version 2017.7.0.
Generates a MAC address with the defined OUI prefix.

Common prefixes:
- `00:16:3E` -- Xen
- `00:18:51` -- OpenVZ
- `00:50:56` -- VMware (manually generated)
- `52:54:00` -- QEMU/KVM
- `AC:DE:48` -- PRIVATE

Example:

```text
{{ '00:50' | gen_mac }}
```

Returns:

`00:50:71:52:1C`

**mac_str_to_bytes**

New in version 2017.7.0.
Converts a string representing a valid MAC address to bytes.

Example:

```text
{{ '00:11:22:33:44:55' | mac_str_to_bytes }}
```

Note: This option may have adverse effects when using the default renderer, `jinja|yaml`. This is due to the fact that YAML requires proper handling in regard to special characters. Please see the section on YAML ASCII support in the YAML Idiosyncracies documentation for more information.

**dns_check**

New in version 2017.7.0.
Return the IP resolved by DNS, but do not exit on failure, only raise an exception. Obey system preference for IPv4/6 address resolution.

Example:

```text
{{ 'www.google.com' | dns_check(port=443) }}
```

Returns:

`'172.217.3.196'`
File filters

**is_text_file**

New in version 2017.7.0.
Return if a file is text.
Uses heuristics to guess whether the given file is text or binary, by reading a single block of bytes from the file. If more than 30% of the chars in the block are non-text, or there are NUL (\x00) bytes in the block, assume this is a binary file.
Example:

```python
dict( '/etc/salt/master' | is_text_file )
```

Returns:

True

**is_binary_file**

New in version 2017.7.0.
Return if a file is binary.
Detects if the file is a binary, returns bool. Returns True if the file is a bin, False if the file is not and None if the file is not available.
Example:

```python
dict( '/etc/salt/master' | is_binary_file )
```

Returns:

False

**is_empty_file**

New in version 2017.7.0.
Return if a file is empty.
Example:

```python
dict( '/etc/salt/master' | is_empty_file )
```

Returns:

False
file_hashsum

New in version 2017.7.0.
Return the hashsum of a file.
Example:
```
{{ '/etc/salt/master' | file_hashsum }}
```
Returns:
```
02d4ef1351493759634f18079653252c7a594ea97bd385480c532bca0fdda
```

list_files

New in version 2017.7.0.
Return a recursive list of files under a specific path.
Example:
```
{{ '/etc/salt/' | list_files | join('n') }}
```
Returns:
```
/etc/salt/master
/etc/salt/proxy
/etc/salt/minion
/etc/salt/pillar/top.sls
/etc/salt/pillar/device1.sls
```

path_join

New in version 2017.7.0.
Joins absolute paths.
Example:
```
{{ '/etc/salt/' | path_join('pillar', 'device1.sls') }}
```
Returns:
```
/etc/salt/pillar/device1.sls
```

which

New in version 2017.7.0.
Python clone of /usr/bin/which.
Example:
```
{{ 'salt-master' | which }}
```
Returns:
6.8.7 Tests

Saltstack extends builtin tests with these custom tests:

**equalto**

Tests the equality between two values.
Can be used in an if statement directly:

```
{% if 1 is equalto(1) %}
    < statements >
{% endif %}
```

If clause evaluates to True
or with the selectattr filter:

```
{{ [{'value': 1}, {'value': 2}, {'value': 3}] | selectattr('value', 'equalto', 3) | list }}
```

Returns:

`[["value": 3]]`

**match**

Tests that a string matches the regex passed as an argument.
Can be used in a if statement directly:

```
{% if 'a' is match('[a-b]') %}
    < statements >
{% endif %}
```

If clause evaluates to True
or with the selectattr filter:

```
{{ [{'value': 'a'}, {'value': 'b'}, {'value': 'c'}] | selectattr('value', 'match', '[b-e]') | list }}
```

Returns:

`[["value": "b"], {"value": "c"}]`

Test supports additional optional arguments: ignorecase, multiline
Escape filters

**regex_escape**

New in version 2017.7.0.

Allows escaping of strings so they can be interpreted literally by another function.

Example:

```python
regex_escape = {{ 'https://example.com?foo=bar%20baz' | regex_escape }}
```

will be rendered as:

```text
regex_escape = https:\/\/example\.com\?foo\=bar\%20baz
```

Set Theory Filters

**unique**

New in version 2017.7.0.

Performs set math using Jinja filters.

Example:

```python
unique = {{ ['foo', 'foo', 'bar'] | unique }}
```

will be rendered as:

```text
unique = ['foo', 'bar']
```

6.8.8 Jinja in Files

Jinja can be used in the same way in managed files:

```yaml
# redis.sls
/etc/redis/redis.conf:
  file.managed:
    - source: salt://redis.conf
    - template: jinja
    - context:
      bind: 127.0.0.1

# lib.sls
{% set port = 6379 %}

# redis.conf
{% from 'lib.sls' import port with context %}
port {{ port }}
bind {{ bind }}
```

As an example, configuration was pulled from the file context and from an external template file.
Note: Macros and variables can be shared across templates. They should not be starting with one or more underscores, and should be managed by one of the following tags: `macro`, `set`, `load_yaml`, `load_json`, `import_yaml` and `import_json`.

### 6.8.9 Escaping Jinja

Occasionally, it may be necessary to escape Jinja syntax. There are two ways to do this in Jinja. One is escaping individual variables or strings and the other is to escape entire blocks.

To escape a string commonly used in Jinja syntax such as `{{`, you can use the following syntax:

```jinja
{{ '{{' }}
```

For larger blocks that contain Jinja syntax that needs to be escaped, you can use raw blocks:

```jinja
{% raw %}
  some text that contains jinja characters that need to be escaped
{% endraw %}
```

See the Escaping section of Jinja’s documentation to learn more.

A real-world example of needing to use raw tags to escape a larger block of code is when using `file.managed` with the `contents_pillar` option to manage files that contain something like consul-template, which shares a syntax subset with Jinja. Raw blocks are necessary here because the Jinja in the pillar would be rendered before the `file.managed` is ever called, so the Jinja syntax must be escaped:

```jinja
{% raw %}
- contents_pillar: |
  job "example-job" {
    <snipped>
  task "example" {
    driver = "docker"
    config {
      image = "docker-registry.service.consul:5000/example-job:{{key "nomad/
      --jobs/example-job/version"}}"
    <snipped>
  }{% endraw %}

### 6.8.10 Calling Salt Functions

The Jinja renderer provides a shorthand lookup syntax for the `salt` dictionary of `execution function`.

New in version 2014.7.0.

```jinja
# The following two function calls are equivalent.
{{ salt['cmd.run']('whoami') }}
{{ salt.cmd.run('whoami') }}
```
6.8.11 Debugging

The `show_full_context` function can be used to output all variables present in the current Jinja context.
New in version 2014.7.0.

```
Context is: {{ show_full_context()|yaml(False) }}
```

Logs

New in version 2017.7.0.

Yes, in Salt, one is able to debug a complex Jinja template using the logs. For example, making the call:

```
{% do salt.log.error('testing jinja logging') -%}
```

Will insert the following message in the minion logs:

```
2017-02-01 01:24:40,728 [salt.module.logmod][ERROR ][3779] testing jinja logging
```

6.8.12 Profiling

New in version 3002.

When working with a very large codebase, it becomes increasingly imperative to trace inefficiencies with state and pillar render times. The `profile` Jinja block enables the user to get finely detailed information on the most expensive areas in the codebase.

Profiling blocks

Any block of Jinja code can be wrapped in a `profile` block. The syntax for a profile block is `{% profile as '<name>' %}<jinja code>{% endprofile %}`, where `<name>` can be any string. The `<name>` token will appear in the log at the profile level along with the render time of the block.

```
#/srv/salt/example.sls
{% profile as 'local data' %}
    {% set local_data = {'counter': 0} %}
    {% for i in range(313377) %}
        {% do local_data.update({'counter': i}) %}
    {% endfor %}
{% endprofile %}

test:
    cmd.run:
        - name: |
            printf 'data: %s' '{{ local_data['counter'] }}'
```

The profile block in the `example.sls` state will emit the following log statement:

```
# salt-call --local -l profile state.apply example
[...]
[PROFILE ] Time (in seconds) to render profile block 'local data': 0.9385035037994385
[...]
```
Profiling imports

Using the same logic as the profile block, the import_yaml, import_json, and import_text blocks will emit similar statements at the profile log level.

```python
# /srv/salt/data.sls
{% set values = { 'counter': 0 } %}
{% for i in range(524288) %}
  {% do values.update({ 'counter': i }) %}
{% endfor %}

data: {{ values['counter'] }}
```

```python
# /srv/salt/example.sls
{% import_yaml 'data.sls' as imported %}

test:
  cmd.run:
    - name: |
      printf 'data: %s' '{{ imported['data'] }}'
```

For import_* blocks, the profile log statement has the following form:

```bash
# salt-call --local -l profile state.apply example
[...]
[PROFILE ] Time (in seconds) to render import_yaml 'data.sls': 1.5500736236572266
[...]
```

6.8.13 Python Methods

A powerful feature of jinja that is only hinted at in the official jinja documentation is that you can use the native python methods of the variable type. Here is the python documentation for string methods.

```python
{% set hostname, domain = grains.id.partition('.')[:2] %}{% set hostname %}
{% set strings = grains.id.split('-') %}{% set strings[0] %}
```

6.8.14 Custom Execution Modules

Custom execution modules can be used to supplement or replace complex Jinja. Many tasks that require complex looping and logic are trivial when using Python in a Salt execution module. Salt execution modules are easy to write and distribute to Salt minions.

Functions in custom execution modules are available in the Salt execution module dictionary just like the built-in execution modules:

```python
{{ salt['my_custom_module.my_custom_function']() }}
```

- How to Convert Jinja Logic to an Execution Module
- Writing Execution Modules
6.8.15 Custom Jinja filters

Given that all execution modules are available in the Jinja template, one can easily define a custom module as in the previous paragraph and use it as a Jinja filter. However, please note that it will not be accessible through the pipe.

For example, instead of:

```
{{ my_variable | my_jinja_filter }}
```

The user will need to define `my_jinja_filter` function under an extension module, say `my_filters` and use as:

```
{{ salt.my_filters.my_jinja_filter(my_variable) }}
```

The greatest benefit is that you are able to access thousands of existing functions, e.g.:

- get the DNS AAAA records for a specific address using the `dnsutil`:

  ```
  {{ salt.dnsutil.AAAA('www.google.com') }}
  ```

- retrieve a specific field value from a Redis hash:

  ```
  {{ salt.redis.hget('foo_hash', 'bar_field') }}
  ```

- get the routes to 0.0.0.0/0 using the NAPALM `route`:

  ```
  {{ salt.route.show('0.0.0.0/0') }}
  ```

6.9 Tutorials Index

6.9.1 Autoaccept minions from Grains

New in version 2018.3.0.

To automatically accept minions based on certain characteristics, e.g. the `uuid` you can specify certain grain values on the salt master. Minions with matching grains will have their keys automatically accepted.

1. Configure the autosign_grains_dir in the master config file:

```
autosign_grains_dir: /etc/salt/autosign_grains
```

2. Configure the grain values to be accepted

Place a file named like the grain in the autosign_grains_dir and write the values that should be accepted automatically inside that file. For example to automatically accept minions based on their `uuid` create a file named `/etc/salt/autosign_grains/uuid`:

```
8f7d68e2-30c5-40c6-b84a-df7e978a03ee
1d3c5473-1fbc-479e-b0c7-877705a0730f
```

The master is now setup to accept minions with either of the two specified uuids. Multiple values must always be written into separate lines. Lines starting with a `#` are ignored.

3. Configure the minion to send the specific grains to the master in the minion config file:

```
autosign_grains:
  - uuid
```
Now you should be able to start salt-minion and run `salt-call state.apply` or any other salt commands that require master authentication.

### 6.9.2 Salt as a Cloud Controller

In Salt 0.14.0, an advanced cloud control system was introduced, allowing private cloud VMs to be managed directly with Salt. This system is generally referred to as **Salt Virt**.

The Salt Virt system already exists and is installed within Salt itself. This means that besides setting up Salt, no additional salt code needs to be deployed.

**Note:** The `libvirt` python module and the `certtool` binary are required.

The main goal of Salt Virt is to facilitate a very fast and simple cloud that can scale and is fully featured. Salt Virt comes with the ability to set up and manage complex virtual machine networking, powerful image and disk management, and virtual machine migration with and without shared storage.

This means that Salt Virt can be used to create a cloud from a blade center and a SAN, but can also create a cloud out of a swarm of Linux Desktops without a single shared storage system. Salt Virt can make clouds from truly commodity hardware, but can also stand up the power of specialized hardware as well.

### Setting up Hypervisors

The first step to set up the hypervisors involves getting the correct software installed and setting up the hypervisor network interfaces.

#### Installing Hypervisor Software

Salt Virt is made to be hypervisor agnostic but currently, the only fully implemented hypervisor is KVM via libvirt. The required software for a hypervisor is `libvirt` and `kvm`. For advanced features, install `libguestfs` or `qemu-nbd`.

**Note:** `Libguestfs` and `qemu-nbd` allow for virtual machine images to be mounted before startup and get pre-seeded with configurations and a salt minion.

This sls will set up the needed software for a hypervisor, and run the routines to set up the libvirt pki keys.

**Note:** Package names and setup used is Red Hat specific. Different package names will be required for different platforms.

```yaml
libvirt:
  pkg.installed: []
  file.managed:
    name: /etc/sysconfig/libvirtd
    contents: 'LIBVIRT_ARGS="--listen"'
    require:
      pkg: libvirt
virt.keys:
  require:
    pkg: libvirt
```

(continues on next page)
Hypervisor Network Setup

The hypervisors will need to be running a network bridge to serve up network devices for virtual machines. This formula will set up a standard bridge on a hypervisor connecting the bridge to eth0:

```
eth0:
  network.managed:
    - enabled: True
    - type: eth
    - bridge: br0

br0:
  network.managed:
    - enabled: True
    - type: bridge
    - proto: dhcp
    - require:
      - network: eth0
```

Virtual Machine Network Setup

Salt Virt comes with a system to model the network interfaces used by the deployed virtual machines. By default, a single interface is created for the deployed virtual machine and is bridged to br0. To get going with the default networking setup, ensure that the bridge interface named br0 exists on the hypervisor and is bridged to an active network device.

Note: To use more advanced networking in Salt Virt, read the Salt Virt Networking document:

Salt Virt Networking
Libvirt State

One of the challenges of deploying a libvirt based cloud is the distribution of libvirt certificates. These certificates allow for virtual machine migration. Salt comes with a system used to auto deploy these certificates. Salt manages the signing authority key and generates keys for libvirt clients on the master, signs them with the certificate authority, and uses pillar to distribute them. This is managed via the libvirt state. Simply execute this formula on the minion to ensure that the certificate is in place and up to date:

Note: The above formula includes the calls needed to set up libvirt keys.

```
libvirt_keys:
    virt.keys
```

Getting Virtual Machine Images Ready

Salt Virt requires that virtual machine images be provided as these are not generated on the fly. Generating these virtual machine images differs greatly based on the underlying platform.

Virtual machine images can be manually created using KVM and running through the installer, but this process is not recommended since it is very manual and prone to errors.

Virtual Machine generation applications are available for many platforms:

**kiwi**: (openSUSE, SLES, RHEL, CentOS) https://opensuse.github.io/kiwi/

**vm-builder**: https://wiki.debian.org/VMBuilder

See also:

  vmbuilder-formula

Once virtual machine images are available, the easiest way to make them available to Salt Virt is to place them in the Salt file server. Just copy an image into `/srv/salt` and it can now be used by Salt Virt.

For purposes of this demo, the file name `centos.img` will be used.

Existing Virtual Machine Images

Many existing Linux distributions distribute virtual machine images which can be used with Salt Virt. Please be advised that NONE OF THESE IMAGES ARE SUPPORTED BY SALTSTACK.

CentOS

These images have been prepared for OpenNebula but should work without issue with Salt Virt, only the raw qcow image file is needed: https://wiki.centos.org/Cloud/OpenNebula
Fedora Linux

Images for Fedora Linux can be found here: https://alt.fedoraproject.org/cloud

openSUSE


SUSE

https://www.suse.com/products/server/jeos

Ubuntu Linux

Images for Ubuntu Linux can be found here: http://cloud-images.ubuntu.com/

Using Salt Virt

With hypervisors set up and virtual machine images ready, Salt can start issuing cloud commands using the *virt runner*.

Start by running a Salt Virt hypervisor info command:

```
salt-run virt.host_info
```

This will query the running hypervisor(s) for stats and display useful information such as the number of CPUs and amount of memory.

You can also list all VMs and their current states on all hypervisor nodes:

```
salt-run virt.list
```

Now that hypervisors are available a virtual machine can be provisioned, the *virt.init* routine will create a new virtual machine:

```
salt-run virt.init centos1 2 512 salt://centos.img
```

The Salt Virt runner will now automatically select a hypervisor to deploy the new virtual machine on. Using `salt:/` assumes that the CentOS virtual machine image is located in the root of the Salt File Server on the master. When images are cloned (i.e. copied locally after retrieval from the file server), the destination directory on the hypervisor minion is determined by the `virt:images` config option; by default this is `/srv/salt-images/`.

When a VM is initialized using `virt.init`, the image is copied to the hypervisor using `cp.cache_file` and will be mounted and seeded with a minion. Seeding includes setting pre-authenticated keys on the new machine. A minion will only be installed if one can not be found on the image using the default arguments to `seed.apply`.

**Note:** The biggest bottleneck in starting VMs is when the Salt Minion needs to be installed. Making sure that the source VM images already have Salt installed will GREATLY speed up virtual machine deployment.

You can also deploy an image on a particular minion by directly calling the `virt` execution module with an absolute image path. This can be quite handy for testing:

```
...
Now that the new VM has been prepared, it can be seen via the `virt.query` command:

```
salt-run virt.query
```

This command will return data about all of the hypervisors and respective virtual machines.

Now that the new VM is booted, it should have contacted the Salt Master. A `test.ping` will reveal if the new VM is running.

### QEMU Copy on Write Support

For fast image cloning, you can use the qcow disk image format. Pass the `enable_qcow` flag and a `.qcow2` image path to `virt.init`:

```
salt 'hypervisor*' virt.init centos1 2 512 image=/var/lib/libvirt/images/centos.qcow2 __enable_qcow=True start=False
```

**Note:** Beware that attempting to boot a qcow image too quickly after cloning can result in a race condition where libvirt may try to boot the machine before image seeding has completed. For that reason, it is recommended to also pass `start=False` to `virt.init`.

Also know that you **must not** modify the original base image without first making a copy and then rebasing all overlay images onto it. See the `qemu-img rebase` usage docs.

### Migrating Virtual Machines

Salt Virt comes with full support for virtual machine migration. Using the libvirt state in the above formula makes migration possible.

A few things need to be available to support migration. Many operating systems turn on firewalls when originally set up; the firewall needs to be opened up to allow for libvirt and kvm to cross communicate and execution migration routines. On Red Hat based hypervisors in particular, port 16514 needs to be opened on hypervisors:

```
iptables -A INPUT -m state --state NEW -m tcp -p tcp --dport 16514 -j ACCEPT
```

**Note:** More in-depth information regarding distribution specific firewall settings can be found in: *Opening the Firewall up for Salt*

Salt also needs the `virt:tunnel` option to be turned on. This flag tells Salt to run migrations securely via the libvirt TLS tunnel and to use port 16514. Without `virt:tunnel`, libvirt tries to bind to random ports when running migrations.

To turn on `virt:tunnel`, simply apply it to the master config file:

```
virt:    
  tunnel: True
```

Once the master config has been updated, restart the master and send out a call to the minions to refresh the pillar to pick up on the change.
salt ¶* saltutil.refresh_modules

Now, migration routines can be run! To migrate a VM, simply run the Salt Virt migrate routine:
salt-run virt.migrate centos <new hypervisor>

VNC Consoles

Although not enabled by default, Salt Virt can also set up VNC consoles allowing for remote visual consoles to be opened up. When creating a new VM using `virt.init`, pass the `enable_vnc=True` parameter to have a console configured for the new VM.

The information from a `virt.query` routine will display the VNC console port for the specific VMs:

<table>
<thead>
<tr>
<th>centos</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU: 2</td>
</tr>
<tr>
<td>Memory: 524288</td>
</tr>
<tr>
<td>State: running</td>
</tr>
<tr>
<td>Graphics: vnc</td>
</tr>
<tr>
<td>Hyper6:5900</td>
</tr>
<tr>
<td>Disk - vda:</td>
</tr>
<tr>
<td>Size: 2.0G</td>
</tr>
<tr>
<td>File: /srv/salt-images/ubuntu2/system.qcow2</td>
</tr>
<tr>
<td>File Format: qcow2</td>
</tr>
<tr>
<td>Nic - ac:de:48:98:08:77:</td>
</tr>
<tr>
<td>Source: br0</td>
</tr>
<tr>
<td>Type: bridge</td>
</tr>
</tbody>
</table>

The line `Graphics: vnc - Hyper6:5900` holds the key. First the port named, in this case 5900, will need to be available in the hypervisor’s firewall. Once the port is open, then the console can be easily opened via `vncviewer`:

```
vncviewer hyper6:5900
```

By default there is no VNC security set up on these ports, which suggests that keeping them firewalled and mandating that SSH tunnels be used to access these VNC interfaces. Keep in mind that activity on a VNC interface that is accessed can be viewed by any other user that accesses that same VNC interface, and any other user logging in can also operate with the logged in user on the virtual machine.

Conclusion

Now with Salt Virt running, new hypervisors can be seamlessly added just by running the above states on new bare metal machines, and these machines will be instantly available to Salt Virt.

6.9.3 Running Salt States and Commands in Docker Containers

The 2016.11.0 release of Salt introduces the ability to execute Salt States and Salt remote execution commands directly inside of Docker containers.

This addition makes it possible to not only deploy fresh containers using Salt States. This also allows for running containers to be audited and modified using Salt, but without running a Salt Minion inside the container. Some of the applications include security audits of running containers as well as gathering operating data from containers.

This new feature is simple and straightforward, and can be used via a running Salt Minion, the Salt Call command, or via Salt SSH. For this tutorial we will use the `salt-call` command, but like all salt commands these calls are directly translatable to `salt` and `salt-ssh`. 

444 Chapter 6. Using Salt
Salt Documentation, Release 3002.5

Step 1 - Install Docker

Since setting up Docker is well covered in the Docker documentation we will make no such effort to describe it here. Please see the Docker Installation Documentation for installing and setting up Docker: https://docs.docker.com/engine/installation/

The Docker integration also requires that the docker-py library is installed. This can easily be done using pip or via your system package manager:

```bash
pip install docker-py
```

Step 2 - Install Salt

For this tutorial we will be using Salt Call, which is available in the salt-minion package, please follow the Salt Installation docs found here: https://repo.saltstack.com/

Step 3 - Create With Salt States

Next some Salt States are needed, for this example a very basic state which installs vim is used, but anything Salt States can do can be done here, please see the Salt States Introduction Tutorial to learn more about Salt States: https://docs.saltstack.com/en/stage/getstarted/config/

For this tutorial, simply create a small state file in /srv/salt/vim.sls:

```bash
vim:
  pkg.installed
```

Note: The base image you choose will need to have python 2.6 or 2.7 installed. We are hoping to resolve this constraint in a future release.

If base is omitted the default image used is a minimal openSUSE image with Python support, maintained by SUSE

Next run the docker.sls_build command:

```bash
salt-call --local dockerng.sls_build test base=my_base_image mods=vim
```

Now we have a fresh image called test to work with and vim has been installed.

Step 4 - Running Commands Inside the Container

Salt can now run remote execution functions inside the container with another simple salt-call command:

```bash
salt-call --local dockerng.call test test.version
salt-call --local dockerng.call test network.interfaces
salt-call --local dockerng.call test disk.usage
salt-call --local dockerng.call test pkg.list_pkgs
salt-call --local dockerng.call test service.running httpd
salt-call --local dockerng.call test cmd.run 'ls -l /etc'
```
6.9.4 Automatic Updates / Frozen Deployments

New in version 0.10.3.d.

Salt has support for the Esky application freezing and update tool. This tool allows one to build a complete zipfile out of the salt scripts and all their dependencies - including shared objects / DLLs.

Getting Started

To build frozen applications, suitable build environment will be needed for each platform. You should probably set up a virtualenv in order to limit the scope of Q/A.

This process does work on Windows. Directions are available at https://github.com/saltstack/salt-windows-install for details on installing Salt in Windows. Only the 32-bit Python and dependencies have been tested, but they have been tested on 64-bit Windows.

Install bbfreeze, and then esky from PyPI in order to enable the bdist_esky command in setup.py. Salt itself must also be installed, in addition to its dependencies.

Building and Freezing

Once you have your tools installed and the environment configured, use setup.py to prepare the distribution files.

```
python setup.py sdist
python setup.py bdist
```

Once the distribution files are in place, Esky can be used traverse the module tree and pack all the scripts up into a redistributable.

```
python setup.py bdist_esky
```

There will be an appropriately versioned salt-VERSION.zip in dist/ if everything went smoothly.

Windows

C:\Python27\lib\site-packages\zmq will need to be added to the PATH variable. This helps bbfreeze find the zmq DLL so it can pack it up.

Using the Frozen Build

Unpack the zip file in the desired install location. Scripts like salt-minion and salt-call will be in the root of the zip file. The associated libraries and bootstrapping will be in the directories at the same level. (Check the Esky documentation for more information)

To support updating your minions in the wild, put the builds on a web server that the minions can reach. salt.modules.saltutil.update() will trigger an update and (optionally) a restart of the minion service under the new version.
Troubleshooting

A Windows minion isn't responding

The process dispatch on Windows is slower than it is on *nix. It may be necessary to add `-t 15` to salt commands to give minions plenty of time to return.

Windows and the Visual Studio Redist

The Visual C++ 2008 32-bit redistributable will need to be installed on all Windows minions. Esky has an option to pack the library into the zipfile, but OpenSSL does not seem to acknowledge the new location. If a `no OPENSSL_Applink` error appears on the console when trying to start a frozen minion, the redistributable is not installed.

Mixed Linux environments and Yum

The Yum Python module doesn't appear to be available on any of the standard Python package mirrors. If RHEL/CentOS systems need to be supported, the frozen build should created on that platform to support all the Linux nodes. Remember to build the virtualenv with `--system-site-packages` so that the `yum` module is included.

Automatic (Python) module discovery

Automatic (Python) module discovery does not work with the late-loaded scheme that Salt uses for (Salt) modules. Any misbehaving modules will need to be explicitly added to the `freezer Includes` in Salt's `setup.py`. Always check the zipped application to make sure that the necessary modules were included.

6.9.5 ESXi Proxy Minion

New in version 2015.8.4.

Note: This tutorial assumes basic knowledge of Salt. To get up to speed, check out the Salt Walkthrough.

This tutorial also assumes a basic understanding of Salt Proxy Minions. If you're unfamiliar with Salt's Proxy Minion system, please read the Salt Proxy Minion documentation and the Salt Proxy Minion End-to-End Example tutorial.

The third assumption that this tutorial makes is that you also have a basic understanding of ESXi hosts. You can learn more about ESXi hosts on VMware's various resources.

Salt's ESXi Proxy Minion allows a VMware ESXi host to be treated as an individual Salt Minion, without installing a Salt Minion on the ESXi host.

Since an ESXi host may not necessarily run on an OS capable of hosting a Python stack, the ESXi host can't run a regular Salt Minion directly. Therefore, Salt's Proxy Minion functionality enables you to designate another machine to host a proxy process that "proxies" communication from the Salt Master to the ESXi host. The master does not know or care that the ESXi target is not a "real" Salt Minion.

More in-depth conceptual reading on Proxy Minions can be found in the Proxy Minion section of Salt's documentation.

Salt's ESXi Proxy Minion was added in the 2015.8.4 release of Salt.
Note: Be aware that some functionality for the ESXi Proxy Minion may depend on the type of license attached the ESXi host(s).

For example, certain services are only available to manipulate service state or policies with a VMware vSphere Enterprise or Enterprise Plus license, while others are available with a Standard license. The ntpd service is restricted to an Enterprise Plus license, while ssh is available via the Standard license.

Please see the vSphere Comparison page for more information.

Dependencies

Manipulation of the ESXi host via a Proxy Minion requires the machine running the Proxy Minion process to have the ESXi CLI package (and all of its dependencies) and the pyVmomi Python Library to be installed.

ESXi Password

The ESXi Proxy Minion uses VMware's API to perform tasks on the host as if it was a regular Salt Minion. In order to access the API that is already running on the ESXi host, the ESXi host must have a username and password that is used to log into the host. The username is usually root. Before Salt can access the ESXi host via VMware's API, a default password must be set on the host.

pyVmomi

The pyVmomi Python library must be installed on the machine that is running the proxy process. pyVmomi can be installed via pip:

```
$ pip install pyVmomi
```

Note: Version 6.0 of pyVmomi has some problems with SSL error handling on certain versions of Python. If using version 6.0 of pyVmomi, the machine that you are running the proxy minion process from must have either Python 2.6, Python 2.7.9, or newer. This is due to an upstream dependency in pyVmomi 6.0 that is not supported in Python version 2.7 to 2.7.8. If the version of Python running the proxy process is not in the supported range, you will need to install an earlier version of pyVmomi. See Issue #29537 for more information.

Based on the note above, to install an earlier version of pyVmomi than the version currently listed in PyPi, run the following:

```
$ pip install pyVmomi==5.5.0.2014.1.1
```

The 5.5.0.2014.1.1 is a known stable version that the original ESXi Proxy Minion was developed against.
ESXCLI

Currently, about a third of the functions used for the ESXi Proxy Minion require the ESXCLI package be installed on the machine running the Proxy Minion process.

The ESXCLI package is also referred to as the VMware vSphere CLI, or vCLI. VMware provides vCLI package installation instructions for **vSphere 5.5** and **vSphere 6.0**.

Once all of the required dependencies are in place and the vCLI package is installed, you can check to see if you can connect to your ESXi host by running the following command:

```
esxcli -s <host-location> -u <username> -p <password> system syslog config get
```

If the connection was successful, ESXCLI was successfully installed on your system. You should see output related to the ESXi host’s syslog configuration.

Configuration

There are several places where various configuration values need to be set in order for the ESXi Proxy Minion to run and connect properly.

**Proxy Config File**

On the machine that will be running the Proxy Minion process(es), a proxy config file must be in place. This file should be located in the `/etc/salt/` directory and should be named `proxy`. If the file is not there by default, create it.

This file should contain the location of your Salt Master that the Salt Proxy will connect to.

Example Proxy Config File:

```
# /etc/salt/proxy
master: <salt-master-location>
```

**Pillar Profiles**

Proxy minions get their configuration from Salt’s Pillar. Every proxy must have a stanza in Pillar and a reference in the Pillar top-file that matches the Proxy ID. At a minimum for communication with the ESXi host, the pillar should look like this:

```
proxy:
  proxitype: esxi
  host: <ip or dns name of esxi host>
  username: <ESXi username>
  passwords:
    - first_password
    - second_password
    - third_password
```

Some other optional settings are `protocol` and `port`. These can be added to the pillar configuration.
proxytype

The `proxytype` key and value pair is critical, as it tells Salt which interface to load from the `proxy` directory in Salt's install hierarchy, or from `/srv/salt/_proxy` on the Salt Master (if you have created your own proxy module, for example). To use this ESXi Proxy Module, set this to `esxi`.

host

The location, or ip/dns, of the ESXi host. Required.

username

The username used to login to the ESXi host, such as `root`. Required.

passwords

A list of passwords to be used to try and login to the ESXi host. At least one password in this list is required.

The proxy integration will try the passwords listed in order. It is configured this way so you can have a regular password and the password you may be updating for an ESXi host either via the `vsphere.update_host_password` execution module function or via the `esxi.password_present` state function. This way, after the password is changed, you should not need to restart the proxy minion—it should just pick up the new password provided in the list. You can then change pillar at will to move that password to the front and retire the unused ones.

Use-case/reasoning for using a list of passwords: You are setting up an ESXi host for the first time, and the host comes with a default password. You know that you'll be changing this password during your initial setup from the default to a new password. If you only have one password option, and if you have a state changing the password, any remote execution commands or states that run after the password change will not be able to run on the host until the password is updated in Pillar and the Proxy Minion process is restarted.

This allows you to use any number of potential fallback passwords.

Note: When a password is changed on the host to one in the list of possible passwords, the further down on the list the password is, the longer individual commands will take to return. This is due to the nature of pyVmomi’s login system. We have to wait for the first attempt to fail before trying the next password on the list.

This scenario is especially true, and even slower, when the proxy minion first starts. If the correct password is not the first password on the list, it may take up to a minute for `test.version` to respond with salt's version installed (Example: `2018.3.4` Once the initial authorization is complete, the responses for commands will be a little faster.

To avoid these longer waiting periods, SaltStack recommends moving the correct password to the top of the list and restarting the proxy minion at your earliest convenience.
protocol

If the ESXi host is not using the default protocol, set this value to an alternate protocol. Default is https. For example:

port

If the ESXi host is not using the default port, set this value to an alternate port. Default is 443.

Example Configuration Files

An example of all of the basic configurations that need to be in place before starting the Proxy Minion processes includes the Proxy Config File, Pillar Top File, and any individual Proxy Minion Pillar files.

In this example, we'll assuming there are two ESXi hosts to connect to. Therefore, we'll be creating two Proxy Minion config files, one config for each ESXi host.

Proxy Config File:

```
# /etc/salt/proxy

master: <salt-master-location>
```

Pillar Top File:

```
# /srv/pillar/top.sls

base:
  'esxi-1':
    - esxi-1
  'esxi-2':
    - esxi-2
```

Pillar Config File for the first ESXi host, esxi-1:

```
# /srv/pillar/esxi-1.sls

proxy:
  proxytype: esxi
  host: esxi-1.example.com
  username: 'root'
  passwords:
    - bad-password-1
    - backup-bad-password-1
```

Pillar Config File for the second ESXi host, esxi-2:

```
# /srv/pillar/esxi-2.sls

proxy:
  proxytype: esxi
  host: esxi-2.example.com
  username: 'root'
  passwords:
```

(continues on next page)
Starting the Proxy Minion

Once all of the correct configuration files are in place, it is time to start the proxy processes!

1. First, make sure your Salt Master is running.

2. Start the first Salt Proxy, in debug mode, by giving the Proxy Minion process and ID that matches the config file name created in the Configuration section.

```bash
salt-proxy --proxyid='esxi-1' -l debug
```

1. Accept the `esxi-1` Proxy Minion’s key on the Salt Master:

```
# salt-key -L
Accepted Keys: esxi-1
Denied Keys: 
Unaccepted Keys: esxi-1
Rejected Keys: 
#
# salt-key -a esxi-1
The following keys are going to be accepted:
Unaccepted Keys: esxi-1
Proceed? [n/Y] y
Key for minion esxi-1 accepted.
```

1. Repeat for the second Salt Proxy, this time we’ll run the proxy process as a daemon, as an example.

```bash
salt-proxy --proxyid='esxi-2' -d
```

1. Accept the `esxi-2` Proxy Minion’s key on the Salt Master:

```
# salt-key -L
Accepted Keys: esxi-1
Denied Keys: 
Unaccepted Keys: esxi-2
Rejected Keys: 
#
# salt-key -a esxi-2
The following keys are going to be accepted:
Unaccepted Keys: esxi-2
Proceed? [n/Y] y
Key for minion esxi-2 accepted.
```

1. Check and see if your Proxy Minions are responding:

```
# salt 'esxi-*' test.version
esxi-1:
```

(continues on next page)
Executing Commands

Now that you've configured your Proxy Minions and have them responding successfully to a `test.version`, we can start executing commands against the ESXi hosts via Salt.

It's important to understand how this particular proxy works, and there are a couple of important pieces to be aware of in order to start running remote execution and state commands against the ESXi host via a Proxy Minion: the vSphere Execution Module, the ESXi Execution Module, and the ESXi State Module.

vSphere Execution Module

The `salt.modules.vsphere` is a standard Salt execution module that does the bulk of the work for the ESXi Proxy Minion. If you pull up the docs for it you'll see that almost every function in the module takes credentials (username and password) and a target host argument. When credentials and a host aren't passed, Salt runs commands through `pyVmomi` or `ESXCLI` against the local machine. If you wanted, you could run functions from this module on any machine where an appropriate version of `pyVmomi` and `ESXCLI` are installed, and that machine would reach out over the network and communicate with the ESXi host.

You'll notice that most of the functions in the vSphere module require a host, username, and password. These parameters are contained in the Pillar files and passed through to the function via the proxy process that is already running. You don't need to provide these parameters when you execute the commands. See the Running Remote Execution Commands section below for an example.

ESXi Execution Module

In order for the Pillar information set up in the Configuration section above to be passed to the function call in the vSphere Execution Module, the `salt.modules.esxi` execution module acts as a “shim” between the vSphere execution module functions and the proxy process.

The "shim" takes the authentication credentials specified in the Pillar files and passes them through to the host, username, password, and optional protocol and port options required by the vSphere Execution Module functions.

If the function takes more positional, or keyword, arguments you can append them to the call. It's this shim that speaks to the ESXi host through the proxy, arranges for the credentials and hostname to be pulled from the Pillar section for the ESXi Proxy Minion.

Because of the presence of the shim, to lookup documentation for what functions you can use to interface with the ESXi host, you'll want to look in `salt.modules.vsphere` instead of `salt.modules.esxi`. 
Running Remote Execution Commands

To run commands from the Salt Master to execute, via the ESXi Proxy Minion, against the ESXi host, you use the `esxi.cmd <vsphere-function-name>` syntax to call functions located in the vSphere Execution Module. Both args and kwargs needed for various vsphere execution module functions must be passed through in a kwargs-type manner. For example:

```
salt 'esxi-*' esxi.cmd system_info
salt 'esxi-*' esxi.cmd get_service_running service_name='ssh'
```

ESXi State Module

The ESXi State Module functions similarly to other state modules. The "shim" provided by the ESXi Execution Module passes the necessary host, username, and password credentials through, so those options don't need to be provided in the state. Other than that, state files are written and executed just like any other Salt state. See the `salt.modules.esxi` state for ESXi state functions.

The follow state file is an example of how to configure various pieces of an ESXi host including enabling SSH, uploading and SSH key, configuring a coredump network config, syslog, ntp, enabling VMotion, resetting a host password, and more.

```
# /srv/salt/configure-esxi.sls

configure-host-ssh:
  esxi.ssh_configured:
    - service_running: True
    - ssh_key_file: /etc/salt/ssh_keys/my_key.pub
    - service_policy: 'automatic'
    - service_restart: True
    - certificate_verify: True

configure-host-coredump:
  esxi.coredump_configured:
    - enabled: True
    - dump_ip: 'my-coredump-ip.example.com'

configure-host-syslog:
  esxi.syslog_configured:
    - syslog_configs:
default-timeout: 120
      - firewall: True
      - reset_service: True
      - reset_syslog_config: True
      - reset_configs: loghost,default-timeout

configure-host-ntp:
  esxi.ntp_configured:
    - service_running: True
    - ntp_servers:
      - 192.174.1.100
      - 192.174.1.200
    - service_policy: 'automatic'
    - service_restart: True
```

(continues on next page)
configure-vmotion:
  esxi.vmotion_configured:
    - enabled: True

configure-host-vsan:
  esxi.vsan_configured:
    - enabled: True
    - add_disks_to_vsan: True

configure-host-password:
  esxi.password_present:
    - password: 'new-bad-password'

States are called via the ESXi Proxy Minion just as they would on a regular minion. For example:

```shell
salt 'esxi-*' state.sls configure-esxi test=true
salt 'esxi-*' state.sls configure-esxi
```

Relevant Salt Files and Resources

- ESXi Proxy Minion
- ESXi Execution Module
- ESXi State Module
- Salt Proxy Minion Docs
- Salt Proxy Minion End-to-End Example
- vSphere Execution Module

### 6.9.6 HTTP Modules

This tutorial demonstrates using the various HTTP modules available in Salt. These modules wrap the Python `tornado`, `urllib2`, and `requests` libraries, extending them in a manner that is more consistent with Salt workflows.

**The `salt.utils.http` Library**

This library forms the core of the HTTP modules. Since it is designed to be used from the minion as an execution module, in addition to the master as a runner, it was abstracted into this multi-use library. This library can also be imported by 3rd-party programs wishing to take advantage of its extended functionality.

Core functionality of the execution, state, and runner modules is derived from this library, so common usages between them are described here. Documentation specific to each module is described below.

This library can be imported with:

```python
import salt.utils.http
```
Configuring Libraries

This library can make use of either tornado, which is required by Salt, urllib2, which ships with Python, or requests, which can be installed separately. By default, tornado will be used. In order to switch to urllib2, set the following variable:

```
backend: urllib2
```

In order to switch to requests, set the following variable:

```
backend: requests
```

This can be set in the master or minion configuration file, or passed as an option directly to any `http.query()` functions.

salt.utils.http.query()

This function forms a basic query, but with some add-ons not present in the tornado, urllib2, and requests libraries. Not all functionality currently available in these libraries has been added, but can be in future iterations.

HTTPS Request Methods

A basic query can be performed by calling this function with no more than a single URL:

```
salt.utils.http.query("http://example.com")
```

By default the query will be performed with a GET method. The method can be overridden with the `method` argument:

```
salt.utils.http.query("http://example.com/delete/url", "DELETE")
```

When using the POST method (and others, such as PUT), extra data is usually sent as well. This data can be sent directly (would be URL encoded when necessary), or in whatever format is required by the remote server (XML, JSON, plain text, etc).

```
```

Data Formatting and Templating

Bear in mind that the data must be sent pre-formatted; this function will not format it for you. However, a templated file stored on the local system may be passed through, along with variables to populate it with. To pass through only the file (untemplated):

```
salt.utils.http.query(
)
```

To pass through a file that contains jinja + yaml templating (the default):
To pass through a file that contains mako templating:

```python
class query:
    "http://example.com/post/url",
    method="POST",
    data_file="/srv/salt/somefile.mako",
  data_render=True,
  data_renderer="mako",
  template_dict={"key1": "value1", "key2": "value2"},
)
```

Because this function uses Salt's own rendering system, any Salt renderer can be used. Because Salt's renderer requires `__opts__` to be set, an `opts` dictionary should be passed in. If it is not, then the default `__opts__` values for the node type (master or minion) will be used. Because this library is intended primarily for use by minions, the default node type is `minion`. However, this can be changed to `master` if necessary.

```python
class query:
    "http://example.com/post/url",
    method="POST",
    data_file="/srv/salt/somefile.jinja",
  data_render=True,
  template_dict={"key1": "value1", "key2": "value2"},
  node="master",
}
```

**Headers**

Headers may also be passed through, either as a `header_list`, a `header_dict`, or as a `header_file`. As with the `data_file`, the `header_file` may also be templated. Take note that because HTTP headers are normally syntactically-correct YAML, they will automatically be imported as an a Python dict.

```python
class query:
    "http://example.com/delete/url",
    method="POST",
    header_file="/srv/salt/headers.jinja",
  header_render=True,
  header_renderer="jinja",
)```
Because much of the data that would be templated between headers and data may be the same, the `template_dict` is the same for both. Correcting possible variable name collisions is up to the user.

### Authentication

The `query()` function supports basic HTTP authentication. A username and password may be passed in as `username` and `password`, respectively.

```python
salt.utils.http.query("http://example.com", username="larry", password="5700g3543v4r")
```

### Cookies and Sessions

Cookies are also supported, using Python's built-in `cookielib`. However, they are turned off by default. To turn cookies on, set `cookies` to True.

```python
salt.utils.http.query("http://example.com", cookies=True)
```

By default cookies are stored in Salt's cache directory, normally `/var/cache/salt`, as a file called `cookies.txt`. However, this location may be changed with the `cookie_jar` argument:

```python
salt.utils.http.query("http://example.com", cookies=True, cookie_jar="/path/to/cookie_jar.txt")
```

By default, the format of the cookie jar is LWP (aka, lib-www-perl). This default was chosen because it is a human-readable text file. If desired, the format of the cookie jar can be set to Mozilla:

```python
salt.utils.http.query("http://example.com", cookies=True, cookie_jar="/path/to/cookie_jar.txt", cookie_format="mozilla")
```

Because Salt commands are normally one-off commands that are piped together, this library cannot normally behave as a normal browser, with session cookies that persist across multiple HTTP requests. However, the session can be persisted in a separate cookie jar. The default filename for this file, inside Salt's cache directory, is `cookies.session.p`. This can also be changed.

```python
salt.utils.http.query("http://example.com", persist_session=True, session_cookie_jar="/path/to/jar.p")
```

The format of this file is msgpack, which is consistent with much of the rest of Salt's internal structure. Historically, the extension for this file is `.p`. There are no current plans to make this configurable.
Proxy

If the tornado backend is used (tornado is the default), proxy information configured in proxy_host, proxy_port, proxy_username, proxy_password and no_proxy from the __opts__ dictionary will be used. Normally these are set in the minion configuration file.

| proxy_host: | proxy.my-domain |
| proxy_port: | 31337 |
| proxy_username: | charon |
| proxy_password: | obolus |
| no_proxy: | ['127.0.0.1', 'localhost'] |

```
salt.utils.http.query("http://example.com", opts=__opts__, backend="tornado")
```

Return Data

**Note:** Return data encoding

If decode is set to True, query() will attempt to decode the return data. decode_type defaults to auto. Set it to a specific encoding, xml, for example, to override autodetection.

Because Salt's http library was designed to be used with REST interfaces, query() will attempt to decode the data received from the remote server when decode is set to True. First it will check the Content-type header to try and find references to XML. If it does not find any, it will look for references to JSON. If it does not find any, it will fall back to plain text, which will not be decoded.

JSON data is translated into a dict using Python's built-in json library. XML is translated using salt.utils.xml_util, which will use Python's built-in XML libraries to attempt to convert the XML into a dict. In order to force either JSON or XML decoding, the decode_type may be set:

```
salt.utils.http.query("http://example.com", decode_type="xml")
```

Once translated, the return dict from query() will include a dict called dict.

If the data is not to be translated using one of these methods, decoding may be turned off.

```
salt.utils.http.query("http://example.com", decode=False)
```

If decoding is turned on, and references to JSON or XML cannot be found, then this module will default to plain text, and return the undecoded data as text (even if text is set to False; see below).

The query() function can return the HTTP status code, headers, and/or text as required. However, each must individually be turned on.

```
salt.utils.http.query("http://example.com", status=True, headers=True, text=True)
```

The return from these will be found in the return dict as status, headers and text, respectively.
Writing Return Data to Files

It is possible to write either the return data or headers to files, as soon as the response is received from the server, but specifying file locations via the `text_out` or `headers_out` arguments. `text` and `headers` do not need to be returned to the user in order to do this.

```python
salt.utils.http.query(
    "http://example.com",
    text=False,
    headers=False,
    text_out="/path/to/url_download.txt",
    headers_out="/path/to/headers_download.txt",
)
```

SSL Verification

By default, this function will verify SSL certificates. However, for testing or debugging purposes, SSL verification can be turned off.

```python
salt.utils.http.query(
    "https://example.com", verify_ssl=False,
)
```

CA Bundles

The `requests` library has its own method of detecting which CA (certificate authority) bundle file to use. Usually this is implemented by the packager for the specific operating system distribution that you are using. However, `urllib2` requires a little more work under the hood. By default, Salt will try to auto-detect the location of this file. However, if it is not in an expected location, or a different path needs to be specified, it may be done so using the `ca_bundle` variable.

```python
salt.utils.http.query(
    "https://example.com", ca_bundle="/path/to/ca_bundle.pem",
)
```

Updating CA Bundles

The `update_ca_bundle()` function can be used to update the bundle file at a specified location. If the target location is not specified, then it will attempt to auto-detect the location of the bundle file. If the URL to download the bundle from does not exist, a bundle will be downloaded from the cURL website.

CAUTION: The `target` and the `source` should always be specified! Failure to specify the `target` may result in the file being written to the wrong location on the local system. Failure to specify the `source` may cause the upstream URL to receive excess unnecessary traffic, and may cause a file to be download which is hazardous or does not meet the needs of the user.

```python
salt.utils.http.update_ca_bundle(
    target="/path/to/ca-bundle.crt",
    source="https://example.com/path/to/ca-bundle.crt",
    opts=__opts__,
)
```
The `opts` parameter should also always be specified. If it is, then the `target` and the `source` may be specified in the relevant configuration file (master or minion) as `ca_bundle` and `ca_bundle_url`, respectively.

<table>
<thead>
<tr>
<th>ca_bundle:</th>
<th>/path/to/ca-bundle.crt</th>
</tr>
</thead>
<tbody>
<tr>
<td>ca_bundle_url:</td>
<td><a href="https://example.com/path/to/ca-bundle.crt">https://example.com/path/to/ca-bundle.crt</a></td>
</tr>
</tbody>
</table>

If Salt is unable to auto-detect the location of the CA bundle, it will raise an error.

The `update_ca_bundle()` function can also be passed a string or a list of strings which represent files on the local system, which should be appended (in the specified order) to the end of the CA bundle file. This is useful in environments where private certs need to be made available, and are not otherwise reasonable to add to the bundle file.

```python
salt.utils.http.update_ca_bundle(
    opts=__opts__,
    merge_files=[
        '/etc/ssl/private_cert_1.pem',
        '/etc/ssl/private_cert_2.pem',
        '/etc/ssl/private_cert_3.pem',
    ],
)
```

**Test Mode**

This function may be run in test mode. This mode will perform all work up until the actual HTTP request. By default, instead of performing the request, an empty dict will be returned. Using this function with TRACE logging turned on will reveal the contents of the headers and POST data to be sent.

Rather than returning an empty dict, an alternate `test_url` may be passed in. If this is detected, then test mode will replace the `url` with the `test_url`, set `test` to `True` in the return data, and perform the rest of the requested operations as usual. This allows a custom, non-destructive URL to be used for testing when necessary.

**Execution Module**

The `http` execution module is a very thin wrapper around the `salt.utils.http` library. The `opts` can be passed through as well, but if they are not specified, the minion defaults will be used as necessary.

Because passing complete data structures from the command line can be tricky at best and dangerous (in terms of execution injection attacks) at worse, the `data_file`, and `header_file` are likely to see more use here.

All methods for the library are available in the execution module, as kwargs.

```bash
salt myminion http.query http://example.com/restapi method=POST \
    username='larry' password='5700g3543v4r' headers=True text=True \n    status=True decode_type=xml data_render=True \n    header_file=tmp/headers.txt data_file=/tmp/data.txt \n    header_render=True cookies=True persist_session=True
```
Runner Module

Like the execution module, the http runner module is a very thin wrapper around the salt.utils.http library. The only significant difference is that because runners execute on the master instead of a minion, a target is not required, and default opts will be derived from the master config, rather than the minion config.

All methods for the library are available in the runner module, as kwargs.

```
salt-run http.query http://example.com/restapi method=POST \
    username='larry' password='5700g3543v4r' headers=True text=True \n    status=True decode_type=xml data_render=True \n    header_file=/tmp/headers.txt data_file=/tmp/data.txt \n    header_render=True cookies=True persist_session=True
```

State Module

The state module is a wrapper around the runner module, which applies stateful logic to a query. All kwargs as listed above are specified as usual in state files, but two more kwargs are available to apply stateful logic. A required parameter is match, which specifies a pattern to look for in the return text. By default, this will perform a string comparison of looking for the value of match in the return text. In Python terms this looks like:

```
def myfunc():
    if match in html_text:
        return True
```

If more complex pattern matching is required, a regular expression can be used by specifying a match_type. By default this is set to string, but it can be manually set to pcre instead. Please note that despite the name, this will use Python's `re.search()` rather than `re.match()`.

Therefore, the following states are valid:

```
http://example.com/restapi:
    http.query:
      - match: 'SUCCESS'
      - username: 'larry'
      - password: '5700g3543v4r'
      - data_render: True
      - header_file: /tmp/headers.txt
      - data_file: /tmp/data.txt
      - header_render: True
      - cookies: True
      - persist_session: True

http://example.com/restapi:
    http.query:
      - match_type: pcre
      - match: '(?=.*suces[ss]ed)'
      - username: 'larry'
      - password: '5700g3543v4r'
      - data_render: True
      - header_file: /tmp/headers.txt
      - data_file: /tmp/data.txt
      - header_render: True
      - cookies: True
      - persist_session: True
```
In addition to, or instead of a match pattern, the status code for a URL can be checked. This is done using the `status` argument:

```
http://example.com/:
  http.query:
    - status: 200
```

If both are specified, both will be checked, but if only one is `True` and the other is `False`, then `False` will be returned. In this case, the comments in the return data will contain information for troubleshooting.

Because this is a monitoring state, it will return extra data to code that expects it. This data will always include `text` and `status`. Optionally, `headers` and `dict` may also be requested by setting the `headers` and `decode` arguments to `True`, respectively.

### 6.9.7 Using Salt at scale

The focus of this tutorial will be building a Salt infrastructure for handling large numbers of minions. This will include tuning, topology, and best practices.

For how to install the Salt Master please go here: Installing saltstack

**Note:** This tutorial is intended for large installations, although these same settings won’t hurt, it may not be worth the complexity to smaller installations.

When used with minions, the term 'many' refers to at least a thousand and 'a few' always means 500.

For simplicity reasons, this tutorial will default to the standard ports used by Salt.

#### The Master

The most common problems on the Salt Master are:

1. too many minions authing at once
2. too many minions re-authing at once
3. too many minions re-connecting at once
4. too many minions returning at once
5. too few resources (CPU/HDD)

The first three are all "thundering herd" problems. To mitigate these issues we must configure the minions to back-off appropriately when the Master is under heavy load.

The fourth is caused by masters with little hardware resources in combination with a possible bug in ZeroMQ. At least that’s what it looks like till today ([Issue 118651](https://github.com/saltstack/salt/issues/118651), [Issue 5948](https://github.com/saltstack/salt/issues/5948), Mail thread)

To fully understand each problem, it is important to understand, how Salt works.

Very briefly, the Salt Master offers two services to the minions.

- a job publisher on port 4505
- an open port 4506 to receive the minions returns

All minions are always connected to the publisher on port 4505 and only connect to the open return port 4506 if necessary. On an idle Master, there will only be connections on port 4505.
Too many minions authing

When the Minion service is first started up, it will connect to its Master's publisher on port 4505. If too many minions are started at once, this can cause a "thundering herd". This can be avoided by not starting too many minions at once.

The connection itself usually isn't the culprit, the more likely cause of master-side issues is the authentication that the Minion must do with the Master. If the Master is too heavily loaded to handle the auth request it will time it out. The Minion will then wait $acceptance\_wait\_time$ to retry. If $acceptance\_wait\_time\_max$ is set then the Minion will increase its wait time by the $acceptance\_wait\_time$ each subsequent retry until reaching $acceptance\_wait\_time\_max$.

Too many minions re-authing

This is most likely to happen in the testing phase of a Salt deployment, when all Minion keys have already been accepted, but the framework is being tested and parameters are frequently changed in the Salt Master's configuration file(s).

The Salt Master generates a new AES key to encrypt its publications at certain events such as a Master restart or the removal of a Minion key. If you are encountering this problem of too many minions re-authing against the Master, you will need to recalibrate your setup to reduce the rate of events like a Master restart or Minion key removal ($salt\_key\_\_d$).

When the Master generates a new AES key, the minions aren't notified of this but will discover it on the next pub job they receive. When the Minion receives such a job it will then re-auth with the Master. Since Salt does minion-side filtering this means that all the minions will re-auth on the next command published on the master-- causing another "thundering herd". This can be avoided by setting the

```
random\_reauth\_delay: 60
```

in the minions configuration file to a higher value and stagger the amount of re-auth attempts. Increasing this value will of course increase the time it takes until all minions are reachable via Salt commands.

Too many minions re-connecting

By default the zmq socket will re-connect every 100ms which for some larger installations may be too quick. This will control how quickly the TCP session is re-established, but has no bearing on the auth load.

To tune the minions sockets reconnect attempts, there are a few values in the sample configuration file (default values)

```
recon\_default: 1000
recon\_max: 5000
recon\_randomize: True
```

- $recon\_default$: the default value the socket should use, i.e. 1000. This value is in milliseconds. (1000ms = 1 second)
- $recon\_max$: the max value that the socket should use as a delay before trying to reconnect This value is in milliseconds. (5000ms = 5 seconds)
- $recon\_randomize$: enables randomization between $recon\_default$ and $recon\_max$

To tune this values to an existing environment, a few decision have to be made.

1. How long can one wait, before the minions should be online and reachable via Salt?
2. How many reconnects can the Master handle without a syn flood?
These questions can not be answered generally. Their answers depend on the hardware and the administrators requirements.

Here is an example scenario with the goal, to have all minions reconnect within a 60 second time-frame on a Salt Master service restart.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>recon_default</td>
<td>1000</td>
</tr>
<tr>
<td>recon_max</td>
<td>59000</td>
</tr>
<tr>
<td>recon_randomize</td>
<td>True</td>
</tr>
</tbody>
</table>

Each Minion will have a randomized reconnect value between 'recon_default' and 'recon_default + recon_max', which in this example means between 1000ms and 60000ms (or between 1 and 60 seconds). The generated random-value will be doubled after each attempt to reconnect (ZeroMQ default behavior).

Let's say the generated random value is 11 seconds (or 11000ms).

- reconnect 1: wait 11 seconds
- reconnect 2: wait 22 seconds
- reconnect 3: wait 33 seconds
- reconnect 4: wait 44 seconds
- reconnect 5: wait 55 seconds
- reconnect 6: wait time is bigger than 60 seconds (recon_default + recon_max)
- reconnect 7: wait 11 seconds
- reconnect 8: wait 22 seconds
- reconnect 9: wait 33 seconds
- reconnect x: etc.

With a thousand minions this will mean

\[
1000/60 = \sim 16
\]

round about 16 connection attempts a second. These values should be altered to values that match your environment. Keep in mind though, that it may grow over time and that more minions might raise the problem again.

**Too many minions returning at once**

This can also happen during the testing phase, if all minions are addressed at once with

```
$ salt * disk.usage
```

it may cause thousands of minions trying to return their data to the Salt Master open port 4506. Also causing a flood of syn-flood if the Master can't handle that many returns at once.

This can be easily avoided with Salt's batch mode:

```
$ salt * disk.usage -b 50
```

This will only address 50 minions at once while looping through all addressed minions.
Too few resources

The masters resources always have to match the environment. There is no way to give good advise without knowing the environment the Master is supposed to run in. But here are some general tuning tips for different situations:

The Master is CPU bound

Salt uses RSA-Key-Pairs on the masters and minions end. Both generate 4096 bit key-pairs on first start. While the key-size for the Master is currently not configurable, the minions keysize can be configured with different key-sizes. For example with a 2048 bit key:

```
keysize: 2048
```

With thousands of decryptions, the amount of time that can be saved on the masters end should not be neglected. See here for reference: Pull Request 9235 how much influence the key-size can have.

Downsizing the Salt Master’s key is not that important, because the minions do not encrypt as many messages as the Master does.

In installations with large or with complex pillar files, it is possible for the master to exhibit poor performance as a result of having to render many pillar files at once. This exhibit itself in a number of ways, both as high load on the master and on minions which block on waiting for their pillar to be delivered to them.

To reduce pillar rendering times, it is possible to cache pillars on the master. To do this, see the set of master configuration options which are prefixed with `pillar_cache`.

If many pillars are encrypted using `gpg` renderer, it is possible to cache GPG data. To do this, see the set of master configuration options which are prefixed with `gpg_cache`.

Note: Caching pillars or GPG data on the master may introduce security considerations. Be certain to read caveats outlined in the master configuration file to understand how pillar caching may affect a master’s ability to protect sensitive data!

The Master is disk IO bound

By default, the Master saves every Minion’s return for every job in its job-cache. The cache can then be used later, to lookup results for previous jobs. The default directory for this is:

```
cachedir: /var/cache/salt
```

and then in the `/proc` directory.

Each job return for every Minion is saved in a single file. Over time this directory can grow quite large, depending on the number of published jobs. The amount of files and directories will scale with the number of jobs published and the retention time defined by

```
keep_jobs: 24
```

250 jobs/day * 2000 minions returns = 500,000 files a day
Use and External Job Cache

An external job cache allows for job storage to be placed on an external system, such as a database.

- ext_job_cache: this will have the minions store their return data directly into a returner (not sent through the Master)
- master_job_cache (New in 2014.7.0): this will make the Master store the job data using a returner (instead of the local job cache on disk).

If a master has many accepted keys, it may take a long time to publish a job because the master must first determine the matching minions and deliver that information back to the waiting client before the job can be published.

To mitigate this, a key cache may be enabled. This will reduce the load on the master to a single file open instead of thousands or tens of thousands.

This cache is updated by the maintainence process, however, which means that minions with keys that are accepted may not be targeted by the master for up to sixty seconds by default.

To enable the master key cache, set key_cache: 'sched' in the master configuration file.

Disable The Job Cache

The job cache is a central component of the Salt Master and many aspects of the Salt Master will not function correctly without a running job cache.

Disabling the job cache is STRONGLY DISCOURAGED and should not be done unless the master is being used to execute routines that require no history or reliable feedback!

The job cache can be disabled:

```
job_cache: False
```

6.9.8 How to Convert Jinja Logic to an Execution Module

Note: This tutorial assumes a basic knowledge of Salt states and specifically experience using the maps.jinja idiom.

This tutorial was written by a salt user who was told "if your maps.jinja is too complicated, write an execution module!". If you are experiencing over-complicated jinja, read on.

The Problem: Jinja Gone Wild

It is often said in the Salt community that "Jinja is not a Programming Language". There's an even older saying known as Maslow's hammer. It goes something like "if all you have is a hammer, everything looks like a nail". Jinja is a reliable hammer, and so is the maps.jinja idiom. Unfortunately, it can lead to code that looks like the following.

```
# storage/maps.yaml

{% import_yaml 'storage.defaults.yaml' as default_settings %}
{% set storage = default_settings.storage %}
{% do storage.update(salt['grains.filter_by']({
    'Debian': {
    },
(continues on next page)```
This is an example from the author’s salt formulae demonstrating misuse of jinja. Aside from being difficult to read and maintain, accessing the logic it contains from a non-jinja renderer while probably possible is a significant barrier!

**Refactor**

The first step is to reduce the maps.jinja file to something reasonable. This gives us an idea of what the module we are writing needs to do. There is a lot of logic around selecting a storage server ip. Let’s move that to an execution module.

```
# storage/maps.yaml
{% import_yaml 'storage/defaults.yaml' as default_settings %}
{% set storage = default_settings.storage %}
{% do storage.update(salt['grains.filter_by']({},
    'Debian': {
    },
    'RedHat': {
    },
'), merge=salt['pillar.get'](‘storage:lookup’))) %}
{% if 'VirtualBox' == grains.get('virtual', None) or 'oracle' == grains.get('virtual', None) %}
{% do storage.update({‘depot_ip’: '192.168.33.81', ‘server_ip’: '192.168.33.51'}) %}
{% endif %}
{% do storage.update({‘server_ip’: salt[‘storage.ip’]()}) %}
{% for network, _ in salt.pillar.get(‘inventory:networks’, {}, | dictsort %)
{% do storage.ipsets.hash_net.foo_networks.append(network) %}
{% endfor %}
```
And then, write the module. Note how the module encapsulates all of the logic around finding the storage server IP.

```python
# modules/storage.py
#!python

""
Functions related to storage servers.
""

import re

def ips():
    ""
    Provide a list of all local storage server IPs.
    CLI Example::

    salt \\* storage.ips
    ""

    if __grains__.get("virtual", None) in ["VirtualBox", "oracle"]:  
        return [  
            "192.168.33.51",  
        ]

    colo = __pillar__.get("inventory", {}).get("colo", "Unknown")
    return __pillar__.get("storage_servers", {}).get(colo, ["unknown",])

def ip():
    ""
    Select and return a local storage server IP.
    This loadbalances across storage servers by using the modulus of the client's id
    ""

    numerical_suffix = re.compile(r"^.*(\d+)$")
    servers_list = ips()

    m = numerical_suffix.match(__grains__["id"])
    if m:
        modulus = len(servers_list)
        server_number = int(m.group(1))
        server_index = server_number % modulus
    else:
        server_index = 0
```

(continues on next page)
Conclusion

That was... surprisingly straight-forward. Now the logic is available in every renderer, instead of just Jinja. Best of all, it can be maintained in Python, which is a whole lot easier than Jinja.

6.9.9 Using Apache Libcloud for declarative and procedural multi-cloud orchestration

New in version 2018.3.0.

**Note:** This walkthrough assumes basic knowledge of Salt and Salt States. To get up to speed, check out the [Salt Walkthrough](https://salt.readthedocs.io/en/latest/). Apache Libcloud is a Python library which hides differences between different cloud provider APIs and allows you to manage different cloud resources through a unified and easy to use API. Apache Libcloud supports over 60 cloud platforms, including Amazon, Microsoft Azure, DigitalOcean, Google Cloud Platform and OpenStack.

Execution and state modules are available for Compute, DNS, Storage and Load Balancer drivers from Apache Libcloud in SaltStack.

- **libcloud_compute** - Compute - services such as OpenStack Nova, Amazon EC2, Microsoft Azure VMs
- **libcloud_dns** - DNS as a Service - services such as Amazon Route 53 and Zerigo
- **libcloud_loadbalancer** - Load Balancers as a Service - services such as Amazon Elastic Load Balancer and GoGrid LoadBalancers
- **libcloud_storage** - Cloud Object Storage and CDN - services such as Amazon S3 and Rackspace CloudFiles, OpenStack Swift

These modules are designed as a way of having a multi-cloud deployment and abstracting simple differences between platform to design a high-availability architecture.

The Apache Libcloud functionality is available through both execution modules and Salt states.

**Configuring Drivers**

Drivers can be configured in the Salt Configuration/Minion settings. All libcloud modules expect a list of "profiles" to be configured with authentication details for each driver.

Each driver will have a string identifier, these can be found in the libcloud.<api>.types.Provider class for each API, https://libcloud.readthedocs.io/en/latest/supported_providers.html

Some drivers require additional parameters, which are documented in the Apache Libcloud documentation. For example, GoDaddy DNS expects "shopper_id", which is the customer ID. These additional parameters can be added to the profile settings and will be passed directly to the driver instantiation method.

```
libcloud_dns:
    godaddy:
        driver: godaddy
        shopper_id: 98425123
```
You can have multiple profiles for a single driver, for example if you wanted 2 DNS profiles for Amazon Route53, naming them "route53_prod" and "route53_test" would help your administrators distinguish their purpose.

Using the execution modules

Amongst over 60 clouds that Apache Libcloud supports, you can add profiles to your Salt configuration to access and control these clouds. Each of the libcloud execution modules exposes the common API methods for controlling Compute, DNS, Load Balancers and Object Storage. To see which functions are supported across specific clouds, see the Libcloud supported methods documentation.

The module documentation explains each of the API methods and how to leverage them.

- **libcloud_compute** - Compute - services such as OpenStack Nova, Amazon EC2, Microsoft Azure VMs
- **libcloud_dns** - DNS as a Service - services such as Amazon Route 53 and Zerigo
- **libcloud_loadbalancer** - Load Balancers as a Service - services such as Amazon Elastic Load Balancer and GoGrid LoadBalancers
- **libcloud_storage** - Cloud Object Storage and CDN - services such as Amazon S3 and Rackspace CloudFiles, OpenStack Swift

For example, listing buckets in the Google Storage platform:

```bash
$ salt-call libcloud_storage.list_containers google
```

```json
local:
  |
  --------
extra: --------
  creation_date: 2017-01-05T05:44:56.324Z
  name: anthonypjshaw
```

The Apache Libcloud storage module can be used to synchronize files between multiple storage clouds, such as Google Storage, S3 and OpenStack Swift
Using the state modules

For each configured profile, the assets available in the API (e.g. storage objects, containers, DNS records and load balancers) can be deployed via Salt's state system.

The state module documentation explains the specific states that each module supports

- **libcloud_storage** - Cloud Object Storage and CDN
  - services such as Amazon S3 and Rackspace CloudFiles, OpenStack Swift
- **libcloud_loadbalancer** - Load Balancers as a Service
  - services such as Amazon Elastic Load Balancer and GoGrid LoadBalancers
- **libcloud_dns** - DNS as a Service
  - services such as Amazon Route 53 and Zerigo

For DNS, the state modules can be used to provide DNS resilience for multiple nameservers, for example:

```yaml
libcloud_dns:
  godaddy:
    driver: godaddy
    shopper_id: 12345
    key: 2orgk344kgk34g
    secret: fjgooidjgoim
  amazon:
    driver: route53
    key: blah
    secret: blah
```

And then in a state file:

```yaml
webserver:
  libcloud_dns.zone_present:
    name: mywebsite.com
    profile: godaddy
  libcloud_dns.record_present:
    name: www
    zone: mywebsite.com
    type: A
    data: 12.34.32.3
    profile: godaddy
  libcloud_dns.zone_present:
    name: mywebsite.com
    profile: amazon
  libcloud_dns.record_present:
    name: www
    zone: mywebsite.com
    type: A
    data: 12.34.32.3
    profile: amazon
```

This could be combined with a multi-cloud load balancer deployment,
webserver:
  libcloud_dns.zone_present:
    - name: mywebsite.com
    - profile: godaddy
  ...
libcloud_loadbalancer.balancer_present:
  - name: web_main
  - port: 80
  - protocol: http
  - members:
    - ip: 1.2.4.5
      port: 80
    - ip: 2.4.5.6
      port: 80
  - profile: google_gce
libcloud_loadbalancer.balancer_present:
  - name: web_main
  - port: 80
  - protocol: http
  - members:
    - ip: 1.2.4.5
      port: 80
    - ip: 2.4.5.6
      port: 80
  - profile: amazon_elb

Extended parameters can be passed to the specific cloud, for example you can specify the region with the Google Cloud API, because create_balancer can accept a ex_region argument. Adding this argument to the state will pass the additional command to the driver.

lb_test:
  libcloud_loadbalancer.balancer_absent:
    - name: example
    - port: 80
    - protocol: http
    - profile: google
    - ex_region: us-east1

Accessing custom arguments in execution modules

Some cloud providers have additional functionality that can be accessed on top of the base API, for example the Google Cloud Engine load balancer service offers the ability to provision load balancers into a specific region.

Looking at the API documentation, we can see that it expects an ex_region in the create_balancer method, so when we execute the salt command, we can add this additional parameter like this:

$ salt myminion libcloud_storage.create_balancer my_balancer 80 http profile1 ex_region=us-east1
$ salt myminion libcloud_storage.list_container_objects my_bucket profile1 ex__prefix=me
Accessing custom methods in Libcloud drivers

Some cloud APIs have additional methods that are prefixed with `ex_` in Apache Libcloud, these methods are part of the non-standard API but can still be accessed from the Salt modules for `libcloud_storage`, `libcloud_loadbalancer` and `libcloud_dns`. The extra methods are available via the `extra` command, which expects the name of the method as the first argument, the profile as the second and then accepts a list of keyword arguments to pass onto the driver method, for example, accessing permissions in Google Storage objects:

```
$ salt myminion libcloud_storage.extra ex_get_permissions google container_name=my_container object_name=me.jpg --out=yaml
```

Example profiles

Google Cloud

Using Service Accounts with GCE, you can provide a path to the JSON file and the project name in the parameters.

```
google:
    driver: gce
    user_id: 234234-compute@developer.gserviceaccount.com
    key: /path/to/service_account_download.json
    auth_type: SA
    project: project-name
```

6.9.10 LXC Management with Salt

Note: This walkthrough assumes basic knowledge of Salt. To get up to speed, check out the Salt Walkthrough.

Dependencies

Manipulation of LXC containers in Salt requires the minion to have an LXC version of at least 1.0 (an alpha or beta release of LXC 1.0 is acceptable). The following distributions are known to have new enough versions of LXC packaged:

- RHEL/CentOS 6 and later (via EPEL)
- Fedora (All non-EOL releases)
- Debian 8.0 (Jessie)
- Ubuntu 14.04 LTS and later (LXC templates are packaged separately as lxc-templates, it is recommended to also install this package)
- openSUSE 13.2 and later
Profiles

Profiles allow for a sort of shorthand for commonly-used configurations to be defined in the minion config file, `grains`, `pillar`, or the master config file. The profile is retrieved by Salt using the `config.get` function, which looks in those locations, in that order. This allows for profiles to be defined centrally in the master config file, with several options for overriding them (if necessary) on groups of minions or individual minions.

There are two types of profiles:

- One for defining the parameters used in container creation/clone.
- One for defining the container's network interface(s) settings.

Container Profiles

LXC container profiles are defined underneath the `lxc.container_profile` config option:

```yaml
lxc.container_profile:
  centos:
    template: centos
    backing: lvm
    vname: vg1
    lvname: lxclv
    size: 10G
  centos_big:
    template: centos
    backing: lvm
    vname: vg1
    lvname: lxclv
    size: 20G
```

Profiles are retrieved using the `config.get` function, with the `recurse` merge strategy. This means that a profile can be defined at a lower level (for example, the master config file) and then parts of it can be overridden at a higher level (for example, in pillar data). Consider the following container profile data:

In the Master config file:

```yaml
lxc.container_profile:
  centos:
    template: centos
    backing: lvm
    vname: vg1
    lvname: lxclv
    size: 10G
```

In the Pillar data

```yaml
lxc.container_profile:
  centos:
    size: 20G
```

Any minion with the above Pillar data would have the `size` parameter in the `centos` profile overridden to 20G, while those minions without the above Pillar data would have the 10G `size` value. This is another way of achieving the same result as the `centos_big` profile above, without having to define another whole profile that differs in just one value.
Note: In the 2014.7.x release cycle and earlier, container profiles are defined under `lxc.profile`. This parameter will still work in version 2015.5.0, but is deprecated and will be removed in a future release. Please note however that the profile merging feature described above will only work with profiles defined under `lxc.container_profile`, and only in versions 2015.5.0 and later.

Additionally, in version 2015.5.0 container profiles have been expanded to support passing template-specific CLI options to `lxc.create`. Below is a table describing the parameters which can be configured in container profiles:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>2015.5.0 and Newer</th>
<th>2014.7.x and Earlier</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>template</code></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><code>options</code></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><code>image</code></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><code>backing</code></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><code>snapshot</code></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><code>lvname</code></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><code>fstype</code></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><code>size</code></td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

1. Parameter is only supported for container creation, and will be ignored if the profile is used when cloning a container.

2. Parameter is only supported for container cloning, and will be ignored if the profile is used when not cloning a container.

Network Profiles

LXC network profiles are defined defined underneath the `lxc.network_profile` config option. By default, the module uses a DHCP based configuration and try to guess a bridge to get connectivity.

Warning: on pre 2015.5.2, you need to specify explicitly the network bridge

```
[lxc.network_profile]
  centos:
    eth0:
      link: br0
      type: veth
      flags: up
  ubuntu:
    eth0:
      link: lxcbr0
      type: veth
      flags: up
```

As with container profiles, network profiles are retrieved using the `config.get` function, with the `recurse` merge strategy. Consider the following network profile data:

In the Master config file:

```
[lxc.network_profile]
  centos:
    eth0:
```

(continues on next page)
In the Pillar data

```yaml
lxc.network_profile:
  centos:
    eth0:
      link: lxcbr0
```

Any minion with the above Pillar data would use the `lxcbr0` interface as the bridge interface for any container configured using the `centos` network profile, while those minions without the above Pillar data would use the `br0` interface for the same.

**Note:** In the 2014.7.x release cycle and earlier, network profiles are defined under `lxc.nic`. This parameter will still work in version 2015.5.0, but is deprecated and will be removed in a future release. Please note however that the profile merging feature described above will only work with profiles defined under `lxc.network_profile`, and only in versions 2015.5.0 and later.

The following are parameters which can be configured in network profiles. These will directly correspond to a parameter in an LXC configuration file (see `man 5 lxc.container.conf`).

- **type** - Corresponds to `lxc.network.type`
- **link** - Corresponds to `lxc.network.link`
- **flags** - Corresponds to `lxc.network.flags`

Interface-specific options (MAC address, IPv4/IPv6, etc.) must be passed on a container-by-container basis, for instance using the `nic_opts` argument to `lxc.create`:

```sh
salt myminion lxc.create container1 profile=centos network_profile=centos nic_opts='{eth0: {ipv4: 10.0.0.20/24, gateway: 10.0.0.1}}'
```

**Warning:** The `ipv4`, `ipv6`, `gateway`, and `link` (bridge) settings in network profiles / `nic_opts` will only work if the container doesn't redefine the network configuration (for example in `/etc/sysconfig/network-scripts/ifcfg-<interface_name>` on RHEL/CentOS, or `/etc/network/interfaces` on Debian/Ubuntu/etc.). Use these with caution. The container images installed using the `download` template, for instance, typically are configured for eth0 to use DHCP, which will conflict with static IP addresses set at the container level.

**Note:** For LXC < 1.0.7 and DHCP support, set `ipv4.gateway: 'auto'` is your network profile, ie:

```yaml
lxc.network_profile.nic:
  debian:
    eth0:
      link: lxcbr0
      ipv4.gateway: 'auto'
```
Old lxc support (<1.0.7)

With saltstack 2015.5.2 and above, normally the setting is autoselected, but before, you'll need to teach your network profile to set `lxc.network.ipv4.gateway` to `auto` when using a classic ipv4 configuration.

Thus you'll need

```
[lxc.network_profile.foo]
eth0:  
  link: lxcbr0
  ipv4.gateway: auto
```

Tricky network setups Examples

This example covers how to make a container with both an internal ip and a public routable ip, wired on two veth pairs.

The another interface which receives directly a public routable ip can't be on the first interface that we reserve for private inter LXC networking.

```
[lxc.network_profile.foo]
eth0:  
  gateway: null, bridge: lxcbr0
eth1:  
  # replace that by your main interface
  'link': 'br0'
  'mac': '00:16:5b:01:24:e1'
  'gateway': '2.20.9.14'
  'ipv4': '2.20.9.1'
```

Creating a Container on the CLI

From a Template

LXC is commonly distributed with several template scripts in `/usr/share/lxc/templates`. Some distros may package these separately in an `lxc-templates` package, so make sure to check if this is the case.

There are LXC template scripts for several different operating systems, but some of them are designed to use tools specific to a given distribution. For instance, the `ubuntu` template uses `deb_bootstrap`, the `centos` template uses `yum`, etc., making these templates impractical when a container from a different OS is desired.

The `lxc.create` function is used to create containers using a template script. To create a CentOS container named `container1` on a CentOS minion named `mycentosminion`, using the `centos` LXC template, one can simply run the following command:

```
salt mycentosminion lxc.create container1 template=centos
```

For these instances, there is a `download` template which retrieves minimal container images for several different operating systems. To use this template, it is necessary to provide an `options` parameter when creating the container, with three values:

1. `dist` - the Linux distribution (i.e. `ubuntu` or `centos`)
2. `release` - the release name/version (i.e. `trusty` or `6`)
3. `arch` - CPU architecture (i.e. `amd64` or `i386`)
The `lxc.images` function (new in version 2015.5.0) can be used to list the available images. Alternatively, the releases can be viewed on `http://images.linuxcontainers.org/images/`. The images are organized in such a way that the `dist`, `release`, and `arch` can be determined using the following URL format: `http://images.linuxcontainers.org/images/dist/release/arch`. For example, `http://images.linuxcontainers.org/images/centos/6/amd64` would correspond to a `dist` of `centos`, a `release` of 6, and an `arch` of `amd64`.

Therefore, to use the `download` template to create a new 64-bit CentOS 6 container, the following command can be used:

```shell
salt myminion lxc.create container1 template=download options='{{"dist": "centos", "release": 6, "arch": "amd64"}}'
```

**Note:** These command-line options can be placed into a `container profile`, like so:

```yaml
lxc.container_profile.cent6:
  template: download
  options:
    dist: centos
    release: 6
    arch: amd64
```

The `options` parameter is not supported in profiles for the 2014.7.x release cycle and earlier, so it would still need to be provided on the command-line.

### Cloning an Existing Container

To clone a container, use the `lxc.clone` function:

```shell
salt myminion lxc.clone container2 orig=container1
```

### Using a Container Image

While cloning is a good way to create new containers from a common base container, the source container that is being cloned needs to already exist on the minion. This makes deploying a common container across minions difficult. For this reason, Salt's `lxc.create` is capable of installing a container from a tar archive of another container's rootfs. To create an image of a container named `cent6`, run the following command as root:

```shell
tar czf cent6.tar.gz -C /var/lib/lxc/cent6 rootfs
```

**Note:** Before doing this, it is recommended that the container is stopped.

The resulting tarball can then be placed alongside the files in the salt fileserver and referenced using a `salt://` URL. To create a container using an image, use the `image` parameter with `lxc.create`:

```shell
salt myminion lxc.create new-cent6 image=salt://path/to/cent6.tar.gz
```

**Note:** Making images of containers with LVM backing
For containers with LVM backing, the rootfs is not mounted, so it is necessary to mount it first before creating the tar archive. When a container is created using LVM backing, an empty rootfs dir is handily created within /var/lib/lxc/container_name, so this can be used as the mountpoint. The location of the logical volume for the container will be /dev/vgname/lvname, where vgname is the name of the volume group, and lvname is the name of the logical volume. Therefore, assuming a volume group of vg1, a logical volume of lxc-cent6, and a container name of cent6, the following commands can be used to create a tar archive of the rootfs:

```
mount /dev/vg1/lxc-cent6 /var/lib/lxc/cent6/rootfs
tar czf cent6.tar.gz -C /var/lib/lxc/cent6 rootfs
umount /var/lib/lxc/cent6/rootfs
```

**Warning:** One caveat of using this method of container creation is that /etc/hosts is left unmodified. This could cause confusion for some distros if salt-minion is later installed on the container, as the functions that determine the hostname take /etc/hosts into account. Additionally, when creating an rootfs image, be sure to remove /etc/salt/minion_id and make sure that id is not defined in /etc/salt/minion, as this will cause similar issues.

### Initializing a New Container as a Salt Minion

The above examples illustrate a few ways to create containers on the CLI, but often it is desirable to also have the new container run as a Minion. To do this, the lxc.init function can be used. This function will do the following:

1. Create a new container
2. Optionally set password and/or DNS
3. Bootstrap the minion (using either salt-bootstrap or a custom command)

By default, the new container will be pointed at the same Salt Master as the host machine on which the container was created. It will then request to authenticate with the Master like any other bootstrapped Minion, at which point it can be accepted.

```
salt myminion lxc.init test1 profile=centos
salt-key -a test1
```

For even greater convenience, the LXC runner contains a runner function of the same name (lxc.init), which creates a keypair, seeds the new minion with it, and pre-accepts the key, allowing for the new Minion to be created and authorized in a single step:

```
salt-run lxc.init test1 host=myminion profile=centos
```

### Running Commands Within a Container

For containers which are not running their own Minion, commands can be run within the container in a manner similar to using (cmd.run <salt.modules.cmdmod.run). The means of doing this have been changed significantly in version 2015.5.0 (though the deprecated behavior will still be supported for a few releases). Both the old and new usage are documented below.
2015.5.0 and Newer

New functions have been added to mimic the behavior of the functions in the cmd module. Below is a table with the cmd functions and their lxc module equivalents:

<table>
<thead>
<tr>
<th>Description</th>
<th>cmd module</th>
<th>lxc module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run a command and get all output</td>
<td>cmd.run</td>
<td>lxc.run</td>
</tr>
<tr>
<td>Run a command and get just stdout</td>
<td>cmd.run_stdout</td>
<td>lxc.run_stdout</td>
</tr>
<tr>
<td>Run a command and get just stderr</td>
<td>cmd.run_stderr</td>
<td>lxc.run_stderr</td>
</tr>
<tr>
<td>Run a command and get just the retcode</td>
<td>cmd.retcode</td>
<td>lxc.retcode</td>
</tr>
<tr>
<td>Run a command and get all information</td>
<td>cmd.run_all</td>
<td>lxc.run_all</td>
</tr>
</tbody>
</table>

2014.7.x and Earlier

Earlier Salt releases use a single function (lxc.run_cmd) to run commands within containers. Whether stdout, stderr, etc. are returned depends on how the function is invoked.

To run a command and return the stdout:

```bash
salt myminion lxc.run_cmd web1 'tail /var/log/messages'
```

To run a command and return the stderr:

```bash
salt myminion lxc.run_cmd web1 'tail /var/log/messages' stdout=False stderr=True
```

To run a command and return the retcode:

```bash
salt myminion lxc.run_cmd web1 'tail /var/log/messages' stdout=False stderr=False
```

To run a command and return all information:

```bash
salt myminion lxc.run_cmd web1 'tail /var/log/messages' stdout=True stderr=True
```

Container Management Using salt-cloud

Salt cloud uses under the hood the salt runner and module to manage containers. Please look at this chapter

Container Management Using States

Several states are being renamed or otherwise modified in version 2015.5.0. The information in this tutorial refers to the new states. For 2014.7.x and earlier, please refer to the documentation for the LXC states.
Ensuring a Container Is Present

To ensure the existence of a named container, use the `lxc.present` state. Here are some examples:

```yaml
# Using a template
web1:
  lxc.present:
    - template: download
      options:
        dist: centos
        release: 6
        arch: amd64

# Cloning
web2:
  lxc.present:
    - clone_from: web-base

# Using a rootfs image
web3:
  lxc.present:
    - image: salt://path/to/cent6.tar.gz

# Using profiles
web4:
  lxc.present:
    - profile: centos_web
    - network_profile: centos
```

**Warning:** The `lxc.present` state will not modify an existing container (in other words, it will not re-create the container). If an `lxc.present` state is run on an existing container, there will be no change and the state will return a `True` result.

The `lxc.present` state also includes an optional `running` parameter which can be used to ensure that a container is running/stopped. Note that there are standalone `lxc.running` and `lxc.stopped` states which can be used for this purpose.

Ensuring a Container Does Not Exist

To ensure that a named container is not present, use the `lxc.absent` state. For example:

```yaml
web1:
  lxc.absent
```
Ensuring a Container is Running/Stopped/Frozen

Containers can be in one of three states:

- **running** - Container is running and active
- **frozen** - Container is running, but all process are blocked and the container is essentially non-active until the container is "unfrozen"
- **stopped** - Container is not running

Salt has three states (**lxc.running**, **lxc.frozen**, and **lxc.stopped**) which can be used to ensure a container is in one of these states:

```python
web1:
  lxc.running

# Restart the container if it was already running

web2:
  lxc.running:
    - restart: True

web3:
  lxc.stopped

# Explicitly kill all tasks in container instead of gracefully stopping

web4:
  lxc.stopped:
    - kill: True

web5:
  lxc.frozen

# If container is stopped, do not start it (in which case the state will fail)

web6:
  lxc.frozen:
    - start: False
```

6.9.11 Remote execution tutorial

Before continuing make sure you have a working Salt installation by following the Installation and the configuration instructions.

Stuck?

There are many ways to Salt Community including our mailing list and our IRC channel #salt.
Order your minions around

Now that you have a master and at least one minion communicating with each other you can perform commands on the minion via the salt command. Salt calls are comprised of three main components:

\[ \text{salt 'target'} \ <\text{function}> \ [\text{arguments}] \]

See also:

salt manpage

**target**

The target component allows you to filter which minions should run the following function. The default filter is a glob on the minion id. For example:

\[ \text{salt '*' test.version} \]
\[ \text{salt '.*.example.org' test.version} \]

Targets can be based on minion system information using the Grains system:

\[ \text{salt -G 'os:Ubuntu' test.version} \]

See also:

Grains system

Targets can be filtered by regular expression:

\[ \text{salt -E 'virtmach[0-9]' test.version} \]

Targets can be explicitly specified in a list:

\[ \text{salt -L 'foo,bar,baz,quo' test.version} \]

Or Multiple target types can be combined in one command:

\[ \text{salt -C 'G@os:Ubuntu and webser*' or \text{E} database.*' test.version} \]

**function**

A function is some functionality provided by a module. Salt ships with a large collection of available functions. List all available functions on your minions:

\[ \text{salt '*' sys.doc} \]

Here are some examples:

Show all currently available minions:

\[ \text{salt '*' test.version} \]

Run an arbitrary shell command:

\[ \text{salt '*' cmd.run 'uname -a'} \]
See also:

*the full list of modules*

**arguments**

Space-delimited arguments to the function:

```
salt '*' cmd.exec_code python 'import sys; print sys.version'
```

Optional, keyword arguments are also supported:

```
salt '*' pip.install salt timeout=5 upgrade=True
```

They are always in the form of `kwaarg=argument`.

### 6.9.12 Multi Master Tutorial

As of Salt 0.16.0, the ability to connect minions to multiple masters has been made available. The multi-master system allows for redundancy of Salt masters and facilitates multiple points of communication out to minions. When using a multi-master setup, all masters are running hot, and any active master can be used to send commands out to the minions.

**Note:** If you need failover capabilities with multiple masters, there is also a MultiMaster-PKI setup available, that uses a different topology [MultiMaster-PKI with Failover Tutorial](#).

In 0.16.0, the masters do not share any information, keys need to be accepted on both masters, and shared files need to be shared manually or use tools like the git files server backend to ensure that the `file_roots` are kept consistent.

Beginning with Salt 2016.11.0, the *Pluggable Minion Data Cache* was introduced. The minion data cache contains the Salt Mine data, minion grains, and minion pillar information cached on the Salt Master. By default, Salt uses the `localfs` cache module, but other external data stores can be used instead.

Using a pluggable minion cache modules allows for the data stored on a Salt Master about Salt Minions to be replicated on other Salt Masters the Minion is connected to. Please see the *Minion Data Cache* documentation for more information and configuration examples.

**Summary of Steps**

1. Create a redundant master server
2. Copy primary master key to redundant master
3. Start redundant master
4. Configure minions to connect to redundant master
5. Restart minions
6. Accept keys on redundant master
Prepping a Redundant Master

The first task is to prepare the redundant master. If the redundant master is already running, stop it. There is only one requirement when preparing a redundant master, which is that masters share the same private key. When the first master was created, the master's identifying key pair was generated and placed in the master's pki_dir. The default location of the master's key pair is /etc/salt/pki/master/. Take the private key, master.pem, and copy it to the same location on the redundant master. Do the same for the master's public key, master.pub. Assuming that no minions have yet been connected to the new redundant master, it is safe to delete any existing key in this location and replace it.

Note: There is no logical limit to the number of redundant masters that can be used.

Once the new key is in place, the redundant master can be safely started.

Configure Minions

Since minions need to be master-aware, the new master needs to be added to the minion configurations. Simply update the minion configurations to list all connected masters:

```
master:
  - saltmaster1.example.com
  - saltmaster2.example.com
```

Now the minion can be safely restarted.

Note: If the ipc_mode for the minion is set to TCP (default in Windows), then each minion in the multi-minion setup (one per master) needs its own tcp_pub_port and tcp_pull_port.

If these settings are left as the default 4510/4511, each minion object will receive a port 2 higher than the previous. Thus the first minion will get 4510/4511, the second will get 4512/4513, and so on. If these port decisions are unacceptable, you must configure tcp_pub_port and tcp_pull_port with lists of ports for each master. The length of these lists should match the number of masters, and there should not be overlap in the lists.

Now the minions will check into the original master and also check into the new redundant master. Both masters are first-class and have rights to the minions.

Note: Minions can automatically detect failed masters and attempt to reconnect to them quickly. To enable this functionality, set master_alive_interval in the minion config and specify a number of seconds to poll the masters for connection status.

If this option is not set, minions will still reconnect to failed masters but the first command sent after a master comes back up may be lost while the minion authenticates.
Sharing Files Between Masters

Salt does not automatically share files between multiple masters. A number of files should be shared or sharing of these files should be strongly considered.

Minion Keys

Minion keys can be accepted the normal way using `salt-key` on both masters. Keys accepted, deleted, or rejected on one master will NOT be automatically managed on redundant masters; this needs to be taken care of by running `salt-key` on both masters or sharing the `/etc/salt/pki/master/{minions,minions_pre, minions_rejected}` directories between masters.

**Note:** While sharing the `/etc/salt/pki/master` directory will work, it is strongly discouraged, since allowing access to the `master.pem` key outside of Salt creates a *SERIOUS* security risk.

File_Roots

The `file_roots` contents should be kept consistent between masters. Otherwise state runs will not always be consistent on minions since instructions managed by one master will not agree with other masters.

The recommended way to sync these is to use a fileserver backend like gitfs or to keep these files on shared storage.

**Important:** If using gitfs/git_pillar with the cachedir shared between masters using GlusterFS, nfs, or another network filesystem, and the masters are running Salt 2015.5.9 or later, it is strongly recommended not to turn off `gitfs_global_lock/git_pillar_global_lock` as doing so will cause lock files to be removed if they were created by a different master.

Pillar_Roots

Pillar roots should be given the same considerations as `file_roots`.

Master Configurations

While reasons may exist to maintain separate master configurations, it is wise to remember that each master maintains independent control over minions. Therefore, access controls should be in sync between masters unless a valid reason otherwise exists to keep them inconsistent.

These access control options include but are not limited to:

- `external_auth`
- `publisher_acl`
- `peer`
- `peer_run`
6.9.13 Multi-Master-PKI Tutorial With Failover

This tutorial will explain, how to run a salt-environment where a single minion can have multiple masters and fail-over between them if its current master fails.

The individual steps are

• setup the master(s) to sign its auth-replies
• setup minion(s) to verify master-public-keys
• enable multiple masters on minion(s)
• enable master-check on minion(s)

Please note, that it is advised to have good knowledge of the salt- authentication and communication-process to understand this tutorial. All of the settings described here, go on top of the default authentication/communication process.

Motivation

The default behaviour of a salt-minion is to connect to a master and accept the masters public key. With each publication, the master sends his public-key for the minion to check and if this public-key ever changes, the minion complains and exits. Practically this means, that there can only be a single master at any given time.

Would it not be much nicer, if the minion could have any number of masters (1:n) and jump to the next master if its current master died because of a network or hardware failure?

Note: There is also a MultiMaster-Tutorial with a different approach and topology than this one, that might also suite your needs or might even be better suited Multi-Master Tutorial

It is also desirable, to add some sort of authenticity-check to the very first public key a minion receives from a master. Currently a minions takes the first masters public key for granted.

The Goal

Setup the master to sign the public key it sends to the minions and enable the minions to verify this signature for authenticity.

Prepping the master to sign its public key

For signing to work, both master and minion must have the signing and/or verification settings enabled. If the master signs the public key but the minion does not verify it, the minion will complain and exit. The same happens, when the master does not sign but the minion tries to verify.

The easiest way to have the master sign its public key is to set

\texttt{master\_sign\_pubkey: True}

After restarting the salt-master service, the master will automatically generate a new key-pair

\texttt{master\_sign\_pem}
\texttt{master\_sign\_pub}

A custom name can be set for the signing key-pair by setting
**master_sign_key_name**: <name_without_suffix>

The master will then generate that key-pair upon restart and use it for creating the public keys signature attached to the auth-reply.

The computation is done for every auth-request of a minion. If many minions auth very often, it is advised to use `conf_master:master_pubkey_signature` and `conf_master:master_use_pubkey_signature` settings described below.

If multiple masters are in use and should sign their auth-replies, the signing key-pair master_sign.* has to be copied to each master. Otherwise a minion will fail to verify the masters public when connecting to a different master than it did initially. That is because the public keys signature was created with a different signing key-pair.

**Prepping the minion to verify received public keys**

The minion must have the public key (and only that one!) available to be able to verify a signature it receives. That public key (defaults to master_sign.pub) must be copied from the master to the minions pki-directory.

```
/etc/salt/pki/minion/master_sign.pub
```

**Important**: DO NOT COPY THE master_sign.pem FILE. IT MUST STAY ON THE MASTER AND ONLY THERE!

When that is done, enable the signature checking in the minions configuration

```
verify_master_pubkey_sign: True
```

and restart the minion. For the first try, the minion should be run in manual debug mode.

```
salt-minion -l debug
```

Upon connecting to the master, the following lines should appear on the output:

```
[DEBUG] Attempting to authenticate with the Salt Master at 172.16.0.10
[DEBUG] Loaded minion key: /etc/salt/pki/minion/minion.pem
[DEBUG] salt.crypt.verify_signature: Loading public key
[DEBUG] salt.crypt.verify_signature: Verifying signature
[DEBUG] Successfully verified signature of master public key with verification public key master_sign.pub
[INFO] Received signed and verified master pubkey from master 172.16.0.10
[DEBUG] Decrypting the current master AES key
```

If the signature verification fails, something went wrong and it will look like this

```
[DEBUG] Attempting to authenticate with the Salt Master at 172.16.0.10
[DEBUG] Loaded minion key: /etc/salt/pki/minion/minion.pem
[DEBUG] salt.crypt.verify_signature: Loading public key
[DEBUG] salt.crypt.verify_signature: Verifying signature
[DEBUG] Failed to verify signature of public key
[CRITICAL] The Salt Master server’s public key did not authenticate!
```

In a case like this, it should be checked, that the verification pubkey (master_sign.pub) on the minion is the same as the one on the master.

Once the verification is successful, the minion can be started in daemon mode again.
For the paranoid among us, it's also possible to verify the publication whenever it is received from the master. That is, for every single auth-attempt which can be quite frequent. For example just the start of the minion will force the signature to be checked 6 times for various things like auth, mine, highstate, etc.

If that is desired, enable the setting

```
always_verify_signature: True
```

### Multiple Masters For A Minion

Configuring multiple masters on a minion is done by specifying two settings:

- a list of masters addresses
- what type of master is defined

```
master:
- 172.16.0.10
- 172.16.0.11
- 172.16.0.12
```

```
mastertype: failover
```

This tells the minion that all the master above are available for it to connect to. When started with this configuration, it will try the master in the order they are defined. To randomize that order, set

```
master_shuffle: True
```

The master-list will then be shuffled before the first connection attempt.

The first master that accepts the minion, is used by the minion. If the master does not yet know the minion, that counts as accepted and the minion stays on that master.

For the minion to be able to detect if its still connected to its current master enable the check for it

```
master_alive_interval: <seconds>
```

If the loss of the connection is detected, the minion will temporarily remove the failed master from the list and try one of the other masters defined (again shuffled if that is enabled).

### Testing the setup

At least two running masters are needed to test the failover setup.

Both masters should be running and the minion should be running on the command line in debug mode

```
salt-minion -l debug
```

The minion will connect to the first master from its master list

```
[DEBUG ] Attempting to authenticate with the Salt Master at 172.16.0.10
[DEBUG ] Loaded minion key: /etc/salt/pki/minion/minion.pem
[DEBUG ] salt.crypt.verify_signature: Loading public key
[DEBUG ] salt.crypt.verify_signature: Verifying signature
[DEBUG ] Successfully verified signature of master public key with verification
...public key master_sign.pub
```

(continues on next page)
A test version on the master the minion is currently connected to should be run to test connectivity. If successful, that master should be turned off. A firewall-rule denying the minions packets will also do the trick. Depending on the configured conf_minion:master_alive_interval, the minion will notice the loss of the connection and log it to its logfile.

The minion will then remove the current master from the list and try connecting to the next master.

If everything is configured correctly, the new masters public key will be verified successfully.

the authentication with the new master is successful

and the minion can be pinged again from its new master.

**Performance Tuning**

With the setup described above, the master computes a signature for every auth-request of a minion. With many minions and many auth-requests, that can chew up quite a bit of CPU-Power.

To avoid that, the master can use a pre-created signature of its public-key. The signature is saved as a base64 encoded string which the master reads once when starting and attaches only that string to auth-replies.

Enabling this also gives paranoid users the possibility, to have the signing key-pair on a different system than the actual salt-master and create the public keys signature there. Probably on a system with more restrictive firewall rules, without internet access, less users, etc.

That signature can be created with

```
salt-key --gen-signature
```

This will create a default signature file in the master pki-directory

```
/etc/salt/pki/master/master_pubkey_signature
```
It is a simple text-file with the binary-signature converted to base64.

If no signing-pair is present yet, this will auto-create the signing pair and the signature file in one call

```
salt-key --gen-signature --auto-create
```

Telling the master to use the pre-created signature is done with

```
master_use_pubkey_signature: True
```

That requires the file 'master_pubkey_signature' to be present in the masters pki-directory with the correct signature.

If the signature file is named differently, its name can be set with

```
master_pubkey_signature: <filename>
```

With many masters and many public-keys (default and signing), it is advised to use the salt-masters hostname for the signature-files name. Signatures can be easily confused because they do not provide any information about the key the signature was created from.

Verifying that everything works is done the same way as above.

**How the signing and verification works**

The default key-pair of the salt-master is

```
/etc/salt/pki/master/master.pem
/etc/salt/pki/master/master.pub
```

To be able to create a signature of a message (in this case a public-key), another key-pair has to be added to the setup. Its default name is:

```
master_sign.pem
master_sign.pub
```

The combination of the master.* and master_sign.* key-pairs give the possibility of generating signatures. The signature of a given message is unique and can be verified, if the public-key of the signing-key-pair is available to the recipient (the minion).

The signature of the masters public-key in master.pub is computed with

```
master_sign.pem
master.pub
M2Crypto.EVP.sign_update()
```

This results in a binary signature which is converted to base64 and attached to the auth-reply send to the minion.

With the signing-pairs public-key available to the minion, the attached signature can be verified with

```
master_sign.pub
master.pub
M2Crypto.EVP.verify_update().
```

When running multiple masters, either the signing key-pair has to be present on all of them, or the master_pubkey_signature has to be pre-computed for each master individually (because they all have different public-keys).

**DO NOT PUT THE SAME master.pub ON ALL MASTERS FOR EASE OF USE.**
6.9.14 Packaging External Modules for Salt

External Modules Setuptools Entry-Points Support

The salt loader was enhanced to look for external modules by looking at the `salt.loader` entry-point:

https://setuptools.readthedocs.io/en/latest/pkg_resources.html#entry-points

`pkg_resources` should be installed, which is normally included in setuptools.


The package which has custom engines, minion modules, outputters, etc, should require setuptools and should define the following entry points in its setup function:

```python
from setuptools import setup, find_packages

setup(  
    name=THE_NAME,  
    version=THE_VERSION,  
    description=THE_DESCRIPTION,  
    author=THE_AUTHOR_NAME,  
    author_email=THE_AUTHOR_EMAIL,  
    url="...",  
    packages=find_packages(),  
    entry_points="
    [salt.loader]  
    engines_dirs = <package>.<loader-module>:engines_dirs  
    fileserver_dirs = <package>.<loader-module>:fileserver_dirs  
    pillar_dirs = <package>.<loader-module>:pillar_dirs  
    returner_dirs = <package>.<loader-module>:returner_dirs  
    roster_dirs = <package>.<loader-module>:roster_dirs  
    
    ",
)
```

The above setup script example mentions a loader module. here's an example of how `<package>/<loader-module>.py` it should look:

```python
# -*- coding: utf-8 -*-
# Import python libs
import os

PKG_DIR = os.path.abspath(os.path.dirname(__file__))

def engines_dirs():
    
    """
    yield one path per parent directory of where engines can be found
    """
    yield os.path.join(PKG_DIR, "engines_1")
    yield os.path.join(PKG_DIR, "engines_2")

def fileserver_dirs():
    
    """
    yield one path per parent directory of where fileserver modules can be found
    """
    yield os.path.join(PKG_DIR, "fileserver")
```

(continues on next page)
def pillar_dirs():
   
   """
   yield one path per parent directory of where external pillar modules can be found
   """
   yield os.path.join(PKG_DIR, "pillar")

def returner_dirs():
   
   """
   yield one path per parent directory of where returner modules can be found
   """
   yield os.path.join(PKG_DIR, "returners")

def roster_dirs():
   
   """
   yield one path per parent directory of where roster modules can be found
   """
   yield os.path.join(PKG_DIR, "roster")

6.9.15 How Do I Use Salt States?

Simplicity, Simplicity, Simplicity

Many of the most powerful and useful engineering solutions are founded on simple principles. Salt States strive to
do just that: K.I.S.S. (Keep It Stupidly Simple)

The core of the Salt State system is the SLS, or Salt State file. The SLS is a representation of the state in which a system
should be in, and is set up to contain this data in a simple format. This is often called configuration management.

Note: This is just the beginning of using states, make sure to read up on pillar Pillar next.

It is All Just Data

Before delving into the particulars, it will help to understand that the SLS file is just a data structure under the hood.
While understanding that the SLS is just a data structure isn’t critical for understanding and making use of Salt States,
it should help bolster knowledge of where the real power is.

SLS files are therefore, in reality, just dictionaries, lists, strings, and numbers. By using this approach Salt can be
much more flexible. As one writes more state files, it becomes clearer exactly what is being written. The result is a
system that is easy to understand, yet grows with the needs of the admin or developer.
The Top File

The example SLS files in the below sections can be assigned to hosts using a file called top.sls. This file is described in-depth here.

Default Data - YAML

By default Salt represents the SLS data in what is one of the simplest serialization formats available - YAML.

A typical SLS file will often look like this in YAML:

```
Note: These demos use some generic service and package names, different distributions often use different names for packages and services. For instance apache should be replaced with httpd on a Red Hat system. Salt uses the name of the init script, systemd name, upstart name etc. based on what the underlying service management for the platform. To get a list of the available service names on a platform execute the service.get_all salt function.

Information on how to make states work with multiple distributions is later in the tutorial.

```

<table>
<thead>
<tr>
<th>apache:</th>
</tr>
</thead>
<tbody>
<tr>
<td>pkg.installed: []</td>
</tr>
<tr>
<td>service.running:</td>
</tr>
<tr>
<td>- require:</td>
</tr>
<tr>
<td>- pkg: apache</td>
</tr>
</tbody>
</table>

This SLS data will ensure that the package named apache is installed, and that the apache service is running. The components can be explained in a simple way.

The first line is the ID for a set of data, and it is called the ID Declaration. This ID sets the name of the thing that needs to be manipulated.

The second and third lines contain the state module function to be run, in the format <state_module>.<function>. The pkg.installed state module function ensures that a software package is installed via the system's native package manager. The service.running state module function ensures that a given system daemon is running.

Finally, on line four, is the word require. This is called a Requisite Statement, and it makes sure that the Apache service is only started after a successful installation of the apache package.

Adding Configs and Users

When setting up a service like an Apache web server, many more components may need to be added. The Apache configuration file will most likely be managed, and a user and group may need to be set up.

```
```

(continues on next page)
This SLS data greatly extends the first example, and includes a config file, a user, a group and new requisite statement: watch.

Adding more states is easy, since the new user and group states are under the Apache ID, the user and group will be the Apache user and group. The require statements will make sure that the user will only be made after the group, and that the group will be made only after the Apache package is installed.

Next, the require statement under service was changed to watch, and is now watching 3 states instead of just one. The watch statement does the same thing as require, making sure that the other states run before running the state with a watch, but it adds an extra component. The watch statement will run the state's watcher function for any changes to the watched states. So if the package was updated, the config file changed, or the user uid modified, then the service state's watcher will be run. The service state's watcher just restarts the service, so in this case, a change in the config file will also trigger a restart of the respective service.

Moving Beyond a Single SLS

When setting up Salt States in a scalable manner, more than one SLS will need to be used. The above examples were in a single SLS file, but two or more SLS files can be combined to build out a State Tree. The above example also references a file with a strange source - salt://apache/httpd.conf. That file will need to be available as well.

The SLS files are laid out in a directory structure on the Salt master; an SLS is just a file and files to download are just files.

The Apache example would be laid out in the root of the Salt file server like this:

apache/init.sls
apache/httpd.conf

So the httpd.conf is just a file in the apache directory, and is referenced directly.

Do not use dots in SLS file names or their directories

The initial implementation of top.sls and Include declaration followed the python import model where a slash is represented as a period. This means that a SLS file with a period in the name (besides the suffix period) can not be referenced. For example, webserver_1.0.sls is not referenceable because webserver_1.0 would refer to the directory/file webserver_1/0.sls

The same applies for any subdirectories, this is especially 'tricky' when git repos are created. Another command that typically can't render its output is `state.show_sls` of a file in a path that contains a dot.
But when using more than one single SLS file, more components can be added to the toolkit. Consider this SSH example:

**ssh/init.sls:**

```yaml
openssh-client:
  pkg.installed

/etc/ssh/ssh_config:
  file.managed:
    - user: root
    - group: root
    - mode: 644
    - source: salt://ssh/ssh_config
    - require:
      - pkg: openssh-client
```

**ssh/server.sls:**

```yaml
include:
  - ssh

openssh-server:
  pkg.installed

sshd:
  service.running:
    - require:
      - pkg: openssh-client
      - pkg: openssh-server
      - file: /etc/ssh/banner
      - file: /etc/ssh/sshd_config

/etc/ssh/sshd_config:
  file.managed:
    - user: root
    - group: root
    - mode: 644
    - source: salt://ssh/sshd_config
    - require:
      - pkg: openssh-server

/etc/ssh/banner:
  file:
    - managed
    - user: root
    - group: root
    - mode: 644
    - source: salt://ssh/banner
    - require:
      - pkg: openssh-server
```

---

**Note:** Notice that we use two similar ways of denoting that a file is managed by Salt. In the `/etc/ssh/sshd_config` state section above, we use the `file.managed` state declaration whereas with the `/etc/ssh/banner` state section, we use the `file` state declaration and add a `managed` attribute to that state declaration. Both ways produce an identical result; the first way -- using `file.managed` -- is merely a shortcut.
Now our State Tree looks like this:

```
apache/init.sls
apache/httpd.conf
ssh/init.sls
ssh/server.sls
ssh/banner
ssh/sshd_config
```

This example now introduces the `include` statement. The include statement includes another SLS file so that components found in it can be required, watched or as will soon be demonstrated - extended.

The include statement allows for states to be cross linked. When an SLS has an include statement it is literally extended to include the contents of the included SLS files.

Note that some of the SLS files are called init.sls, while others are not. More info on what this means can be found in the States Tutorial.

### Extending Included SLS Data

Sometimes SLS data needs to be extended. Perhaps the apache service needs to watch additional resources, or under certain circumstances a different file needs to be placed.

In these examples, the first will add a custom banner to ssh and the second will add more watchers to apache to include mod_python.

**ssh/custom-server.sls:**

```
include:
- ssh.server
extend:
 /etc/ssh/banner:
  file:
   - source: salt://ssh/custom-banner
```

**python/mod_python.sls:**

```
include:
- apache
extend:
 apache:
  service:
    - watch:
      - pkg: mod_python
mod_python:
  pkg.installed
```

The `custom-server.sls` file uses the extend statement to overwrite where the banner is being downloaded from, and therefore changing what file is being used to configure the banner.

In the new `mod_python` SLS the `mod_python` package is added, but more importantly the apache service was extended to also watch the `mod_python` package.

Using extend with require or watch
The extend statement works differently for require or watch. It appends to, rather than replacing the requisite component.

Understanding the Render System

Since SLS data is simply that (data), it does not need to be represented with YAML. Salt defaults to YAML because it is very straightforward and easy to learn and use. But the SLS files can be rendered from almost any imaginable medium, so long as a renderer module is provided.

The default rendering system is the jinja|yaml renderer. The jinja|yaml renderer will first pass the template through the Jinja2 templating system, and then through the YAML parser. The benefit here is that full programming constructs are available when creating SLS files.

Other renderers available are yaml_mako and yaml_wempy which each use the Mako or Wempy templating system respectively rather than the jinja templating system, and more notably, the pure Python or py, pydsl & pyobjects renderers. The py renderer allows for SLS files to be written in pure Python, allowing for the utmost level of flexibility and power when preparing SLS data; while the pydsl renderer provides a flexible, domain-specific language for authoring SLS data in Python; and the pyobjects renderer gives you a "Pythonic" interface to building state data.

Note: The templating engines described above aren't just available in SLS files. They can also be used in file managed states, making file management much more dynamic and flexible. Some examples for using templates in managed files can be found in the documentation for the file state, as well as the MooseFS example below.

Getting to Know the Default - jinja|yaml

The default renderer - jinja|yaml, allows for use of the jinja templating system. A guide to the Jinja templating system can be found here: https://jinja.palletsprojects.com/en/2.11.x/

When working with renderers a few very useful bits of data are passed in. In the case of templating engine based renderers, three critical components are available, salt, grains, and pillar. The salt object allows for any Salt function to be called from within the template, and grains allows for the Grains to be accessed from within the template. A few examples:

apache/init.sls:

```python
apache:
  pkg.installed:
    {% if grains['os'] == 'RedHat' %}
    - name: httpd
    {% endif %}
  service.running:
    {% if grains['os'] == 'RedHat' %}
    - name: httpd
    {% endif %}
    - watch:
      - pkg: apache
      - file: /etc/httpd/conf/httpd.conf
      - user: apache
  user.present:
    - uid: 87
    - gid: 87
```

(continues on next page)
- home: /var/www/html
- shell: /bin/nologin
- require:
  - group: apache

group.present:
- gid: 87
- require:
  - pkg: apache

/etc/httpd/conf/httpd.conf:
  file.managed:
  - source: salt://apache/httpd.conf
  - user: root
  - group: root
  - mode: 644

This example is simple. If the os grain states that the operating system is Red Hat, then the name of the Apache package and service needs to be httpd.

A more aggressive way to use Jinja can be found here, in a module to set up a MooseFS distributed filesystem chunkserver:

moosefs/chunk.sls:

```jinja
{% for mnt in salt['cmd.run']('ls /dev/data/moose*').split() %}
/mnt/moose{{ mnt[-1] }}:
  mount.mounted:
    - device: {{ mnt }}
    - fstype: xfs
    - mkmnt: True
    file.directory:
      - user: mfs
      - group: mfs
  {% endfor %}

/etc/mfshdd.cfg:
  file.managed:
    - source: salt://moosefs/mfshdd.cfg
    - user: root
    - group: root
    - mode: 644
    - template: jinja
    - require:
      - pkg: mfs-chunkserver

/etc/mfschunkserver.cfg:
  file.managed:
    - source: salt://moosefs/mfschunkserver.cfg
    - user: root
    - group: root
    - mode: 644
```

(continues on next page)
This example shows much more of the available power of Jinja. Multiple for loops are used to dynamically detect available hard drives and set them up to be mounted, and the `salt` object is used multiple times to call shell commands to gather data.

### Introducing the Python, PyDSL, and the Pyobjects Renderers

Sometimes the chosen default renderer might not have enough logical power to accomplish the needed task. When this happens, the Python renderer can be used. Normally a YAML renderer should be used for the majority of SLS files, but an SLS file set to use another renderer can be easily added to the tree.

This example shows a very basic Python SLS file:

```python
#!py

def run():
    
    # Install the django package
    
    return {
        "include": ["python"],
        "django": {
            "pkg": ["installed"]
        }
    }
```

This is a very simple example; the first line has an SLS shebang that tells Salt to not use the default renderer, but to use the `py` renderer. Then the run function is defined, the return value from the run function must be a Salt friendly data structure, or better known as a Salt `HighState data structure`.

Alternatively, using the `pydsl` renderer, the above example can be written more succinctly as:

```python
# pydsl

include("python", delayed=True)
state("django").pkg.installed()
```

The `pyobjects` renderer provides an "Pythonic" object based approach for building the state data. The above example could be written as:
# pyobjects

```python
include("python")
Pkg.installed("django")
```

These Python examples would look like this if they were written in YAML:

```yaml
include:
  - python
django:
    pkg.installed
```

This example clearly illustrates that; one, using the YAML renderer by default is a wise decision and two, unbridled power can be obtained where needed by using a pure Python SLS.

### Running and Debugging Salt States

Once the rules in an SLS are ready, they should be tested to ensure they work properly. To invoke these rules, simply execute `salt '*' state.apply` on the command line. If you get back only hostnames with a `:` after, but no return, chances are there is a problem with one or more of the sls files. On the minion, use the `salt-call` command to examine the output for errors:

```
salt-call state.apply -l debug
```

This should help troubleshoot the issue. The minion can also be started in the foreground in debug mode by running `salt-minion -l debug`.

### Next Reading

With an understanding of states, the next recommendation is to become familiar with Salt's pillar interface:

*Pillar Walkthrough*

### 6.9.16 States tutorial, part 1 - Basic Usage

The purpose of this tutorial is to demonstrate how quickly you can configure a system to be managed by Salt States. For detailed information about the state system please refer to the full states reference.

This tutorial will walk you through using Salt to configure a minion to run the Apache HTTP server and to ensure the server is running.

**Before continuing** make sure you have a working Salt installation by following the Installation and the configuration instructions.

Stuck?

There are many ways to Salt Community including our mailing list and our IRC channel #salt.
Setting up the Salt State Tree

States are stored in text files on the master and transferred to the minions on demand via the master's File Server. The collection of state files make up the State Tree.

To start using a central state system in Salt, the Salt File Server must first be set up. Edit the master config file (file_roots) and uncomment the following lines:

```
file_roots:
    base:
      - /srv/salt
```

Note: If you are deploying on FreeBSD via ports, the file_roots path defaults to /usr/local/etc/salt/states.

Restart the Salt master in order to pick up this change:

```
pkill salt-master
salt-master -d
```

Preparing the Top File

On the master, in the directory uncommented in the previous step, (/srv/salt by default), create a new file called top.sls and add the following:

```
base:
  '*':
    - webserver
```

The top file is separated into environments (discussed later). The default environment is base. Under the base environment a collection of minion matches is defined; for now simply specify all hosts (*).

Targeting minions

The expressions can use any of the targeting mechanisms used by Salt — minions can be matched by glob, PCRE regular expression, or by grains. For example:

```
base:
  'os:Fedora':
    - match: grain
    - webserver
```
Create an sls file

In the same directory as the top file, create a file named webserver.sls, containing the following:

```
apache:
  pkg:
    - installed
```

The first line, called the ID declaration, is an arbitrary identifier. In this case it defines the name of the package to be installed.

Note: The package name for the Apache httpd web server may differ depending on OS or distro — for example, on Fedora it is httpd but on Debian/Ubuntu it is apache2.

The second line, called the State declaration, defines which of the Salt States we are using. In this example, we are using the pkg state to ensure that a given package is installed.

The third line, called the Function declaration, defines which function in the pkg state module to call.

Renderers

States sls files can be written in many formats. Salt requires only a simple data structure and is not concerned with how that data structure is built. Templating languages and DSLs are a dime-a-dozen and everyone has a favorite.

Building the expected data structure is the job of Salt Renderers and they are dead-simple to write.

In this tutorial we will be using YAML in Jinja2 templates, which is the default format. The default can be changed by editing renderer in the master configuration file.

Install the package

Next, let's run the state we created. Open a terminal on the master and run:

```
salt '*' state.apply
```

Our master is instructing all targeted minions to run state.apply. When this function is executed without any SLS targets, a minion will download the top file and attempt to match the expressions within it. When the minion does match an expression the modules listed for it will be downloaded, compiled, and executed.

Note: This action is referred to as a "highstate", and can be run using the state.highstate function. However, to make the usage easier to understand ("highstate" is not necessarily an intuitive name), a state.apply function was added in version 2015.5.0, which when invoked without any SLS names will trigger a highstate. state.highstate still exists and can be used, but the documentation (as can be seen above) has been updated to reference state.apply, so keep the following in mind as you read the documentation:

- state.apply invoked without any SLS names will run state.highstate
- state.apply invoked with SLS names will run state.sls

Once completed, the minion will report back with a summary of all actions taken and all changes made.
Warning: If you have created custom grain modules, they will not be available in the top file until after the first highstate. To make custom grains available on a minion's first highstate, it is recommended to use this example to ensure that the custom grains are synced when the minion starts.

SLS File Namespace

Note that in the example above, the SLS file `webserver.sls` was referred to simply as `webserver`. The namespace for SLS files when referenced in `top.sls` or an include declaration follows a few simple rules:

1. The `.sls` is discarded (i.e. `webserver.sls` becomes `webserver`).
2. Subdirectories can be used for better organization.
   a. Each subdirectory is represented with a dot (following the Python import model) in Salt states and on the command line. `webserver/dev.sls` on the filesystem is referred to as `webserver.dev` in Salt.
   b. Because slashes are represented as dots, SLS files can not contain dots in the name (other than the dot for the SLS suffix). The SLS file `webserver_1.0.sls` can not be matched, and `webserver_1.0` would match the directory/file `webserver_1/0.sls`.
3. A file called `init.sls` in a subdirectory is referred to by the path of the directory. So, `webserver/init.sls` is referred to as `webserver`.
4. If both `webserver.sls` and `webserver/init.sls` happen to exist, `webserver/init.sls` will be ignored and `webserver.sls` will be the file referred to as `webserver`.

Troubleshooting Salt

If the expected output isn’t seen, the following tips can help to narrow down the problem.

Turn up logging  Salt can be quite chatty when you change the logging setting to `debug`:

```bash
salt-minion -l debug
```

Run the minion in the foreground  By not starting the minion in daemon mode (`-d`) one can view any output from the minion as it works:

```bash
salt-minion
```

Increase the default timeout value when running `salt`. For example, to change the default timeout to 60 seconds:

```bash
salt -t 60
```

For best results, combine all three:

```bash
salt-minion -l debug  # On the minion
salt '*' state.apply -t 60  # On the master
```
Next steps

This tutorial focused on getting a simple Salt States configuration working. Part 2 will build on this example to cover more advanced sls syntax and will explore more of the states that ship with Salt.

6.9.17 States tutorial, part 2 - More Complex States, Requisites

Note: This tutorial builds on topics covered in part 1. It is recommended that you begin there.

In the last part of the Salt States tutorial we covered the basics of installing a package. We will now modify our webserver.sls file to have requirements, and use even more Salt States.

Call multiple States

You can specify multiple State declaration under an ID declaration. For example, a quick modification to our webserver.sls to also start Apache if it is not running:

```
apache:
  pkg.installed: []
  service.running:
    - require:
      - pkg: apache
```

Try stopping Apache before running state.apply once again and observe the output.

Note: For those running RedhatOS derivatives (Centos, AWS), you will want to specify the service name to be httpd. More on state service here, service state. With the example above, just add “- name: httpd” above the require line and with the same spacing.

Require other states

We now have a working installation of Apache so let’s add an HTML file to customize our website. It isn’t exactly useful to have a website without a webserver so we don’t want Salt to install our HTML file until Apache is installed and running. Include the following at the bottom of your webserver/init.sls file:

```
apache:
  pkg.installed: []
  service.running:
    - require:
      - pkg: apache
/var/www/index.html:
  file:
    - managed
    - source: salt://webserver/index.html
    - require:
      - pkg: apache
```

line 7 is the ID declaration. In this example it is the location we want to install our custom HTML file. (Note: the default location that Apache serves may differ from the above on your OS or distro. /srv/www could also be a likely place to look.)
Line 8 the *State declaration*. This example uses the Salt file state.

Line 9 is the *Function declaration*. The managed function will download a file from the master and install it in the location specified.

Line 10 is a *Function arg declaration* which, in this example, passes the `source` argument to the managed function.

Line 11 is a *Requisite declaration*.

Line 12 is a *Requisite reference* which refers to a state and an ID. In this example, it is referring to the ID declaration from our example in *part 1*. This declaration tells Salt not to install the HTML file until Apache is installed.

Next, create the `index.html` file and save it in the `webserver` directory:

```html
<!DOCTYPE html>
<html>
<head><title>Salt rocks</title></head>
<body>
<h1>This file brought to you by Salt</h1>
</body>
</html>
```

Last, call `state.apply` again and the minion will fetch and execute the `highstate` as well as our HTML file from the master using Salt’s File Server:

```
salt '*' state.apply
```

Verify that Apache is now serving your custom HTML.

**require vs. watch**

There are two *Requisite declaration*, “require”, and “watch”. Not every state supports “watch”. The `service state` does support “watch” and will restart a service based on the watch condition.

For example, if you use Salt to install an Apache virtual host configuration file and want to restart Apache whenever that file is changed you could modify our Apache example from earlier as follows:

```
/etc/httpd/extra/httpd-vhosts.conf:
    file.managed:
        - source: salt://webserver/httpd-vhosts.conf

apache:
    pkg.installed: []
    service.running:
        - watch:
            - file: /etc/httpd/extra/httpd-vhosts.conf
        - require:
            - pkg: apache
```

If the pkg and service names differ on your OS or distro of choice you can specify each one separately using a *Name declaration* which explained in *Part 3*. 

---

6.9. Tutorials Index
Next steps

In part 3 we will discuss how to use includes, extends, and templating to make a more complete State Tree configuration.

6.9.18 States tutorial, part 3 - Templating, Includes, Extends

Note: This tutorial builds on topics covered in part 1 and part 2. It is recommended that you begin there.

This part of the tutorial will cover more advanced templating and configuration techniques for SLS files.

Templating SLS modules

SLS modules may require programming logic or inline execution. This is accomplished with module templating. The default module templating system used is Jinja2 and may be configured by changing the renderer value in the master config.

All states are passed through a templating system when they are initially read. To make use of the templating system, simply add some templating markup. An example of an sls module with templating markup may look like this:

```jinja
{% for usr in ['moe','larry','curly'] %}
    {{ usr }}: user.present
{% endfor %}
```

This templated sls file once generated will look like this:

```
moe:
    user.present
larry:
    user.present
curly:
    user.present
```

Here's a more complex example:

```jinja
{% for usr in ['moe','larry','curly'] %}
    {{ usr }}: group:
        - present
    user:  
        - present
        - gid_from_name: True
        - require:  
            - group: {{ usr }}
{% endfor %}
```

Using Grains in SLS modules

Often times a state will need to behave differently on different systems. **Salt grains** objects are made available in the template context. The grains can be used from within sls modules:

```python
apache:
pkg.installed:
    {% if grains['os'] == 'RedHat' %}
        - name: httpd
    {% elif grains['os'] == 'Ubuntu' %}
        - name: apache2
    {% endif %}
```

Using Environment Variables in SLS modules

You can use `salt['environ.get']('VARNAME')` to use an environment variable in a Salt state.

```bash
MYENVVAR="world" salt-call state.template test.sls
```

Create a file with contents from an environment variable:
```
file.managed:
    - name: /tmp/hello
    - contents: {{ salt['environ.get']('MYENVVAR') }}
```

Error checking:
```
{% set myenvvar = salt['environ.get']('MYENVVAR') %}
{% if myenvvar %}
Create a file with contents from an environment variable:
    file.managed:
        - name: /tmp/hello
        - contents: {{ salt['environ.get']('MYENVVAR') }}
{% else %}
Fail - no environment passed in:
    test.fail_without_changes
{% endif %}
```

Calling Salt modules from templates

All of the Salt modules loaded by the minion are available within the templating system. This allows data to be gathered in real time on the target system. It also allows for shell commands to be run easily from within the sls modules.

The Salt module functions are also made available in the template context as `salt`:

The following example illustrates calling the `group_to_gid` function in the file execution module with a single positional argument called `some_group_that_exists`.

```python
moe:
    user.present:
        - gid: {{ salt['file.group_to_gid']('some_group_that_exists') }}
```
One way to think about this might be that the `gid` key is being assigned a value equivalent to the following python pseudo-code:

```python
import salt.modules.file
file.group_to_gid("some_group_that_exists")
```

Note that for the above example to work, `some_group_that_exists` must exist before the state file is processed by the templating engine.

Below is an example that uses the `network.hw_addr` function to retrieve the MAC address for eth0:

```python
salt["network.hw_addr"]("eth0")
```

To examine the possible arguments to each execution module function, one can examine the module reference documentation:

### Advanced SLS module syntax

Lastly, we will cover some incredibly useful techniques for more complex State trees.

#### Include declaration

A previous example showed how to spread a Salt tree across several files. Similarly, `Requisites and Other Global State Arguments` span multiple files by using an `Include declaration`. For example:

```python
python/python-libs.sls:

    python-dateutil:
        pkg.installed

python/django.sls:

    include:
        - python.python-libs

    django:
        pkg.installed:
            require:
                pkg: python-dateutil
```

#### Extend declaration

You can modify previous declarations by using an `Extend declaration`. For example the following modifies the Apache tree to also restart Apache when the vhosts file is changed:

```python
apache/apache.sls:

    apache:
        pkg.installed

apache/mywebsite.sls:

```
Using extend with require or watch

The `extend` statement works differently for `require` or `watch`. It appends to, rather than replacing the requisite component.

### Name declaration

You can override the **ID declaration** by using a **Name declaration**. For example, the previous example is a bit more maintainable if rewritten as follows:

```
apache/mywebsite.sls:

include:
  - apache.apache

extend:
  apache:
    service:
      - running
      - watch:
        - file: /etc/httpd/extra/httpd-vhosts.conf

/etc/httpd/extra/httpd-vhosts.conf:
  file.managed:
    - source: salt://apache/httpd-vhosts.conf

mywebsite:
  file.managed:
    - name: /etc/httpd/extra/httpd-vhosts.conf
    - source: salt://apache/httpd-vhosts.conf
```

### Names declaration

Even more powerful is using a **Names declaration** to override the **ID declaration** for multiple states at once. This often can remove the need for looping in a template. For example, the first example in this tutorial can be rewritten without the loop:

```
stooges:
  user.present:
    - names:
      - moe
      - larry
      - curly
```
**Next steps**

In *part 4* we will discuss how to use salt’s `file_roots` to set up a workflow in which states can be "promoted" from dev, to QA, to production.

### 6.9.19 States tutorial, part 4

**Note:** This tutorial builds on topics covered in *part 1*, *part 2*, and *part 3*. It is recommended that you begin there.

This part of the tutorial will show how to use salt’s `file_roots` to set up a workflow in which states can be "promoted" from dev, to QA, to production.

**Salt fileservor path inheritance**

Salt's fileserver allows for more than one root directory per environment, like in the below example, which uses both a local directory and a secondary location shared to the salt master via NFS:

```
# In the master config file (/etc/salt/master)
file_roots:
  base:
    - /srv/salt
    - /mnt/salt-nfs/base
```

Salt’s fileserver collapses the list of root directories into a single virtual environment containing all files from each root. If the same file exists at the same relative path in more than one root, then the top-most match "wins". For example, if `/srv/salt/foo.txt` and `/mnt/salt-nfs/base/foo.txt` both exist, then `salt://foo.txt` will point to `/srv/salt/foo.txt`.

**Note:** When using multiple fileservor backends, the order in which they are listed in the `fileserver_backend` parameter also matters. If both `roots` and `git` backends contain a file with the same relative path, and `roots` appears before `git` in the `fileserver_backend` list, then the file in `roots` will "win", and the file in `gitfs` will be ignored.

A more thorough explanation of how Salt’s modular fileservor works can be found [here](#). We recommend reading this.

**Environment configuration**

Configure a multiple-environment setup like so:

```
file_roots:
  base:
    - /srv/salt/prod
  qa:
    - /srv/salt/qa
    - /srv/salt/prod
  dev:
    - /srv/salt/dev
    - /srv/salt/qa
    - /srv/salt/prod
```
Given the path inheritance described above, files within `/srv/salt/prod` would be available in all environments. Files within `/srv/salt/qa` would be available in both qa, and dev. Finally, the files within `/srv/salt/dev` would only be available within the dev environment.

Based on the order in which the roots are defined, new files/states can be placed within `/srv/salt/dev`, and pushed out to the dev hosts for testing.

Those files/states can then be moved to the same relative path within `/srv/salt/qa`, and they are now available only in the dev and qa environments, allowing them to be pushed to QA hosts and tested.

Finally, if moved to the same relative path within `/srv/salt/prod`, the files are now available in all three environments.

**Requesting files from specific fileserver environments**

See [here](#) for documentation on how to request files from specific environments.

**Practical Example**

As an example, consider a simple website, installed to `/var/www/foobarcom`. Below is a top.sls that can be used to deploy the website:

```
/srv/salt/prod/top.sls:

base:
  'web*prod*':
    - webserver.foobarcom
qa:
  'web*qa*':
    - webserver.foobarcom
dev:
  'web*dev*':
    - webserver.foobarcom
```

Using pillar, roles can be assigned to the hosts:

```
/srv/pillar/top.sls:

base:
  'web*prod*':
    - webserver.prod
  'web*qa*':
    - webserver.qa
  'web*dev*':
    - webserver.dev
```

```
/srv/pillar/webserver/prod.sls:
webserver_role: prod
```

```
/srv/pillar/webserver/qa.sls:
webserver_role: qa
```

```
/srv/pillar/webserver/dev.sls:
```
webserver_role: dev

And finally, the SLS to deploy the website:

/srv/salt/prod/webserver/foobar.com.sls:

{% if pillar.get('webserver_role', '') %}
/var/www/foobar.com:
  file.recurse:
    - source: salt://webserver/src/foobar.com
    - env: {{ pillar['webserver_role'] }}
    - user: www
    - group: www
    - dir_mode: 755
    - file_mode: 644
{% endif %}

Given the above SLS, the source for the website should initially be placed in /srv/salt/dev/webserver/src/foobar.com.

First, let's deploy to dev. Given the configuration in the top file, this can be done using state.apply:

```
salt --pillar 'webserver_role:dev' state.apply
```

However, in the event that it is not desirable to apply all states configured in the top file (which could be likely in more complex setups), it is possible to apply just the states for the foobar.com website, by invoking state.apply with the desired SLS target as an argument:

```
salt --pillar 'webserver_role:dev' state.apply webserver.foobar.com
```

Once the site has been tested in dev, then the files can be moved from /srv/salt/dev/webserver/src/foobar.com to /srv/salt/qa/webserver/src/foobar.com, and deployed using the following:

```
salt --pillar 'webserver_role:qa' state.apply webserver.foobar.com
```

Finally, once the site has been tested in qa, then the files can be moved from /srv/salt/qa/webserver/src/foobar.com to /srv/salt/prod/webserver/src/foobar.com, and deployed using the following:

```
salt --pillar 'webserver_role:prod' state.apply webserver.foobar.com
```

Thanks to Salt's fileserver inheritance, even though the files have been moved to within /srv/salt/prod, they are still available from the same salt:// URI in both the qa and dev environments.

**Continue Learning**

The best way to continue learning about Salt States is to read through the reference documentation and to look through examples of existing state trees. Many pre-configured state trees can be found on GitHub in the saltstack-formulas collection of repositories.

If you have any questions, suggestions, or just want to chat with other people who are using Salt, we have a very active community and we'd love to hear from you.

In addition, by continuing to the Orchestrate Runner docs, you can learn about the powerful orchestration of which Salt is capable.
6.9.20 States Tutorial, Part 5 - Orchestration with Salt

This was moved to *Orchestrate Runner*.

6.9.21 Syslog-ng usage

Overview

Syslog-ng state module is for generating syslog-ng configurations. You can do the following things:

- generate syslog-ng configuration from YAML,
- use non-YAML configuration,
- start, stop or reload syslog-ng.

There is also an execution module, which can check the syntax of the configuration, get the version and other information about syslog-ng.

Configuration

Users can create syslog-ng configuration statements with the `syslog_ng.config` function. It requires a `name` and a `config` parameter. The `name` parameter determines the name of the generated statement and the `config` parameter holds a parsed YAML structure.

A statement can be declared in the following forms (both are equivalent):

```yaml
source.s_localhost:
syslog_ng.config:
  - config:
      - tcp:
          - ip: "127.0.0.1"
          - port: 1233

s_localhost:
syslog_ng.config:
  - config:
      source:
        tcp:
          - ip: "127.0.0.1"
          - port: 1233
```

The first one is called short form, because it needs less typing. Users can use lists and dictionaries to specify their configuration. The format is quite self describing and there are more examples [at the end](#examples) of this document.
Quotation

The quotation can be tricky sometimes but here are some rules to follow:

- when a string meant to be "string" in the generated configuration, it should be like "'string'" in the YAML document
- similarly, users should write "'string'" to get 'string' in the generated configuration

Full example

The following configuration is an example, how a complete syslog-ng configuration looks like:

```yaml
# Set the location of the configuration file
set_location:
  module.run:
    - name: syslog_ng.set_config_file
      m_name: "'/home/tibi/install/syslog-ng/etc/syslog-ng.conf"

# The syslog-ng and syslog-ng-ctl binaries are here. You needn't use
# this method if these binaries can be found in a directory in your PATH.
set_bin_path:
  module.run:
    - name: syslog_ng.set_binary_path
      m_name: "'/home/tibi/install/syslog-ng/sbin"

# Writes the first lines into the config file, also erases its previous
# content
write_version:
  module.run:
    - name: syslog_ng.write_version
      m_name: "'3.6'

# There is a shorter form to set the above variables
set_variables:
  module.run:
    - name: syslog_ng.set_parameters
      version: "'3.6'
      binary_path: "'/home/tibi/install/syslog-ng/sbin"
      config_file: "'/home/tibi/install/syslog-ng/etc/syslog-ng.conf"

# Some global options
options.global_options:
  syslog_ng.config:
    config:
      - time_reap: 30
      - mark_freq: 10
      - keep_hostname: "yes"

source.s_localhost:
  syslog_ng.config:
    config:
      - tcp:
          ip: "127.0.0.1"
          port: 1233

(continues on next page)
The `syslog_ng.reloaded` function can generate syslog-ng configuration from YAML. If the statement (source, destination, parser, etc.) has a name, this function uses the id as the name, otherwise (log statement) its purpose is like a mandatory comment.

After execution this example the `syslog_ng` state will generate this file:

```yaml
#Generated by Salt on 2014-08-18 00:11:11
@version: 3.6

options {
  time_reap(
    30
  );
  mark_freq(
    10
  );
  keep_hostname(
    yes
  );
};

source s_localhost {
  tcp(
    ip(
      127.0.0.1
    ),
    port(
      1233
    )
  )
};
```
Users can include arbitrary texts in the generated configuration with using the `config` statement (see the example above).

**Syslog_ng module functions**

You can use `syslog_ng.set_binary_path` to set the directory which contains the syslog-ng and syslog-ng-ctl binaries. If this directory is in your PATH, you don't need to use this function. There is also a `syslog_ng.set_config_file` function to set the location of the configuration file.

**Examples**

**Simple source**

```plaintext
source s_tail {
  file("/var/log/apache/access.log",
       follow_freq(1),
       flags(no-parse, validate-utf8)
  );
}
```
### s_tail:

Salt will call the source function of syslog_ng module

```yaml
-syslog_ng.config:
  - config:
    - source:
      - file:
        - file: '/var/log/apache/access.log'
        - follow_freq: 1
        - flags: no-parse validate-utf8
```

OR

```yaml
-syslog_ng.config:
  - config:
    - file:
      - file: '/var/log/apache/access.log'
      - follow_freq: 1
      - flags: no-parse validate-utf8
```

OR

```yaml
-source.s_tail:
  - syslog_ng.config:
    - config:
      - file:
        - file: '/var/log/apache/access.log'
        - follow_freq: 1
        - flags: no-parse validate-utf8
```

### Complex source

```yaml
source s_gsoc2014 {
  tcp(
    ip("0.0.0.0"),
    port(1234),
    flags(no-parse)
  )
};
```

```yaml
-s_gsoc2014:
  - syslog_ng.config:
    - config:
      - source:
        - tcp:
          - ip: 0.0.0.0
          - port: 1234
          - flags: no-parse
```
Filter

```plaintext
filter f_json {
    match("@json:"
    );
};
```

```plaintext
f_json:
    syslog_ng.config:
        - config:
            - filter:
                - match: 
                  
```

Template

```plaintext
template t_demo_filetemplate {
    template(
        "$ISODATE $HOST $MSG 
    );
    template_escape( 
        no
    );
};
```

```plaintext
t_demo_filetemplate:
    syslog_ng.config:
        - config:
            - template:
                - "template:
                    - "template: 
                        - "$ISODATE $HOST $MSG\n"
                    - template_escape:
                        - "no"
```

Rewrite

```plaintext
rewrite r_set_message_to_MESSAGE {
    set(
        "${.json.message}",
        value("$MESSAGE")
    );
};
```

```plaintext
r_set_message_to_MESSAGE:
    syslog_ng.config:
        - config:
            - rewrite:
                - set:
                    - "${.json.message}"
                    - value : "${MESSAGE}"
```

520 Chapter 6. Using Salt
Global options

```yaml
options {
  time_reap(30);
  mark_freq(10);
  keep_hostname(yes);
};
```

```yaml
global_options:
  syslog_ng.config:
    - config:
      options:
        - time_reap: 30
        - mark_freq: 10
        - keep_hostname: "yes"
```

Log

```yaml
log {
  source(s_gsoc2014);
  junction {
    channel {
      filter(f_json);
      parser(p_json);
      rewrite(r_set_json_tag);
      rewrite(r_set_message_to_MESSAGE);
      destination {
        file("/tmp/json-input.log",
             template(t_gsoc2014)
         );
      };
      flags(final);
    }; channel {
      filter(f_not_json);
      parser {
        syslog-parser(
        );
      };
      rewrite(r_set_syslog_tag);
      flags(final);
    };
    destination {
      file("/tmp/all.log",
           template(t_gsoc2014)
       );
    };
  }
}
```
6.9.22 Salt in 10 Minutes

Note: Welcome to SaltStack! I am excited that you are interested in Salt and starting down the path to better infrastructure management. I developed (and am continuing to develop) Salt with the goal of making the best software available to manage computers of almost any kind. I hope you enjoy working with Salt and that the software can solve your real world needs!

- Thomas S Hatch
  - Salt creator and Chief Developer
  - CTO of SaltStack, Inc.

Getting Started

What is Salt?

Salt is a different approach to infrastructure management, founded on the idea that high-speed communication with large numbers of systems can open up new capabilities. This approach makes Salt a powerful multitasking system that can solve many specific problems in an infrastructure.

The backbone of Salt is the remote execution engine, which creates a high-speed, secure and bi-directional communication net for groups of systems. On top of this communication system, Salt provides an extremely fast, flexible, and easy-to-use configuration management system called Salt States.
Installing Salt

SaltStack has been made to be very easy to install and get started. The installation documents contain instructions for all supported platforms.

Starting Salt

Salt functions on a master/minion topology. A master server acts as a central control bus for the clients, which are called minions. The minions connect back to the master.

Setting Up the Salt Master

Turning on the Salt Master is easy -- just turn it on! The default configuration is suitable for the vast majority of installations. The Salt Master can be controlled by the local Linux/Unix service manager:

On Systemd based platforms (newer Debian, openSUSE, Fedora):

```bash
systemctl start salt-master
```

On Upstart based systems (Ubuntu, older Fedora/RHEL):

```bash
service salt-master start
```

On SysV Init systems (Gentoo, older Debian etc.):

```bash
/etc/init.d/salt-master start
```

Alternatively, the Master can be started directly on the command-line:

```bash
salt-master -d
```

The Salt Master can also be started in the foreground in debug mode, thus greatly increasing the command output:

```bash
salt-master -l debug
```

The Salt Master needs to bind to two TCP network ports on the system. These ports are 4505 and 4506. For more in depth information on firewalling these ports, the firewall tutorial is available here.

Finding the Salt Master

When a minion starts, by default it searches for a system that resolves to the salt hostname on the network. If found, the minion initiates the handshake and key authentication process with the Salt master. This means that the easiest configuration approach is to set internal DNS to resolve the name salt back to the Salt Master IP.

Otherwise, the minion configuration file will need to be edited so that the configuration option master points to the DNS name or the IP of the Salt Master:

---

**Note:** The default location of the configuration files is `/etc/salt`. Most platforms adhere to this convention, but platforms such as FreeBSD and Microsoft Windows place this file in different locations.

```bash
/etc/salt/minion:
```
Setting up a Salt Minion

Note: The Salt Minion can operate with or without a Salt Master. This walk-through assumes that the minion will be connected to the master, for information on how to run a master-less minion please see the master-less quick-start guide:

Masterless Minion Quickstart

Now that the master can be found, start the minion in the same way as the master; with the platform init system or via the command line directly:

As a daemon:

```
salt-minion -d
```

In the foreground in debug mode:

```
salt-minion -l debug
```

When the minion is started, it will generate an id value, unless it has been generated on a previous run and cached (in /etc/salt/minion_id by default). This is the name by which the minion will attempt to authenticate to the master. The following steps are attempted, in order to try to find a value that is not localhost:

1. The Python function `socket.getfqdn()` is run
2. `/etc/hostname` is checked (non-Windows only)
3. `/etc/hosts (%WINDIR%\system32\drivers\etc\hosts on Windows hosts) is checked for hostnames that map to anything within 127.0.0.0/8.

If none of the above are able to produce an id which is not localhost, then a sorted list of IP addresses on the minion (excluding any within 127.0.0.0/8) is inspected. The first publicly-routable IP address is used, if there is one. Otherwise, the first privately-routable IP address is used.

If all else fails, then localhost is used as a fallback.

Note: Overriding the id

The minion id can be manually specified using the `id` parameter in the minion config file. If this configuration value is specified, it will override all other sources for the id.

Now that the minion is started, it will generate cryptographic keys and attempt to connect to the master. The next step is to venture back to the master server and accept the new minion's public key.
Using salt-key

Salt authenticates minions using public-key encryption and authentication. For a minion to start accepting commands from the master, the minion keys need to be accepted by the master.

The `salt-key` command is used to manage all of the keys on the master. To list the keys that are on the master:

```
salt-key -L
```

The keys that have been rejected, accepted, and pending acceptance are listed. The easiest way to accept the minion key is to accept all pending keys:

```
salt-key -A
```

**Note:** Keys should be verified! Print the master key fingerprint by running `salt-key -F master` on the Salt master. Copy the `master.pub` fingerprint from the Local Keys section, and then set this value as the `master_finger` in the minion configuration file. Restart the Salt minion.

On the master, run `salt-key -f minion-id` to print the fingerprint of the minion's public key that was received by the master. On the minion, run `salt-call key.finger --local` to print the fingerprint of the minion key.

On the master:

```
# salt-key -f foo.domain.com
Unaccepted Keys:
```

On the minion:

```
# salt-call key.finger --local
local:
```

If they match, approve the key with `salt-key -a foo.domain.com`.

Sending the First Commands

Now that the minion is connected to the master and authenticated, the master can start to command the minion.

Salt commands allow for a vast set of functions to be executed and for specific minions and groups of minions to be targeted for execution.

The `salt` command is comprised of command options, target specification, the function to execute, and arguments to the function.

A simple command to start with looks like this:

```
salt '*' test.version
```

The * is the target, which specifies all minions.

test.version tells the minion to run the `test.version` function.

In the case of `test.version`, `test` refers to a **execution module**. `version` refers to the `version` function contained in the aforementioned `test` module.
Note: Execution modules are the workhorses of Salt. They do the work on the system to perform various tasks, such as manipulating files and restarting services.

The result of running this command will be the master instructing all of the minions to execute `test.version` in parallel and return the result. Using `test.version` is a good way of confirming that a minion is connected, and reaffirm to the user the salt version(s) they have installed on the minions.

Note: Each minion registers itself with a unique minion ID. This ID defaults to the minion’s hostname, but can be explicitly defined in the minion config as well by using the `id` parameter.

Of course, there are hundreds of other modules that can be called just as `test.version` can. For example, the following would return disk usage on all targeted minions:

```
salt '*' disk.usage
```

**Getting to Know the Functions**

Salt comes with a vast library of functions available for execution, and Salt functions are self-documenting. To see what functions are available on the minions execute the `sys.doc` function:

```
salt '*' sys.doc
```

This will display a very large list of available functions and documentation on them.

Note: Module documentation is also available on the web.

These functions cover everything from shelling out to package management to manipulating database servers. They comprise a powerful system management API which is the backbone to Salt configuration management and many other aspects of Salt.

Note: Salt comes with many plugin systems. The functions that are available via the salt command are called *Execution Modules*.

**Helpful Functions to Know**

The `cmd` module contains functions to shell out on minions, such as `cmd.run` and `cmd.run_all`:

```
salt '*' cmd.run 'ls -l /etc'
```

The `pkg` functions automatically map local system package managers to the same salt functions. This means that `pkg.install` will install packages via `yum` on Red Hat based systems, `apt` on Debian systems, etc.:

```
salt '*' pkg.install vim
```

Note: Some custom Linux spins and derivatives of other distributions are not properly detected by Salt. If the above command returns an error message saying that `pkg.install` is not available, then you may need to override the
pkg provider. This process is explained here.

The `network.interfaces` function will list all interfaces on a minion, along with their IP addresses, netmasks, MAC addresses, etc:

```
salt '*' network.interfaces
```

### Changing the Output Format

The default output format used for most Salt commands is called the `nested` ouputter, but there are several other outputters that can be used to change the way the output is displayed. For instance, the `pprint` outputter can be used to display the return data using Python's `pprint` module:

```
root@saltmaster:~# salt myminion grains.item pythonpath --out=pprint
{
    'myminion': {
        'pythonpath': ['/usr/lib64/python2.7',
                      '/usr/lib/python2.7/plat-linux2',
                      '/usr/lib64/python2.7/lib-tk',
                      '/usr/lib/python2.7/lib-tk',
                      '/usr/lib/python2.7/site-packages',
                      '/usr/lib/python2.7/site-packages/gst-0.10',
                      '/usr/lib/python2.7/site-packages/gtk-2.0']
    }
}
```

The full list of Salt outputters, as well as example output, can be found here.

### salt-call

The examples so far have described running commands from the Master using the `salt` command, but when troubleshooting it can be more beneficial to login to the minion directly and use `salt-call`.

Doing so allows you to see the minion log messages specific to the command you are running (which are not part of the return data you see when running the command from the Master using `salt`), making it unnecessary to tail the minion log. More information on `salt-call` and how to use it can be found here.

### Grains

Salt uses a system called **Grains** to build up static data about minions. This data includes information about the operating system that is running, CPU architecture and much more. The grains system is used throughout Salt to deliver platform data to many components and to users.

Grains can also be statically set, this makes it easy to assign values to minions for grouping and managing.

A common practice is to assign grains to minions to specify what the role or roles a minion might be. These static grains can be set in the minion configuration file or via the `grains.setval` function.
Targeting

Salt allows for minions to be targeted based on a wide range of criteria. The default targeting system uses globular expressions to match minions, hence if there are minions named `larry1`, `larry2`, `curly1`, and `curly2`, a glob of `larry*` will match `larry1` and `larry2`, and a glob of `*1` will match `larry1` and `curly1`.

Many other targeting systems can be used other than globs, these systems include:

- **Regular Expressions**  Target using PCRE-compliant regular expressions
- **Grains**  Target based on grains data: [Targeting with Grains](#)
- **Pillar**  Target based on pillar data: [Targeting with Pillar](#)
- **IP**  Target based on IP address/subnet/range
- **Compound**  Create logic to target based on multiple targets: [Targeting with Compound](#)
- **Nodegroup**  Target with nodegroups: [Targeting with Nodegroup](#)

The concepts of targets are used on the command line with Salt, but also function in many other areas as well, including the state system and the systems used for ACLs and user permissions.

Passing in Arguments

Many of the functions available accept arguments which can be passed in on the command line:

```bash
salt '*' pkg.install vim
```

This example passes the argument `vim` to the `pkg.install` function. Since many functions can accept more complex input than just a string, the arguments are parsed through YAML, allowing for more complex data to be sent on the command line:

```bash
salt '*' test.echo 'foo: bar'
```

In this case Salt translates the string `foo: bar` into the dictionary `"{'foo': 'bar'}"`

**Note:** Any line that contains a newline will not be parsed by YAML.

Salt States

Now that the basics are covered the time has come to evaluate States. Salt States, or the State System is the component of Salt made for configuration management.

The state system is already available with a basic Salt setup, no additional configuration is required. States can be set up immediately.

**Note:** Before diving into the state system, a brief overview of how states are constructed will make many of the concepts clearer. Salt states are based on data modeling and build on a low level data structure that is used to execute each state function. Then more logical layers are built on top of each other.

The high layers of the state system which this tutorial will cover consists of everything that needs to be known to use states, the two high layers covered here are the `sls` layer and the highest layer `highstate`.

Understanding the layers of data management in the State System will help with understanding states, but they never need to be used. Just as understanding how a compiler functions assists when learning a programming language,
understanding what is going on under the hood of a configuration management system will also prove to be a valuable asset.

The First SLS Formula

The state system is built on SLS (SaLt State) formulas. These formulas are built out in files on Salt’s file server. To make a very basic SLS formula open up a file under /srv/salt named vim.sls. The following state ensures that vim is installed on a system to which that state has been applied.

/srv/salt/vim.sls:

```bash
vim:
  pkg.installed
```

Now install vim on the minions by calling the SLS directly:

```bash
salt '*' state.apply vim
```

This command will invoke the state system and run the vim SLS.

Now, to beef up the vim SLS formula, a vimrc can be added:

/srv/salt/vim.sls:

```bash
vim:
  pkg.installed: []

/etc/vimrc:
  file.managed:
    - source: salt://vimrc
    - mode: 644
    - user: root
    - group: root
```

Now the desired vimrc needs to be copied into the Salt file server to /srv/salt/vimrc. In Salt, everything is a file, so no path redirection needs to be accounted for. The vimrc file is placed right next to the vim.sls file. The same command as above can be executed to all the vim SLS formulas and now include managing the file.

Note: Salt does not need to be restarted/reloaded or have the master manipulated in any way when changing SLS formulas. They are instantly available.

Adding Some Depth

Obviously maintaining SLS formulas right in a single directory at the root of the file server will not scale out to reasonably sized deployments. This is why more depth is required. Start by making an nginx formula a better way, make an nginx subdirectory and add an init.sls file:

/srv/salt/nginx/init.sls:

```bash
nginx:
  pkg.installed: []
  service.running:
```

(continues on next page)
A few concepts are introduced in this SLS formula.

First is the service statement which ensures that the nginx service is running.

Of course, the nginx service can’t be started unless the package is installed -- hence the require statement which sets up a dependency between the two.

The require statement makes sure that the required component is executed before and that it results in success.

Note: The require option belongs to a family of options called requisites. Requisites are a powerful component of Salt States, for more information on how requisites work and what is available see: Requisites

Also evaluation ordering is available in Salt as well: Ordering States

This new sls formula has a special name -- init.sls. When an SLS formula is named init.sls it inherits the name of the directory path that contains it. This formula can be referenced via the following command:

```
salt '*' state.apply nginx
```

Note: state.apply is just another remote execution function, just like test.version or disk.usage. It simply takes the name of an SLS file as an argument.

Now that subdirectories can be used, the vim.sls formula can be cleaned up. To make things more flexible, move the vim.sls and vimrc into a new subdirectory called edit and change the vim.sls file to reflect the change:

```
/srv/salt/edit/vim.sls:
```

```
vim:
    pkg.installed

/etc/vimrc:
    file.managed:
        - source: salt://edit/vimrc
        - mode: 644
        - user: root
        - group: root
```

Only the source path to the vimrc file has changed. Now the formula is referenced as edit.vim because it resides in the edit subdirectory. Now the edit subdirectory can contain formulas for emacs, nano, joe or any other editor that may need to be deployed.
Next Reading

Two walk-throughs are specifically recommended at this point. First, a deeper run through States, followed by an explanation of Pillar.

1. Starting States
2. Pillar Walkthrough

An understanding of Pillar is extremely helpful in using States.

Getting Deeper Into States

Two more in-depth States tutorials exist, which delve much more deeply into States functionality.

1. How Do I Use Salt States?, covers much more to get off the ground with States.
2. The States Tutorial also provides a fantastic introduction.

These tutorials include much more in-depth information including templating SLS formulas etc.

So Much More!

This concludes the initial Salt walk-through, but there are many more things still to learn! These documents will cover important core aspects of Salt:

- Pillar
- Job Management

A few more tutorials are also available:

- Remote Execution Tutorial
- Standalone Minion

This still is only scratching the surface, many components such as the reactor and event systems, extending Salt, modular components and more are not covered here. For an overview of all Salt features and documentation, look at the Table of Contents.

6.9.23 Salt's Test Suite: An Introduction

Note: This tutorial makes a couple of assumptions. The first assumption is that you have a basic knowledge of Salt. To get up to speed, check out the Salt Walkthrough.

The second assumption is that your Salt development environment is already configured and that you have a basic understanding of contributing to the Salt codebase. If you're unfamiliar with either of these topics, please refer to the Installing Salt for Development and the Contributing pages, respectively.

Salt comes with a powerful integration and unit test suite. The test suite allows for the fully automated run of integration and/or unit tests from a single interface.

Salt's test suite is located under the tests directory in the root of Salt's code base and is divided into two main types of tests: unit tests and integration tests. The unit and integration sub-test-suites are located in the tests directory, which is where the majority of Salt's test cases are housed.
Getting Set Up For Tests

First of all you will need to ensure you install nox.

```
pip install nox
```

Test Directory Structure

As noted in the introduction to this tutorial, Salt's test suite is located in the `tests` directory in the root of Salt's code base. From there, the tests are divided into two groups integration and unit. Within each of these directories, the directory structure roughly mirrors the directory structure of Salt's own codebase. For example, the files inside `tests/integration/modules` contains tests for the files located within `salt/modules`.

---

Note: `tests/integration` and `tests/unit` are the only directories discussed in this tutorial. With the exception of the `tests/runtests.py` file, which is used below in the *Running the Test Suite* section, the other directories and files located in `tests` are outside the scope of this tutorial.

---

Integration vs. Unit

Given that Salt's test suite contains two powerful, though very different, testing approaches, when should you write integration tests and when should you write unit tests?

Integration tests use Salt masters, minions, and a syndic to test salt functionality directly and focus on testing the interaction of these components. Salt's integration test runner includes functionality to run Salt execution modules, runners, states, shell commands, salt-ssh commands, salt-api commands, and more. This provides a tremendous ability to use Salt to test itself and makes writing such tests a breeze. Integration tests are the preferred method of testing Salt functionality when possible.

Unit tests do not spin up any Salt daemons, but instead find their value in testing singular implementations of individual functions. Instead of testing against specific interactions, unit tests should be used to test a function's logic. Unit tests should be used to test a function's exit point(s) such as any return or raises statements.

Unit tests are also useful in cases where writing an integration test might not be possible. While the integration test suite is extremely powerful, unfortunately at this time, it does not cover all functional areas of Salt's ecosystem. For example, at the time of this writing, there is not a way to write integration tests for Proxy Minions. Since the test runner will need to be adjusted to account for Proxy Minion processes, unit tests can still provide some testing support in the interim by testing the logic contained inside Proxy Minion functions.

Running the Test Suite

Once all of the requirements are installed, the nox command is used to instantiate Salt's test suite:

```
nox -e 'pytest-zeromq-3(coverage=False)'
```

The command above, if executed without any options, will run the entire suite of integration and unit tests. Some tests require certain flags to run, such as destructive tests. If these flags are not included, then the test suite will only perform the tests that don't require special attention.

At the end of the test run, you will see a summary output of the tests that passed, failed, or were skipped.

You can pass any pytest options after the nox command like so:
The above command will run the `test_ps.py` test with the zeromq transport, python3, and pytest. The option after `--` can include any pytest options.

### Running Integration Tests

Salt’s set of integration tests use Salt to test itself. The integration portion of the test suite includes some built-in Salt daemons that will spin up in preparation of the test run. This list of Salt daemon processes includes:

- 2 Salt Masters
- 2 Salt Minions
- 1 Salt Syndic

These various daemons are used to execute Salt commands and functionality within the test suite, allowing you to write tests to assert against expected or unexpected behaviors.

A simple example of a test utilizing a typical master/minion execution module command is the test for the `test_ping` function in the `tests/integration/modules/test_test.py` file:

```python
def test_ping(self):
    ""
    test.ping
    ""
    self.assertTrue(self.run_function("test.ping"))
```

The test above is a very simple example where the `test.ping` function is executed by Salt’s test suite runner and is asserting that the minion returned with a `True` response.

### Test Selection Options

If you want to run only a subset of tests, this is easily done with pytest. You only need to point the test runner to the directory. For example if you want to run all integration module tests:

```bash
nox -e 'pytest-zeromq-3(coverage=False)' -- tests/integration/modules/
```

### Running Unit Tests

If you want to run only the unit tests, you can just pass the unit test directory as an option to the test runner.

The unit tests do not spin up any Salt testing daemons as the integration tests do and execute very quickly compared to the integration tests.

```bash
nox -e 'pytest-zeromq-3(coverage=False)' -- tests/unit/
```
Running Specific Tests

There are times when a specific test file, test class, or even a single, individual test need to be executed, such as when writing new tests. In these situations, you should use the pytest syntax to select the specific tests.

For running a single test file, such as the pillar module test file in the integration test directory, you must provide the file path:

```
nox -e 'pytest-zeromq-3(coverage=False)' -- tests/integration/modules/test_pillar.py
```

Some test files contain only one test class while other test files contain multiple test classes. To run a specific test class within the file, append the name of the test class to the end of the file path:

```
nox -e 'pytest-zeromq-3(coverage=False)' -- tests/integration/modules/test_pillar.PillarModuleTest
```

To run a single test within a file, append both the name of the test class the individual test belongs to, as well as the name of the test itself:

```
nox -e 'pytest-zeromq-3(coverage=False)' -- tests/integration/modules/test_pillar.PillarModuleTest::test_data
```

The following command is an example of how to execute a single test found in the tests/unit/modules/test_cp.py file:

```
nox -e 'pytest-zeromq-3(coverage=False)' -- tests/unit/modules/test_cp.CpTestCase::test_get_file_not_found
```

Writing Tests for Salt

Once you’re comfortable running tests, you can now start writing them! Be sure to review the Integration vs. Unit section of this tutorial to determine what type of test makes the most sense for the code you’re testing.

Note: There are many decorators, naming conventions, and code specifications required for Salt test files. We will not be covering all of the these specifics in this tutorial. Please refer to the testing documentation links listed below in the Additional Testing Documentation section to learn more about these requirements.

In the following sections, the test examples assume the "new" test is added to a test file that is already present and regularly running in the test suite and is written with the correct requirements.

Writing Integration Tests

Since integration tests validate against a running environment, as explained in the Running Integration Tests section of this tutorial, integration tests are very easy to write and are generally the preferred method of writing Salt tests.

The following integration test is an example taken from the test.py file in the tests/integration/modules directory. This test uses the run_function method to test the functionality of a traditional execution module command.

The run_function method uses the integration test daemons to execute a module.function command as you would with Salt. The minion runs the function and returns. The test also uses Python’s Assert Functions to test that the minion’s return is expected.
def test_ping(self):
    ""
    test.ping
    ""
    self.assertTrue(self.run_function("test.ping"))

Args can be passed in to the run_function method as well:

def test_echo(self):
    ""
    test.echo
    ""
    self.assertEqual(self.run_function("test.echo", ["text"]), "text")

The next example is taken from the tests/integration/modules/test_aliases.py file and demonstrates how to pass kwargs to the run_function call. Also note that this test uses another salt function to ensure the correct data is present (via the aliases.set_target call) before attempting to assert what the aliases.get_target call should return.

def test_set_target(self):
    ""
    aliases.set_target and aliases.get_target
    ""
    set_ret = self.run_function("aliases.set_target", alias="fred", target="bob")
    self.assertTrue(set_ret)
    tgt_ret = self.run_function("aliases.get_target", alias="fred")
    self.assertEqual(tgt_ret, "bob")

Using multiple Salt commands in this manner provides two useful benefits. The first is that it provides some additional coverage for the aliases.set_target function. The second benefit is the call to aliases.get_target is not dependent on the presence of any aliases set outside of this test. Tests should not be dependent on the previous execution, success, or failure of other tests. They should be isolated from other tests as much as possible.

While it might be tempting to build out a test file where tests depend on one another before running, this should be avoided. SaltStack recommends that each test should test a single functionality and not rely on other tests. Therefore, when possible, individual tests should also be broken up into singular pieces. These are not hard-and-fast rules, but serve more as recommendations to keep the test suite simple. This helps with debugging code and related tests when failures occur and problems are exposed. There may be instances where large tests use many asserts to set up a use case that protects against potential regressions.

Note: The examples above all use the run_function option to test execution module functions in a traditional master/minion environment. To see examples of how to test other common Salt components such as runners, salt-api, and more, please refer to the Integration Test Class Examples documentation.
Destructive vs Non-destructive Tests

Since Salt is used to change the settings and behavior of systems, often, the best approach to run tests is to make actual changes to an underlying system. This is where the concept of destructive integration tests comes into play. Tests can be written to alter the system they are running on. This capability is what fills in the gap needed to properly test aspects of system management like package installation.

To write a destructive test, import and use the `destructiveTest` decorator for the test method:

```python
import integration
from tests.support.helpers import destructiveTest

class PkgTest(integration.ModuleCase):
    @destructiveTest
    def test_pkg_install(self):
        ret = self.run_function("pkg.install", name="finch")
        self.assertSaltTrueReturn(ret)
        ret = self.run_function("pkg.purge", name="finch")
        self.assertSaltTrueReturn(ret)
```

Writing Unit Tests

As explained in the Integration vs. Unit section above, unit tests should be written to test the logic of a function. This includes focusing on testing return and raises statements. Substantial effort should be made to mock external resources that are used in the code being tested.

External resources that should be mocked include, but are not limited to, APIs, function calls, external data either globally available or passed in through function arguments, file data, etc. This practice helps to isolate unit tests to test Salt logic. One handy way to think about writing unit tests is to "block all of the exits". More information about how to properly mock external resources can be found in Salt's Unit Test documentation.

Salt’s unit tests utilize Python’s mock class as well as `MagicMock`. The `@patch` decorator is also heavily used when "blocking all the exits".

A simple example of a unit test currently in use in Salt is the `test_get_file_not_found` test in the `tests/unit/modules/test_cp.py` file. This test uses the `@patch` decorator and `MagicMock` to mock the return of the call to Salt’s `cp.hash_file` execution module function. This ensures that we’re testing the `cp.get_file` function directly, instead of inadvertently testing the call to `cp.hash_file`, which is used in `cp.get_file`.

```python
def test_get_file_not_found(self):
    """
    Test if get_file can't find the file.
    """
    with patch("salt.modules.cp.hash_file", MagicMock(return_value=False)):
        path = "salt://saltines"
        dest = "/srv/salt/cheese"
        ret = 
        assert cp.get_file(path, dest) == ret
```

Note that Salt’s `cp` module is imported at the top of the file, along with all of the other necessary testing imports. The `get_file` function is then called directly in the testing function, instead of using the `run_function` method as the integration test examples do above.

The call to `cp.get_file` returns an empty string when a `hash_file` isn’t found. Therefore, the example above is a good illustration of a unit test "blocking the exits" via the `@patch` decorator, as well as testing logic via asserting against the `return` statement in the `if` clause. In this example we used the python `assert` to verify the return
from cp.get_file. Pytest allows you to use these asserts when writing your tests and, in fact, plain asserts is the preferred way to assert anything in your tests. As Salt dives deeper into Pytest, the use of unittest.TestCase will be replaced by plain test functions, or test functions grouped in a class, which does not subclass unittest.TestCase, which, of course, doesn't work with unittest assert functions.

There are more examples of writing unit tests of varying complexities available in the following docs:

- Simple Unit Test Example
- Complete Unit Test Example
- Complex Unit Test Example

Note: Considerable care should be made to ensure that you're testing something useful in your test functions. It is very easy to fall into a situation where you have mocked so much of the original function that the test results in only asserting against the data you have provided. This results in a poor and fragile unit test.

Add a python module dependency to the test run

The test dependencies for python modules are managed under the requirements/static directory. You will need to add your module to the appropriate file under requirements/static. When pre-commit is run it will create all of the needed requirement files under requirements/static/py3{5,6,7}. Nox will then use these files to install the requirements for the tests.

Add a system dependency to the test run

If you need to add a system dependency for the test run, this will need to be added in the salt jenkins repo. This repo uses salt states to install system dependencies. You need to update the state-tree/golden-images-provision.sls file with your dependency to ensure it is installed. Once your PR is merged the core team will need to promote the new images with your new dependency installed.

Checking for Log Messages

To test to see if a given log message has been emitted, the following pattern can be used

```python
# Import logging handler
from tests.support.helpers import TstSuiteLoggingHandler

# .. inside test
with TstSuiteLoggingHandler() as handler:
    for message in handler.messages:
        if message.startswith("ERROR: This is the error message we seek"): break
    else:
        raise AssertionError("Did not find error message")
```
Automated Test Runs

SaltStack maintains a Jenkins server which can be viewed at https://jenkinsci.saltstack.com. The tests executed from this Jenkins server create fresh virtual machines for each test run, then execute the destructive tests on the new, clean virtual machine. This allows for the execution of tests across supported platforms.

Additional Testing Documentation

In addition to this tutorial, there are some other helpful resources and documentation that go into more depth on Salt’s test runner, writing tests for Salt code, and general Python testing documentation. Please see the following references for more information:

- Salt’s Test Suite Documentation
- Integration Tests
- Unit Tests
- MagicMock
- Python Unittest
- Python’s Assert Functions

6.10 Troubleshooting

The intent of the troubleshooting section is to introduce solutions to a number of common issues encountered by users and the tools that are available to aid in developing States and Salt code.

6.10.1 Troubleshooting the Salt Master

If your Salt master is having issues such as minions not returning data, slow execution times, or a variety of other issues, the following links contain details on troubleshooting the most common issues encountered:

Troubleshooting the Salt Master

Running in the Foreground

A great deal of information is available via the debug logging system, if you are having issues with minions connecting or not starting run the master in the foreground:

```
# salt-master -l debug
```

Anyone wanting to run Salt daemons via a process supervisor such as monit, runit, or supervisord, should omit the –d argument to the daemons and run them in the foreground.
What Ports does the Master Need Open?

For the master, TCP ports 4505 and 4506 need to be open. If you've put both your Salt master and minion in debug mode and don't see an acknowledgment that your minion has connected, it could very well be a firewall interfering with the connection. See our firewall configuration page for help opening the firewall on various platforms.

If you've opened the correct TCP ports and still aren't seeing connections, check that no additional access control system such as SELinux or AppArmor is blocking Salt.

Too many open files

The salt-master needs at least 2 sockets per host that connects to it, one for the Publisher and one for response port. Thus, large installations may, upon scaling up the number of minions accessing a given master, encounter:

```
12:45:29,289 [salt.master ][INFO ] Starting Salt worker process 38
Too many open files
sock != -1 (tcp_listener.cpp:335)
```

The solution to this would be to check the number of files allowed to be opened by the user running salt-master (root by default):

```
[root@salt-master ~]# ulimit -n
1024
```

If this value is not equal to at least twice the number of minions, then it will need to be raised. For example, in an environment with 1800 minions, the nofile limit should be set to no less than 3600. This can be done by creating the file /etc/security/limits.d/99-salt.conf, with the following contents:

```
root    hard    nofile    4096
root    soft    nofile    4096
```

Replace root with the user under which the master runs, if different.

If your master does not have an /etc/security/limits.d directory, the lines can simply be appended to /etc/security/limits.conf.

As with any change to resource limits, it is best to stay logged into your current shell and open another shell to run ulimit -n again and verify that the changes were applied correctly. Additionally, if your master is running upstart, it may be necessary to specify the nofile limit in /etc/default/salt-master if upstart isn't respecting your resource limits:

```
limit nofile 4096 4096
```

Note: The above is simply an example of how to set these values, and you may wish to increase them even further if your Salt master is doing more than just running Salt.
Salt Master Stops Responding

There are known bugs with ZeroMQ versions less than 2.1.11 which can cause the Salt master to not respond properly. If you’re running a ZeroMQ version greater than or equal to 2.1.9, you can work around the bug by setting the sysctls `net.core.rmem_max` and `net.core.wmem_max` to 16777216. Next, set the third field in `net.ipv4.tcp_rmem` and `net.ipv4.tcp_wmem` to at least 16777216.

You can do it manually with something like:

```sh
# echo 16777216 > /proc/sys/net/core/rmem_max
# echo 16777216 > /proc/sys/net/core/wmem_max
# echo "4096 87380 16777216" > /proc/sys/net/ipv4/tcp_rmem
# echo "4096 87380 16777216" > /proc/sys/net/ipv4/tcp_wmem
```

Or with the following Salt state:

```yaml
net.core.rmem_max:
  - sysctl:
    - present
    - value: 16777216

net.core.wmem_max:
  - sysctl:
    - present
    - value: 16777216

net.ipv4.tcp_rmem:
  - sysctl:
    - present
    - value: 4096 87380 16777216

net.ipv4.tcp_wmem:
  - sysctl:
    - present
    - value: 4096 87380 16777216
```

Live Python Debug Output

If the master seems to be unresponsive, a SIGUSR1 can be passed to the salt-master threads to display what piece of code is executing. This debug information can be invaluable in tracking down bugs.

To pass a SIGUSR1 to the master, first make sure the master is running in the foreground. Stop the service if it is running as a daemon, and start it in the foreground like so:

```sh
# salt-master -l debug
```

Then pass the signal to the master when it seems to be unresponsive:

```sh
# killall -SIGUSR1 salt-master
```

When filing an issue or sending questions to the mailing list for a problem with an unresponsive daemon, be sure to include this information if possible.
Live Salt-Master Profiling

When faced with performance problems one can turn on master process profiling by sending it SIGUSR2.

```bash
# killall -SIGUSR2 salt-master
```

This will activate `yappi` profiler inside salt-master code, then after some time one must send SIGUSR2 again to stop profiling and save results to file. If run in foreground salt-master will report filename for the results, which are usually located under `/tmp` on Unix-based OSes and `c:\temp` on windows.

Make sure you have yappi installed.

Results can then be analyzed with `kcachegrind` or similar tool.

Make sure you have yappi installed.

On Windows, in the absence of kcachegrind, a simple file-based workflow to create profiling graphs could use `gprof2dot`, `graphviz` and this batch file:

```bash
:: Converts callgrind* profiler output to *.pdf, via *.dot
::
@echo off
del *.dot.pdf
for /r %%f in (callgrind*) do ( echo "%%f"
gprof2dot.exe -f callgrind --show-samples "%%f" -o "%%f.dot"
dot.exe "%%f.dot" -Tpdf -O
del "%%f.dot"
)
```

Commands Time Out or Do Not Return Output

Depending on your OS (this is most common on Ubuntu due to apt-get) you may sometimes encounter times where a `state.apply`, or other long running commands do not return output.

By default the timeout is set to 5 seconds. The timeout value can easily be increased by modifying the `timeout` line within your `/etc/salt/master` configuration file.

Having keys accepted for Salt minions that no longer exist or are not reachable also increases the possibility of timeouts, since the Salt master waits for those systems to return command results.

Passing the `-c` Option to Salt Returns a Permissions Error

Using the `-c` option with the Salt command modifies the configuration directory. When the configuration file is read it will still base data off of the `root_dir` setting. This can result in unintended behavior if you are expecting files such as `/etc/salt/pki` to be pulled from the location specified with `-c`. Modify the `root_dir` setting to address this behavior.
Salt Master Doesn't Return Anything While Running jobs

When a command being run via Salt takes a very long time to return (package installations, certain scripts, etc.) the master may drop you back to the shell. In most situations the job is still running but Salt has exceeded the set timeout before returning. Querying the job queue will provide the data of the job but is inconvenient. This can be resolved by either manually using the `--t` option to set a longer timeout when running commands (by default it is 5 seconds) or by modifying the master configuration file: `/etc/salt/master` and setting the `timeout` value to change the default timeout for all commands, and then restarting the salt-master service.

If a `state.apply` run takes too long, you can find a bottleneck by adding the `--out=profile` option.

Salt Master Auth Flooding

In large installations, care must be taken not to overwhelm the master with authentication requests. Several options can be set on the master which mitigate the chances of an authentication flood from causing an interruption in service.

<table>
<thead>
<tr>
<th>Note:</th>
<th>recon_default:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The average number of seconds to wait between reconnection attempts.</td>
<td></td>
</tr>
<tr>
<td>recon_max: The maximum number of seconds to wait between reconnection attempts.</td>
<td></td>
</tr>
<tr>
<td>recon_randomize: A flag to indicate whether the recon_default value should be randomized.</td>
<td></td>
</tr>
<tr>
<td>acceptance_wait_time: The number of seconds to wait for a reply to each authentication request.</td>
<td></td>
</tr>
<tr>
<td>random_reauth_delay: The range of seconds across which the minions should attempt to randomize authentication attempts.</td>
<td></td>
</tr>
<tr>
<td>auth_timeout: The total time to wait for the authentication process to complete, regardless of the number of attempts.</td>
<td></td>
</tr>
</tbody>
</table>

Running states locally

To debug the states, you can use call locally.

```
salt-call -l trace --local state.highstate
```

The top.sls file is used to map what SLS modules get loaded onto what minions via the state system.

It is located in the file defined in the `file_roots` variable of the salt master configuration file which is defined by found in CONFIG_DIR/master, normally `/etc/salt/master`

The default configuration for the `file_roots` is:

```
file_roots:
  base:
    - /srv/salt
```

So the top file is defaulted to the location `/srv/salt/top.sls`
Salt Master Umask

The salt master uses a cache to track jobs as they are published and returns come back. The recommended umask for a salt-master is \(022\), which is the default for most users on a system. Incorrect umasks can result in permission-denied errors when the master tries to access files in its cache.

6.10.2 Troubleshooting the Salt Minion

In the event that your Salt minion is having issues, a variety of solutions and suggestions are available. Please refer to the following links for more information:

Troubleshooting the Salt Minion

Running in the Foreground

A great deal of information is available via the debug logging system, if you are having issues with minions connecting or not starting run the minion in the foreground:

```
# salt-minion -l debug
```

Anyone wanting to run Salt daemons via a process supervisor such as `monit`, `runit`, or `supervisord`, should omit the `-d` argument to the daemons and run them in the foreground.

What Ports does the Minion Need Open?

No ports need to be opened on the minion, as it makes outbound connections to the master. If you've put both your Salt master and minion in debug mode and don't see an acknowledgment that your minion has connected, it could very well be a firewall interfering with the connection. See our firewall configuration page for help opening the firewall on various platforms.

If you have netcat installed, you can check port connectivity from the minion with the `nc` command:

```
$ nc -v -z salt.master.ip.addr 4505
Connection to salt.master.ip.addr 4505 port [tcp/unknown] succeeded!
$ nc -v -z salt.master.ip.addr 4506
Connection to salt.master.ip.addr 4506 port [tcp/unknown] succeeded!
```

The `Nmap` utility can also be used to check if these ports are open:

```
# nmap -sS -q -p 4505-4506 salt.master.ip.addr
Starting Nmap 6.40 ( http://nmap.org ) at 2013-12-29 19:44 CST
Nmap scan report for salt.master.ip.addr (10.0.0.10)
Host is up (0.0026s latency).
PORT STATE SERVICE
4505/tcp open unknown
4506/tcp open unknown
MAC Address: 00:11:22:AA:BB:CC (Intel)
Nmap done: 1 IP address (1 host up) scanned in 1.64 seconds
```
If you’ve opened the correct TCP ports and still aren’t seeing connections, check that no additional access control system such as SELinux or AppArmor is blocking Salt. Tools like tcptraceroute can also be used to determine if an intermediate device or firewall is blocking the needed TCP ports.

Using salt-call

The salt-call command was originally developed for aiding in the development of new Salt modules. Since then, many applications have been developed for running any Salt module locally on a minion. These range from the original intent of salt-call (development assistance), to gathering more verbose output from calls like state.apply.

When initially creating your state tree, it is generally recommended to invoke highstates by running state.apply directly from the minion with salt-call, rather than remotely from the master. This displays far more information about the execution than calling it remotely. For even more verbosity, increase the loglevel using the -l argument:

```
# salt-call -l debug state.apply
```

The main difference between using salt and using salt-call is that salt-call is run from the minion, and it only runs the selected function on that minion. By contrast, salt is run from the master, and requires you to specify the minions on which to run the command using salt's targeting system.

Live Python Debug Output

If the minion seems to be unresponsive, a SIGUSR1 can be passed to the process to display what piece of code is executing. This debug information can be invaluable in tracking down bugs.

To pass a SIGUSR1 to the minion, first make sure the minion is running in the foreground. Stop the service if it is running as a daemon, and start it in the foreground like so:

```
# salt-minion -l debug
```

Then pass the signal to the minion when it seems to be unresponsive:

```
# killall -SIGUSR1 salt-minion
```

When filing an issue or sending questions to the mailing list for a problem with an unresponsive daemon, be sure to include this information if possible.

Multiprocessing in Execution Modules

As is outlined in github issue #6300, Salt cannot use python's multiprocessing pipes and queues from execution modules. Multiprocessing from the execution modules is perfectly viable, it is just necessary to use Salt's event system to communicate back with the process.

The reason for this difficulty is that python attempts to pickle all objects in memory when communicating, and it cannot pickle function objects. Since the Salt loader system creates and manages function objects this causes the pickle operation to fail.
Salt Minion Doesn't Return Anything While Running Jobs Locally

When a command being run via Salt takes a very long time to return (package installations, certain scripts, etc.) the minion may drop you back to the shell. In most situations the job is still running but Salt has exceeded the set timeout before returning. Querying the job queue will provide the data of the job but is inconvenient. This can be resolved by either manually using the -t option to set a longer timeout when running commands (by default it is 5 seconds) or by modifying the minion configuration file: /etc/salt/minion and setting the timeout value to change the default timeout for all commands, and then restarting the salt-minion service.

Note: Modifying the minion timeout value is not required when running commands from a Salt Master. It is only required when running commands locally on the minion.

If a state.apply run takes too long, you can find a bottleneck by adding the --out=profile option.

6.10.3 Running in the Foreground

A great deal of information is available via the debug logging system, if you are having issues with minions connecting or not starting run the minion and/or master in the foreground:

```
salt-master -l debug
salt-minion -l debug
```

Anyone wanting to run Salt daemons via a process supervisor such as monit, runit, or supervisord, should omit the -d argument to the daemons and run them in the foreground.

6.10.4 What Ports do the Master and Minion Need Open?

No ports need to be opened up on each minion. For the master, TCP ports 4505 and 4506 need to be open. If you've put both your Salt master and minion in debug mode and don't see an acknowledgment that your minion has connected, it could very well be a firewall.

You can check port connectivity from the minion with the nc command:

```
nc -v -z salt.master.ip 4505
nc -v -z salt.master.ip 4506
```

There is also a firewall configuration document that might help as well.

If you've enabled the right TCP ports on your operating system or Linux distribution's firewall and still aren't seeing connections, check that no additional access control system such as SELinux or AppArmor is blocking Salt.

6.10.5 Using salt-call

The salt-call command was originally developed for aiding in the development of new Salt modules. Since then, many applications have been developed for running any Salt module locally on a minion. These range from the original intent of salt-call, development assistance, to gathering more verbose output from calls like state.apply.

When initially creating your state tree, it is generally recommended to invoke state.apply directly from the minion with salt-call, rather than remotely from the master. This displays far more information about the execution than calling it remotely. For even more verbosity, increase the loglevel using the -l argument:
salt-call -l debug state.apply

The main difference between using salt and using salt-call is that salt-call is run from the minion, and it only runs the selected function on that minion. By contrast, salt is run from the master, and requires you to specify the minions on which to run the command using salt's targeting system.

6.10.6 Too many open files

The salt-master needs at least 2 sockets per host that connects to it, one for the Publisher and one for response port. Thus, large installations may, upon scaling up the number of minions accessing a given master, encounter:

```
12:45:29,289 [salt.master ] [INFO ] Starting Salt worker process 38
Too many open files
sock != -1 (tcp_listener.cpp:335)
```

The solution to this would be to check the number of files allowed to be opened by the user running salt-master (root by default):

```
[root@salt-master ~]# ulimit -n
1024
```

And modify that value to be at least equal to the number of minions x 2. This setting can be changed in limits.conf as the nofile value(s), and activated upon new a login of the specified user.

So, an environment with 1800 minions, would need 1800 x 2 = 3600 as a minimum.

6.10.7 Salt Master Stops Responding

There are known bugs with ZeroMQ versions less than 2.1.11 which can cause the Salt master to not respond properly. If you're running a ZeroMQ version greater than or equal to 2.1.9, you can work around the bug by setting the sysctls `net.core.rmem_max` and `net.core.wmem_max` to 16777216. Next, set the third field in `net.ipv4.tcp_rmem` and `net.ipv4.tcp_wmem` to at least 16777216.

You can do it manually with something like:

```
# echo 16777216 > /proc/sys/net/core/rmem_max
# echo 16777216 > /proc/sys/net/core/wmem_max
# echo "4096 87380 16777216" > /proc/sys/net/ipv4/tcp_rmem
# echo "4096 87380 16777216" > /proc/sys/net/ipv4/tcp_wmem
```

Or with the following Salt state:

```python
net.core.rmem_max:
  - sysctl:
    - present
    - value: 16777216

net.core.wmem_max:
  - sysctl:
    - present
    - value: 16777216

net.ipv4.tcp_rmem:
  - sysctl:
```

(continues on next page)
6.10.8 Salt and SELinux

Currently there are no SELinux policies for Salt. For the most part Salt runs without issue when SELinux is running in Enforcing mode. This is because when the minion executes as a daemon the type context is changed to initrc_t. The problem with SELinux arises when using salt-call or running the minion in the foreground, since the type context stays unconfined_t.

This problem is generally manifest in the rpm install scripts when using the pkg module. Until a full SELinux Policy is available for Salt the solution to this issue is to set the execution context of salt-call and salt-minion to rpm_exec_t:

```
# CentOS 5 and RHEL 5:
chcon -t system_u:system_r:rpm_exec_t:s0 /usr/bin/salt-minion
chcon -t system_u:system_r:rpm_exec_t:s0 /usr/bin/salt-call

# CentOS 6 and RHEL 6:
chcon system_u:object_r:rpm_exec_t:s0 /usr/bin/salt-minion
chcon system_u:object_r:rpm_exec_t:s0 /usr/bin/salt-call
```

This works well, because the rpm_exec_t context has very broad control over other types.

6.10.9 Red Hat Enterprise Linux 5

Salt requires Python 2.6 or 2.7. Red Hat Enterprise Linux 5 and its variants come with Python 2.4 installed by default. When installing on RHEL 5 from the EPEL repository this is handled for you. But, if you run Salt from git, be advised that its dependencies need to be installed from EPEL and that Salt needs to be run with the python26 executable.

6.10.10 Common YAML Gotchas

An extensive list of YAML idiosyncrasies has been compiled:

YAML Idiosyncrasies

One of Salt’s strengths, the use of existing serialization systems for representing SLS data, can also backfire. YAML is a general purpose system and there are a number of things that would seem to make sense in an sls file that cause YAML issues. It is wise to be aware of these issues. While reports or running into them are generally rare they can still crop up at unexpected times.

6.10. Troubleshooting
Spaces vs Tabs

**YAML uses spaces**, period. Do not use tabs in your SLS files! If strange errors are coming up in rendering SLS files, make sure to check that no tabs have crept in! In Vim, after enabling search highlighting with: `:set hlsearch`, you can check with the following key sequence in normal mode (you can hit `ESC` twice to be sure): `/`, `Ctrl-v`, `Tab`, then hit `Enter`. Also, you can convert tabs to 2 spaces by these commands in Vim: `:set tabstop=2 expandtab` and then `:retab`.

Indentation

The suggested syntax for YAML files is to use 2 spaces for indentation, but YAML will follow whatever indentation system that the individual file uses. Indentation of two spaces works very well for SLS files given the fact that the data is uniform and not deeply nested.

Nested Dictionaries

When dictionaries are nested within other data structures (particularly lists), the indentation logic sometimes changes. Examples of where this might happen include `context` and `defaults` options from the `file.managed` state:

```
/etc/http/conf/http.conf:
  file:
    - managed
    - source: salt://apache/http.conf
    - user: root
    - group: root
    - mode: 644
    - template: jinja
    - context:
      custom_var: "override"
    - defaults:
      custom_var: "default value"
      other_var: 123
```

Notice that while the indentation is two spaces per level, for the values under the `context` and `defaults` options there is a four-space indent. If only two spaces are used to indent, then those keys will be considered part of the same dictionary that contains the `context` key, and so the data will not be loaded correctly. If using a double indent is not desirable, then a deeply-nested dict can be declared with curly braces:

```
/etc/http/conf/http.conf:
  file:
    - managed
    - source: salt://apache/http.conf
    - user: root
    - group: root
    - mode: 644
    - template: jinja
    - context: { 
      custom_var: "override" 
    }
    - defaults: { 
      custom_var: "default value",
      other_var: 123
    }
```
Here is a more concrete example of how YAML actually handles these indentations, using the Python interpreter on the command line:

```python
>>> import yaml

>>> yaml.safe_load('''
    mystate:
    ...
    file.managed:
    ...
    - context:
    ...
    some: var'''
)
{'mystate': {'file.managed': [{'context': {'some': 'var'}}]}}

>>> yaml.safe_load('''
    mystate:
    ...
    file.managed:
    ...
    - context:
    ...
    some: var'''
)
{'mystate': {'file.managed': [{'some': 'var', 'context': None}]}},

Note that in the second example, `some` is added as another key in the same dictionary, whereas in the first example, it's the start of a new dictionary. That's the distinction. `context` is a common example because it is a keyword arg for many functions, and should contain a dictionary.

**Multi-line Strings**

Similarly, when a multi-line string is nested within a list item (such as when using the `contents` argument for a `file.managed` state), the indentation must be doubled. Take for example the following state:

```
/tmp/foo.txt:
    file.managed:
    - contents: |
        foo
        bar
        baz
```

This is invalid YAML, and will result in a rather cryptic error when you try to run the state:

```
myminion:
    Data failed to compile:
    -------------
    Rendering SLS 'base:test' failed: could not find expected ':'; line 5
```

```
/tmp/foo.txt:
    file.managed:
    - contents: |
        foo
        bar <======================
        baz
```

The correct indentation would be as follows:

```
/tmp/foo.txt:
    file.managed:
    - contents: |
        foo
        bar
        baz
```
True/False, Yes/No, On/Off

PyYAML will load these values as boolean True or False. Un-capitalized versions will also be loaded as booleans (true, false, yes, no, on, and off). This can be especially problematic when constructing Pillar data. Make sure that your Pillars which need to use the string versions of these values are enclosed in quotes. Pillars will be parsed twice by salt, so you'll need to wrap your values in multiple quotes, including double quotation marks (" ") and single quotation marks (' '). Note that spaces are included in the quotation type examples for clarity.

Multiple quoting examples looks like this:

```
- "false"
- "True"
- "YES"
- "No"
```

Note: When using multiple quotes in this manner, they must be different. Using " " or ' ' won't work in this case (spaces are included in examples for clarity).

The '%' Sign

The % symbol has a special meaning in YAML, it needs to be passed as a string literal:

```
cheese:
  ssh_auth.present:
    - user: tbortels
    - source: salt://ssh_keys/chease.pub
    - config: '%h/.ssh/authorized_keys'
```

Time Expressions

PyYAML will load a time expression as the integer value of that, assuming HH:MM. So for example, 12:00 is loaded by PyYAML as 720. An excellent explanation for why can be found here.

To keep time expressions like this from being loaded as integers, always quote them.

Note: When using a jinja load_yaml map, items must be quoted twice. For example:

```
{% load_yaml as wsus_schedule %}

FRI_10:
  time: "23:00"
  day: 6 - Every Friday
SAT_10:
  time: "06:00"
  day: 7 - Every Saturday
SAT_20:
  time: "14:00"
  day: 7 - Every Saturday
SAT_30:
  time: "22:00"
  day: 7 - Every Saturday
```

(continues on next page)
YAML does not like "Double Short Decs"

If I can find a way to make YAML accept "Double Short Decs" then I will, since I think that double short decs would be awesome. So what is a "Double Short Dec"? It is when you declare a multiple short decs in one ID. Here is a standard short dec, it works great:

```vim
pkg.installed
```

The short dec means that there are no arguments to pass, so it is not required to add any arguments, and it can save space.

YAML though, gets upset when declaring multiple short decs, for the record...

THIS DOES NOT WORK:

```vim
pkg.installed
user.present
```

Similarly declaring a short dec in the same ID dec as a standard dec does not work either...

ALSO DOES NOT WORK:

```fred
user.present
ssh_auth.present:
  - name: AAAAB3NzaC...
  - user: fred
  - enc: ssh-dss
  - require:
    - user: fred
```

The correct way is to define them like this:

```vim
pkg.installed: []
user.present: []
```

```fred
user.present: []
ssh_auth.present:
  - name: AAAAB3NzaC...
  - user: fred
  - enc: ssh-dss
  - require:
    - user: fred
```

Alternatively, they can be defined the "old way", or with multiple "full decs":

---

6.10. Troubleshooting 551
YAML supports only plain ASCII

According to YAML specification, only ASCII characters can be used. Within double-quotes, special characters may be represented with C-style escape sequences starting with a backslash (\). Examples:

- micro: "\u00b5"
- copyright: "\u00a9"
- A: "\x41"
- alpha: "\u0251"
- Alef: "\u05d0"

List of usable Unicode characters will help you to identify correct numbers. Python can also be used to discover the Unicode number for a character:

```python
repr(u"Text with wrong characters i need to figure out")
```

This shell command can find wrong characters in your SLS files:

```
find . -name '*.sls' -exec grep --color='auto' -P -n '[^\x00-\x7F]' {} \;
```

Alternatively you can toggle the yaml_utf8 setting in your master configuration file. This is still an experimental setting but it should manage the right encoding conversion in salt after yaml states compilations.

Underscores stripped in Integer Definitions

If a definition only includes numbers and underscores, it is parsed by YAML as an integer and all underscores are stripped. To ensure the object becomes a string, it should be surrounded by quotes. More information here.

Here's an example:

```python
>>> import yaml
>>> yaml.safe_load('2013_05_10')
20130510
```

(continues on next page)
Automatic datetime conversion

If there is a value in a YAML file formatted `2014-01-20 14:23:23` or similar, YAML will automatically convert this to a Python `datetime` object. These objects are not msgpack serializable, and so may break core salt functionality. If values such as these are needed in a salt YAML file (specifically a configuration file), they should be formatted with surrounding strings to force YAML to serialize them as strings:

```python
>>> import yaml
>>> yaml.safe_load('2014-01-20 14:23:23')
datetime.datetime(2014, 1, 20, 14, 23, 23)
>>> yaml.safe_load('"2014-01-20 14:23:23"')
'2014-01-20 14:23:23'
```

Additionally, numbers formatted like `XXXX-XX-XX` will also be converted (or YAML will attempt to convert them, and error out if it doesn't think the date is a real one). Thus, for example, if a minion were to have an ID of `4017-16-20` the minion would not start because YAML would complain that the date was out of range. The workaround is the same, surround the offending string with quotes:

```python
>>> import yaml
>>> yaml.safe_load('4017-16-20')
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
  File "/usr/local/lib/python2.7/site-packages/yaml/__init__.py", line 93, in safe_load
    return load(stream, SafeLoader)
  File "/usr/local/lib/python2.7/site-packages/yaml/__init__.py", line 71, in load
    loader.get_single_data()
  File "/usr/local/lib/python2.7/site-packages/yaml/constructor.py", line 39, in get_single_data
    return self.construct_document(node)
  File "/usr/local/lib/python2.7/site-packages/yaml/constructor.py", line 43, in construct_document
    data = self.construct_object(node)
  File "/usr/local/lib/python2.7/site-packages/yaml/constructor.py", line 88, in construct_object
    data = constructor(self, node)
  File "/usr/local/lib/python2.7/site-packages/yaml/constructor.py", line 312, in construct_yaml_timestamp
    return datetime.date(year, month, day)
ValueError: month must be in 1..12
```
### Keys Limited to 1024 Characters

Simple keys are limited by the YAML Spec to a single line, and cannot be longer than 1024 characters. PyYAML enforces these limitations (see here), and therefore anything parsed as YAML in Salt is subject to them.

### 6.10.11 Live Python Debug Output

If the minion or master seems to be unresponsive, a SIGUSR1 can be passed to the processes to display where in the code they are running. If encountering a situation like this, this debug information can be invaluable. First make sure the master of minion are running in the foreground:

```bash
salt-master -l debug
salt-minion -l debug
```

Then pass the signal to the master or minion when it seems to be unresponsive:

```bash
killall -SIGUSR1 salt-master
killall -SIGUSR1 salt-minion
```

Also under BSD and macOS in addition to SIGUSR1 signal, debug subroutine set up for SIGINFO which has an advantage of being sent by Ctrl+T shortcut.

When filing an issue or sending questions to the mailing list for a problem with an unresponsive daemon this information can be invaluable.

### 6.10.12 Salt 0.16.x minions cannot communicate with a 0.17.x master

As of release 0.17.1 you can no longer run different versions of Salt on your Master and Minion servers. This is due to a protocol change for security purposes. The Salt team will continue to attempt to ensure versions are as backwards compatible as possible.

### 6.10.13 Debugging the Master and Minion

A list of common master and minion troubleshooting steps provide a starting point for resolving issues you may encounter.

### 6.11 Frequently Asked Questions

#### FAQ

- Frequently Asked Questions
  - Is Salt open-core?
  - I think I found a bug! What should I do?
  - What ports should I open on my firewall?
  - I'm seeing weird behavior (including but not limited to packages not installing their users properly)
  - My script runs every time I run a state.apply. Why?
- When I run test.ping, why don't the Minions that aren't responding return anything? Returning False would be helpful.
- How does Salt determine the Minion's id?
- I'm trying to manage packages/services but I get an error saying that the state is not available. Why?
- Why aren't my custom modules/states/etc. available on my Minions?
- Module X isn't available, even though the shell command it uses is installed. Why?
- Can I run different versions of Salt on my Master and Minion?
- Does Salt support backing up managed files?
- Is it possible to deploy a file to a specific minion, without other minions having access to it?
- What is the best way to restart a Salt Minion daemon using Salt after upgrade?
  * Upgrade without automatic restart
  * Restart using states
  * Restart using remote executions
  * Waiting for minions to come back online
- Salting the Salt Master
- Is Targeting using Grain Data Secure?
- Why Did the Value for a Grain Change on Its Own?

6.11.1 Is Salt open-core?

No. Salt is 100% committed to being open-source, including all of our APIs. It is developed under the Apache 2.0 license, allowing it to be used in both open and proprietary projects.

To expand on this a little:

There is much argument over the actual definition of "open core". From our standpoint, Salt is open source because

1. It is a standalone product that anyone is free to use.
2. It is developed in the open with contributions accepted from the community for the good of the project.
3. There are no features of Salt itself that are restricted to separate proprietary products distributed by SaltStack, Inc.
4. Because of our Apache 2.0 license, Salt can be used as the foundation for a project or even a proprietary tool.
5. Our APIs are open and documented (any lack of documentation is an oversight as opposed to an intentional decision by SaltStack the company) and available for use by anyone.

SaltStack the company does make proprietary products which use Salt and its libraries, like company is free to do, but we do so via the APIs, NOT by forking Salt and creating a different, closed-source version of it for paying customers.
I think I found a bug! What should I do?

The salt-users mailing list as well as the salt IRC channel can both be helpful resources to confirm if others are seeing the issue and to assist with immediate debugging.

To report a bug to the Salt project, please follow the instructions in reporting a bug.

What ports should I open on my firewall?

Minions need to be able to connect to the Master on TCP ports 4505 and 4506. Minions do not need any inbound ports open. More detailed information on firewall settings can be found here.

I'm seeing weird behavior (including but not limited to packages not installing their users properly)

This is often caused by SELinux. Try disabling SELinux or putting it in permissive mode and see if the weird behavior goes away.

My script runs every time I run a state.apply. Why?

You are probably using cmd.run rather than cmd.wait. A cmd.wait state will only run when there has been a change in a state that it is watching.

A cmd.run state will run the corresponding command every time (unless it is prevented from running by the unless or onlyif arguments).

More details can be found in the documentation for the cmd states.

When I run test.ping, why don't the Minions that aren't responding return anything? Returning False would be helpful.

When you run test.ping the Master tells Minions to run commands/functions, and listens for the return data, printing it to the screen when it is received. If it doesn't receive anything back, it doesn't have anything to display for that Minion.

There are a couple options for getting information on Minions that are not responding. One is to use the verbose (-v) option when you run salt commands, as it will display "Minion did not return" for any Minions which time out.

Another option is to use the manage.down runner:

Also, if the Master is under heavy load, it is possible that the CLI will exit without displaying return data for all targeted Minions. However, this doesn't mean that the Minions did not return; this only means that the Salt CLI timed out waiting for a response. Minions will still send their return data back to the Master once the job completes. If any expected Minions are missing from the CLI output, the jobs.list_jobs runner can be used to show the job IDs of the jobs that have been run, and the jobs.lookup_jid runner can be used to get the return data for that job.
If you find that you are often missing Minion return data on the CLI, only to find it with the jobs runners, then this may be a sign that the `worker_threads` value may need to be increased in the master config file. Additionally, running your Salt CLI commands with the `-t` option will make Salt wait longer for the return data before the CLI command exits. For instance, the below command will wait up to 60 seconds for the Minions to return:

```
salt -t 60 '*' test.ping
```

### 6.11.7 How does Salt determine the Minion's id?

If the Minion id is not configured explicitly (using the `id` parameter), Salt will determine the id based on the hostname. Exactly how this is determined varies a little between operating systems and is described in detail [here](#).

### 6.11.8 I'm trying to manage packages/services but I get an error saying that the state is not available. Why?

Salt detects the Minion's operating system and assigns the correct package or service management module based on what is detected. However, for certain custom spins and OS derivatives this detection fails. In cases like this, an issue should be opened on our [tracker](#), with the following information:

1. The output of the following command:
   ```
salt <minion_id> grains.items | grep os
   ```
2. The contents of `/etc/lsb-release`, if present on the Minion.

### 6.11.9 Why aren't my custom modules/states/etc. available on my Minions?

Custom modules are synced to Minions when `saltutil.sync_modules`, or `saltutil.sync_all` is run. Similarly, custom states are synced to Minions when `saltutil.sync_states`, or `saltutil.sync_all` is run.

They are both also synced when a `highstate` is triggered.

As of the 2019.2.0 release, as well as 2017.7.7 and 2018.3.2 in their respective release cycles, the `sync` argument to `state.apply`/`state.sls` can be used to sync custom types when running individual SLS files.

Other custom types (renderers, outputters, etc.) have similar behavior, see the documentation for the `saltutil` module for more information.

This reactor example can be used to automatically sync custom types when the minion connects to the master, to help with this chicken-and-egg issue.

### 6.11.10 Module X isn't available, even though the shell command it uses is installed. Why?

This is most likely a PATH issue. Did you custom-compile the software which the module requires? RHEL/CentOS/etc. in particular override the root user's path in `/etc/init.d/functions`, setting it to `/sbin:/usr/sbin:/bin:/usr/bin`, making software installed into `/usr/local/bin` unavailable to Salt when the Minion is started using the initscript. In version 2014.1.0, Salt will have a better solution for these sort of PATH-related issues, but recompiling the software to install it into a location within the PATH should resolve the issue in the meantime. Alternatively, you can create a symbolic link within the PATH using a `file.symlink` state.
6.11.11 Can I run different versions of Salt on my Master and Minion?

This depends on the versions. In general, it is recommended that Master and Minion versions match.

When upgrading Salt, the master(s) should always be upgraded first. Backwards compatibility for minions running newer versions of salt than their masters is not guaranteed.

Whenever possible, backwards compatibility between new masters and old minions will be preserved. Generally, the only exception to this policy is in case of a security vulnerability.

Recent examples of backwards compatibility breakage include the 0.17.1 release (where all backwards compatibility was broken due to a security fix), and the 2014.1.0 release (which retained compatibility between 2014.1.0 masters and 0.17 minions, but broke compatibility for 2014.1.0 minions and older masters).

6.11.12 Does Salt support backing up managed files?

Yes. Salt provides an easy to use addition to your file.managed states that allow you to back up files via `backup_mode`. `backup_mode` can be configured on a per state basis, or in the minion config (note that if set in the minion config this would simply be the default method to use, you still need to specify that the file should be backed up!).

6.11.13 Is it possible to deploy a file to a specific minion, without other minions having access to it?

The Salt fileserver does not yet support access control, but it is still possible to do this. As of Salt 2015.5.0, the `file_tree` external pillar is available, and allows the contents of a file to be loaded as Pillar data. This external pillar is capable of assigning Pillar values both to individual minions, and to `nodegroups`. See the documentation for details on how to set this up.

Once the external pillar has been set up, the data can be pushed to a minion via a `file.managed` state, using the `contents_pillar` argument:

```
/etc/my_super_secret_file:
  file.managed:
    - user: secret
    - group: secret
    - mode: 600
    - contents_pillar: secret_files:my_super_secret_file
```

In this example, the source file would be located in a directory called `secret_files` underneath the `file_tree` path for the minion. The syntax for specifying the pillar variable is the same one used for `pillar.get`, with a colon representing a nested dictionary.

**Warning:** Deploying binary contents using the `file.managed` state is only supported in Salt 2015.8.4 and newer.
What is the best way to restart a Salt Minion daemon using Salt after upgrade?

Updating the `salt-minion` package requires a restart of the `salt-minion` service. But restarting the service while in the middle of a state run interrupts the process of the Minion running states and sending results back to the Master. A common way to workaround that is to schedule restarting the Minion service in the background by issuing a `salt-call` command calling `service.restart` function. This prevents the Minion being disconnected from the Master immediately. Otherwise you would get `Minion did not return. [Not connected]` message as the result of a state run.

Upgrade without automatic restart

Doing the Minion upgrade seems to be a simplest state in your SLS file at first. But the operating systems such as Debian GNU/Linux, Ubuntu and their derivatives start the service after the package installation by default. To prevent this, we need to create policy layer which will prevent the Minion service to restart right after the upgrade:

```yaml
{% if grains['os_family'] == 'Debian' %}
Disable starting services:
  file.managed:
    - name: /usr/sbin/policy-rc.d
    - user: root
    - group: root
    - mode: 0755
    - contents:
      - '#!/bin/sh'
      - exit 101
    # do not touch if already exists
    - replace: False
    - prereq:
      - pkg: Upgrade Salt Minion

{% endif %}

Upgrade Salt Minion:
  pkg.installed:
    - name: salt-minion
    - version: 2016.11.3{% if grains['os_family'] == 'Debian' %}+ds-1{% endif %}
    - order: last

Enable Salt Minion:
  service.enabled:
    - name: salt-minion
    - require:
      - pkg: Upgrade Salt Minion

{% if grains['os_family'] == 'Debian' %}
Enable starting services:
  file.absent:
    - name: /usr/sbin/policy-rc.d
    - onchanges:
      - pkg: Upgrade Salt Minion

{% endif %}
```
Restart using states

Now we can apply the workaround to restart the Minion in reliable way. The following example works on UNIX-like operating systems:

```yaml
{% if grains['os'] != 'Windows' %}
  Restart Salt Minion:
  cmd.run:
    - name: 'salt-call service.restart salt-minion'
    - bg: True
    - onchanges:
      - pkg: Upgrade Salt Minion
{% endif %}
```

Note that restarting the `salt-minion` service on Windows operating systems is not always necessary when performing an upgrade. The installer stops the `salt-minion` service, removes it, deletes the contents of the \salt\ bin directory, installs the new code, re-creates the `salt-minion` service, and starts it (by default). The restart step **would** be necessary during the upgrade process, however, if the minion config was edited after the upgrade or installation. If a minion restart is necessary, the state above can be edited as follows:

```yaml
Restart Salt Minion:
  cmd.run:
{% if grains['kernel'] == 'Windows' %}
    - name: 'C:\salt\salt-call.bat service.restart salt-minion'
{% else %}
    - name: 'salt-call service.restart salt-minion'
{% endif %}
  - bg: True
  - onchanges:
    - pkg: Upgrade Salt Minion
```

However, it requires more advanced tricks to upgrade from legacy version of Salt (before 2016.3.0) on UNIX-like operating systems, where executing commands in the background is not supported. You also may need to schedule restarting the Minion service using *masterless mode* after all other states have been applied for Salt versions earlier than 2016.11.0. This allows the Minion to keep the connection to the Master alive for being able to report the final results back to the Master, while the service is restarting in the background. This state should run last or watch for the `pkg` state changes:

```yaml
Restart Salt Minion:
  cmd.run:
{% if grains['kernel'] == 'Windows' %}
    - name: "start powershell "Restart-Service -Name salt-minion"
{% else %}
    # fork and disown the process
    - name: |
      exec 0>&- # close stdin
      exec 1>&- # close stdout
      exec 2>&- # close stderr
      nohup salt-call --local service.restart salt-minion &
{% endif %}
```
**Restart using remote executions**

Restart the Minion from the command line:

```bash
salt -G kernel:Windows cmd.run_bg 'C:\salt\salt-call.bat service.restart salt-minion'
salt -C 'not G@kernel:Windows' cmd.run_bg 'salt-call service.restart salt-minion'
```

**Waiting for minions to come back online**

A common issue in performing automated restarts of a salt minion, for example during an orchestration run, is that it will break the orchestration since the next statement is likely to be attempted before the minion is back online. This can be remedied by inserting a blocking waiting state that only returns when the selected minions are back up (note: this will only work in orchestration states since `manage.up` needs to run on the master):

```yaml
Wait for salt minion:
  loop.until_no_eval:
    - name: saltutil.runner
    - expected:
      - my_minion
    - args:
      - manage.up
    - kwargs:
      tgt: my_minion
    - period: 3
    - init_wait: 3
```

This will, after an initial delay of 3 seconds, execute the `manage.up`-runner targeted specifically for `my_minion`. It will do this every `period` seconds until the `expected` data is returned. The default timeout is 60s but can be configured as well.

### 6.11.15 Salting the Salt Master

In order to configure a master server via states, the Salt master can also be "salted" in order to enforce state on the Salt master as well as the Salt minions. Salting the Salt master requires a Salt minion to be installed on the same machine as the Salt master. Once the Salt minion is installed, the minion configuration file must be pointed to the local Salt master:

```
master: 127.0.0.1
```

Once the Salt master has been "salted" with a Salt minion, it can be targeted just like any other minion. If the minion on the salted master is running, the minion can be targeted via any usual `salt` command. Additionally, the `salt-call` command can execute operations to enforce state on the salted master without requiring the minion to be running.

More information about salting the Salt master can be found in the salt-formula for salt itself:

https://github.com/saltstack-formulas/salt-formula

Restarting the `salt-master` service using execution module or application of state could be done the same way as for the Salt minion described above.
6.11.16 Is Targeting using Grain Data Secure?

**Warning:** Grains can be set by users that have access to the minion configuration files on the local system, making them less secure than other identifiers in Salt. Avoid storing sensitive data, such as passwords or keys, on minions. Instead, make use of *Storing Static Data in the Pillar* and/or *Storing Data in Other Databases*.

Because grains can be set by users that have access to the minion configuration files on the local system, grains are considered less secure than other identifiers in Salt. Use caution when targeting sensitive operations or setting pillar values based on grain data.

The only grain which can be safely used is `grains['id']` which contains the Minion ID.

When possible, you should target sensitive operations and data using the Minion ID. If the Minion ID of a system changes, the Salt Minion's public key must be re-accepted by an administrator on the Salt Master, making it less vulnerable to impersonation attacks.

6.11.17 Why Did the Value for a Grain Change on Its Own?

This is usually the result of an upstream change in an OS distribution that replaces or removes something that Salt was using to detect the grain. Fortunately, when this occurs, you can use Salt to fix it with a command similar to the following:

```
salt -G 'grain:ChangedValue' grains.setvals "{'grain': 'OldValue'}"
```

(Replacing `grain`, `ChangedValue`, and `OldValue` with the grain and values that you want to change / set.)

You should also file an issue describing the change so it can be fixed in Salt.

6.12 Salt Best Practices

Salt's extreme flexibility leads to many questions concerning the structure of configuration files.

This document exists to clarify these points through examples and code.

**Important:** The guidance here should be taken in combination with *Hardening Salt*.

6.12.1 General rules

1. Modularity and clarity should be emphasized whenever possible.
2. Create clear relations between pillars and states.
3. Use variables when it makes sense but don’t overuse them.
4. Store sensitive data in pillar.
5. Don’t use grains for matching in your pillar top file for any sensitive pillars.
6.12.2 Structuring States and Formulas

When structuring Salt States and Formulas it is important to begin with the directory structure. A proper directory structure clearly defines the functionality of each state to the user via visual inspection of the state’s name.

Reviewing the MySQL Salt Formula it is clear to see the benefits to the end-user when reviewing a sample of the available states:

```
/srv/salt/mysql/files/
/srv/salt/mysql/client.sls
/srv/salt/mysql/map.jinja
/srv/salt/mysql/python.sls
/srv/salt/mysql/server.sls
```

This directory structure would lead to these states being referenced in a top file in the following way:

```
base:
  'web*':
    - mysql.client
    - mysql.python
  'db*':
    - mysql.server
```

This clear definition ensures that the user is properly informed of what each state will do.

Another example comes from the vim-formula:

```
/srv/salt/vim/files/
/srv/salt/vim/absent.sls
/srv/salt/vim/init.sls
/srv/salt/vim/map.jinja
/srv/salt/vim/nerdtree.sls
/srv/salt/vim/pyflakes.sls
/srv/salt/vim/salt.sls
```

Once again viewing how this would look in a top file:

```
/srv/salt/top.sls:
base:
  'web*':
    - vim
    - vim.nerdtree
    - vim.pyflakes
    - vim.salt
  'db*':
    - vim.absent
```

The usage of a clear top-level directory as well as properly named states reduces the overall complexity and leads a user to both understand what will be included at a glance and where it is located.

In addition Formulas should be used as often as possible.
Note: Formulas repositories on the saltstack-formulas GitHub organization should not be pointed to directly from systems that automatically fetch new updates such as GitFS or similar tooling. Instead formulas repositories should be forked on GitHub or cloned locally, where unintended, automatic changes will not take place.

### 6.12.3 Structuring Pillar Files

Pillars are used to store secure and insecure data pertaining to minions. When designing the structure of the `/srv/pillar` directory, the pillars contained within should once again be focused on clear and concise data which users can easily review, modify, and understand.

The `/srv/pillar/` directory is primarily controlled by `top.sls`. It should be noted that the pillar `top.sls` is not used as a location to declare variables and their values. The `top.sls` is used as a way to include other pillar files and organize the way they are matched based on environments or grains.

An example `top.sls` may be as simple as the following:

```
/srv/pillar/top.sls:

base:
  '*':
    - packages
```

Any number of matchers can be added to the base environment. For example, here is an expanded version of the Pillar top file stated above:

```
/srv/pillar/top.sls:

base:
  '*':
    - packages
  'web*':
    - apache
    - vim
```

Or an even more complicated example, using a variety of matchers in numerous environments:

```
/srv/pillar/top.sls:

base:
  '*':
    - apache
dev:
  'os:Debian':
    - match: grain
    - vim
test:
  '* and not G@os: Debian':
    - match: compound
    - emacs
```

It is clear to see through these examples how the top file provides users with power but when used incorrectly it can lead to confusing configurations. This is why it is important to understand that the top file for pillar is not used for variable definitions.

Each SLS file within the `/srv/pillar/` directory should correspond to the states which it matches.
This would mean that the **apache** pillar file should contain data relevant to Apache. Structuring files in this way once again ensures modularity, and creates a consistent understanding throughout our Salt environment. Users can expect that pillar variables found in an Apache state will live inside of an Apache pillar:

```
/srv/pillar/apache.sls:

apache:
  lookup:
    name: httpd
    config:
      tmpl: /etc/httpd/httpd.conf
```

While this pillar file is simple, it shows how a pillar file explicitly relates to the state it is associated with.

### 6.12.4 Variable Flexibility

Salt allows users to define variables in SLS files. When creating a state variables should provide users with as much flexibility as possible. This means that variables should be clearly defined and easy to manipulate, and that sane defaults should exist in the event a variable is not properly defined. Looking at several examples shows how these different items can lead to extensive flexibility.

Although it is possible to set variables locally, this is generally not preferred:

```
/srv/salt/apache/conf.sls:

{% set name = 'httpd' %}
{% set tmpl = 'salt://apache/files/httpd.conf' %}

include:
  - apache

apache_conf:
  file.managed:
    - name: {{ name }}
    - source: {{ tmpl }}
    - template: jinja
    - user: root
    - watch_in:
      - service: apache
```

When generating this information it can be easily transitioned to the pillar where data can be overwritten, modified, and applied to multiple states, or locations within a single state:

```
/srv/pillar/apache.sls:

apache:
  lookup:
    name: httpd
    config:
      tmpl: salt://apache/files/httpd.conf
```

```
/srv/salt/apache/conf.sls:

{% from "apache/map.jinja" import apache with context %}

include:
  - apache
```

(continues on next page)
apache_conf:
  file.managed:
    - name: {{ salt['pillar.get']('apache:lookup:name') }}
    - source: {{ salt['pillar.get']('apache:lookup:config:tmpl') }}
    - template: jinja
    - user: root
    - watch_in:
      - service: apache

This flexibility provides users with a centralized location to modify variables, which is extremely important as an environment grows.

### 6.12.5 Modularity Within States

Ensuring that states are modular is one of the key concepts to understand within Salt. When creating a state a user must consider how many times the state could be re-used, and what it relies on to operate. Below are several examples which will iteratively explain how a user can go from a state which is not very modular to one that is:

/srv/salt/apache/init.sls:

```yaml
httpd:
  pkg:
    - installed
  service.running:
    - enable: True

/etc/httpd/httpd.conf:
  file.managed:
    - source: salt://apache/files/httpd.conf
    - template: jinja
    - watch_in:
      - service: httpd
```

The example above is probably the worst-case scenario when writing a state. There is a clear lack of focus by naming both the pkg/service, and managed file directly as the state ID. This would lead to changing multiple requires within this state, as well as others that may depend upon the state.

Imagine if a require was used for the `httpd` package in another state, and then suddenly it’s a custom package. Now changes need to be made in multiple locations which increases the complexity and leads to a more error prone configuration.

There is also the issue of having the configuration file located in the init, as a user would be unable to simply install the service and use the default conf file.

Our second revision begins to address the referencing by using `- name`, as opposed to direct ID references:

/srv/salt/apache/init.sls:

```yaml
apache:
  pkg.installed:
    - name: httpd
  service.running:
    - name: httpd
    - enable: True
```

(continues on next page)
apache_conf:
  file.managed:
    - name: /etc/httpd/httpd.conf
    - source: salt://apache/files/httpd.conf
    - template: jinja
    - watch_in:
      - service: apache

The above init file is better than our original, yet it has several issues which lead to a lack of modularity. The first of these problems is the usage of static values for items such as the name of the service, the name of the managed file, and the source of the managed file. When these items are hard coded they become difficult to modify and the opportunity to make mistakes arises. It also leads to multiple edits that need to occur when changing these items (imagine if there were dozens of these occurrences throughout the state!). There is also still the concern of the configuration file data living in the same state as the service and package.

In the next example steps will be taken to begin addressing these issues. Starting with the addition of a map.jinja file (as noted in the *Formula documentation*), and modification of static values:

```
/srv/salt/apache/map.jinja:

{%
set apache = salt['grains.filter_by']({
    'Debian': {
        'server': 'apache2',
        'service': 'apache2',
        'conf': '/etc/apache2/apache.conf',
    },
    'RedHat': {
        'server': 'httpd',
        'service': 'httpd',
        'conf': '/etc/httpd/httpd.conf',
    },
}, merge=salt['pillar.get']('apache:lookup')) %}
```

```
/srv/pillar/apache.sls:

apache:
  lookup:
    config:
      tmpl: salt://apache/files/httpd.conf
```

```
/srv/salt/apache/init.sls:

{%
from "apache/map.jinja" import apache with context %}

apache:
  pkg.installed:
    - name: {{ apache.server }}
  service.running:
    - name: {{ apache.service }}
    - enable: True

apache_conf:
  file.managed:
    - name: {{ apache.conf }}
    - source: {{ salt['pillar.get']('apache:lookup:config:tmpl') }}
    - template: jinja
    - user: root
```

(continues on next page)
- watch_in:
  - service: apache

The changes to this state now allow us to easily identify the location of the variables, as well as ensuring they are flexible and easy to modify. While this takes another step in the right direction, it is not yet complete. Suppose the user did not want to use the provided conf file, or even their own configuration file, but the default apache conf. With the current state setup this is not possible. To attain this level of modularity this state will need to be broken into two states.

/srv/salt/apache/map.jinja:

{%- set apache = salt['grains.filter_by']({
   'Debian': {
      'server': 'apache2',
      'service': 'apache2',
      'conf': '/etc/apache2/apache.conf',
   },
   'RedHat': {
      'server': 'httpd',
      'service': 'httpd',
      'conf': '/etc/httpd/httpd.conf',
   },
}, merge=salt['pillar.get']('apache:lookup')) %}

/srv/pillar/apache.sls:

apache:
  lookup:
    config:
      tmpl: salt://apache/files/httpd.conf

/srv/salt/apache/init.sls:

{% from "apache/map.jinja" import apache with context %}

apache:
  pkg.installed:
    - name: {{ apache.server }}
  service.running:
    - name: {{ apache.service }}
    - enable: True

/srv/salt/apache/conf.sls:

{% from "apache/map.jinja" import apache with context %}

include:
  - apache

apache_conf:
  file.managed:
    - name: {{ apache.conf }}
    - source: {{ salt['pillar.get']('apache:lookup:config:tmpl') }}
    - template: jinja
    - user: root
    - watch_in:
      - service: apache
This new structure now allows users to choose whether they only wish to install the default Apache, or if they wish, overwrite the default package, service, configuration file location, or the configuration file itself. In addition to this the data has been broken between multiple files allowing for users to identify where they need to change the associated data.

6.12.6 Storing Secure Data

Secure data refers to any information that you would not wish to share with anyone accessing a server. This could include data such as passwords, keys, or other information.

As all data within a state is accessible by EVERY server that is connected it is important to store secure data within pillar. This will ensure that only those servers which require this secure data have access to it. In this example a use can go from an insecure configuration to one which is only accessible by the appropriate hosts:

```
/srv/salt/mysql/testerdb.sls:

```
testdb:
  mysql_database.present:
    - name: testerdb
```

```
/srv/salt/mysql/user.sls:

```
included:
  - mysql.testerdb

testdb_user:
  mysql_user.present:
    - name: frank
    - password: "test3rdb"
    - host: localhost
    - require:
      - sls: mysql.testerdb

```

Many users would review this state and see that the password is there in plain text, which is quite problematic. It results in several issues which may not be immediately visible.

The first of these issues is clear to most users -- the password being visible in this state. This means that any minion will have a copy of this, and therefore the password which is a major security concern as minions may not be locked down as tightly as the master server.

The other issue that can be encountered is access by users on the master. If everyone has access to the states (or their repository), then they are able to review this password. Keeping your password data accessible by only a few users is critical for both security and peace of mind.

There is also the issue of portability. When a state is configured this way it results in multiple changes needing to be made. This was discussed in the sections above but it is a critical idea to drive home. If states are not portable it may result in more work later!

Fixing this issue is relatively simple, the content just needs to be moved to the associated pillar:

```
/srv/pillar/mysql.sls:

```
mysql:
  lookup:
    name: testerdb
    password: test3rdb
    user: frank
    host: localhost

```

/srv/salt/mysql/testerdb.sls:

```yaml
testdb:
    mysql_database.present:
        - name: {{ salt['pillar.get']('mysql:lookup:name') }}
```

/srv/salt/mysql/user.sls:

```yaml
include:
    - mysql.testerdb

testdb_user:
    mysql_user.present:
        - name: {{ salt['pillar.get']('mysql:lookup:user') }}
        - password: {{ salt['pillar.get']('mysql:lookup:password') }}
        - host: {{ salt['pillar.get']('mysql:lookup:host') }}
        - require:
            - sls: mysql.testerdb
```

Now that the database details have been moved to the associated pillar file, only machines which are targeted via pillar will have access to these details. Access to users who should not be able to review these details can also be prevented while ensuring that they are still able to write states which take advantage of this information.
Running pre-defined or arbitrary commands on remote hosts, also known as remote execution, is the core function of Salt. The following links explore modules and returners, which are two key elements of remote execution.

**Salt Execution Modules**

Salt execution modules are called by the remote execution system to perform a wide variety of tasks. These modules provide functionality such as installing packages, restarting a service, running a remote command, transferring files, and so on.

- **Full list of execution modules** Contains: a list of core modules that ship with Salt.
- **Writing execution modules** Contains: a guide on how to write Salt modules.

### 7.1 Running Commands on Salt Minions

Salt can be controlled by a command line client by the root user on the Salt master. The Salt command line client uses the Salt client API to communicate with the Salt master server. The Salt client is straightforward and simple to use.

Using the Salt client commands can be easily sent to the minions.

Each of these commands accepts an explicit `--config` option to point to either the master or minion configuration file. If this option is not provided and the default configuration file does not exist then Salt falls back to use the environment variables `SALT_MASTER_CONFIG` and `SALT_MINION_CONFIG`.

**See also:**

- **Configuration**

#### 7.1.1 Using the Salt Command

The Salt command needs a few components to send information to the Salt minions. The target minions need to be defined, the function to call and any arguments the function requires.
Defining the Target Minions

The first argument passed to salt, defines the target minions, the target minions are accessed via their hostname. The default target type is a bash glob:

```
salt '*foo.com' sys.doc
```

Salt can also define the target minions with regular expressions:

```
salt -E '*.*' cmd.run 'ls -l | grep foo'
```

Or to explicitly list hosts, salt can take a list:

```
salt -L foo.bar.baz,quo.qux cmd.run 'ps aux | grep foo'
```

More Powerful Targets

See Targeting.

Calling the Function

The function to call on the specified target is placed after the target specification.

New in version 0.9.8.

Functions may also accept arguments, space-delimited:

```
salt '*' cmd.exec_code python 'import sys; print sys.version'
```

Optional, keyword arguments are also supported:

```
salt '*' pip.install salt timeout=5 upgrade=True
```

They are always in the form of `kwarg=argument`.

Arguments are formatted as YAML:

```
salt '*' cmd.run 'echo "Hello: $FIRST_NAME"' env='{FIRST_NAME: "Joe"}'
```

Note: dictionaries must have curly braces around them (like the `env` keyword argument above). This was changed in 0.15.1: in the above example, the first argument used to be parsed as the dictionary `{echo "Hello": '$FIRST_NAME'}`). This was generally not the expected behavior.

If you want to test what parameters are actually passed to a module, use the `test.arg_repr` command:

```
salt '*' test.arg_repr 'echo "Hello: $FIRST_NAME"' env='{FIRST_NAME: "Joe"}'
```
Finding available minion functions

The Salt functions are self documenting, all of the function documentation can be retrieved from the minions via the `sys.doc()` function:

```
salt '*' sys.doc
```

Compound Command Execution

If a series of commands needs to be sent to a single target specification then the commands can be sent in a single publish. This can make gathering groups of information faster, and lowers the stress on the network for repeated commands.

Compound command execution works by sending a list of functions and arguments instead of sending a single function and argument. The functions are executed on the minion in the order they are defined on the command line, and then the data from all of the commands are returned in a dictionary. This means that the set of commands are called in a predictable way, and the returned data can be easily interpreted.

Executing compound commands if done by passing a comma delimited list of functions, followed by a comma delimited list of arguments:

```
salt '*' cmd.run,test.ping,test.echo 'cat /proc/cpuinfo',,foo
```

The trick to look out for here, is that if a function is being passed no arguments, then there needs to be a placeholder for the absent arguments. This is why in the above example, there are two commas right next to each other. `test.ping` takes no arguments, so we need to add another comma, otherwise Salt would attempt to pass "foo" to `test.ping`.

If you need to pass arguments that include commas, then make sure you add spaces around the commas that separate arguments. For example:

```
salt '*' cmd.run,test.ping,test.echo 'echo "1,2,3"' , , foo
```

You may change the arguments separator using the `--args-separator` option:

```
salt --args-separator=:: '*' some.fun,test.echo params with , comma :: foo
```

7.1.2 CLI Completion

Shell completion scripts for the Salt CLI are available in the `pkg` Salt source directory.

7.2 Writing Execution Modules

Salt execution modules are the functions called by the `salt` command.
7.2.1 Modules Are Easy to Write!

Writing Salt execution modules is straightforward.

A Salt execution module is a Python or Cython module placed in a directory called `_modules/` at the root of the Salt fileserver. When using the default fileserver backend (i.e. `roots`), unless environments are otherwise defined in the `file_roots` config option, the `_modules/` directory would be located in `/srv/salt/_modules` on most systems.

Modules placed in `_modules/` will be synced to the minions when any of the following Salt functions are called:

- `state.highstate` (or `state.apply` with no state argument)
- `saltutil.sync_modules`
- `saltutil.sync_all`

Modules placed in `_modules/` will be synced to masters when any of the following Salt runners are called:

- `saltutil.sync_modules`
- `saltutil.sync_all`

Note that a module's default name is its filename (i.e. `foo.py` becomes module `foo`), but that its name can be overridden by using a `__virtual__` function.

If a Salt module has errors and cannot be imported, the Salt minion will continue to load without issue and the module with errors will simply be omitted.

If adding a Cython module the file must be named `<modulename>.pyx` so that the loader knows that the module needs to be imported as a Cython module. The compilation of the Cython module is automatic and happens when the minion starts, so only the `.pyx` file is required.

7.2.2 Zip Archives as Modules

Python 2.3 and higher allows developers to directly import zip archives containing Python code. By setting `enable_zip_modules` to `True` in the minion config, the Salt loader will be able to import `.zip` files in this fashion. This allows Salt module developers to package dependencies with their modules for ease of deployment, isolation, etc.

For a user, Zip Archive modules behave just like other modules. When executing a function from a module provided as the file `my_module.zip`, a user would call a function within that module as `my_module.<function>`.

Creating a Zip Archive Module

A Zip Archive module is structured similarly to a simple Python package. The `.zip` file contains a single directory with the same name as the module. The module code traditionally in `<module_name>.py` goes in `<module_name>/__init__.py`. The dependency packages are subdirectories of `<module_name>/`.

Here is an example directory structure for the `lumberjack` module, which has two library dependencies (`sleep` and `work`) to be included.

```
modules $ ls -R lumberjack
__init__.py   sleep   work
lumberjack/sleep:
  __init__.py
```
(continues on next page)
lumberjack/work:
__init__.py

The contents of lumberjack/__init__.py show how to import and use these included libraries.

```python
# Libraries included in lumberjack.zip
from lumberjack import sleep, work

def is_ok(person):
    """ Checks whether a person is really a lumberjack ""
    return sleep.all_night(person) and work.all_day(person)
```

Then, create the zip:

```
modules $ zip -r lumberjack lumberjack
    adding: lumberjack/ (stored 0%)
    adding: lumberjack/__init__.py (deflated 39%)
    adding: lumberjack/sleep/ (stored 0%)
    adding: lumberjack/sleep/__init__.py (deflated 7%)
    adding: lumberjack/work/ (stored 0%)
    adding: lumberjack/work/__init__.py (deflated 7%)
modules $ unzip -l lumberjack.zip
Archive: lumberjack.zip
    Name          Date Time  Type          Size  Compressed Size
    -------      -----  -----          ----            ----
        lumberjack/  08-21-15 20:08    0     08-21-15 20:08   0
          __init__.py  08-21-15 19:53    0     08-21-15 19:53   0
          sleep/       08-21-15 19:53    0     08-21-15 19:53   0
             __init__.py  08-21-15 19:53    0     08-21-15 19:53   0
          work/        08-21-15 19:21    0     08-21-15 19:21   0
             __init__.py  08-21-15 19:21    0     08-21-15 19:21   0
              --------  -------           -------         -------
                512          6 files
```

Once placed in file_roots, Salt users can distribute and use lumberjack.zip like any other module.

```
$ sudo salt minion1 saltutil.sync_modules
minion1: modules.lumberjack
$ sudo salt minion1 lumberjack.is_ok 'Michael Palin'
minion1: True
```

### 7.2.3 Cross Calling Execution Modules

All of the Salt execution modules are available to each other and modules can call functions available in other execution modules.

The variable __salt__ is packed into the modules after they are loaded into the Salt minion.

The __salt__ variable is a Python dictionary containing all of the Salt functions. Dictionary keys are strings representing the names of the modules and the values are the functions themselves.

Salt modules can be cross-called by accessing the value in the __salt__ dict:
def foo(bar):
    return __salt__['cmd.run'](bar)

This code will call the run function in the cmd module and pass the argument bar to it.

### 7.2.4 Calling Execution Modules on the Salt Master

New in version 2016.11.0.

Execution modules can now also be called via the `salt-run` command using the salt runner.

### 7.2.5 Preloaded Execution Module Data

When interacting with execution modules often it is nice to be able to read information dynamically about the minion or to load in configuration parameters for a module.

Salt allows for different types of data to be loaded into the modules by the minion.

**Grains Data**

The values detected by the Salt Grains on the minion are available in a Python dictionary named `__grains__` and can be accessed from within callable objects in the Python modules.

To see the contents of the grains dictionary for a given system in your deployment run the `grains.items()` function:

```bash
salt 'hostname' grains.items --output=pprint
```

Any value in a grains dictionary can be accessed as any other Python dictionary. For example, the grain representing the minion ID is stored in the `id` key and from an execution module, the value would be stored in `__grains__['id']`.

**Module Configuration**

Since parameters for configuring a module may be desired, Salt allows for configuration information from the minion configuration file to be passed to execution modules.

Since the minion configuration file is a YAML document, arbitrary configuration data can be passed in the minion config that is read by the modules. It is therefore strongly recommended that the values passed in the configuration file match the module name. A value intended for the test execution module should be named `test.<value>`.

The test execution module contains usage of the module configuration and the default configuration file for the minion contains the information and format used to pass data to the modules. `salt.modules.test.conf/minion`
__init__ Function

If you want your module to have different execution modes based on minion configuration, you can use the
__init__(opts) function to perform initial module setup. The parameter opts is the complete minion config-
uration, as also available in the __opts__ dict.

```
    """
    Cheese module initialization example
    """

def __init__(opts):
    """
    Allow foreign imports if configured to do so
    """
    if opts.get("cheese.allow_foreign", False):
        _enable_foreign_products()
```

7.2.6 Strings and Unicode

An execution module author should always assume that strings fed to the module have already decoded from strings
into Unicode. In Python 2, these will be of type 'Unicode' and in Python 3 they will be of type str. Calling from
a state to other Salt sub-systems, should pass Unicode (or bytes if passing binary data). In the rare event that a
state needs to write directly to disk, Unicode should be encoded to a string immediately before writing to disk. An
author may use __salt_system_encoding__ to learn what the encoding type of the system is. For example,
'my_string'.encode(__salt_system_encoding__).

7.2.7 Outputter Configuration

Since execution module functions can return different data, and the way the data is printed can greatly change the
presentation, Salt allows for a specific outputter to be set on a function-by-function basis.

This is done be declaring an __outputter__ dictionary in the global scope of the module. The __outputter__
dictionary contains a mapping of function names to Salt outputters.

```
__outputter__ = {"run": "txt"}
```

This will ensure that the txt outputter is used to display output from the run function.

7.2.8 Virtual Modules

Virtual modules let you override the name of a module in order to use the same name to refer to one of several
similar modules. The specific module that is loaded for a virtual name is selected based on the current platform or
environment.

For example, packages are managed across platforms using the pkg module. pkg is a virtual module name that
is an alias for the specific package manager module that is loaded on a specific system (for example, yumpkg on
RHEL/CentOS systems, and aptpkg on Ubuntu).

Virtual module names are set using the __virtual__ function and the virtual name.
7.2.9 __virtual__ Function

The __virtual__ function returns either a string, True, False, or False with an error string. If a string is returned then the module is loaded using the name of the string as the virtual name. If True is returned the module is loaded using the current module name. If False is returned the module is not loaded. False lets the module perform system checks and prevent loading if dependencies are not met.

Since __virtual__ is called before the module is loaded, __salt__ will be unreliable as not all modules will be available at this point in time. The __pillar__ and __grains__ "dunder" dictionaries are available however.

Note: Modules which return a string from __virtual__ that is already used by a module that ships with Salt will override the stock module.

Returning Error Information from __virtual__

Optionally, Salt plugin modules, such as execution, state, returner, beacon, etc. modules may additionally return a string containing the reason that a module could not be loaded. For example, an execution module called cheese and a corresponding state module also called cheese, both depending on a utility called enzymes should have __virtual__ functions that handle the case when the dependency is unavailable.

```python
""
Cheese execution (or returner/beacon/etc.) module
"

try:
  import enzymes

  HAS_ENZYMES = True
except ImportError:
  HAS_ENZYMES = False

def __virtual__():
  ""
  only load cheese if enzymes are available
  ""
  if HAS_ENZYMES:
    return "cheese"
  else:
    return (False,
            "The cheese execution module cannot be loaded: enzymes unavailable.",
            )

def slice():
  pass

""
Cheese state module. Note that this works in state modules because it is guaranteed that execution modules are loaded first
"

def __virtual__():
  (continues on next page)
only load cheese if enzymes are available

# predicate loading of the cheese state on the corresponding execution module
if "cheese.slice" in __salt__:
    return "cheese"
else:
    return False, "The cheese state module cannot be loaded: enzymes unavailable."

Examples

The package manager modules are among the best examples of using the __virtual__ function. A table of all the virtual pkg modules can be found here.

Overriding Virtual Module Providers

Salt often uses OS grains (os, osrelease, os_family, etc.) to determine which module should be loaded as the virtual module for pkg, service, etc. Sometimes this OS detection is incomplete, with new distros popping up, existing distros changing init systems, etc. The virtual modules likely to be affected by this are in the list below (click each item for more information):

- pkg
- service
- user
- shadow
- group

If Salt is using the wrong module for one of these, first of all, please report it on the issue tracker, so that this issue can be resolved for a future release. To make it easier to troubleshoot, please also provide the grains.items output, taking care to redact any sensitive information.

Then, while waiting for the SaltStack development team to fix the issue, Salt can be made to use the correct module using the providers option in the minion config file:

```
providers:
    service: systemd
    pkg: aptpkg
```

The above example will force the minion to use the systemd module to provide service management, and the aptpkg module to provide package management.
Logging Restrictions

As a rule, logging should not be done anywhere in a Salt module before it is loaded. This rule applies to all code that would run before the `__virtual__()` function, as well as the code within the `__virtual__()` function itself.

If logging statements are made before the virtual function determines if the module should be loaded, then those logging statements will be called repeatedly. This clutters up log files unnecessarily.

Exceptions may be considered for logging statements made at the `trace` level. However, it is better to provide the necessary information by another means. One method is to return error information in the `__virtual__()` function.

### 7.2.10 __virtualname__

`__virtualname__` is a variable that is used by the documentation build system to know the virtual name of a module without calling the `__virtual__` function. Modules that return a string from the `__virtual__` function must also set the `__virtualname__` variable.

To avoid setting the virtual name string twice, you can implement `__virtual__` to return the value set for `__virtualname__` using a pattern similar to the following:

```python
# Define the module's virtual name
__virtualname__ = "pkg"

def __virtual__():
    
    # Confine this module to Mac OS with Homebrew.
    
    if salt.utils.path.which("brew") and __grains__['os'] == "MacOS":
        return __virtualname__
    return False
```

The `__virtual__()` function can return a `True` or `False` boolean, a tuple, or a string. If it returns a `True` value, this `__virtualname__` module-level attribute can be set as seen in the above example. This is the string that the module should be referred to as.

When `__virtual__()` returns a tuple, the first item should be a boolean and the second should be a string. This is typically done when the module should not load. The first value of the tuple is `False` and the second is the error message to display for why the module did not load.

For example:

```python
def __virtual__():
    
    # Only load if git exists on the system
    
    if salt.utils.path.which("git") is None:
        return (False, "The git execution module cannot be loaded: git unavailable.")
    else:
        return True
```
7.2.11 Documentation

Salt execution modules are documented. The `sys.doc()` function will return the documentation for all available modules:

```bash
salt '*/' sys.doc
```

The `sys.doc` function simply prints out the docstrings found in the modules; when writing Salt execution modules, please follow the formatting conventions for docstrings as they appear in the other modules.

Adding Documentation to Salt Modules

It is strongly suggested that all Salt modules have documentation added.

To add documentation add a Python docstring to the function.

```python
def spam(eggs):
    """
    A function to make some spam with eggs!
    
    CLI Example:::
    
    salt '*' test.spam eggs
    """
    return eggs
```

Now when the sys.doc call is executed the docstring will be cleanly returned to the calling terminal.

Documentation added to execution modules in docstrings will automatically be added to the online web-based documentation.

Add Execution Module Metadata

When writing a Python docstring for an execution module, add information about the module using the following field lists:

```
:maintainer: Thomas Hatch <thatch@saltstack.com, Seth House <shouse@saltstack.com>
maturity: new
depends: python-mysqldb
platform: all
```

The maintainer field is a comma-delimited list of developers who help maintain this module.

The maturity field indicates the level of quality and testing for this module. Standard labels will be determined.

The depends field is a comma-delimited list of modules that this module depends on.

The platform field is a comma-delimited list of platforms that this module is known to run on.
## 7.2.12 Log Output

You can call the logger from custom modules to write messages to the minion logs. The following code snippet demonstrates writing log messages:

```python
import logging

log = logging.getLogger(__name__)

log.info("Here is Some Information")
log.warning("You Should Not Do That")
log.error("It Is Busted")
```

### 7.2.13 Aliasing Functions

Sometimes one wishes to use a function name that would shadow a python built-in. A common example would be `set()`. To support this, append an underscore to the function definition, `def set_():`, and use the `__func_alias__` feature to provide an alias to the function.

`__func_alias__` is a dictionary where each key is the name of a function in the module, and each value is a string representing the alias for that function. When calling an aliased function from a different execution module, state module, or from the cli, the alias name should be used.

```python
__func_alias__ = {
    "set_": "set",
    "list_": "list",
}
```

### 7.2.14 Private Functions

In Salt, Python callable objects contained within an execution module are made available to the Salt minion for use. The only exception to this rule is a callable object with a name starting with an underscore `_`.

**Objects Loaded Into the Salt Minion**

```python
def foo(bar):
    return bar
```

**Objects NOT Loaded into the Salt Minion**

```python
def _foobar(baz):  # Preceded with an _
    return baz

cheese = {}  # Not a callable Python object
```
7.2.15 Useful Decorators for Modules

Depends Decorator

When writing execution modules there are many times where some of the module will work on all hosts but some functions have an external dependency, such as a service that needs to be installed or a binary that needs to be present on the system.

Instead of trying to wrap much of the code in large try/except blocks, a decorator can be used.

If the dependencies passed to the decorator don't exist, then the salt minion will remove those functions from the module on that host.

If a fallback_function is defined, it will replace the function instead of removing it

```python
import logging
from salt.utils.decorators import depends

log = logging.getLogger(__name__)

try:
    import dependency_that_sometimes_exists
except ImportError as e:
    log.trace("Failed to import dependency_that_sometimes_exists: {0}".format(e))

@depends("dependency_that_sometimes_exists")
def foo():
    """
    Function with a dependency on the "dependency_that_sometimes_exists" module,
    if the "dependency_that_sometimes_exists" is missing this function will not exist
    """
    return True

def _fallback():
    """
    Fallback function for the depends decorator to replace a function with
    """
    return "dependency_that_sometimes_exists" needs to be installed for this function to exist

@depends("dependency_that_sometimes_exists", fallback_function=_fallback)
def foo():
    """
    Function with a dependency on the "dependency_that_sometimes_exists" module. If the "dependency_that_sometimes_exists" is missing this function will be replaced with "_fallback"
    """
    return True
```

In addition to global dependencies the depends decorator also supports raw booleans.

```python
from salt.utils.decorators import depends

HAS_DEP = False
```

(continues on next page)
try:
    import dependency_that_sometimes_exists
    HAS_DEP = True
except ImportError:
    pass

@depends(HAS_DEP)
def foo():
    return True

7.3 Executors

Executors are used by minion to execute module functions. Executors can be used to modify the functions behavior, do any pre-execution steps or execute in a specific way like sudo executor.

Executors could be passed as a list and they will be used one-by-one in the order. If an executor returns None the next one will be called. If an executor returns non-None the execution sequence is terminated and the returned value is used as a result. It’s a way executor could control modules execution working as a filter. Note that executor could actually not execute the function but just do something else and return None like splay executor does. In this case some other executor have to be used as a final executor that will actually execute the function. See examples below.

Executors list could be passed by minion config file in the following way:

```yaml
module_executors:
    - splay
    - direct_call
splaytime: 30
```

The same could be done by command line:

```
salt -t 40 --module-executors="[splay, direct_call]" --executor-opts="{'splaytime': 30}
    '-' 'x' test.version
```

And the same command called via netapi will look like this:

```
curl -sSk https://localhost:8000 \
    -H 'Accept: application/x-yaml' \
    -H 'X-Auth-Token: 697adbdc8fe971d09ae4c2a3aad7248859c87079' \
    -H 'Content-type: application/json' \
    -d '{
        "client": "local",
        "tgt": ",",
        "fun": "test.version",
        "module_executors": ["splay", "direct_call"],
        "executor_opts": {"splaytime": 10}
    }'
```

See also:

The full list of executors
7.3.1 Writing Salt Executors

A Salt executor is written in a similar manner to a Salt execution module. Executor is a python module placed into the executors folder and containing the execute function with the following signature:

```python
def execute(opts, data, func, args, kwargs):
    ...
```

Where the args are:

- **opts**: Dictionary containing the minion configuration options
- **data**: Dictionary containing the load data including executor_opts passed via cmdline/API.
- **func, args, kwargs**: Execution module function to be executed and its arguments. For instance the simplest direct_call executor just runs it as func(*args, **kwargs).

**Returns**: None if the execution sequence must be continued with the next executor. Error string or execution result if the job is done and execution must be stopped.

Specific options could be passed to the executor via minion config or via executor_opts argument. For instance to access splaytime option set by minion config executor should access opts.get('splaytime'). To access the option set by commandline or API data.get('executor_opts', {}).get('splaytime') should be used. So if an option is safe and must be accessible by user executor should check it in both places, but if an option is unsafe it should be read from the only config ignoring the passed request data.

There is also a function named all_missing_func which the name of the func is passed, which can be used to verify if the command should still be run, even if it is not loaded in minion_mods.
Salt contains a robust and flexible configuration management framework, which is built on the remote execution core. This framework executes on the minions, allowing effortless, simultaneous configuration of tens of thousands of hosts, by rendering language specific state files. The following links provide resources to learn more about state and renderers.

States Express the state of a host using small, easy to read, easy to understand configuration files. *No programming required.*

- **Full list of states** Contains: list of install packages, create users, transfer files, start services, and so on.
- **Pillar System** Contains: description of Salt’s Pillar system.
- **Highstate data structure** Contains: a dry vocabulary and technical representation of the configuration format that states represent.
- **Writing states** Contains: a guide on how to write Salt state modules, easily extending Salt to directly manage more software.

**Note:** Salt execution modules are different from state modules and cannot be called as a state in an SLS file. In other words, this will not work:

```
moe:
  user.rename:
    - new_name: larry
    - onlyif: id moe
```

You must use the `module` states to call execution modules directly. Here’s an example:

```
rename_moe:
  module.run:
    - name: user.rename
    - m_name: moe
    - new_name: larry
    - onlyif: id moe
```

**Renderers** Renderers use state configuration files written in a variety of languages, templating engines, or files. Salt’s configuration management system is, under the hood, language agnostic.

- **Full list of renderers** Contains: a list of renderers. YAML is one choice, but many systems are available, from alternative templating engines to the PyDSL language for rendering sls formulas.
- **Renderers** Contains: more information about renderers. Salt states are only concerned with the ultimate highstate data structure, not how the data structure was created.
8.1 State System Reference

Salt offers an interface to manage the configuration or "state" of the Salt minions. This interface is a fully capable mechanism used to enforce the state of systems from a central manager.

8.1.1 Mod Aggregate State Runtime Modifications

New in version 2014.7.0.

The mod_aggregate system was added in the 2014.7.0 release of Salt and allows for runtime modification of the executing state data. Simply put, it allows for the data used by Salt’s state system to be changed on the fly at runtime, kind of like a configuration management JIT compiler or a runtime import system. All in all, it makes Salt much more dynamic.

How it Works

The best example is the pkg state. One of the major requests in Salt has long been adding the ability to install all packages defined at the same time. The mod_aggregate system makes this a reality. While executing Salt’s state system, when a pkg state is reached the mod_aggregate function in the state module is called. For pkg this function scans all of the other states that are slated to run, and picks up the references to name and pkgs, then adds them to pkgs in the first state. The result is a single call to yum, apt-get, pacman, etc as part of the first package install.

How to Use it

Note: Since this option changes the basic behavior of the state runtime, after it is enabled states should be executed using *test*=True to ensure that the desired behavior is preserved.

In config files

The first way to enable aggregation is with a configuration option in either the master or minion configuration files. Salt will invoke mod_aggregate the first time it encounters a state module that has aggregate support.

If this option is set in the master config it will apply to all state runs on all minions, if set in the minion config it will only apply to said minion.

Enable for all states:

```
state_aggregate: True
```

Enable for only specific state modules:

```
state_aggregate:
  - pkg
```
In states

The second way to enable aggregation is with the state-level `aggregate` keyword. In this configuration, Salt will invoke the `mod_aggregate` function the first time it encounters this keyword. Any additional occurrences of the keyword will be ignored as the aggregation has already taken place.

The following example will trigger `mod_aggregate` when the `lamp_stack` state is processed resulting in a single call to the underlying package manager.

```
lamp_stack:
  pkg.installed:
    - pkgs:
      - php
      - mysql-client
      - aggregate: True
memcached:
  pkg.installed:
    - name: memcached
```

Adding `mod_aggregate` to a State Module

Adding a `mod_aggregate` routine to an existing state module only requires adding an additional function to the state module called `mod_aggregate`.

The `mod_aggregate` function just needs to accept three parameters and return the low data to use. Since `mod_aggregate` is working on the state runtime level it does need to manipulate `low data`.

The three parameters are `low`, `chunks`, and `running`. The `low` option is the low data for the state execution which is about to be called. The `chunks` is the list of all of the low data dictionaries which are being executed by the runtime and the `running` dictionary is the return data from all of the state executions which have already be executed.

This example, simplified from the pkg state, shows how to create `mod_aggregate` functions:

```
def mod_aggregate(low, chunks, running):
    """
The `mod_aggregate` function which looks up all packages in the available low chunks and merges them into a single pkgs ref in the present low data
"""
    pkgs = []
    # What functions should we aggregate?
    agg_enabled = [
        "installed",
        "latest",
        "removed",
        "purged",
    ]
    # The `low` data is just a dict with the state, function (fun) and # arguments passed in from the sls
    if low.get("fun") not in agg_enabled:
        return low
    # Now look into what other things are set to execute
    for chunk in chunks:
        # The state runtime uses "tags" to track completed jobs, it may # look familiar with the _|-:
        tag = __utils__["state.gen_tag"](chunk)
        if tag in running:
```

(continues on next page)
```python
# Already ran the pkg state, skip aggregation
continue
if chunk.get("state") == "pkg":
    if "__agg__" in chunk:
        continue
    # Check for the same function
    if chunk.get("fun") != low.get("fun"):
        continue
    # Pull out the pkg names!
    if "pkgs" in chunk:
        pkgs.extend(chunk["pkgs"])
        chunk["__agg__"] = True
    elif "name" in chunk:
        pkgs.append(chunk["name"])
        chunk["__agg__"] = True
if pkgs:
    if "pkgs" in low:
        low["pkgs"].extend(pkgs)
    else:
        low["pkgs"] = pkgs
# The low has been modified and needs to be returned to the state
# runtime for execution
return low
```

8.1.2 Altering States

Note: This documentation has been moved here.

8.1.3 File State Backups

In 0.10.2 a new feature was added for backing up files that are replaced by the file.managed and file.recurse states. The new feature is called the backup mode. Setting the backup mode is easy, but it can be set in a number of places.

The backup_mode can be set in the minion config file:

```yaml
backup_mode: minion
```

Or it can be set for each file:

```yaml
/etc/ssh/sshd_config:
file.managed:
    - source: salt://ssh/sshd_config
    - backup: minion
```
Backed-up Files

The files will be saved in the minion cachedir under the directory named file_backup. The files will be in the location relative to where they were under the root filesystem and be appended with a timestamp. This should make them easy to browse.

Interacting with Backups

Starting with version 0.17.0, it will be possible to list, restore, and delete previously-created backups.

Listing

The backups for a given file can be listed using file.list_backups:

```
# salt foo.bar.com file.list_backups /tmp/foo.txt
foo.bar.com:
    0:
        Backup Time: Sat Jul 27 2013 17:48:41.738027
        Size: 13
    1:
        Backup Time: Sat Jul 27 2013 17:48:28.369804
        Size: 35
```

Restoring

Restoring is easy using file.restore_backup, just pass the path and the numeric id found with file.list_backups:

```
# salt foo.bar.com file.restore_backup /tmp/foo.txt 1
foo.bar.com:
    comment: Successfully restored /var/cache/salt/minion/file_backup/tmp/foo.txt_Sat_Jul_27_17:48:28_369804_2013 to /tmp/foo.txt
    result: True
```

The existing file will be backed up, just in case, as can be seen if file.list_backups is run again:
# salt foo.bar.com file.list_backups /tmp/foo.txt

foo.bar.com:

    0:
        Backup Time: Sat Jul 27 2013 18:00:19.822550
        Location: /var/cache/salt/minion/file_backup/tmp/foo.txt_Sat_Jul_27_18:00:19_822550_2013
        Size: 53

    1:
        Backup Time: Sat Jul 27 2013 17:48:41.738027
        Size: 13

    2:
        Backup Time: Sat Jul 27 2013 17:48:28.369804
        Size: 35

Note: Since no state is being run, restoring a file will not trigger any watches for the file. So, if you are restoring a config file for a service, it will likely still be necessary to run a `service.restart`.

Deleting

Deleting backups can be done using `file.delete_backup`:

```bash
# salt foo.bar.com file.delete_backup /tmp/foo.txt 0

foo.bar.com:
    comment:
        Successfully removed /var/cache/salt/minion/file_backup/tmp/foo.txt_Sat_Jul_27_18:00:19_822550_2013
    result: True
```
8.1.4 Understanding State Compiler Ordering

Note: This tutorial is an intermediate level tutorial. Some basic understanding of the state system and writing Salt Formulas is assumed.

Salt's state system is built to deliver all of the power of configuration management systems without sacrificing simplicity. This tutorial is made to help users understand in detail just how the order is defined for state executions in Salt.

This tutorial is written to represent the behavior of Salt as of version 0.17.0.

Compiler Basics

To understand ordering in depth some very basic knowledge about the state compiler is very helpful. No need to worry though, this is very high level!

High Data and Low Data

When defining Salt Formulas in YAML the data that is being represented is referred to by the compiler as High Data. When the data is initially loaded into the compiler it is a single large python dictionary, this dictionary can be viewed raw by running:

```
salt '*' state.show_highstate
```

This "High Data" structure is then compiled down to "Low Data". The Low Data is what is matched up to create individual executions in Salt's configuration management system. The low data is an ordered list of single state calls to execute. Once the low data is compiled the evaluation order can be seen.

The low data can be viewed by running:

```
salt '*' state.show_lowstate
```

Note: The state execution module contains MANY functions for evaluating the state system and is well worth a read! These routines can be very useful when debugging states or to help deepen one's understanding of Salt's state system.

As an example, a state written thusly:

```
apache:
    pkg.installed:
        - name: httpd
    service.running:
        - name: httpd
        - watch:
            - file: apache_conf
            - pkg: apache
    apache_conf:
        file.managed:
            - name: /etc/httpd/conf.d/httpd.conf
            - source: salt://apache/httpd.conf
```

8.1. State System Reference
Salt Documentation, Release 3002.5

Will have High Data which looks like this represented in json:

```
{
    "apache": {
        "pkg": [
            {
                "name": "httpd",
                "installed",
                "order": 10000
            }
        ],
        "service": [
            {
                "name": "httpd",
                "watch": [
                    {
                        "file": "apache_conf",
                        "pkg": "apache"
                    }
                ],
                "running",
                "order": 10001
            }
        ],
        "__sls__": "blah",
        "__env__": "base"
    },
    "apache_conf": {
        "file": [
            {
                "name": "/etc/httpd/conf.d/httpd.conf",
                "source": "salt://apache/httpd.conf",
                "managed",
                "order": 10002
            }
        ],
        "__sls__": "blah",
        "__env__": "base"
    }
}
```

The subsequent Low Data will look like this:

```
[
    {
        "name": "httpd",
        (continues on next page)
```
This tutorial discusses the Low Data evaluation and the state runtime.

Ordering Layers

Salt defines 2 order interfaces which are evaluated in the state runtime and defines these orders in a number of passes.

Definition Order

Note: The Definition Order system can be disabled by turning the option state_auto_order to False in the master configuration file.

The top level of ordering is the Definition Order. The Definition Order is the order in which states are defined in salt formulas. This is very straightforward on basic states which do not contain include statements or a top file, as the states are just ordered from the top of the file, but the include system starts to bring in some simple rules for how the Definition Order is defined.
Looking back at the "Low Data" and "High Data" shown above, the order key has been transparently added to the data to enable the Definition Order.

**The Include Statement**

Basically, if there is an include statement in a formula, then the formulas which are included will be run BEFORE the contents of the formula which is including them. Also, the include statement is a list, so they will be loaded in the order in which they are included.

In the following case:

foo.sls

```
include:
  - bar
  - baz
```

bar.sls

```
include:
  - quo
```

baz.sls

```
include:
  - qux
```

In the above case if `state.apply foo` were called then the formulas will be loaded in the following order:

1. quo
2. bar
3. qux
4. baz
5. foo

**The order Flag**

The Definition Order happens transparently in the background, but the ordering can be explicitly overridden using the order flag in states:

```
apache:
  pkg.installed:
    - name: httpd
    - order: 1
```

This order flag will over ride the definition order, this makes it very simple to create states that are always executed first, last or in specific stages, a great example is defining a number of package repositories that need to be set up before anything else, or final checks that need to be run at the end of a state run by using `order: last` or `order: -1`.

When the order flag is explicitly set the Definition Order system will omit setting an order for that state and directly use the order flag defined.
Lexicographical Fall-back

Salt states were written to ALWAYS execute in the same order. Before the introduction of Definition Order in version 0.17.0 everything was ordered lexicographically according to the name of the state, then function then id. This is the way Salt has always ensured that states always run in the same order regardless of where they are deployed, the addition of the Definition Order method mealy makes this finite ordering easier to follow.

The lexicographical ordering is still applied but it only has any effect when two order statements collide. This means that if multiple states are assigned the same order number that they will fall back to lexicographical ordering to ensure that every execution still happens in a finite order.

Note: If running with state_auto_order: False the order key is not set automatically, since the Lexicographical order can be derived from other keys.

Requisite Ordering

Salt states are fully declarative, in that they are written to declare the state in which a system should be. This means that components can require that other components have been set up successfully. Unlike the other ordering systems, the Requisite system in Salt is evaluated at runtime.

The requisite system is also built to ensure that the ordering of execution never changes, but is always the same for a given set of states. This is accomplished by using a runtime that processes states in a completely predictable order instead of using an event loop based system like other declarative configuration management systems.

Runtime Requisite Evaluation

The requisite system is evaluated as the components are found, and the requisites are always evaluated in the same order. This explanation will be followed by an example, as the raw explanation may be a little dizzying at first as it creates a linear dependency evaluation sequence.

The "Low Data" is an ordered list or dictionaries, the state runtime evaluates each dictionary in the order in which they are arranged in the list. When evaluating a single dictionary it is checked for requisites, requisites are evaluated in order, require then watch then prereq.

Note: If using requisite in statements like require_in and watch_in these will be compiled down to require and watch statements before runtime evaluation.

Each requisite contains an ordered list of requisites, these requisites are looked up in the list of dictionaries and then executed. Once all requisites have been evaluated and executed then the requiring state can safely be run (or not run if requisites have not been met).

This means that the requisites are always evaluated in the same order, again ensuring one of the core design principals of Salt's State system to ensure that execution is always finite is intact.
Simple Runtime Evaluation Example

Given the above "Low Data" the states will be evaluated in the following order:

1. The pkg.installed is executed ensuring that the apache package is installed, it contains no requisites and is therefore the first defined state to execute.

2. The service.running state is evaluated but NOT executed, a watch requisite is found, therefore they are read in order, the runtime first checks for the file, sees that it has not been executed and calls for the file state to be evaluated.

3. The file state is evaluated AND executed, since it, like the pkg state does not contain any requisites.

4. The evaluation of the service state continues, it next checks the pkg requisite and sees that it is met, with all requisites met the service state is now executed.

Best Practice

The best practice in Salt is to choose a method and stick with it, official states are written using requisites for all associations since requisites create clean, traceable dependency trails and make for the most portable formulas. To accomplish something similar to how classical imperative systems function all requisites can be omitted and the failhard option then set to True in the master configuration, this will stop all state runs at the first instance of a failure.

In the end, using requisites creates very tight and fine grained states, not using requisites makes full sequence runs and while slightly easier to write, and gives much less control over the executions.

8.1.5 Extending External SLS Data

Sometimes a state defined in one SLS file will need to be modified from a separate SLS file. A good example of this is when an argument needs to be overwritten or when a service needs to watch an additional state.

The Extend Declaration

The standard way to extend is via the extend declaration. The extend declaration is a top level declaration like include and encapsulates ID declaration data included from other SLS files. A standard extend looks like this:

```yaml
include:
  - http
  - ssh

extend:
  apache:
    file:
      - name: /etc/httpd/conf/httpd.conf
        source: salt://http/httpd2.conf
  ssh-server:
    service:
      - watch:
        - file: /etc/ssh/banner

/etc/ssh/banner:
  file.managed:
    - source: salt://ssh/banner
```
A few critical things happened here, first off the SLS files that are going to be extended are included, then the extend dec is defined. Under the extend dec 2 IDs are extended, the apache ID's file state is overwritten with a new name and source. Then the ssh server is extended to watch the banner file in addition to anything it is already watching.

**Extend is a Top Level Declaration**

This means that extend can only be called once in an sls, if it is used twice then only one of the extend blocks will be read. So this is WRONG:

```yaml
include:
  - http
  - ssh
extend:
  apache:
    file:
      - name: /etc/httpd/conf/httpd.conf
      - source: salt://http/httpd2.conf
      # Second extend will overwrite the first!! Only make one
extend:
  ssh-server:
    service:
      - watch:
        - file: /etc/ssh/banner
```

**The Requisite "in" Statement**

Since one of the most common things to do when extending another SLS is to add states for a service to watch, or anything for a watcher to watch, the requisite in statement was added to 0.9.8 to make extending the watch and require lists easier. The ssh-server extend statement above could be more cleanly defined like so:

```yaml
include:
  - ssh
/etc/ssh/banner:
  file.managed:
    - source: salt://ssh/banner
    - watch_in:
      service: ssh-server
```

**Rules to Extend By**

There are a few rules to remember when extending states:

1. Always include the SLS being extended with an include declaration
2. Requisites (watch and require) are appended to, everything else is overwritten
3. extend is a top level declaration, like an ID declaration, cannot be declared twice in a single SLS
4. Many IDs can be extended under the extend declaration
**8.1.6 Failhard Global Option**

Normally, when a state fails Salt continues to execute the remainder of the defined states and will only refuse to execute states that require the failed state.

But the situation may exist, where you would want all state execution to stop if a single state execution fails. The capability to do this is called **failing hard**.

**State Level Failhard**

A single state can have a failhard set, this means that if this individual state fails that all state execution will immediately stop. This is a great thing to do if there is a state that sets up a critical config file and setting a require for each state that reads the config would be cumbersome. A good example of this would be setting up a package manager early on:

```
/etc/yum.repos.d/company.repo:
  file.managed:
    - source: salt://company/yumrepo.conf
    - user: root
    - group: root
    - mode: 644
    - order: 1
    - failhard: True
```

In this situation, the yum repo is going to be configured before other states, and if it fails to lay down the config file, than no other states will be executed. It is possible to override a Global Failhard (see below) by explicitly setting it to `False` in the state.

**Global Failhard**

It may be desired to have failhard be applied to every state that is executed, if this is the case, then failhard can be set in the master configuration file. Setting failhard in the master configuration file will result in failing hard when any minion gathering states from the master have a state fail.

This is NOT the default behavior, normally Salt will only fail states that require a failed state.

Using the global failhard is generally not recommended, since it can result in states not being executed or even checked. It can also be confusing to see states failhard if an admin is not actively aware that the failhard has been set.

To use the global failhard set `failhard` to `True` in the master configuration file.

**8.1.7 Global State Arguments**

---

*Note:* This documentation has been moved [here.](#)
8.1.8 Highstate data structure definitions

The Salt State Tree

A state tree is a collection of SLS files and directories that live under the directory specified in `file_roots`.

**Note:** Directory names or filenames in the state tree cannot contain a period, with the exception of the period in the `.sls` file suffix.

Top file

The main state file that instructs minions what environment and modules to use during state execution.

Configurable via `state_top`.

See also:

- A detailed description of the top file

Include declaration

Defines a list of **Module reference** strings to include in this SLS.

Occurs only in the top level of the SLS data structure.

Example:

```
include:
  - edit.vim
  - http.server
```

Module reference

The name of a SLS module defined by a separate SLS file and residing on the Salt Master. A module named `edit.vim` is a reference to the SLS file `salt://edit/vim.sls`.

ID declaration

Defines an individual **highstate** component. Always references a value of a dictionary containing keys referencing **State declaration** and **Requisite declaration**. Can be overridden by a **Name declaration** or a **Names declaration**.

Occurs on the top level or under the **Extend declaration**.

Must be unique across entire state tree. If the same ID declaration is used twice, only the first one matched will be used. All subsequent ID declarations with the same name will be ignored.

**Note:** Naming gotchas

In Salt versions earlier than 0.9.7, ID declarations containing dots would result in unpredictable output.
Extend declaration

Extends a Name declaration from an included SLS module. The keys of the extend declaration always refer to an existing ID declaration which have been defined in included SLS modules.

Occurs only in the top level and defines a dictionary.

States cannot be extended more than once in a single state run.

Extend declarations are useful for adding-to or overriding parts of a State declaration that is defined in another SLS file. In the following contrived example, the shown mywebsite.sls file is include-ing and extend-ing the apache.sls module in order to add a watch declaration that will restart Apache whenever the Apache configuration file, mywebsite changes.

```python
include:
    - apache

extend:
    apache:
        service:
            - watch:
                file: mywebsite

mywebsite:
    file.managed:
        - name: /var/www/mysite
```

See also:

watch_in and require_in

Sometimes it is more convenient to use the watch_in or require_in syntax instead of extending another SLS file.

State Requisites

State declaration

A list which contains one string defining the Function declaration and any number of Function arg declaration dictionaries.

Can, optionally, contain a number of additional components like the name override components — name and names.

Can also contain requisite declarations.

Occurs under an ID declaration.

Requisite declaration

A list containing requisite references.

Used to build the action dependency tree. While Salt states are made to execute in a deterministic order, this order is managed by requiring and watching other Salt states.

Occurs as a list component under a State declaration or as a key under an ID declaration.
Requisite reference

A single key dictionary. The key is the name of the referenced State declaration and the value is the ID of the referenced ID declaration.

Occurs as a single index in a Requisite declaration list.

Function declaration

The name of the function to call within the state. A state declaration can contain only a single function declaration.

For example, the following state declaration calls the installed function in the pkg state module:

```
httpd:
  pkg.installed: []
```

The function can be declared inline with the state as a shortcut. The actual data structure is compiled to this form:

```
httpd:
  pkg:
    - installed
```

Where the function is a string in the body of the state declaration. Technically when the function is declared in dot notation the compiler converts it to be a string in the state declaration list. Note that the use of the first example more than once in an ID declaration is invalid yaml.

INVALID:

```
httpd:
  pkg.installed
  service.running
```

When passing a function without arguments and another state declaration within a single ID declaration, then the long or "standard" format needs to be used since otherwise it does not represent a valid data structure.

VALID:

```
httpd:
  pkg.installed: []
  service.running: []
```

Occurs as the only index in the State declaration list.

Function arg declaration

A single key dictionary referencing a Python type which is to be passed to the named Function declaration as a parameter. The type must be the data type expected by the function.

Occurs under a Function declaration.

For example in the following state declaration user, group, and mode are passed as arguments to the managed function in the file state module:

```
/etc/http/conf/http.conf:
  file.managed:
    - user: root
```

(continues on next page)
Name declaration

overrides the name argument of a State declaration. If name is not specified the ID declaration satisfies the name argument.

The name is always a single key dictionary referencing a string.

Overriding name is useful for a variety of scenarios.

For example, avoiding clashing ID declarations. The following two state declarations cannot both have /etc/motd as the ID declaration:

```
motd_perms:
  file.managed:
    - name: /etc/motd
    - mode: 644

motd_quote:
  file.append:
    - name: /etc/motd
    - text: "Of all smells, bread; of all tastes, salt."
```

Another common reason to override name is if the ID declaration is long and needs to be referenced in multiple places. In the example below it is much easier to specify mywebsite than to specify /etc/apache2/sites-available/mywebsite.com multiple times:

```
mywebsite:
  file.managed:
    - name: /etc/apache2/sites-available/mywebsite.com
    - source: salt://mywebsite.com

a2ensite mywebsite.com:
  cmd.wait:
    - unless: test -L /etc/apache2/sites-enabled/mywebsite.com
    - watch:
      - file: mywebsite

apache2:
  service.running:
    - watch:
      - file: mywebsite
```
Names declaration

Expands the contents of the containing State declaration into multiple state declarations, each with its own name. For example, given the following state declaration:

```
python-pkgs:
  pkg.installed:
    - names:
      - python-django
      - python-crypto
      - python-yaml
```

Once converted into the lowstate data structure the above state declaration will be expanded into the following three state declarations:

```
python-django:
  pkg.installed

python-crypto:
  pkg.installed

python-yaml:
  pkg.installed
```

Other values can be overridden during the expansion by providing an additional dictionary level.

New in version 2014.7.0.

```
ius:
  pkgrepo.managed:
    - humanname: IUS Community Packages for Enterprise Linux 6 - $basearch
    - gpgcheck: 1
    - gpgkey: http://dl.iuscommunity.org/pub/ius/IUS-COMMUNITY-GPG-KEY
    - names:
      - ius
      - ius-devel:
        - baseurl: http://mirror.rackspace.com/ius/development/CentOS/6/$basearch
```

Large example

Here is the layout in yaml using the names of the highdata structure components.

```
<Include Declaration>:
  - <Module Reference>
  - <Module Reference>

<Extend Declaration>:
  <ID Declaration>:
    [<overrides>]

# standard declaration

<ID Declaration>:
```
(continues on next page)
<State Module>:
- <Function>
- <Function Arg>
- <Function Arg>
- <Function Arg>
- <Name>: <name>
- <Requisite Declaration>:
  - <Requisite Reference>
  - <Requisite Reference>

# inline function and names

<ID Declaration>:
<State Module>.<Function>:
- <Function Arg>
- <Function Arg>
- <Function Arg>
- <Names>:
  - <name>
  - <name>
  - <name>
- <Requisite Declaration>:
  - <Requisite Reference>
  - <Requisite Reference>

# multiple states for single id

<ID Declaration>:
<State Module>:
- <Function>
- <Function Arg>
- <Name>: <name>
- <Requisite Declaration>:
  - <Requisite Reference>
<State Module>:
- <Function>
- <Function Arg>
- <Names>:
  - <name>
  - <name>
  - <name>
- <Requisite Declaration>:
  - <Requisite Reference>
8.1.9 Include and Exclude

Salt SLS files can include other SLS files and exclude SLS files that have been otherwise included. This allows for an SLS file to easily extend or manipulate other SLS files.

Include

When other SLS files are included, everything defined in the included SLS file will be added to the state run. When including define a list of SLS formulas to include:

```
include:
  - http
  - libvirt
```

The include statement will include SLS formulas from the same environment that the including SLS formula is in. But the environment can be explicitly defined in the configuration to override the running environment, therefore if an SLS formula needs to be included from an external environment named "dev" the following syntax is used:

```
include:
  - dev: http
```

NOTE: `include` does not simply inject the states where you place it in the SLS file. If you need to guarantee order of execution, consider using requisites.

Do not use dots in SLS file names or their directories

The initial implementation of `top.sls` and `Include declaration` followed the python import model where a slash is represented as a period. This means that a SLS file with a period in the name (besides the suffix period) cannot be referenced. For example, `webserver_1.0.sls` is not referenceable because `webserver_1.0` would refer to the directory/file `webserver_1/0.sls`

The same applies for any subdirectories, this is especially 'tricky' when git repos are created. Another command that typically can't render its output is `state.show_sls` of a file in a path that contains a dot.

Relative Include

In Salt 0.16.0, the capability to include SLS formulas which are relative to the running SLS formula was added. Simply precede the formula name with a `.`:

```
include:
  - .virt
  - .virt.hyper
```

In Salt 2015.8, the ability to include SLS formulas which are relative to the parents of the running SLS formula was added. In order to achieve this, precede the formula name with more than one `.` (dot). Much like Python's relative import abilities, two or more leading dots represent a relative include of the parent or parents of the current package, with each `.` representing one level after the first.

The following SLS configuration, if placed within `example.dev.virtual`, would result in `example.http` and `base` being included respectively:

```
include:
  - ..http
  - ...base
```
Exclude

The exclude statement, added in Salt 0.10.3, allows an SLS to hard exclude another SLS file or a specific id. The component is excluded after the high data has been compiled, so nothing should be able to override an exclude.

Since the exclude can remove an id or an sls the type of component to exclude needs to be defined. An exclude statement that verifies that the running highstate does not contain the http sls and the /etc/vimrc id would look like this:

```yaml
exclude:
  - sls: http
  - id: /etc/vimrc
```

**Note:** The current state processing flow checks for duplicate IDs before processing excludes. An error occurs if duplicate IDs are present even if one of the IDs is targeted by an exclude.

8.1.10 State System Layers

The Salt state system is comprised of multiple layers. While using Salt does not require an understanding of the state layers, a deeper understanding of how Salt compiles and manages states can be very beneficial.

Function Call

The lowest layer of functionality in the state system is the direct state function call. State executions are executions of single state functions at the core. These individual functions are defined in state modules and can be called directly via the `state.single` command.

```bash
salt '*' state.single pkg.installed name='vim'
```

Low Chunk

The low chunk is the bottom of the Salt state compiler. This is a data representation of a single function call. The low chunk is sent to the state caller and used to execute a single state function.

A single low chunk can be executed manually via the `state.low` command.

```bash
salt '*' state.low '{name: vim, state: pkg, fun: installed}'
```

The passed data reflects what the state execution system gets after compiling the data down from sls formulas.

Low State

The Low State layer is the list of low chunks "evaluated" in order. To see what the low state looks like for a highstate, run:

```bash
salt '*' state.show_lowstate
```

This will display the raw lowstate in the order which each low chunk will be evaluated. The order of evaluation is not necessarily the order of execution, since requisites are evaluated at runtime. Requisite execution and evaluation is finite; this means that the order of execution can be ascertained with 100% certainty based on the order of the low state.
**High Data**

High data is the data structure represented in YAML via SLS files. The High data structure is created by merging the data components rendered inside sls files (or other render systems). The High data can be easily viewed by executing the `state.show_highstate` or `state.show_sls` functions. Since this data is a somewhat complex data structure, it may be easier to read using the json, yaml, or pprint outputters:

```
salt '*' state.show_highstate --out yaml
salt '*' state.show_sls edit.vim --out pprint
```

**SLS**

Above "High Data", the logical layers are no longer technically required to be executed, or to be executed in a hierarchy. This means that how the High data is generated is optional and very flexible. The SLS layer allows for many mechanisms to be used to render sls data from files or to use the fileserver backend to generate sls and file data from external systems.

The SLS layer can be called directly to execute individual sls formulas.

---

**Note:** SLS Formulas have historically been called "SLS files". This is because a single SLS was only constituted in a single file. Now the term "SLS Formula" better expresses how a compartmentalized SLS can be expressed in a much more dynamic way by combining pillar and other sources, and the SLS can be dynamically generated.

To call a single SLS formula named `edit.vim`, execute `state.apply` and pass `edit.vim` as an argument:

```
salt '*' state.apply edit.vim
```

**HighState**

Calling SLS directly logically assigns what states should be executed from the context of the calling minion. The Highstate layer is used to allow for full contextual assignment of what is executed where to be tied to groups of, or individual, minions entirely from the master. This means that the environment of a minion, and all associated execution data pertinent to said minion, can be assigned from the master without needing to execute or configure anything on the target minion. This also means that the minion can independently retrieve information about its complete configuration from the master.

To execute the `highstate` use `state.apply`:

```
salt '*' state.apply
```

**Orchestrate**

The orchestrate layer expresses the highest functional layer of Salt’s automated logic systems. The Overstate allows for stateful and functional orchestration of routines from the master. The orchestrate defines in data execution stages which minions should execute states, or functions, and in what order using requisite logic.
8.1.11 The Orchestrate Runner

Note: This documentation has been moved here.

8.1.12 Ordering States

The way in which configuration management systems are executed is a hotly debated topic in the configuration management world. Two major philosophies exist on the subject, to either execute in an imperative fashion where things are executed in the order in which they are defined, or in a declarative fashion where dependencies need to be mapped between objects.

Imperative ordering is finite and generally considered easier to write, but declarative ordering is much more powerful and flexible but generally considered more difficult to create.

Salt has been created to get the best of both worlds. States are evaluated in a finite order, which guarantees that states are always executed in the same order, and the states runtime is declarative, making Salt fully aware of dependencies via the requisite system.

State Auto Ordering

Salt always executes states in a finite manner, meaning that they will always execute in the same order regardless of the system that is executing them. This evaluation order makes it easy to know what order the states will be executed in, but it is important to note that the requisite system will override the ordering defined in the files, and the order option, described below, will also override the order in which states are executed.

This ordering system can be disabled in preference of lexicographic (classic) ordering by setting the state_auto_order option to False in the master configuration file. Otherwise, state_auto_order defaults to True.

How compiler ordering is managed is described further in Understanding State Compiler Ordering.

Requisite Statements

Note: The behavior of requisites changed in version 0.9.7 of Salt. This documentation applies to requisites in version 0.9.7 and later.

Often when setting up states any single action will require or depend on another action. Salt allows for the building of relationships between states with requisite statements. A requisite statement ensures that the named state is evaluated before the state requiring it. There are three types of requisite statements in Salt, require, watch, and prereq.

These requisite statements are applied to a specific state declaration:

```
httpd:
  pkg.installed: []
  file.managed:
    - name: /etc/httpd/conf/httpd.conf
    - source: salt://httpd/httpd.conf
    - require:
      - pkg: httpd
```
In this example, the `require` requisite is used to declare that the file `/etc/httpd/conf/httpd.conf` should only be set up if the `pkg` state executes successfully.

The requisite system works by finding the states that are required and executing them before the state that requires them. Then the required states can be evaluated to see if they have executed correctly.

Require statements can refer to any state defined in Salt. The basic examples are `pkg`, `service`, and `file`, but any used state can be referenced.

In addition to state declarations such as `pkg`, `file`, etc., `sls` type requisites are also recognized, and essentially allow 'chaining' of states. This provides a mechanism to ensure the proper sequence for complex state formulas, especially when the discrete states are split or groups into separate `sls` files:

```
include:
  - network

httpd:
  pkg.installed: []
  service.running:
    - require:
      - pkg: httpd
      - sls: network
```

In this example, the `httpd` service running state will not be applied (i.e., the `httpd` service will not be started) unless both the `httpd` package is installed AND the network state is satisfied.

**Note:** Requisite matching

Requisites match on both the ID Declaration and the `name` parameter. Therefore, if using the `pkgs` or `sources` argument to install a list of packages in a `pkg` state, it's important to note that it is impossible to match an individual package in the list, since all packages are installed as a single state.

**Multiple Requisites**

The requisite statement is passed as a list, allowing for the easy addition of more requisites. Both requisite types can also be separately declared:

```
httpd:
  pkg.installed: []
  service.running:
    - enable: True
    - watch:
      - file: /etc/httpd/conf/httpd.conf
    - require:
      - pkg: httpd
      - user: httpd
      - group: httpd
  file.managed:
    - name: /etc/httpd/conf/httpd.conf
    - source: salt://httpd/httpd.conf
    - require:
      - pkg: httpd
  user.present: []
  group.present: []
```
In this example, the httpd service is only going to be started if the package, user, group, and file are executed successfully.

Requisite Documentation

For detailed information on each of the individual requisites, please look here.

The Order Option

Before using the order option, remember that the majority of state ordering should be done with a Requisite declaration, and that a requisite declaration will override an order option, so a state with order option should not require or required by other states.

The order option is used by adding an order number to a state declaration with the option order:

```
vim:
  pkg.installed:
    - order: 1
```

By adding the order option to 1 this ensures that the vim package will be installed in tandem with any other state declaration set to the order 1.

Any state declared without an order option will be executed after all states with order options are executed.

But this construct can only handle ordering states from the beginning. Certain circumstances will present a situation where it is desirable to send a state to the end of the line. To do this, set the order to last:

```
vim:
  pkg.installed:
    - order: last
```

8.1.13 Running States in Parallel

Introduced in Salt version 2017.7.0 it is now possible to run select states in parallel. This is accomplished very easily by adding the parallel: True option to your state declaration:

```
nginx:
  service.running:
    - parallel: True
```

Now nginx will be started in a separate process from the normal state run and will therefore not block additional states.

Parallel States and Requisites

Parallel States still honor requisites. If a given state requires another state that has been run in parallel then the state runtime will wait for the required state to finish.

Given this example:

```
sleep 10:
  cmd.run:
    - parallel: True
```

(continues on next page)
The `sleep 10` will be started first, then the state system will block on starting nginx until the `sleep 10` completes. Once nginx has been ensured to be running then the `sleep 5` will start.

This means that the order of evaluation of Salt States and requisites are still honored, and given that in the above case, `parallel: True` does not actually speed things up.

To run the above state much faster make sure that the `sleep 5` is evaluated before the nginx state

Now both of the sleep calls will be started in parallel and nginx will still wait for the state it requires, but while it waits the `sleep 5` state will also complete.

**Things to be Careful of**

Parallel States do not prevent you from creating parallel conflicts on your system. This means that if you start multiple package installs using Salt then the package manager will block or fail. If you attempt to manage the same file with multiple states in parallel then the result can produce an unexpected file.

Make sure that the states you choose to run in parallel do not conflict, or else, like in any parallel programming environment, the outcome may not be what you expect. Doing things like just making all states run in parallel will almost certainly result in unexpected behavior.

With that said, running states in parallel should be safe the vast majority of the time and the most likely culprit for unexpected behavior is running multiple package installs in parallel.
8.1.14 State Providers

New in version 0.9.8.

Salt predetermines what modules should be mapped to what uses based on the properties of a system. These determinations are generally made for modules that provide things like package and service management.

Sometimes in states, it may be necessary to use an alternative module to provide the needed functionality. For instance, an very old Arch Linux system may not be running systemd, so instead of using the systemd service module, you can revert to the default service module:

```
httpd:
  service.running:
    - enable: True
    - provider: service
```

In this instance, the basic service module (which manages sysvinit-based services) will replace the systemd module which is used by default on Arch Linux.

This change only affects this one state though. If it is necessary to make this override for most or every service, it is better to just override the provider in the minion config file, as described here.

Also, keep in mind that this only works for states with an identically-named virtual module (pkg, service, etc.).

Arbitrary Module Redirects

The provider statement can also be used for more powerful means, instead of overwriting or extending the module used for the named service an arbitrary module can be used to provide certain functionality.

```
emacs:
  pkg.installed:
    - provider:
      - cmd: customcmd
```

In this example, the state is being instructed to use a custom module to invoke commands.

Arbitrary module redirects can be used to dramatically change the behavior of a given state.

8.1.15 Requisites and Other Global State Arguments

Requisites

The Salt requisite system is used to create relationships between states. This provides a method to easily define inter-dependencies between states. These dependencies are expressed by declaring the relationships using state names and IDs or names. The generalized form of a requisite target is <state name>: <ID or name>. The specific form is defined as a Requisite Reference.

A common use-case for requisites is ensuring a package has been installed before trying to ensure the service is running. In the following example, Salt will ensure nginx has been installed before trying to manage the service. If the package could not be installed, Salt will not try to manage the service.

```
nginx:
  pkg.installed:
    - name: nginx-light
  service.running:
    - enable: True
```

(continues on next page)
Without the requisite defined, salt would attempt to install the package and then attempt to manage the service even if the installation failed.

These requisites always form dependencies in a predictable single direction. Each requisite has an alternate `require_site_in` form that can be used to establish a "reverse" dependency--useful in for loops.

In the end, a single dependency map is created and everything is executed in a finite and predictable order.

**Requisite matching**

Requisites typically need two pieces of information for matching:

- The state module name (e.g. `pkg` or `service`)
- The state identifier (e.g. `nginx` or `/etc/nginx/nginx.conf`

```yaml
nginx:
  pkg.installed: []
file.managed:
  - name: /etc/nginx/nginx.conf
service.running:
  - require:
    - pkg: nginx
    - file: /etc/nginx/nginx.conf
```

**Glob matching in requisites**

New in version 0.9.8.

Glob matching is supported in requisites. This is mostly useful for file changes. In the example below, a change in `/etc/apache2/httpd.conf` or `/etc/apache2/sites-available/default.conf` will reload/restart the service:

```yaml
apache2:
  service.running:
    - watch:
      - file: /etc/apache2/*
```

**Omitting state module in requisites**

New in version 2016.3.0.

In version 2016.3.0, the state module name was made optional. If the state module is omitted, all states matching the ID will be required, regardless of which module they are using.

```yaml
- require:
  - vim
```
State target matching

In order to understand how state targets are matched, it is helpful to know how the state compiler is working. Consider the following example:

```
Deploy server package:
  file.managed:
    - name: /usr/local/share/myapp.tar.xz
    - source: salt://myapp.tar.xz

Extract server package:
  archive.extracted:
    - name: /usr/local/share/myapp
    - source: /usr/local/share/myapp.tar.xz
    - archive_format: tar
    - onchanges:
      - file: Deploy server package
```

The first formula is converted to a dictionary which looks as follows (represented as YAML, some properties omitted for simplicity) as High Data:

```
Deploy server package:
  file:
    - managed
    - name: /usr/local/share/myapp.tar.xz
    - source: salt://myapp.tar.xz
```

The file.managed format used in the formula is essentially syntactic sugar: at the end, the target is file, which is used in the Extract server package state above.

Identifier matching

Requisites match on both the ID Declaration and the name parameter. This means that, in the ”Deploy server package” example above, a require requisite would match with Deploy server package or /usr/local/share/myapp.tar.xz, so either of the following versions for ”Extract server package” is correct:

```
# (Archive arguments omitted for simplicity)

# Match by ID declaration
Extract server package:
  archive.extracted:
    - onchanges:
      - file: Deploy server package

# Match by name parameter
Extract server package:
  archive.extracted:
    - onchanges:
      - file: /usr/local/share/myapp.tar.xz
```
Omitting state module in requisites

New in version 2016.3.0.

In version 2016.3.0, the state module name was made optional. If the state module is omitted, all states matching the ID will be required, regardless of which module they are using.

- **require:**
  - vim

Requisites Types

All requisite types have a corresponding `<requisite>_in` form:

- **require:** Requires that a list of target states succeed before execution
- **onchanges:** Execute if any target states succeed with changes
- **watch:** Similar to onchanges; modifies state behavior using `mod_watch`
- **listen:** Similar to onchanges; delays execution to end of state run using `mod_wait`
- **prereq:** Execute prior to target state if target state expects to produce changes
- **onfail:** Execute only if a target state fails
- **use:** Copy arguments from another state

Several requisite types have a corresponding **requisite_any** form:

- **require_any**
- **watch_any**
- **onchanges_any**
- **onfail_any**

Lastly, onfail has one special **onfail_all** form to account for when AND logic is desired instead of the default OR logic of onfail/onfail_any (which are equivalent).

All requisites define specific relationships and always work with the dependency logic defined above.

**require**

The use of **require** builds a dependency that prevents a state from executing until all required states execute successfully. If any required state fails, then the state will fail due to requisites.

In the following example, the **service** state will not be checked unless both **file** states execute without failure.

```yaml
nginx:
  service.running:
    - require:
      - file: /etc/nginx/nginx.conf
      - file: /etc/nginx/conf.d/ssl.conf
```
Require SLS File

As of Salt 0.16.0, it is possible to require an entire sls file. Do this by first including the sls file and then setting a state to `require` the included sls file:

```yaml
include:
  - foo

bar:
  pkg.installed:
    - require:
      - sls: foo
```

This will add a `require` to all of the state declarations found in the given sls file. This means that `bar` will `require` every state within `foo`. This makes it very easy to batch large groups of states easily in any requisite statement.

onchanges

New in version 2014.7.0.

The `onchanges` requisite makes a state only apply if the required states generate changes, and if the watched state's "result" is `True` (does not fail). This can be a useful way to execute a post hook after changing aspects of a system. If a state has multiple `onchanges` requisites then the state will trigger if any of the watched states changes.

```yaml
myservice:
  file.managed:
    - name: /etc/myservice/myservice.conf
    - source: salt://myservice/files/myservice.conf

  cmd.run:
    - name: /usr/local/sbin/run-build
    - onchanges:
      - file: /etc/myservice/myservice.conf
```

In the example above, `cmd.run` will run only if there are changes in the `file.managed` state.

An easy mistake to make is using `onchanges_in` when `onchanges` is the correct choice, as seen in this next example.

```yaml
myservice:
  file.managed:
    - name: /etc/myservice/myservice.conf
    - source: salt://myservice/files/myservice.conf

  cmd.run:
    - name: /usr/local/sbin/run-build
    - onchanges_in:
      # <-- broken logic
      - file: /etc/myservice/myservice.conf
```

This will set up a requisite relationship in which the `cmd.run` state always executes, and the `file.managed` state only executes if the `cmd.run` state has changes (which it always will, since the `cmd.run` state includes the command results as changes).

It may semantically seem like the `cmd.run` state should only run when there are changes in the file state, but remember that requisite relationships involve one state watching another state, and a `requisite_in` does the opposite: it forces the specified state to watch the state with the `requisite_in`. 

618 Chapter 8. Configuration Management
watch

A watch requisite is used to add additional behavior when there are changes in other states. This is done using the mod_watch function available from the execution module and will execute any time a watched state changes.

**Note:** If a state should only execute when another state has changes, and otherwise do nothing, the onchanges requisite should be used instead of watch. watch is designed to add additional behavior when there are changes, but otherwise the state executes normally.

A good example of using watch is with a service.running state. When a service watches a state, then the service is reloaded/restarted when the watched state changes, in addition to Salt ensuring that the service is running.

```yaml
ntpd:
  service.running:
    - watch:
      - file: /etc/ntp.conf
  file.managed:
    - name: /etc/ntp.conf
    - source: salt://ntp/files/ntp.conf
```

Another useful example of watch is using salt to ensure a configuration file is present and in a correct state, ensure the service is running, and trigger service nginx reload instead of service nginx restart in order to avoid dropping any connections.

```yaml
nginx:
  service.running:
    - reload: True
    - watch:
    - file: nginx
  file.managed:
    - name: /etc/nginx/conf.d/tls-settings.conf
    - source: salt://nginx/files/tls-settings.conf
```

**Note:** Not all state modules contain mod_watch. If mod_watch is absent from the watching state module, the watch requisite behaves exactly like a require requisite.

The state containing the watch requisite is defined as the watching state. The state specified in the watch statement is defined as the watched state. When the watched state executes, it will return a dictionary containing a key named "changes". Here are two examples of state return dictionaries, shown in json for clarity:

```json
{
  "local": {
    "file_|-/tmp/foo_|-/tmp/foo_|-directory": {
      "comment": "Directory /tmp/foo updated",
      "__run_num__": 0,
      "changes": {
        "user": "bar"
      },
      "name": "/tmp/foo",
      "result": true
    }
  }
}
```
If the "result" of the watched state is True, the watching state will execute normally, and if it is False, the watching state will never run. This part of watch mirrors the functionality of the require requisite.

If the "result" of the watched state is True and the "changes" key contains a populated dictionary (changes occurred in the watched state), then the watch requisite can add additional behavior. This additional behavior is defined by the mod_watch function within the watching state module. If the mod_watch function exists in the watching state module, it will be called in addition to the normal watching state. The return data from the mod_watch function is what will be returned to the master in this case; the return data from the main watching function is discarded.

If the "changes" key contains an empty dictionary, the watch requisite acts exactly like the require requisite (the watching state will execute if "result" is True, and fail if "result" is False in the watched state).

---

**Note:** If the watching state changes key contains values, then mod_watch will not be called. If you're using watch or watch_in then it's a good idea to have a state that only enforces one attribute - such as splitting out service.running into its own state and have service.enabled in another.

One common source of confusion is expecting mod_watch to be called for every necessary change. You might be tempted to write something like this:

```yaml
httpd:
  service.running:
    - enable: True
    - watch:
      - file: httpd-config

httpd-config:
  file.managed:
    - name: /etc/httpd/conf/httpd.conf
    - source: salt://httpd/files/apache.conf
```

If your service is already running but not enabled, you might expect that Salt will be able to tell that since the config file changed your service needs to be restarted. This is not the case. Because the service needs to be enabled, that change will be made and mod_watch will never be triggered. In this case, changes to your apache.conf file will fail to be loaded. If you want to ensure that your service always reloads the correct way to handle this is either ensure that your service is not running before applying your state, or simply make sure that service.running is in a state on its own:

```yaml
enable-httpd:
  service.enabled:
    - name: httpd

start-httpd:
  service.running:
```

(continues on next page)
Now that `service.running` is its own state, changes to `service.enabled` will no longer prevent `mod_watch` from getting triggered, so your `httpd` service will get restarted like you want.

**listen**

New in version 2014.7.0.

A `listen` requisite is used to trigger the `mod_wait` function of an execution module. Rather than modifying execution order, the `mod_wait` state created by `listen` will execute at the end of the state run.

```
restart-apache2:
    service.running:
        - name: apache2
        - listen:
            - file: /etc/apache2/apache2.conf

configure-apache2:
    file.managed:
        - name: /etc/apache2/apache2.conf
        - source: salt://apache2/apache2.conf
```

This example will cause `apache2` to restart when the `apache2.conf` file is changed, but the `apache2` restart will happen at the end of the state run.

```
restart-apache2:
    service.running:
        - name: apache2

configure-apache2:
    file.managed:
        - name: /etc/apache2/apache2.conf
        - source: salt://apache2/apache2.conf
        - listen_in:
            - service: apache2
```

This example does the same as the above example, but puts the state argument on the file resource, rather than the service resource.
prereq

New in version 0.16.0.

The `prereq` requisite works similar to `onchanges` except that it uses the result from `test=True` on the observed state to determine if it should run prior to the observed state being run.

The best way to define how `prereq` operates is displayed in the following practical example: When a service should be shut down because underlying code is going to change, the service should be off-line while the update occurs. In this example, `graceful-down` is the pre-requiring state and `site-code` is the pre-required state.

```
graceful-down:
    cmd.run:
    name: service apache graceful
    prereq:
    file: site-code

site-code:
    file.recurse:
    name: /opt/site_code
    source: salt://site/code
```

In this case, the apache server will only be shut down if the site-code state expects to deploy fresh code via the file.recurse call. The site-code deployment will only be executed if the graceful-down run completes successfully.

When a `prereq` requisite is evaluated, the pre-required state reports if it expects to have any changes. It does this by running the pre-required single state as a test-run by enabling `test=True`. This test-run will return a dictionary containing a key named "changes". (See the `watch` section above for examples of "changes" dictionaries.)

If the "changes" key contains a populated dictionary, it means that the pre-required state expects changes to occur when the state is actually executed, as opposed to the test-run. The pre-requiring state will now run. If the pre-requiring state executes successfully, the pre-required state will then execute. If the pre-requiring state fails, the pre-required state will not execute.

If the "changes" key contains an empty dictionary, this means that changes are not expected by the pre-required state. Neither the pre-required state nor the pre-requiring state will run.

onfail

New in version 2014.7.0.

The `onfail` requisite allows for reactions to happen strictly as a response to the failure of another state. This can be used in a number of ways, such as sending a notification or attempting an alternate task or thread of tasks when an important state fails.

The `onfail` requisite is applied in the same way as `require` and `watch`:

```
primary_mount:
    mount.mounted:
    - name: /mnt/share
      device: 10.0.0.45:/share
      fstype: nfs

backup_mount:
    mount.mounted:
    - name: /mnt/share
      device: 192.168.40.34:/share
```

(continues on next page)
The default behavior of the `onfail` when multiple requisites are listed is the opposite of other requisites in the salt state engine, it acts by default like `any()` instead of `all()`. This means that when you list multiple onfail requisites on a state, if `any` fail the requisite will be satisfied. If you instead need `all` logic to be applied, you can use `onfail_all` form:

```yaml
build_site:
  cmd.run:
    - name: /srv/web/app/build_site

notify-build_failure:
  hipchat.send_message:
    - room_id: 123456
    - message: "Building website fail on {{ salt.grains.get('id') }}"
```

In this contrived example `notify_site_down` will run when both 10.0.0.1 and 10.0.0.2 fail to respond to ping.

---

**Note:** Setting failhard (globally or in the failing state) to `True` will cause onfail, onfail_in and onfail_any requisites to be ignored. If you want to combine a global failhard set to `True` with onfail, onfail_in or onfail_any, you will have to explicitly set failhard to `False` (overriding the global setting) in the state that could fail.

---

**Note:** Beginning in the 2016.11.0 release of Salt, onfail uses OR logic for multiple listed onfail requisites. Prior to the 2016.11.0 release, onfail used AND logic. See Issue #22370 for more information. Beginning in the Neon release of Salt, a new onfail_all requisite form is available if AND logic is desired.
use

The `use` requisite is used to inherit the arguments passed in another id declaration. This is useful when many files need to have the same defaults.

```
/etc/foo.conf:
  file.managed:
      - source: salt://foo.conf
      - template: jinja
      - mkdirs: True
      - user: apache
      - group: apache
      - mode: 755

/etc/bar.conf:
  file.managed:
      - source: salt://bar.conf
      - use:
          - file: /etc/foo.conf
```

The `use` statement was developed primarily for the networking states but can be used on any states in Salt. This makes sense for the networking state because it can define a long list of options that need to be applied to multiple network interfaces.

The `use` statement does not inherit the requisites arguments of the targeted state. This means also a chain of `use` requisites would not inherit inherited options.

The `_in` version of requisites

Direct requisites form a dependency in a single direction. This makes it possible for Salt to detect cyclical dependencies and helps prevent faulty logic. In some cases, often in loops, it is desirable to establish a dependency in the opposite direction.

All direct requisites have an `_in` counterpart that behaves the same but forms the dependency in the opposite direction. The following sls examples will produce the exact same dependency mapping.

```
httpd:
  pkg.installed: []
  service.running:
      - require:
          - pkg: httpd

httpd:
  pkg.installed:
      - require_in:
          - service: httpd
  service.running: []
```

In the following example, Salt will not try to manage the nginx service or any configuration files unless the nginx package is installed because of the `pkg: nginx` requisite.

```
nginx:
  pkg.installed: []
  service.running:
      - enable: True
```

(continues on next page)
- **reload**: True
- **require**:
  - **pkg**: nginx

### php.sls

```yaml
include:
  - http

php:
  pkg.installed:
    - require_in:
      - service: httpd
```

### mod_python.sls

```yaml
include:
  - http

mod_python:
  pkg.installed:
    - require_in:
      - service: httpd
```

Now the httpd server will only start if both php and mod_python are first verified to be installed. Thus allowing for a requisite to be defined "after the fact".

```yaml
{% for cfile in salt.pillar.get('nginx:config_files') %}
/etc/nginx/conf.d/{{ cfile }}:
  file.managed:
    - source: salt://nginx/configs/{{ cfile }}
    - require:
      - pkg: nginx
    - listen_in:
      - service: nginx
{% endfor %}
```

In this scenario, **listen_in** is a better choice than **require_in** because the **listen** requisite will trigger mod_wait behavior which will wait until the end of state execution and then reload the service.

### The _any version of requisites

New in version 2018.3.0.

Some requisites have an _any counterpart that changes the requisite behavior from all() to any().

**A:**

```yaml
cmd.run:
  - name: echo A
  - require_any:
    - cmd: B
    - cmd: C
```

**B:**

```yaml
cmd.run:
```

(continues on next page)
In this example, `cmd.run` would be run only if either of the `file.managed` states generated changes and at least one of the watched state's "result" is True.

### Altering States

The state altering system is used to make sure that states are evaluated exactly as the user expects. It can be used to double check that a state preformed exactly how it was expected to, or to make 100% sure that a state only runs under certain conditions. The use of unless or onlyif options help make states even more stateful. The `check_cmd` option helps ensure that the result of a state is evaluated correctly.

**reload**

`reload_modules` is a boolean option that forces salt to reload its modules after a state finishes. `reload_pillar` and `reload_grains` can also be set. See *Reloading Modules*.

```yaml
grains_refresh:
  module.run:
    - name: saltutil.refresh_grains
    - reload_grains: true

grains_read:
  module.run:
    - name: grains.items
```
unless

New in version 2014.7.0.

The unless requisite specifies that a state should only run when any of the specified commands return False. The unless requisite operates as NAND and is useful in giving more granular control over when a state should execute.

NOTE: Under the hood unless calls cmd.retcode with python_shell=True. This means the commands referenced by unless will be parsed by a shell, so beware of side-effects as this shell will be run with the same privileges as the salt-minion. Also be aware that the boolean value is determined by the shell’s concept of True and False, rather than Python’s concept of True and False.

```
vim:
  pkg.installed:
    - unless:
      - rpm -q vim-enhanced
      - ls /usr/bin/vim
```

In the example above, the state will only run if either the vim-enhanced package is not installed (returns False) or if /usr/bin/vim does not exist (returns False). The state will run if both commands return False.

However, the state will not run if both commands return True.

Unless checks are resolved for each name to which they are associated.

For example:

```
deploy_app:
  cmd.run:
    - names:
      - first_deploy_cmd
      - second_deploy_cmd
    - unless: some_check
```

In the above case, some_check will be run prior to _each_ name -- once for first_deploy_cmd and a second time for second_deploy_cmd.

Changed in version 3000: The unless requisite can take a module as a dictionary field in unless. The dictionary must contain an argument fun which is the module that is being run, and everything else must be passed in under the args key or will be passed as individual kwargs to the module function.

```
install apache on debian based distros:
  cmd.run:
    - name: make install
    - cwd: /path/to/dir/whatever-2.1.5/
    - unless:
      - fun: file.file_exists
        path: /usr/local/bin/whatever

set mysql root password:
  debconf.set:
    - name: mysql-server-5.7
    - data:
      'mysql-server/root_password': {'type': 'password', 'value': {{pillar['mysql.pass']}}}
    - unless:
      - fun: pkg.version
```

(continues on next page)
**args:**
- mysql-server-5.7

Changed in version sodium: For modules which return a deeper data structure, the `get_return` key can be used to access results.

```yaml
test:
  test.nop:
    - name: foo
    - unless:
      - fun: consul.get
        consul_url: http://127.0.0.1:8500
        key: not-existing
        get_return: res
```

**onlyif**

New in version 2014.7.0.

The `onlyif` requisite specifies that if each command listed in `onlyif` returns `True`, then the state is run. If any of the specified commands return `False`, the state will not run.  

**NOTE:** Under the hood `onlyif` calls `cmd.retcode` with `python_shell=True`. This means the commands referenced by `onlyif` will be parsed by a shell, so beware of side-effects as this shell will be run with the same privileges as the salt-minion. Also be aware that the boolean value is determined by the shell’s concept of `True` and `False`, rather than Python’s concept of `True` and `False`.

```yaml
stop-volume:
  module.run:
    - name: glusterfs.stop_volume
    - m_name: work
    - onlyif: gluster volume status work
    - order: 1

remove-volume:
  module.run:
    - name: glusterfs.delete
    - m_name: work
    - onlyif: gluster volume info work
    - watch:
      - cmd: stop-volume
```

The above example ensures that the stop_volume and delete modules only run if the gluster commands return a 0 ret value.

Changed in version 3000: The `onlyif` requisite can take a module as a dictionary field in `onlyif`. The dictionary must contain an argument `fun` which is the module that is being run, and everything else must be passed in under the `args` key or will be passed as individual kwargs to the module function.

```yaml
install apache on redhat based distros:
  pkg.latest:
    - name: httpd
    - onlyif:
```

(continues on next page)
- **fun**: match.grain
  
  **tgt**: 'os_family:RedHat'

**install apache on debian based distros:**

**pkg.latest**:

- **name**: apache
- **onlyif**:
  - **fun**: match.grain
  
  **tgt**: 'os_family:Debian'

**arbitrary file example:**

**file.touch**:

- **name**: /path/to/file
- **onlyif**:
  - **fun**: file.search
    
    **args**:
    
    - /etc/crontab
    - 'entry1'

Changed in version sodium: For modules which return a deeper data structure, the `get_return` key can be used to access results.

**test**:

**test.nop**:

- **name**: foo
- **onlyif**:
  
  - **fun**: consul.get
    
    **consul_url**: http://127.0.0.1:8500
    
    **key**: does-exist
    
    **get_return**: res

**creates**

New in version 3001.

The `creates` requisite specifies that a state should only run when any of the specified files do not already exist. Like `unless`, `creates` requisite operates as NAND and is useful in giving more granular control over when a state should execute. This was previously used by the `cmd` and `docker_container` states.

**contrived creates example**:

**file.touch**:

- **name**: /path/to/file
- **creates**: /path/to/file

`creates` also accepts a list of files, in which case this state will run if any of the files do not exist:

**creates list**:

**file.cmd**:

- **name**: /path/to/command
- **creates**:
  
  - /path/file
  - /path/file2
runas

New in version 2017.7.0.

The `runas` global option is used to set the user which will be used to run the command in the `cmd.run` module.

```
django:
    pip.installed:
      - name: django >= 1.6, <= 1.7
      - runas: daniel
      - require:
          - pkg: python-pip
```

In the above state, the pip command run by `cmd.run` will be run by the daniel user.

runas_password

New in version 2017.7.2.

The `runas_password` global option is used to set the password used by the `runas` global option. This is required by `cmd.run` on Windows when `runas` is specified. It will be set when `runas_password` is defined in the state.

```
run_script:
  cmd.run:
    - name: Powershell -NonInteractive -ExecutionPolicy Bypass -File C:\\Temp\\script.ps1
      - runas: frank
      - runas_password: supersecret
```

In the above state, the Powershell script run by `cmd.run` will be run by the frank user with the password `supersecret`.

check_cmd

New in version 2014.7.0.

Check Command is used for determining that a state did or did not run as expected.

**NOTE:** Under the hood `check_cmd` calls `cmd.retcode` with `python_shell=True`. This means the commands referenced by `unless` will be parsed by a shell, so beware of side-effects as this shell will be run with the same privileges as the salt-minion.

```
comment-repo:
  file.replace:
    - name: /etc/yum.repos.d/fedora.repo
    - pattern: '^enabled=0'
    - repl: enabled=1
    - check_cmd:
      - ! grep 'enabled=0' /etc/yum.repos.d/fedora.repo
```

This will attempt to do a replace on all `enabled=0` in the `.repo` file, and replace them with `enabled=1`. The `check_cmd` is just a bash command. It will do a grep for `enabled=0` in the file, and if it finds any, it will return a 0, which will be inverted by the leading `!`, causing `check_cmd` to set the state as failed. If it returns a 1, meaning it didn't find any `enabled=0`, it will be inverted by the leading `!`, returning a 0, and declaring the function succeeded.

**NOTE:** This requisite `check_cmd` functions differently than the `check_cmd` of the `file.managed` state.
Overriding Checks

There are two commands used for the above checks.

`mod_run_check` is used to check for `onlyif` and `unless`. If the goal is to override the global check for these to variables, include a `mod_run_check` in the salt/states/ file.

`mod_run_check_cmd` is used to check for the `check_cmd` options. To override this one, include a `mod_run_check_cmd` in the states file for the state.

Fire Event Notifications

New in version 2015.8.0.

The `fire_event` option in a state will cause the minion to send an event to the Salt Master upon completion of that individual state.

The following example will cause the minion to send an event to the Salt Master with a tag of `salt/state_result/20150505121517276431/dasalt/nano` and the result of the state will be the data field of the event. Notice that the `name` of the state gets added to the tag.

```
nano_stuff:
  pkg.installed:
    - name: nano
    - fire_event: True
```

In the following example instead of setting `fire_event` to `True`, `fire_event` is set to an arbitrary string, which will cause the event to be sent with this tag: `salt/state_result/20150505121725642845/dasalt/custom/tag/nano/finished`

```
nano_stuff:
  pkg.installed:
    - name: nano
    - fire_event: custom/tag/nano/finished
```

Retrying States

New in version 2017.7.0.

The retry option in a state allows it to be executed multiple times until a desired result is obtained or the maximum number of attempts have been made.

The retry option can be configured by the `attempts`, `until`, `interval`, and `splay` parameters.

The `attempts` parameter controls the maximum number of times the state will be run. If not specified or if an invalid value is specified, `attempts` will default to 2.

The `until` parameter defines the result that is required to stop retrying the state. If not specified or if an invalid value is specified, `until` will default to `True`.

The `interval` parameter defines the amount of time, in seconds, that the system will wait between attempts. If not specified or if an invalid value is specified, `interval` will default to 30.

The `splay` parameter allows the `interval` to be additionally spread out. If not specified or if an invalid value is specified, `splay` defaults to 0 (i.e. no splaying will occur).

The following example will run the pkg.installed state until it returns `True` or it has been run 5 times. Each attempt will be 60 seconds apart and the interval will be splayed up to an additional 10 seconds:
The following example will run the `pkg.installed` state with all the defaults for `retry`. The state will run up to 2 times, each attempt being 30 seconds apart, or until it returns `True`.

```
my_retried_state:
  pkg.installed:
    - name: nano
    - retry:
      attempts: 5
      until: True
      interval: 60
      splay: 10
```

The following example will run the `file.exists` state every 30 seconds up to 15 times or until the file exists (i.e. the state returns `True`).

```
install_nano:
  pkg.installed:
    - name: nano
    - retry: True
```

**Return data from a retried state**

When a state is retried, the returned output is as follows:

- The result return value is the result from the final run. For example, imagine a state set to `retry` up to three times or until `True`. If the state returns `False` on the first run and then `True` on the second, the result of the state will be `True`.
- The started return value is the started from the first run.
- The duration return value is the total duration of all attempts plus the retry intervals.
- The comment return value will include the result and comment from all previous attempts.

For example:

```
wait_for_file:
  file.exists:
    - name: /path/to/file
    - retry:
      attempts: 10
      interval: 30
```

Would return similar to the following. The state result in this case is `False` (file.exist was run 10 times with a 2 second interval, but the file specified did not exist on any run).

```
ID: wait_for_file
Function: file.exists
Result: False
```
Comment: Attempt 1: Returned a result of "False", with the following comment:
→ "Specified path /path/to/file does not exist"

Attempt 2: Returned a result of "False", with the following comment:
→ "Specified path /path/to/file does not exist"

Attempt 3: Returned a result of "False", with the following comment:
→ "Specified path /path/to/file does not exist"

Attempt 4: Returned a result of "False", with the following comment:
→ "Specified path /path/to/file does not exist"

Attempt 5: Returned a result of "False", with the following comment:
→ "Specified path /path/to/file does not exist"

Attempt 6: Returned a result of "False", with the following comment:
→ "Specified path /path/to/file does not exist"

Attempt 7: Returned a result of "False", with the following comment:
→ "Specified path /path/to/file does not exist"

Attempt 8: Returned a result of "False", with the following comment:
→ "Specified path /path/to/file does not exist"

Attempt 9: Returned a result of "False", with the following comment:
→ "Specified path /path/to/file does not exist"

Specified path /path/to/file does not exist

Started: 09:08:12.903000
Duration: 47000.0 ms
Changes:

8.1.16 Startup States

Sometimes it may be desired that the salt minion execute a state run when it is started. This alleviates the need for
the master to initiate a state run on a new minion and can make provisioning much easier.

As of Salt 0.10.3 the minion config reads options that allow for states to be executed at startup. The options are
startup_states, sls_list, and top_file.

The startup_states option can be passed one of a number of arguments to define how to execute states. The available
options are:

highstate  Execute state.apply
sls  Read in the sls_list option and execute the named sls files
top  Read in the top_file option and execute states based on that top file on the Salt Master

Examples:

Execute state.apply to run the highstate when starting the minion:

```
startup_states: highstate
```

Execute the sls files edit.vim and hyper:

```
startup_states: sls

sls_list:
  - edit.vim
  - hyper
```
8.1.17 State Testing

Executing a Salt state run can potentially change many aspects of a system and it may be desirable to first see what a state run is going to change before applying the run.

Salt has a test interface to report on exactly what will be changed, this interface can be invoked on any of the major state run functions:

```shell
salt '*' state.apply test=True
salt '*' state.apply mysls test=True
salt '*' state.single test=True
```

The test run is mandated by adding the `test=True` option to the states. The return information will show states that will be applied in yellow and the result is reported as `None`.

Default Test

If the value `test` is set to `True` in the minion configuration file then states will default to being executed in test mode. If this value is set then states can still be run by calling `test=False`:

```shell
salt '*' state.apply test=False
salt '*' state.apply mysls test=False
salt '*' state.single test=False
```

8.1.18 The Top File

Introduction

Most infrastructures are made up of groups of machines, each machine in the group performing a role similar to others. Those groups of machines work in concert with each other to create an application stack.

To effectively manage those groups of machines, an administrator needs to be able to create roles for those groups. For example, a group of machines that serve front-end web traffic might have roles which indicate that those machines should all have the Apache webserver package installed and that the Apache service should always be running.

In Salt, the file which contains a mapping between groups of machines on a network and the configuration roles that should be applied to them is called a top file.

Top files are named `top.sls` by default and they are so-named because they always exist in the "top" of a directory hierarchy that contains state files. That directory hierarchy is called a state tree.

A Basic Example

Top files have three components:

- **Environment**: A state tree directory containing a set of state files to configure systems.
- **Target**: A grouping of machines which will have a set of states applied to them.
- **State files**: A list of state files to apply to a target. Each state file describes one or more states to be configured and enforced on the targeted machines.

The relationship between these three components is nested as follows:

- Environments contain targets
- Targets contain states
Putting these concepts together, we can describe a scenario in which all minions with an ID that begins with web have an apache state applied to them:

```
base: # Apply SLS files from the directory root for the 'base' environment
  'web*': # All minions with a minion_id that begins with 'web'
    - apache # Apply the state file named 'apache.sls'
```

Environments

Environments are directory hierarchies which contain a top file and a set of state files.

Environments can be used in many ways, however there is no requirement that they be used at all. In fact, the most common way to deploy Salt is with a single environment, called base. It is recommended that users only create multiple environments if they have a use case which specifically calls for multiple versions of state trees.

Getting Started with Top Files

Each environment is defined inside a salt master configuration variable called, `file_roots`.

In the most common single-environment setup, only the base environment is defined in `file_roots` along with only one directory path for the state tree.

```
file_roots:
  base:
    - /srv/salt
```

In the above example, the top file will only have a single environment to pull from.

Next is a simple single-environment top file placed in `/srv/salt/top.sls`, illustrating that for the environment called base, all minions will have the state files named `core.sls` and `edit.sls` applied to them.

```
base:
  '*':
    - core
    - edit
```

Assuming the `file_roots` configuration from above, Salt will look in the `/srv/salt` directory for `core.sls` and `edit.sls`.

Multiple Environments

In some cases, teams may wish to create versioned state trees which can be used to test Salt configurations in isolated sets of systems such as a staging environment before deploying states into production.

For this case, multiple environments can be used to accomplish this task.

To create multiple environments, the `file_roots` option can be expanded:

```
file_roots:
  dev:
    - /srv/salt/dev
  qa:
    - /srv/salt/qa
  prod:
    - /srv/salt/prod
```
In the above, we declare three environments: dev, qa and prod. Each environment has a single directory assigned to it.

Our top file references the environments:

```plaintext
def:
  'webserver*':
    - webserver
  'db*':
    - db
qa:
  'webserver*':
    - webserver
  'db*':
    - db
prod:
  'webserver*':
    - webserver
  'db*':
    - db
```

As seen above, the top file now declares the three environments and for each, target expressions are defined to map minions to state files. For example, all minions which have an ID beginning with the string `webserver` will have the webserver state from the requested environment assigned to it.

In this manner, a proposed change to a state could first be made in a state file in `/srv/salt/dev` and then be applied to development webservers before moving the state into QA by copying the state file into `/srv/salt/qa`.

**Choosing an Environment to Target**

The top file is used to assign a minion to an environment unless overridden using the methods described below. The environment in the top file must match valid fileserver environment (a.k.a. saltenv) in order for any states to be applied to that minion. When using the default fileserver backend, environments are defined in `file_roots`.

The states that will be applied to a minion in a given environment can be viewed using the `state.show_top` function.

Minions may be pinned to a particular environment by setting the `environment` value in the minion configuration file. In doing so, a minion will only request files from the environment to which it is assigned.

The environment may also be dynamically selected at runtime by passing it to the `salt`, `salt-call` or `salt-ssh` command. This is most commonly done with functions in the `state` module by using the `saltenv` argument. For example, to run a `highstate` on all minions, using only the top file and SLS files in the `prod` environment, run: `salt '*' state.highstate saltenv=prod`.

**Note:** Not all functions accept `saltenv` as an argument, see the documentation for an individual function documentation to verify.
Shorthand

If you assign only one SLS to a system, as in this example, a shorthand is also available:

```
base:
  '*': global
dev:
  'webserver*': webserver
  'db*': db
qa:
  'webserver*': webserver
  'db*': db
prod:
  'webserver*': webserver
  'db*': db
```

Advanced Minion Targeting

In the examples above, notice that all of the target expressions are globs. The default match type in top files (since version 2014.7.0) is actually the **compound matcher**, not the glob matcher as in the CLI.

A single glob, when passed through the compound matcher, acts the same way as matching by glob, so in most cases the two are indistinguishable. However, there is an edge case in which a minion ID contains whitespace. While it is not recommended to include spaces in a minion ID, Salt will not stop you from doing so. However, since compound expressions are parsed word-by-word, if a minion ID contains spaces it will fail to match. In this edge case, it will be necessary to explicitly use the `glob` matcher:

```
base:
  'minion 1':
    - match: glob
    - foo
```

The available match types which can be set for a target expression in the top file are:

<table>
<thead>
<tr>
<th>Match Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>glob</td>
<td>Full minion ID or glob expression to match multiple minions (e.g. minion123 or minion*)</td>
</tr>
<tr>
<td>pcre</td>
<td>Perl-compatible regular expression (PCRE) matching a minion ID (e.g. web[0-3].domain.com)</td>
</tr>
<tr>
<td>grain</td>
<td>Match a grain, optionally using globbing (e.g. kernel:Linux or kernel:*BSD)</td>
</tr>
<tr>
<td>grain_pcre</td>
<td>Match a grain using PCRE (e.g. kernel:(Free</td>
</tr>
<tr>
<td>list</td>
<td>Comma-separated list of minions (e.g. minion1,minion2,minion3)</td>
</tr>
<tr>
<td>pillar</td>
<td>Pillar match, optionally using globbing (e.g. role:webserver or role:web*)</td>
</tr>
<tr>
<td>pillar_pcre</td>
<td>Pillar match using PCRE (e.g. role:web(server</td>
</tr>
<tr>
<td>pillar_exact</td>
<td>Pillar match with no globbing or PCRE (e.g. role:webserver)</td>
</tr>
<tr>
<td>ipcidr</td>
<td>Subnet or IP address (e.g. 172.17.0.0/16 or 10.2.9.80)</td>
</tr>
<tr>
<td>data</td>
<td>Match values kept in the minion's datastore (created using the data execution module)</td>
</tr>
<tr>
<td>range</td>
<td>Range cluster</td>
</tr>
<tr>
<td>compound</td>
<td>Complex expression combining multiple match types (see <a href="#">here</a>)</td>
</tr>
<tr>
<td>nodegroup</td>
<td>Pre-defined compound expressions in the master config file (see <a href="#">here</a>)</td>
</tr>
</tbody>
</table>

Below is a slightly more complex top file example, showing some of the above match types:
# All files will be taken from the file path specified in the base
# environment in the `file_roots` configuration value.

## base:

# All minions which begin with the strings 'nag1' or any minion with
# a grain set called 'role' with the value of 'monitoring' will have
# the 'server.sls' state file applied from the 'nagios/' directory.

'nag1*' or G@role:monitoring:
   - nagios.server

# All minions which begin with the phrase
# 'salt-master' will have an SLS file applied that is named
# 'master.sls' and is in the 'salt' directory, underneath
# the root specified in the `base` environment in the
# configuration value for `'file_roots'`.

'salt-master*':
   - salt.master

# Minions that have an ID matching the following regular
# expression will have the state file called 'web.sls' in the
# nagios/mon directory applied. Additionally, minions matching
# the regular expression will also have the 'server.sls' file
# in the apache/ directory applied.

'^memcache|web).(qa|prod).loc$':
   - match: pcre
     - nagios.mon.web
     - apache.server

# Minions that have a grain set indicating that they are running
# the Ubuntu operating system will have the state file called
# 'ubuntu.sls' in the 'repos' directory applied.

'os:Ubuntu':
   - match: grain
     - repos.ubuntu

# Minions that are either RedHat or CentOS should have the 'epel.sls'
# state applied, from the 'repos/' directory.

(continues on next page)
How Top Files Are Compiled

When a highstate is executed and an environment is specified (either using the environment config option or by passing the saltenv when executing the highstate), then that environment's top file is the only top file used to assign states to minions, and only states from the specified environment will be run.

The remainder of this section applies to cases in which a highstate is executed without an environment specified.

With no environment specified, the minion will look for a top file in each environment, and each top file will be processed to determine the SLS files to run on the minions. By default, the top files from each environment will be merged together. In configurations with many environments, such as with GitFS where each branch and tag is treated as a distinct environment, this may cause unexpected results as SLS files from older tags cause defunct SLS files to be included in the highstate. In cases like this, it can be helpful to set top_file_merging_strategy to same to force each environment to use its own top file.

### top_file_merging_strategy: same

Another option would be to set state_top_saltenv to a specific environment, to ensure that any top files in other environments are disregarded:

```
state_top_saltenv: base
```

With GitFS, it can also be helpful to simply manage each environment's top file separately, and/or manually specify the environment when executing the highstate to avoid any complicated merging scenarios. gitfs_saltenv_whitelist and gitfs_saltenv_blacklist can also be used to hide unneeded branches and tags from GitFS to reduce the number of top files in play.

When using multiple environments, it is not necessary to create a top file for each environment. The easiest-to-maintain approach is to use a single top file placed in the base environment. This is often infeasible with GitFS though, since branching/tagging can easily result in extra top files. However, when only the default (roots) file-server backend is used, a single top file in the base environment is the most common way of configuring a highstate.

The following minion configuration options affect how top files are compiled when no environment is specified, it is recommended to follow the below four links to learn more about how these options work:

- state_top_saltenv
- top_file_merging_strategy
Top File Compilation Examples

For the scenarios below, assume the following configuration:

/etc/salt/master:

```
file_roots:
  base:
    - /srv/salt/base
  dev:
    - /srv/salt/dev
  qa:
    - /srv/salt/qa
```

/srv/salt/base/top.sls:

```
base:
  '*':
    - base1
dev:
  '*':
    - dev1
qa:
  '*':
    - qa1
```

/srv/salt/dev/top.sls:

```
base:
  'minion1':
    - base2
dev:
  'minion2':
    - dev2
qa:
  '*':
    - qa1
    - qa2
```

Note: For the purposes of these examples, there is no top file in the qa environment.
**Scenario 1 - dev Environment Specified**

In this scenario, the `highstate` was either invoked with `saltenv=dev` or the minion has `environment: dev` set in the minion config file. The result will be that only the dev2 SLS from the dev environment will be part of the `highstate`, and it will be applied to minion2, while minion1 will have no states applied to it.

If the `base` environment were specified, the result would be that only the base1 SLS from the base environment would be part of the `highstate`, and it would be applied to all minions.

If the `qa` environment were specified, the `highstate` would exit with an error.

**Scenario 2 - No Environment Specified, `top_file_merging_strategy` is "merge"**

In this scenario, assuming that the base environment's top file was evaluated first, the base1, dev1, and qa1 states would be applied to all minions. If, for instance, the qa environment is not defined in `/srv/salt/base/top.sls`, then because there is no top file for the qa environment, no states from the qa environment would be applied.

**Scenario 3 - No Environment Specified, `top_file_merging_strategy` is "same"**

Changed in version 2016.11.0: In prior versions, "same" did not quite work as described below (see here). This has now been corrected. It was decided that changing something like top file handling in a point release had the potential to unexpectedly impact users' top files too much, and it would be better to make this correction in a feature release.

In this scenario, base1 from the base environment is applied to all minions. Additionally, dev2 from the dev environment is applied to minion2.

If `default_top` is unset (or set to base, which happens to be the default), then qa1 from the qa environment will be applied to all minions. If `default_top` were set to dev, then both qa1 and qa2 from the qa environment would be applied to all minions.

**Scenario 4 - No Environment Specified, `top_file_merging_strategy` is "merge_all"**

New in version 2016.11.0.

In this scenario, all configured states in all top files are applied. From the base environment, base1 would be applied to all minions, with base2 being applied only to minion1. From the dev environment, dev1 would be applied to all minions, with dev2 being applied only to minion2. Finally, from the qa environment, both the qa1 and qa2 states will be applied to all minions. Note that the qa1 states would not be applied twice, even though qa1 appears twice.

### 8.1.19 SLS Template Variable Reference

**Warning:** In the 3002 release `sls_path`, `tplfile`, and `tpldir` have had some significant improvements which have the potential to break states that rely on old and broken functionality. These fixes can be enabled by setting the `enable_slsvars_fixes` feature flag to `True` in your minion's config file. This functionality will become the default in the 3005 release.

```
features:
  enable_slsvars_fixes: True
```
The template engines available to sls files and file templates come loaded with a number of context variables. These variables contain information and functions to assist in the generation of templates. See each variable below for its availability -- not all variables are available in all templating contexts.

Salt

The *salt* variable is available to abstract the salt library functions. This variable is a python dictionary containing all of the functions available to the running salt minion. It is available in all salt templates.

```plaintext
{% for file in salt['cmd.run']('ls -l /opt/to_remove').splitlines() %}
  /opt/to_remove/{{ file }}:
  file.absent
{% endfor %}
```

Opts

The *opts* variable abstracts the contents of the minion's configuration file directly to the template. The *opts* variable is a dictionary. It is available in all templates.

```plaintext
{{ opts['cachedir'] }}
```

The *config.get* function also searches for values in the *opts* dictionary.

Pillar

The *pillar* dictionary can be referenced directly, and is available in all templates:

```plaintext
{{ pillar['key'] }}
```

Using the *pillar.get* function via the *salt* variable is generally recommended since a default can be safely set in the event that the value is not available in pillar and dictionaries can be traversed directly:

```plaintext
{{ salt['pillar.get']('key', 'failover_value') }}
{{ salt['pillar.get']( 'stuff:more:deeper' ) }}
```

Grains

The *grains* dictionary makes the minion's grains directly available, and is available in all templates:

```plaintext
{{ grains['os'] }}
```

The *grains.get* function can be used to traverse deeper grains and set defaults:

```plaintext
{{ salt['grains.get']('os') }}
```
**saltenv**

The `saltenv` variable is available in only in sls files when gathering the sls from an environment.

```yaml
{{ saltenv }}
```

**SLS Only Variables**

The following are only available when processing sls files. If you need these in other templates, you can usually pass them in as template context.

**sls**

The `sls` variable contains the sls reference value, and is only available in the actual SLS file (not in any files referenced in that SLS). The sls reference value is the value used to include the sls in top files or via the include option.

```yaml
{{ sls }}
```

**slspath**

The `slspath` variable contains the path to the directory of the current sls file. The value of `slspath` in files referenced in the current sls depends on the reference method. For jinja includes `slspath` is the path to the current directory of the file. For salt includes `slspath` is the path to the directory of the included file. If current sls file is in root of the file roots, this will return ""

```yaml
{{ slspath }}
```

**sls_path**

A version of `slspath` with underscores as path separators instead of slashes. So, if `slspath` is `path/to/state` then `sls_path` is `path_to_state`

```yaml
{{ sls_path }}
```

**slsdotpath**

A version of `slspath` with dots as path separators instead of slashes. So, if `slspath` is `path/to/state` then `slsdotpath` is `path.to.state`. This is same as `sls` if `sls` points to a directory instead of a file.

```yaml
{{ slsdotpath }}
```
slscolonpath

A version of slspath with colons (:) as path separators instead of slashes. So, if slspath is path/to/state then slscolonpath is path:to:state.

{{ slscolonpath }}

tplpath

Full path to sls template file being processed on local disk. This is usually pointing to a copy of the sls file in a cache directory. This will be in OS specific format (Windows vs POSIX). (It is probably best not to use this.)

{{ tplpath }}

tplfile

Relative path to exact sls template file being processed relative to file roots.

{{ tplfile }}

tpldir

Directory, relative to file roots, of the current sls file. If current sls file is in root of the file roots, this will return ".". This is usually identical to slspath except in case of root-level sls, where this will return a "..".

A Common use case for this variable is to generate relative salt urls like: .. code-block:: jinja

my-file:

    file.managed: source: salt://{{ tpldir }}/files/my-template

tpldot

A version of tpldir with dots as path separators instead of slashes. So, if tpldir is path/to/state then tpldot is path.to.state. NOTE: if tpldir is ".", this will be set to ""

{{ tpldot }}

8.1.20 State Modules

State Modules are the components that map to actual enforcement and management of Salt states.
States are Easy to Write!

State Modules should be easy to write and straightforward. The information passed to the SLS data structures will map directly to the states modules.

Mapping the information from the SLS data is simple, this example should illustrate:

```
/etc/salt/master
  # maps to "name", unless a "name" argument is specified below
file.managed: # maps to <filename>.<function> - e.g. "managed" in https://github.com/saltstack/salt/tree/master/salt/states/file.py
  - user: root # one of many options passed to the manage function
  - group: root
  - mode: 644
  - source: salt://salt/master
```

Therefore this SLS data can be directly linked to a module, function, and arguments passed to that function.

This does issue the burden, that function names, state names and function arguments should be very human readable inside state modules, since they directly define the user interface.

Keyword Arguments

Salt passes a number of keyword arguments to states when rendering them, including the environment, a unique identifier for the state, and more. Additionally, keep in mind that the requisites for a state are part of the keyword arguments. Therefore, if you need to iterate through the keyword arguments in a state, these must be considered and handled appropriately. One such example is in the pkgrepo.managed state, which needs to be able to handle arbitrary keyword arguments and pass them to module execution functions. An example of how these keyword arguments can be handled can be found here.

Best Practices

A well-written state function will follow these steps:

Note: This is an extremely simplified example. Feel free to browse the source code for Salt's state modules to see other examples.

1. Set up the return dictionary and perform any necessary input validation (type checking, looking for use of mutually-exclusive arguments, etc.).

   ```python
def myfunc():
    ret = {'name': name, 'result': False, 'changes': {}, 'comment': '}'

    if foo and bar:
        ret['comment'] = 'Only one of foo and bar is permitted'
        return ret
   ```

2. Check if changes need to be made. This is best done with an information-gathering function in an accompanying execution module. The state should be able to use the return from this function to tell whether or not the minion is already in the desired state.

   ```python
result = __salt__['modname.check'](name)
   ```

3. If step 2 found that the minion is already in the desired state, then exit immediately with a True result and without making any changes.

8.1. State System Reference
def myfunc():
    if result:
        ret["result"] = True
        ret["comment"] = "\{0\} is already installed".format(name)
        return

ret["result"] = True
ret["comment"] = "\{0\} would be installed".format(name)
return

def myfunc():
    if __opts__["test"]:
        ret["result"] = None
        ret["comment"] = "\{0\} would be installed".format(name)
        ret["changes"] = result
        return

result = __salt__[\"modname.install\"](name)

6. Perform the same check from step 2 again to confirm whether or not the minion is in the desired state. Just as in step 2, this function should be able to tell you by its return data whether or not changes need to be made.

   ret["changes"] = __salt__[\"modname.check\"](name)

As you can see here, we are setting the changes key in the return dictionary to the result of the modname check function (just as we did in step 4). The assumption here is that the information-gathering function will return a dictionary explaining what changes need to be made. This may or may not fit your use case.

7. Set the return data and return!

   def myfunc():
       if ret["changes"]:
           ret["comment"] = "\{0\} failed to install".format(name)
       else:
           ret["result"] = True
           ret["comment"] = "\{0\} was installed".format(name)

       return ret

Using Custom State Modules

Before the state module can be used, it must be distributed to minions. This can be done by placing them into salt://_states/. They can then be distributed manually to minions by running saltutil.sync_states or saltutil.sync_all. Alternatively, when running a highstate custom types will automatically be synced.

NOTE: Writing state modules with hyphens in the filename will cause issues with !pyobjects routines. Best practice to stick to underscores.

Any custom states which have been synced to a minion, that are named the same as one of Salt's default set of states, will take the place of the default state with the same name. Note that a state module's name defaults to one based on its filename (i.e. foo.py becomes state module foo), but that its name can be overridden by using a __virtual__ function.
Cross Calling Execution Modules from States

As with Execution Modules, State Modules can also make use of the __salt__ and __grains__ data. See cross calling execution modules.

It is important to note that the real work of state management should not be done in the state module unless it is needed. A good example is the pkg state module. This module does not do any package management work, it just calls the pkg execution module. This makes the pkg state module completely generic, which is why there is only one pkg state module and many backend pkg execution modules.

On the other hand some modules will require that the logic be placed in the state module, a good example of this is the file module. But in the vast majority of cases this is not the best approach, and writing specific execution modules to do the backend work will be the optimal solution.

Cross Calling State Modules

All of the Salt state modules are available to each other and state modules can call functions available in other state modules.

The variable __states__ is packed into the modules after they are loaded into the Salt minion.

The __states__ variable is a Python dictionary containing all of the state modules. Dictionary keys are strings representing the names of the modules and the values are the functions themselves.

Salt state modules can be cross-called by accessing the value in the __states__ dict:

```python
ret = __states__['file.managed'](name='/tmp/myfile', source='salt://myfile')
```

This code will call the managed function in the file state module and pass the arguments name and source to it.

Return Data

A State Module must return a dict containing the following keys/values:

- **name**: The same value passed to the state as "name".
- **changes**: A dict describing the changes made. Each thing changed should be a key, with its value being another dict with keys called "old" and "new" containing the old/new values. For example, the pkg state's changes dict has one key for each package changed, with the "old" and "new" keys in its sub-dict containing the old and new versions of the package. For example, the final changes dictionary for this scenario would look something like this:

  ```python
  ret['changes'].update({'my_pkg_name': {'old': '', 'new': 'my_pkg_name-1.0'}})
  ```

- **result**: A tristate value. True if the action was successful, False if it was not, or None if the state was run in test mode, test=True, and changes would have been made if the state was not run in test mode.

<table>
<thead>
<tr>
<th></th>
<th>live mode</th>
<th>test mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>no changes</td>
<td>True</td>
<td>True</td>
</tr>
<tr>
<td>successful changes</td>
<td>True</td>
<td>None</td>
</tr>
<tr>
<td>failed changes</td>
<td>False</td>
<td>False or None</td>
</tr>
</tbody>
</table>

**Note**: Test mode does not predict if the changes will be successful or not, and hence the result for pending changes is usually None.
However, if a state is going to fail and this can be determined in test mode without applying the change, `False` can be returned.

- **comment**: A list of strings or a single string summarizing the result. Note that support for lists of strings is available as of Salt 2018.3.0. Lists of strings will be joined with newlines to form the final comment; this is useful to allow multiple comments from subparts of a state. Prefer to keep line lengths short (use multiple lines as needed), and end with punctuation (e.g. a period) to delimit multiple comments.

**Note**: States should not return data which cannot be serialized such as frozensets.

### Sub State Runs

Some states can return multiple state runs from an external engine. State modules that extend tools like Puppet, Chef, Ansible, and idem can run multiple external states and then return their results individually in the "sub_state_run" portion of their return as long as their individual state runs are formatted like salt states with low and high data.

For example, the idem state module can execute multiple idem states via it's runtime and report the status of all those runs by attaching them to "sub_state_run" in it's state return. These sub_state_runs will be formatted and printed alongside other salt states.

Example:

```python
state_return = {
    "name": None, # The parent state name
    "result": None, # The overall status of the external state engine run
    "comment": None, # Comments on the overall external state engine run
    "changes": {}, # An empty dictionary, each sub state run has it's own changes to report
    "sub_state_run": [
        {
            "changes": {}, # A dictionary describing the changes made in the external state run
            "result": None, # The external state run name
            "comment": None, # Comment on the external state run
            "duration": None, # Optional, the duration in seconds of the external state run's start time
            "low": {
                "name": None, # The name of the state from the external state run
                "state": None, # Name of the external state run
                "__id__": None, # ID of the external state run
                "fun": None, # The Function name from the external state run
            }
        }
    ]
}
```
Test State

All states should check for and support `test` being passed in the options. This will return data about what changes would occur if the state were actually run. An example of such a check could look like this:

```python
def myfunc():
    # Return comment of changes if test.
    if __opts__['test']:
        ret['result'] = None
        ret['comment'] = "State Foo will execute with param {0}".format(bar)
    return ret
```

Make sure to test and return before performing any real actions on the minion.

**Note:** Be sure to refer to the result table listed above and displaying any possible changes when writing support for `test`. Looking for changes in a state is essential to `test=true` functionality. If a state is predicted to have no changes when `test=True` (or `test: true` in a config file) is used, then the result of the final state **should not** be `None`.

Watcher Function

If the state being written should support the watch requisite then a watcher function needs to be declared. The watcher function is called whenever the watch requisite is invoked and should be generic to the behavior of the state itself.

The watcher function should accept all of the options that the normal state functions accept (as they will be passed into the watcher function).

A watcher function typically is used to execute state specific reactive behavior, for instance, the watcher for the service module restarts the named service and makes it useful for the watcher to make the service react to changes in the environment.

The watcher function also needs to return the same data that a normal state function returns.

Mod_init Interface

Some states need to execute something only once to ensure that an environment has been set up, or certain conditions global to the state behavior can be predefined. This is the realm of the mod_init interface.

A state module can have a function called `mod_init` which executes when the first state of this type is called. This interface was created primarily to improve the pkg state. When packages are installed the package metadata needs to be refreshed, but refreshing the package metadata every time a package is installed is wasteful. The `mod_init` function for the pkg state sets a flag down so that the first, and only the first, package installation attempt will refresh the package database (the package database can of course be manually called to refresh via the `refresh` option in the pkg state).

The `mod_init` function must accept the Low State Data for the given executing state as an argument. The low state data is a dict and can be seen by executing the state.show_lowstate function. Then the `mod_init` function must return a bool. If the return value is True, then the `mod_init` function will not be executed again, meaning that the needed behavior has been set up. Otherwise, if the `mod_init` function returns False, then the function will be called the next time.

A good example of the `mod_init` function is found in the pkg state module:
The `mod_init` function in the `pkg` state accepts the low state data as `low` and then checks to see if the function being called is going to install packages, if the function is not going to install packages then there is no need to refresh the package database. Therefore if the package database is prepared to refresh, then return `True` and the `mod_init` will not be called the next time a `pkg` state is evaluated, otherwise return `False` and the `mod_init` will be called next time a `pkg` state is evaluated.

**Log Output**

You can call the logger from custom modules to write messages to the minion logs. The following code snippet demonstrates writing log messages:

```python
import logging

log = logging.getLogger(__name__)

log.info("Here is Some Information")
log.warning("You Should Not Do That")
log.error("It Is Busted")
```

**Strings and Unicode**

A state module author should always assume that strings fed to the module have already decoded from strings into Unicode. In Python 2, these will be of type 'Unicode' and in Python 3 they will be of type `str`. Calling from a state to other Salt sub-systems, such as execution modules should pass Unicode (or bytes if passing binary data). In the rare event that a state needs to write directly to disk, Unicode should be encoded to a string immediately before writing to disk. An author may use `__salt_system_encoding__` to learn what the encoding type of the system is. For example, `my_string'.encode(__salt_system_encoding__)`.

**Full State Module Example**

The following is a simplistic example of a full state module and function. Remember to call out to execution modules to perform all the real work. The state module should only perform "before" and "after" checks.

1. Make a custom state module by putting the code into a file at the following path: `/srv/salt/_states/my_custom_state.py`.
2. Distribute the custom state module to the minions:
   ```
   salt '*' saltutil.sync_states
   ```
3. Write a new state to use the custom state by making a new state file, for instance `/srv/salt/my_custom_state.sls`. 
4. Add the following SLS configuration to the file created in Step 3:

```yaml
human_friendly_state_id: # An arbitrary state ID declaration.
  my_custom_state: # The custom state module name.
    - enforce_custom_thing # The function in the custom state module.
      name: a_value # Maps to the `name` parameter in the custom function.
    - foo: Foo # Specify the required `foo` parameter.
    - bar: False # Override the default value for the `bar` parameter.
```

Example state module

```python
import salt.exceptions

def enforce_custom_thing(name, foo, bar=True):
    
    # Enforce the state of a custom thing
    # This state module does a custom thing. It calls out to the execution module `my_custom_module` in order to check the current system and perform any needed changes.

    name # The thing to do something to
    foo # A required argument
    bar : True # An argument with a default value
    
    ret = {
        "name": name,
        "changes": {},
        "result": False,
        "comment": "",
    }

    # Start with basic error-checking. Do all the passed parameters make sense # and agree with each-other?
    if bar == True and foo.startswith("Foo"):
        raise salt.exceptions.SaltInvocationError( # Argument "foo" cannot start with "Foo" if argument "bar" is True.
            'Argument "foo" cannot start with "Foo" if argument "bar" is True.'
        )

    # Check the current state of the system. Does anything need to change?
    current_state = __salt__["my_custom_module.current_state"](name)

    if current_state == foo:
        ret["result"] = True
        ret["comment"] = "System already in the correct state"
        return ret

    # The state of the system does need to be changed. Check if we're running # in `test=true` mode.
    if __opts__["test"] == True:
```

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8.1.21 State Management

State management, also frequently called Software Configuration Management (SCM), is a program that puts and keeps a system into a predetermined state. It installs software packages, starts or restarts services or puts configuration files in place and watches them for changes.

Having a state management system in place allows one to easily and reliably configure and manage a few servers or a few thousand servers. It allows configurations to be kept under version control.

Salt States is an extension of the Salt Modules that we discussed in the previous remote execution tutorial. Instead of calling one-off executions the state of a system can be easily defined and then enforced.

8.1.22 Understanding the Salt State System Components

The Salt state system is comprised of a number of components. As a user, an understanding of the SLS and renderer systems are needed. But as a developer, an understanding of Salt states and how to write the states is needed as well.

Note: States are compiled and executed only on minions that have been targeted. To execute functions directly on masters, see runners.
**Salt SLS System**

The primary system used by the Salt state system is the SLS system. SLS stands for Salt State.

The Salt States are files which contain the information about how to configure Salt minions. The states are laid out in a directory tree and can be written in many different formats.

The contents of the files and the way they are laid out is intended to be as simple as possible while allowing for maximum flexibility. The files are laid out in states and contains information about how the minion needs to be configured.

**SLS File Layout**

SLS files are laid out in the Salt file server.

A simple layout can look like this:

```plaintext
top.sls
ssh.sls
sshd_config
users/init.sls
users/admin.sls
salt/master.sls
web/init.sls
```

The `top.sls` file is a key component. The `top.sls` files is used to determine which SLS files should be applied to which minions.

The rest of the files with the `.sls` extension in the above example are state files.

Files without a `.sls` extensions are seen by the Salt master as files that can be downloaded to a Salt minion.

States are translated into dot notation. For example, the `ssh.sls` file is seen as the `ssh` state and the `users/admin.sls` file is seen as the `users.admin` state.

Files named `init.sls` are translated to be the state name of the parent directory, so the `web/init.sls` file translates to the `web` state.

In Salt, everything is a file; there is no "magic translation" of files and file types. This means that a state file can be distributed to minions just like a plain text or binary file.

**SLS Files**

The Salt state files are simple sets of data. Since SLS files are just data they can be represented in a number of different ways.

The default format is YAML generated from a Jinja template. This allows for the states files to have all the language constructs of Python and the simplicity of YAML.

State files can then be complicated Jinja templates that translate down to YAML, or just plain and simple YAML files.

The State files are simply common data structures such as dictionaries and lists, constructed using a templating language such as YAML.

Here is an example of a Salt State:
vim:
  pkg.installed: []

salt:
  pkg.latest:
    - name: salt
  service.running:
    - names:
      - salt-master
      - salt-minion
    - require:
      - pkg: salt
    - watch:
      - file: /etc/salt/minion

/etc/salt/minion:
  file.managed:
    - source: salt://salt/minion
    - user: root
    - group: root
    - mode: 644
    - require:
      - pkg: salt

This short stanza will ensure that vim is installed, Salt is installed and up to date, the salt-master and salt-minion daemons are running and the Salt minion configuration file is in place. It will also ensure everything is deployed in the right order and that the Salt services are restarted when the watched file updated.

The Top File

The top file controls the mapping between minions and the states which should be applied to them.

The top file specifies which minions should have which SLS files applied and which environments they should draw those SLS files from.

The top file works by specifying environments on the top-level.

Each environment contains target expressions to match minions. Finally, each target expression contains a list of Salt states to apply to matching minions:

base:
  '*':
    - salt
    - users
    - users.admin
  'saltmaster.*':
    - match: pcre
    - salt.master

This above example uses the base environment which is built into the default Salt setup.

The base environment has target expressions. The first one matches all minions, and the SLS files below it apply to all minions.

The second expression is a regular expression that will match all minions with an ID matching saltmaster.* and specifies that for those minions, the salt.master state should be applied.
Important: Since version 2014.7.0, the default matcher (when one is not explicitly defined as in the second expression in the above example) is the compound matcher. Since this matcher parses individual words in the expression, minion IDs containing spaces will not match properly using this matcher. Therefore, if your target expression is designed to match a minion ID containing spaces, it will be necessary to specify a different match type (such as glob). For example:

```yaml
base:
  'test minion':
    - match: glob
    - foo
    - bar
    - baz
```

A full table of match types available in the top file can be found here.

### Reloading Modules

Some Salt states require that specific packages be installed in order for the module to load. As an example the pip state module requires the pip package for proper name and version parsing.

In most of the common cases, Salt is clever enough to transparently reload the modules. For example, if you install a package, Salt reloads modules because some other module or state might require just that package which was installed.

On some edge-cases salt might need to be told to reload the modules. Consider the following state file which we'll call pep8.sls:

```yaml
python-pip:
  cmd.run:
    - name: |
      easy_install --script-dir=/usr/bin -U pip
    - cwd: /

pep8:
  pip.installed:
    - require:
      - cmd: python-pip
```

The above example installs pip using easy_install from setuptools and installs pep8 using pip, which, as told earlier, requires pip to be installed system-wide. Let's execute this state:

```
salt-call state.apply pep8
```

The execution output would be something like:

```
-------------
State: - pip
Name:    pep8
Function: installed
  Result: False
  Comment: State pip.installed found in sls pep8 is unavailable
Changes:
```

(continues on next page)
Summary
---------
Succeeded: 1
Failed: 1
---------
Total: 2

If we executed the state again the output would be:

<table>
<thead>
<tr>
<th>State:</th>
<th>pip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>pep8</td>
</tr>
<tr>
<td>Function:</td>
<td>installed</td>
</tr>
<tr>
<td>Result:</td>
<td>True</td>
</tr>
<tr>
<td>Comment:</td>
<td>Package was successfully installed</td>
</tr>
<tr>
<td>Changes:</td>
<td>pep8==1.4.6: Installed</td>
</tr>
</tbody>
</table>

Summary
---------
Succeeded: 2
Failed: 0
---------
Total: 2

Since we installed pip using cmd, Salt has no way to know that a system-wide package was installed.

On the second execution, since the required pip package was installed, the state executed correctly.

**Note:** Salt does not reload modules on every state run because doing so would greatly slow down state execution.

So how do we solve this edge-case? **reload_modules**!

reload_modules is a boolean option recognized by salt on all available states which forces salt to reload its modules once a given state finishes.

The modified state file would now be:

```yaml
python-pip:
  cmd.run:
    - name: |
      easy_install --script-dir=/usr/bin -U pip
    - cwd: /
    - reload_modules: true

pep8:
  pip.installed:
    - require:
      - cmd: python-pip
```

Let's run it, once:

```
salt-call state.apply pep8
```

The output is:
<table>
<thead>
<tr>
<th>State:</th>
<th>pip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>pep8</td>
</tr>
<tr>
<td>Function:</td>
<td>installed</td>
</tr>
<tr>
<td>Result:</td>
<td>True</td>
</tr>
<tr>
<td>Comment:</td>
<td>Package was successfully installed</td>
</tr>
<tr>
<td>Changes:</td>
<td>pep8==1.4.6: Installed</td>
</tr>
</tbody>
</table>

Summary

-------------
Succeeded: 2
Failed: 0
-------------
Total: 2
When the `salt` or `salt-call` CLI commands result in an error, the command will exit with a return code of 1. Error cases consist of the following:

1. Errors are encountered while running `States`, or any state returns a `False` result
2. Any exception is raised
3. In the case of remote-execution functions, when the return data is a Python dictionary with a key named either `result` or `success`, which has a value of `False`

### 9.1 Retcode Passthrough

In addition to the cases listed above, if a state or remote-execution function sets a nonzero value in the `retcode` key of the `__context__` dictionary, the command will exit with a return code of 1. For those developing custom states and execution modules, using `__context__['retcode']` can be a useful way of signaling that an error has occurred:

```python
if something_went_wrong:
    __context__['retcode'] = 42
```

This is actually how states signal that they have failed. Different cases result in different codes being set in the `__context__` dictionary:

- 1 is set when any error is encountered in the state compiler (missing SLS file, etc.)
- 2 is set when any state returns a `False` result
- 5 is set when Pillar data fails to be compiled before running the state(s)

When the `--retcode-passthrough` flag is used with `salt-call`, then `salt-call` will exit with whichever retcode was set in the `__context__` dictionary, rather than the default behavior which simply exits with 1 for any error condition.
UTILITY MODULES - CODE REUSE IN CUSTOM MODULES

New in version 2015.5.0.

Changed in version 2016.11.0: These can now be synced to the Master for use in custom Runners, and in custom execution modules called within Pillar SLS files.

When extending Salt by writing custom (state modules), execution modules, etc., sometimes there is a need for a function to be available to more than just one kind of custom module. For these cases, Salt supports what are called "utility modules". These modules are like normal execution modules, but instead of being invoked in Salt code using __salt__, the __utils__ prefix is used instead.

For example, assuming the following simple utility module, saved to salt://_utils/foo.py

```python
# -*- coding: utf-8 -*-

""
My utils module
""

This module contains common functions for use in my other custom types.
""

def bar():
    return "baz"

```

Once synced to a minion, this function would be available to other custom Salt types like so:

```python
# -*- coding: utf-8 -*-

""
My awesome execution module
""

def observe_the_awesomeness():
    ""
    Prints information from my utility module
    
    CLI Example:
    .. code-block:: bash
        
        salt '*' mymodule.observe_the_awesomeness
    ""
    return __utils__['foo.bar']()

```

Utility modules, like any other kind of Salt extension, support using a `__virtual__` function to conditionally load them, or load them under a different namespace. For instance, if the utility module above were named `salt://_utils/mymodule.py` it could be made to be loaded as the `foo` utility module with a `__virtual__` function.

```python
# -*- coding: utf-8 -*-
"
My utils module
-------------

This module contains common functions for use in my other custom types.
""

def __virtual__():
    ""
    Load as a different name
    ""
    return "foo"

def bar():
    return "baz"
```

New in version 2018.3.0: Instantiating objects from classes declared in util modules works with Master side modules, such as Runners, Outputters, etc.

Also you could even write your utility modules in object oriented fashion:

```python
# -*- coding: utf-8 -*-
"
My OOP-style utils module
-------------------------

This module contains common functions for use in my other custom types.
""

class Foo(object):
    def __init__(self):
        pass

    def bar(self):
        return "baz"
```

And import them into other custom modules:

```python
# -*- coding: utf-8 -*-
"
My awesome execution module
---------------------------

import mymodule

def observe_the_awesomeness():
    ""
    Prints information from my utility module
    ""
```

These are, of course, contrived examples, but they should serve to show some of the possibilities opened up by writing utility modules. Keep in mind though that states still have access to all of the execution modules, so it is not necessary to write a utility module to make a function available to both a state and an execution module. One good use case for utility modules is one where it is necessary to invoke the same function from a custom outputter/returner, as well as an execution module.

Utility modules placed in `salt://_utils/` will be synced to the minions when a `highstate` is run, as well as when any of the following Salt functions are called:

- `saltutil.sync_utils`
- `saltutil.sync_all`

As of the 2019.2.0 release, as well as 2017.7.7 and 2018.3.2 in their respective release cycles, the `sync` argument to `state.apply/state.sls` can be used to sync custom types when running individual SLS files.

To sync to the Master, use either of the following:

- `saltutil.sync_utils`
- `saltutil.sync_all`
11.1 Event System

The Salt Event System is used to fire off events enabling third party applications or external processes to react to behavior within Salt. The event system uses a publish-subscribe pattern, otherwise known as pub/sub.

11.1.1 Event Bus

The event system is comprised of two primary components, which make up the concept of an Event Bus:

- The event sockets, which publish events
- The event library, which can listen to events and send events into the Salt system

Events are published onto the event bus and event bus subscribers listen for the published events.

The event bus is used for both inter-process communication as well as network transport in Salt. Inter-process communication is provided through UNIX domain sockets (UDX).

The Salt Master and each Salt Minion has their own event bus.

11.1.2 Event Types

Salt Master Events

These events are fired on the Salt Master event bus. This list is not comprehensive.

Authentication Events

_salt/auth_

Fired when a minion performs an authentication check with the master.

Variables

- **id** -- The minion ID.
- **act** -- The current status of the minion key: accept, pend, reject.
- **pub** -- The minion public key.
Note: Minions fire auth events on fairly regular basis for a number of reasons. Writing reactors to respond to events through the auth cycle can lead to infinite reactor event loops (minion tries to auth, reactor responds by doing something that generates another auth event, minion sends auth event, etc.). Consider reacting to salt/key or salt/minion/<MID>/start or firing a custom event tag instead.

Start events

salt/minion/<MID>/start
Fired every time a minion connects to the Salt master.

Variables
id -- The minion ID.

Key events

salt/key
Fired when accepting and rejecting minions keys on the Salt master. These happen as a result of actions undertaken by the salt-key command.

Variables
- id -- The minion ID.
- act -- The new status of the minion key: accept, delete,

Warning: If a master is in auto_accept mode, salt/key events will not be fired when the keys are accepted. In addition, pre-seeding keys (like happens through Salt-Cloud) will not cause firing of these events.

Job events

salt/job/<JID>/new
Fired as a new job is sent out to minions.

Variables
- jid -- The job ID.
- tgt -- The target of the job: *, a minion ID, G@os_family:RedHat, etc.
- tgt_type -- The type of targeting used: glob, grain, compound, etc.
- fun -- The function to run on minions: test.version, network.interfaces, etc.
- arg -- A list of arguments to pass to the function that will be called.
- minions -- A list of minion IDs that Salt expects will return data for this job.
- user -- The name of the user that ran the command as defined in Salt's Publisher ACL or external auth.

salt/job/<JID>/ret/<MID>
Fired each time a minion returns data for a job.

Variables
id -- The minion ID.
• **jid** -- The job ID.
• **retcode** -- The return code for the job.
• **fun** -- The function the minion ran. E.g., `test.version`.
• **return** -- The data returned from the execution module.

**salt/job/<JID>/prog/<MID>/<RUN NUM>**

Fired each time a each function in a state run completes execution. Must be enabled using the `state_events` option.

Variables

• **data** -- The data returned from the state module function.
• **id** -- The minion ID.
• **jid** -- The job ID.

**Runner Events**

**salt/run/<JID>/new**

Fired as a runner begins execution

Variables

• **jid** -- The job ID.
• **fun** -- The name of the runner function, with `runner.` prepended to it (e.g. `runner.jobs.lookup_jid`)
• **fun_args** -- The arguments passed to the runner function (e.g. `['20160829225914848058']`)
• **user** -- The user who executed the runner (e.g. `root`)

**salt/run/<JID>/ret**

Fired when a runner function returns

Variables

• **jid** -- The job ID.
• **fun** -- The name of the runner function, with `runner.` prepended to it (e.g. `runner.jobs.lookup_jid`)
• **fun_args** -- The arguments passed to the runner function (e.g. `['20160829225914848058']`)
• **return** -- The data returned by the runner function

**salt/run/<JID>/args**

New in version 2016.11.0.

Fired by the `state.orchestrate` runner

Variables

• **name** -- The ID declaration for the orchestration job (i.e. the line above `salt.state`, `salt.function`, `salt.runner`, etc.)
• **type** -- The type of orchestration job being run (e.g. `state`)
• **tgt** -- The target expression (e.g. `*`). Included for `state` and `function` types only.
• **args** -- The args passed to the orchestration job. **Note:** for state and function types, also includes a tgt_type value which shows what kind of match (glob, pcre, etc.) was used. This value was named expr_form in the 2016.11 release cycle but has been renamed to tgt_type in 2017.7.0 for consistency with other events.

**Presence Events**

**salt/presence/present**

Events fired on a regular interval about currently connected, newly connected, or recently disconnected minions. Requires the presence_events setting to be enabled.

**Variables**

- **present** -- A list of minions that are currently connected to the Salt master.

**salt/presence/change**

Fired when the Presence system detects new minions connect or disconnect.

**Variables**

- **new** -- A list of minions that have connected since the last presence event.
- **lost** -- A list of minions that have disconnected since the last presence event.

**Cloud Events**

Unlike other Master events, salt-cloud events are not fired on behalf of a Salt Minion. Instead, salt-cloud events are fired on behalf of a VM. This is because the minion-to-be may not yet exist to fire events to or also may have been destroyed.

This behavior is reflected by the **name** variable in the event data for salt-cloud events as compared to the **id** variable for Salt Minion-triggered events.

**salt/cloud/<VM NAME>/creating**

Fired when salt-cloud starts the VM creation process.

**Variables**

- **name** -- the name of the VM being created.
- **event** -- description of the event.
- **provider** -- the cloud provider of the VM being created.
- **profile** -- the cloud profile for the VM being created.

**salt/cloud/<VM NAME>/deploying**

Fired when the VM is available and salt-cloud begins deploying Salt to the new VM.

**Variables**

- **name** -- the name of the VM being created.
- **event** -- description of the event.
- **kwargs** -- options available as the deploy script is invoked: conf_file, deploy_command, display_ssh_output, host, keep_temp, key_filename, make_minion, minion_conf, name, parallel, preseed_minion_keys, script, script_args, script_env, sock_dir, start_action, sudo, tmp_dir, tty, username

**salt/cloud/<VM NAME>/requesting**

Fired when salt-cloud sends the request to create a new VM.
Variables

- `event` -- description of the event.
- `location` -- the location of the VM being requested.
- `kwargs` -- options available as the VM is being requested: `Action`, `ImageId`, `InstanceType`, `KeyName`, `MaxCount`, `MinCount`, `SecurityGroup`

`salt/cloud/<VM NAME>/querying`
Fired when salt-cloud queries data for a new instance.

Variables

- `event` -- description of the event.
- `instance_id` -- the ID of the new VM.

`salt/cloud/<VM NAME>/tagging`
Fired when salt-cloud tags a new instance.

Variables

- `event` -- description of the event.
- `tags` -- tags being set on the new instance.

`salt/cloud/<VM NAME>/waiting_for_ssh`
Fired while the salt-cloud deploy process is waiting for ssh to become available on the new instance.

Variables

- `event` -- description of the event.
- `ip_address` -- IP address of the new instance.

`salt/cloud/<VM NAME>/deploy_script`
Fired once the deploy script is finished.

Variables

- `event` -- description of the event.

`salt/cloud/<VM NAME>/created`
Fired once the new instance has been fully created.

Variables

- `name` -- the name of the VM being created.
- `event` -- description of the event.
- `instance_id` -- the ID of the new instance.
- `provider` -- the cloud provider of the VM being created.
- `profile` -- the cloud profile for the VM being created.

`salt/cloud/<VM NAME>/destroying`
Fired when salt-cloud requests the destruction of an instance.

Variables

- `name` -- the name of the VM being created.
- `event` -- description of the event.
- `instance_id` -- the ID of the new instance.

`salt/cloud/<VM NAME>/destroyed`
Fired when an instance has been destroyed.
Variables

- **name** -- the name of the VM being created.
- **event** -- description of the event.
- **instance_id** -- the ID of the new instance.

11.1.3 Listening for Events

Salt's event system is used heavily within Salt and it is also written to integrate heavily with existing tooling and scripts. There is a variety of ways to consume it.

From the CLI

The quickest way to watch the event bus is by calling the `state.event` runner:

```
salt-run state.event pretty=True
```

That runner is designed to interact with the event bus from external tools and shell scripts. See the documentation for more examples.

Remotely via the REST API

Salt's event bus can be consumed `salt.netapi.rest_cherrypy.app.Events` as an HTTP stream from external tools or services.

```
curl -SSNk https://salt-api.example.com:8000/events?token=05A3
```

From Python

Python scripts can access the event bus only as the same system user that Salt is running as.

The event system is accessed via the event library and can only be accessed by the same system user that Salt is running as. To listen to events a SaltEvent object needs to be created and then the get_event function needs to be run. The SaltEvent object needs to know the location that the Salt Unix sockets are kept. In the configuration this is the `sock_dir` option. The `sock_dir` option defaults to "/var/run/salt/master" on most systems.

The following code will check for a single event:

```python
import salt.config
import salt.utils.event

opts = salt.config.client_config("/etc/salt/master")

event = salt.utils.event.get_event(
    "master", sock_dir=opts["sock_dir"], transport=opts["transport"], opts=opts
)

data = event.get_event()
```

Events will also use a "tag". Tags allow for events to be filtered by prefix. By default all events will be returned. If only authentication events are desired, then pass the tag "salt/auth".

The `get_event` method has a default poll time assigned of 5 seconds. To change this time set the "wait" option.
The following example will only listen for auth events and will wait for 10 seconds instead of the default 5.

```python
data = event.get_event(wait=10, tag="salt/auth")
```

To retrieve the tag as well as the event data, pass full=True:

```python
evdata = event.get_event(wait=10, tag="salt/job", full=True)
tag, data = evdata['tag'], evdata['data']
```

Instead of looking for a single event, the `iter_events` method can be used to make a generator which will continually yield salt events.

The `iter_events` method also accepts a tag but not a wait time:

```python
for data in event.iter_events(tag="salt/auth"):
    print(data)
```

And finally event tags can be globbed, such as they can be in the Reactor, using the fnmatch library.

```python
import fnmatch
import salt.config
import salt.utils.event

opts = salt.config.client_config("/etc/salt/master")
sevent = salt.utils.event.get_event(
    "master", sock_dir=opts['Sock_dir'], transport=opts['transport'], opts=opts)

while True:
    ret = sevent.get_event(full=True)
    if ret is None:
        continue

    if fnmatch.fnmatch(ret['tag'], "salt/job/*/ret/*"):
        do_something_with_job_return(ret['data'])
```

### 11.1.4 Firing Events

It is possible to fire events on either the minion's local bus or to fire events intended for the master.

To fire a local event from the minion on the command line call the `event.fire` execution function:

```
salt-call event.fire '{"data": "message to be sent in the event"}' 'tag'
```

To fire an event to be sent up to the master from the minion call the `event.send` execution function. Remember YAML can be used at the CLI in function arguments:

```
salt-call event.send 'myco/mytag/success' '{success: True, message: "It works!"}'
```

If a process is listening on the minion, it may be useful for a user on the master to fire an event to it. An example of listening local events on a minion on a non-Windows system:
# Job on minion
import salt.utils.event

opts = salt.config.minion_config("/etc/salt/minion")
event = salt.utils.event.MinionEvent(opts)

for evdata in event.iter_events(match_type="regex", tag="custom/.*"):  
    # do your processing here...
    ...

And an example of listening local events on a Windows system:

# Job on minion
import salt.utils.event

opts = salt.config.minion_config(salt.minion.DEFAULT_MINION_OPTS)
event = salt.utils.event.MinionEvent(opts)

for evdata in event.iter_events(match_type="regex", tag="custom/.*"):  
    # do your processing here...
    ...

salt minionname event.fire '{"data": "message for the minion"}', 'customtag/african/unladen'

11.1.5 Firing Events from Python

From Salt execution modules

Events can be very useful when writing execution modules, in order to inform various processes on the master when a certain task has taken place. This is easily done using the normal cross-calling syntax:

# /srv/salt/_modules/my_custom_module.py

def do_something():
    ""
    Do something and fire an event to the master when finished
    ""

    CLI Example::

    salt '*' my_custom_module:do_something
    ""
    # do something!
    __salt__['event.send'](
        "myco/my_custom_module/finished",
        {"finished": True, "message": "The something is finished!"},
    )
From Custom Python Scripts

Firing events from custom Python code is quite simple and mirrors how it is done at the CLI:

```python
import salt.client

caller = salt.client.Caller()

ret = caller.cmd(
    "event.send", "myco/event/success", {
        "success": True, "message": "It works!"
    }
)

if not ret:
    # the event could not be sent, process the error here
```

11.2 Beacons

Beacons let you use the Salt event system to monitor non-Salt processes. The beacon system allows the minion to hook into a variety of system processes and continually monitor these processes. When monitored activity occurs in a system process, an event is sent on the Salt event bus that can be used to trigger a reactor.

Salt beacons can currently monitor and send Salt events for many system activities, including:

- file system changes
- system load
- service status
- shell activity, such as user login
- network and disk usage

See beacon modules for a current list.

Note: Salt beacons are an event generation mechanism. Beacons leverage the Salt reactor system to make changes when beacon events occur.

11.2.1 Configuring Beacons

Salt beacons do not require any changes to the system components that are being monitored, everything is configured using Salt.

Beacons are typically enabled by placing a beacons: top level block in /etc/salt/minion or any file in /etc/salt/minion.d/ such as /etc/salt/minion.d/beacons.conf or add it to pillars for that minion:

```yaml
beacons:
    inotify:
        files:
            /etc/important_file: {}
            /opt: {}
```

The beacon system, like many others in Salt, can also be configured via the minion pillar, grains, or local config file.
Note: The *inotify* beacon only works on OSes that have *inotify* kernel support. Currently this excludes FreeBSD, macOS, and Windows.

All beacon configuration is done using list based configuration.

New in version Neon.

Multiple copies of a particular Salt beacon can be configured by including the *beacon_module* parameter in the beacon configuration.

```
beacons:
  watch_importand_file:
    - files:
      /etc/important_file: {}
    - beacon_module: inotify

watch_another_file:
    - files:
      /etc/another_file: {}
    - beacon_module: inotify
```

**Beacon Monitoring Interval**

Beacons monitor on a 1-second interval by default. To set a different interval, provide an *interval* argument to a beacon. The following beacons run on 5- and 10-second intervals:

```
beacons:
  inotify:
    - files:
      /etc/important_file: {}
      /opt: {}
    - interval: 5
    - disable_during_state_run: True

load:
  - averages:
    1m:
      - 0.0
      - 2.0
    5m:
      - 0.0
      - 1.5
    15m:
      - 0.1
      - 1.0
    - interval: 10
```
Avoiding Event Loops

It is important to carefully consider the possibility of creating a loop between a reactor and a beacon. For example, one might set up a beacon which monitors whether a file is read which in turn fires a reactor to run a state which in turn reads the file and re-fires the beacon.

To avoid these types of scenarios, the `disable_during_state_run` argument may be set. If a state run is in progress, the beacon will not be run on its regular interval until the minion detects that the state run has completed, at which point the normal beacon interval will resume.

```
beacons:
  inotify:
    files:
      /etc/important_file: {}
    disable_during_state_run: True
```

Note: For beacon writers: If you need extra stuff to happen, like closing file handles for the `disable_during_state_run` to actually work, you can add a `close()` function to the beacon to run those extra things. See the `inotify` beacon.

11.2.2 Beacon Example

This example demonstrates configuring the `inotify` beacon to monitor a file for changes, and then restores the file to its original contents if a change was made.

```
Note: The inotify beacon requires Pyinotify on the minion, install it using `salt myminion pkg.install python-inotify`.
```

Create Watched File

Create the file named `/etc/important_file` and add some simple content:

```
important_config: True
```

Add Beacon Configs to Minion

On the Salt minion, add the following configuration to `/etc/salt/minion.d/beacons.conf`:

```
beacons:
  inotify:
    files:
      /etc/important_file:
        mask: modify
        disable_during_state_run: True
```

Save the configuration file and restart the minion service. The beacon is now set up to notify salt upon modifications made to the file.
Note: The `disable_during_state_run: True` parameter prevents the inotify beacon from generating reactor events due to salt itself modifying the file.

**View Events on the Master**

On your Salt master, start the event runner using the following command:

```
salt-run state.event pretty=true
```

This runner displays events as they are received by the master on the Salt event bus. To test the beacon you set up in the previous section, make and save a modification to `/etc/important_file`. You'll see an event similar to the following on the event bus:

```json
{
   "_stamp": "2015-09-09T15:59:37.972753",
   "data": {
      "change": "IN_IGNORED",
      "id": "larry",
      "path": "/etc/important_file"
   },
   "tag": "salt/beacon/larry/inotify//etc/important_file"
}
```

This indicates that the event is being captured and sent correctly. Now you can create a reactor to take action when this event occurs.

**Create a Reactor**

This reactor reverts the file named `/etc/important_file` to the contents provided by salt each time it is modified.

**Reactor SLS**

On your Salt master, create a file named `/srv/reactor/revert.sls`.

Note: If the `/srv/reactor` directory doesn't exist, create it.

```
mkdir -p /srv/reactor
```

Add the following to `/srv/reactor/revert.sls`:

```bash
revert-file:
  local.state.apply:
    - tgt: {{ data['data']['id'] }}
    - arg:
      - maintain_important_file
```

Note: In addition to setting `disable_during_state_run: True` for an inotify beacon whose reaction is to modify the watched file, it is important to ensure the state applied is also idempotent.
Note: The expression `{{ data['data']['id'] }}` is correct as it matches the event structure shown above.

State SLS

Create the state sls file referenced by the reactor sls file. This state file will be located at `/srv/salt/maintain_important_file.sls`.

```yaml
important_file:
  file.managed:
    - name: /etc/important_file
    - contents: |
      important_config: True
```

Master Config

Configure the master to map the inotify beacon event to the `revert` reaction in `/etc/salt/master.d/reactor.conf`:

```yaml
reactor:
  - salt/beacon/*/inotify/*etc/important_file: /srv/reactor/revert.sls
```

Note: You can have only one top level `reactor` section, so if one already exists, add this code to the existing section. See here to learn more about reactor SLS syntax.

Start the Salt Master in Debug Mode

To help with troubleshooting, start the Salt master in debug mode:

```
service salt-master stop
salt-master -l debug
```

When debug logging is enabled, event and reactor data are displayed so you can discover syntax and other issues.

Trigger the Reactor

On your minion, make and save another change to `/etc/important_file`. On the Salt master, you'll see debug messages that indicate the event was received and the `state.apply` job was sent. When you inspect the file on the minion, you'll see that the file contents have been restored to `important_config: True`.

All beacons are configured using a similar process of enabling the beacon, writing a reactor SLS (and state SLS if needed), and mapping a beacon event to the reactor SLS.
11.2.3 Writing Beacon Plugins

Beacon plugins use the standard Salt loader system, meaning that many of the constructs from other plugin systems holds true, such as the `__virtual__` function.

The important function in the Beacon Plugin is the `beacon` function. When the beacon is configured to run, this function will be executed repeatedly by the minion. The `beacon` function therefore cannot block and should be as lightweight as possible. The `beacon` also must return a list of dicts, each dict in the list will be translated into an event on the master.

Beacons may also choose to implement a `validate` function which takes the beacon configuration as an argument and ensures that it is valid prior to continuing. This function is called automatically by the Salt loader when a beacon is loaded.

Please see the `inotify` beacon as an example.

The `beacon` Function

The beacons system will look for a function named `beacon` in the module. If this function is not present then the beacon will not be fired. This function is called on a regular basis and defaults to being called on every iteration of the minion, which can be tens to hundreds of times a second. This means that the `beacon` function cannot block and should not be CPU or IO intensive.

The beacon function will be passed in the configuration for the executed beacon. This makes it easy to establish a flexible configuration for each called beacon. This is also the preferred way to ingest the beacon's configuration as it allows for the configuration to be dynamically updated while the minion is running by configuring the beacon in the minion's pillar.

The Beacon Return

The information returned from the beacon is expected to follow a predefined structure. The returned value needs to be a list of dictionaries (standard python dictionaries are preferred, no ordered dicts are needed).

The dictionaries represent individual events to be fired on the minion and master event buses. Each dict is a single event. The dict can contain any arbitrary keys but the 'tag' key will be extracted and added to the tag of the fired event.

The return data structure would look something like this:

```
[{
    "changes": ["/foo/bar"], 
    "tag": "foo"}, 
   {
    "changes": ["/foo/baz"], 
    "tag": "bar"}]
```

Calling Execution Modules

Execution modules are still the preferred location for all work and system interaction to happen in Salt. For this reason the `__salt__` variable is available inside the beacon.

Please be careful when calling functions in `__salt__`, while this is the preferred means of executing complicated routines in Salt not all of the execution modules have been written with beacons in mind. Watch out for execution modules that may be CPU intense or IO bound. Please feel free to add new execution modules and functions to back specific beacons.
Distributing Custom Beacons

Custom beacons can be distributed to minions via the standard methods, see Modular Systems.

11.3 Reactor System

Salt's Reactor system gives Salt the ability to trigger actions in response to an event. It is a simple interface to watching Salt's event bus for event tags that match a given pattern and then running one or more commands in response.

This system binds sls files to event tags on the master. These sls files then define reactions. This means that the reactor system has two parts. First, the reactor option needs to be set in the master configuration file. The reactor option allows for event tags to be associated with sls reaction files. Second, these reaction files use highdata (like the state system) to define reactions to be executed.

11.3.1 Event System

A basic understanding of the event system is required to understand reactors. The event system is a local ZeroMQ PUB interface which fires salt events. This event bus is an open system used for sending information notifying Salt and other systems about operations.

The event system fires events with a very specific criteria. Every event has a tag. Event tags allow for fast top-level filtering of events. In addition to the tag, each event has a data structure. This data structure is a dictionary, which contains information about the event.

11.3.2 Mapping Events to Reactor SLS Files

Reactor SLS files and event tags are associated in the master config file. By default this is /etc/salt/master, or /etc/salt/master.d/reactor.conf.

New in version 2014.7.0: Added Reactor support for salt:// file paths.

In the master config section 'reactor:' is a list of event tags to be matched and each event tag has a list of reactor SLS files to be run.

| reactor: | # Master config section "reactor"
|----------|---------------------------------------------------------------|
| - 'salt/minion/*/start': | # Match tag "salt/minion/*/start"
| - /srv/reactor/start.sls | # Things to do when a minion starts
| - /srv/reactor/monitor.sls | # Other things to do
| - 'salt/cloud/*/destroyed': | # Globs can be used to match tags
| - /srv/reactor/destroy/*.sls | # Globs can be used to match file names
| - 'myco/custom/event/tag': | # React to custom event tags
| - salt://reactor/mycustom.sls | # Reactor files can come from the salt fileserver

Note: In the above example, salt://reactor/mycustom.sls refers to the base environment. To pull this file from a different environment, use the querystring syntax (e.g. salt://reactor/mycustom.sls?saltenv=reactor).
Reactor SLS files are similar to State and Pillar SLS files. They are by default YAML + Jinja templates and are passed familiar context variables. Click here for more detailed information on the variables available in Jinja templating.

Here is the SLS for a simple reaction:

```yaml
{% if data['id'] == 'mysql1' %}
highstate_run:
  - local.state.apply:
    - tgt: mysql1
{% endif %}
```

This simple reactor file uses Jinja to further refine the reaction to be made. If the id in the event data is mysql1 (in other words, if the name of the minion is mysql1) then the following reaction is defined. The same data structure and compiler used for the state system is used for the reactor system. The only difference is that the data is matched up to the salt command API and the runner system. In this example, a command is published to the mysql1 minion with a function of state.apply, which performs a highstate. Similarly, a runner can be called:

```yaml
{% if data['data']['custom_var'] == 'runit' %}
call_runit_orch:
  - runner.state.orchestrate:
    - args:
      - mods: orchestrate.runit
{% endif %}
```

This example will execute the state.orchestrate runner and intiate an execution of the runit orchestrator located at /srv/salt/orchestrate/runit.sls.

### 11.3.3 Types of Reactions

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>local</td>
<td>Runs a remote-execution function on targeted minions</td>
</tr>
<tr>
<td>runner</td>
<td>Executes a runner function</td>
</tr>
<tr>
<td>wheel</td>
<td>Executes a wheel function on the master</td>
</tr>
<tr>
<td>caller</td>
<td>Runs a remote-execution function on a masterless minion</td>
</tr>
</tbody>
</table>

Note: The local and caller reaction types will likely be renamed in a future release. These reaction types were named after Salt's internal client interfaces, and are not intuitively named. Both local and caller will continue to work in Reactor SLS files, however.

### 11.3.4 Where to Put Reactor SLS Files

Reactor SLS files can come both from files local to the master, and from any of backends enabled via the fileservisor Backend config option. Files placed in the Salt fileserver can be referenced using a salt:// URL, just like they can in State SLS files.

It is recommended to place reactor and orchestrator SLS files in their own uniquely-named subdirectories such as orch/, orchestrate/, react/, reactor/, etc., to keep them organized.
11.3.5 Writing Reactor SLS

The different reaction types were developed separately and have historically had different methods for passing arguments. For the 2017.7.2 release a new, unified configuration schema has been introduced, which applies to all reaction types.

The old config schema will continue to be supported, and there is no plan to deprecate it at this time.

Local Reactions

A local reaction runs a remote-execution function on the targeted minions.

The old config schema required the positional and keyword arguments to be manually separated by the user under arg and kwarg parameters. However, this is not very user-friendly, as it forces the user to distinguish which type of argument is which, and make sure that positional arguments are ordered properly. Therefore, the new config schema is recommended if the master is running a supported release.

The below two examples are equivalent:

<table>
<thead>
<tr>
<th>Supported in 2017.7.2 and later</th>
<th>Supported in all releases</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>install_zsh:</strong></td>
<td><strong>install_zsh:</strong></td>
</tr>
<tr>
<td>local.state.single:</td>
<td>local.state.single:</td>
</tr>
<tr>
<td>- tgt: 'kernel:Linux'</td>
<td>- tgt: 'kernel:Linux'</td>
</tr>
<tr>
<td>- tgt_type: grain</td>
<td>- tgt_type: grain</td>
</tr>
<tr>
<td>- args:</td>
<td>- arg:</td>
</tr>
<tr>
<td>- fun: pkg.installed</td>
<td>- pkg.installed</td>
</tr>
<tr>
<td>- name: zsh</td>
<td>- zsh</td>
</tr>
<tr>
<td>- fromrepo: updates</td>
<td>- kwarg:</td>
</tr>
<tr>
<td></td>
<td>fromrepo: updates</td>
</tr>
</tbody>
</table>

This reaction would be equivalent to running the following Salt command:

```bash
salt -G 'kernel:Linux' state.single pkg.installed name=zsh fromrepo=updates
```

### Note:
Any other parameters in the LocalClient().cmd_async() method can be passed at the same indentation level as tgt.

### Note:
tgt_type is only required when the target expression defined in tgt uses a target type other than a minion ID glob.

The tgt_type argument was named expr_form in releases prior to 2017.7.0.
Runner Reactions

Runner reactions execute runner functions locally on the master.

The old config schema called for passing arguments to the reaction directly under the name of the runner function. However, this can cause unpredictable interactions with the Reactor system's internal arguments. It is also possible to pass positional and keyword arguments under arg and kwarg like above in local reactions, but as noted above this is not very user-friendly. Therefore, the new config schema is recommended if the master is running a supported release.

The below two examples are equivalent:

<table>
<thead>
<tr>
<th>Supported in 2017.7.2 and later</th>
<th>Supported in all releases</th>
</tr>
</thead>
</table>
| ```
deploy_app:
  runner.state.orchestrate:
    - args:
    - mods: orchestrate.deploy_app
    - pillar:
      event_tag: {{ tag }}
      event_data: {{ data['data' → '']} | json }}
``` | ```
deploy_app:
  runner.state.orchestrate:
    - mods: orchestrate.deploy_app
    - kwarg:
      pillar:
        event_tag: {{ tag }}
        event_data: {{ data['data' → '']} | json }}
``` |

Assuming that the event tag is foo, and the data passed to the event is `{'bar': 'baz'}`, then this reaction is equivalent to running the following Salt command:

```
salt-run state.orchestrate mods=orchestrate.deploy_app pillar='${"event_tag": "foo", "event_data": {"bar": "baz"}}'
```

Wheel Reactions

Wheel reactions run wheel functions locally on the master.

Like runner reactions, the old config schema called for wheel reactions to have arguments passed directly under the name of the wheel function (or in arg or kwarg parameters).

The below two examples are equivalent:

<table>
<thead>
<tr>
<th>Supported in 2017.7.2 and later</th>
<th>Supported in all releases</th>
</tr>
</thead>
</table>
| ```
remove_key:
  wheel.key.delete:
    - args:
    - match: {{ data['id'] }}
``` | ```
remove_key:
  wheel.key.delete:
    - match: {{ data['id'] }}
``` |
**Caller Reactions**

Caller reactions run *remote-execution functions* on a minion daemon's Reactor system. To run a Reactor on the minion, it is necessary to configure the *Reactor Engine* in the minion config file, and then setup your watched events in a *reactor* section in the minion config file as well.

**Note:** Masterless Minions use this Reactor
This is the only way to run the Reactor if you use masterless minions.

Both the old and new config schemas involve passing arguments under an *args* parameter. However, the old config schema only supports positional arguments. Therefore, the new config schema is recommended if the masterless minion is running a supported release.

The below two examples are equivalent:

<table>
<thead>
<tr>
<th>Supported in 2017.7.2 and later</th>
<th>Supported in all releases</th>
</tr>
</thead>
</table>

This reaction is equivalent to running the following Salt command:

```bash
salt-call file.touch name=/tmp/foo
```

### 11.3.6 Best Practices for Writing Reactor SLS Files

The Reactor works as follows:

1. The Salt Reactor watches Salt's event bus for new events.
2. Each event's tag is matched against the list of event tags configured under the *reactor* section in the Salt Master config.
3. The SLS files for any matches are rendered into a data structure that represents one or more function calls.
4. That data structure is given to a pool of worker threads for execution.

Matching and rendering Reactor SLS files is done sequentially in a single process. For that reason, reactor SLS files should contain few individual reactions (one, if at all possible). Also, keep in mind that reactions are fired asynchronously (with the exception of *caller*) and do *not* support *requisites*.

Complex Jinja templating that calls out to slow *remote-execution* or *runner* functions slows down the rendering and causes other reactions to pile up behind the current one. The worker pool is designed to handle complex and long-running processes like *orchestration* jobs.

Therefore, when complex tasks are in order, *orchestration* is a natural fit. Orchestration SLS files can be more complex, and use requisites. Performing a complex task using orchestration lets the Reactor system fire off the orchestration job and proceed with processing other reactions.
11.3.7 Jinja Context

Reactor SLS files only have access to a minimal Jinja context. grains and pillar are not available. The salt object is available for calling remote-execution or runner functions, but it should be used sparingly and only for quick tasks for the reasons mentioned above.

In addition to the salt object, the following variables are available in the Jinja context:

- **tag** - the tag from the event that triggered execution of the Reactor SLS file
- **data** - the event's data dictionary

The data dict will contain an id key containing the minion ID, if the event was fired from a minion, and a data key containing the data passed to the event.

11.3.8 Advanced State System Capabilities

Reactor SLS files, by design, do not support requisites, ordering, onlyif/unless conditionals and most other powerful constructs from Salt's State system.

Complex Master-side operations are best performed by Salt's Orchestrate system so using the Reactor to kick off an Orchestrate run is a very common pairing.

For example:

```bash
# /etc/salt/master.d/reactor.conf
# A custom event containing: {"foo": "Foo!", "bar": "bar\*", "baz": "Baz!"}
reactor:
  - my/custom/event:
    - /srv/reactor/some_event.sls

# /srv/reactor/some_event.sls
invoke_orchestrate_file:
  runner.state.orchestrate:
    - args:
      - mods: orchestrate.do_complex_thing
      - pillar:
        event_tag: {{ tag }}
        event_data: {{ data|json }}
```

```bash
# /srv/salt/orchestrate/do_complex_thing.sls
{% set tag = salt.pillar.get('event_tag') %}
{% set data = salt.pillar.get('event_data') %}

# Pass data from the event to a custom runner function.
# The function expects a 'foo' argument.
do_first_thing:
  salt.runner:
    - name: custom_runner.custom_function
      foo: {{ data.foo }}

# Wait for the runner to finish then send an execution to minions.
# Forward some data from the event down to the minion's state run.
do_second_thing:
  salt.state:
    - tgt: {{ data.bar }}
    - sls:
```

(continues on next page)
11.3.9 Beacons and Reactors

An event initiated by a beacon, when it arrives at the master will be wrapped inside a second event, such that the data object containing the beacon information will be `data['data']`, rather than `data`.

For example, to access the `id` field of the beacon event in a reactor file, you will need to reference `{{ data['data']['id'] }}` rather than `{{ data['id'] }}` as for events initiated directly on the event bus.

Similarly, the data dictionary attached to the event would be located in `{{ data['data']['data'] }}` instead of `{{ data['data'] }}`.

See the [beacon documentation](#) for examples.

11.3.10 Manually Firing an Event

**From the Master**

Use the `event.send` runner:

```
salt-run event.send foo '{orchestrate: refresh}'
```

**From the Minion**

To fire an event to the master from a minion, call `event.send`:

```
salt-call event.send foo '{orchestrate: refresh}'
```

To fire an event to the minion's local event bus, call `event.fire`:

```
salt-call event.fire '{orchestrate: refresh}' foo
```

**Referencing Data Passed in Events**

Assuming any of the above examples, any reactor SLS files triggered by watching the event tag `foo` will execute with `{{ data['data']['orchestrate'] }}` equal to `'refresh'`.
11.3.11 Getting Information About Events

The best way to see exactly what events have been fired and what data is available in each event is to use the `state.event` runner.

See also:

*Common Salt Events*

Example usage:

```
salt-run state.event pretty=True
```

Example output:

```
salt/job/20150213001905721678/new {
    "_stamp": "2015-02-13T00:19:05.724583",
    "arg": [],
    "fun": "test.ping",
    "jid": "20150213001905721678",
    "minions": [
        "jerry"
    ],
    "tgt": "*",
    "tgt_type": "glob",
    "user": "root"
}
salt/job/20150213001910749506/ret/jerry {
    "_stamp": "2015-02-13T00:19:10.749766",
    "cmd": "_return",
    "fun": "saltutil.find_job",
    "fun_args": [
        "20150213001905721678"
    ],
    "id": "jerry",
    "jid": "20150213001910749506",
    "retcode": 0,
    "return": {},
    "success": true
}
```

11.3.12 Debugging the Reactor

The best window into the Reactor is to run the master in the foreground with debug logging enabled. The output will include when the master sees the event, what the master does in response to that event, and it will also include the rendered SLS file (or any errors generated while rendering the SLS file).

1. Stop the master.
2. Start the master manually:

   ```
salt-master -l debug
   ```
3. Look for log entries in the form:

   ```
[DEBUG] Gathering reactors for tag foo/bar
[DEBUG] Compiling reactions for tag foo/bar
   ```

(continues on next page)
The rendered output is the result of the Jinja parsing and is a good way to view the result of referencing Jinja variables. If the result is empty then Jinja produced an empty result and the Reactor will ignore it.

**Passing Event Data to Minions or Orchestration as Pillar**

An interesting trick to pass data from the Reactor SLS file to `state.apply` is to pass it as inline Pillar data since both functions take a keyword argument named `pillar`.

The following example uses Salt’s Reactor to listen for the event that is fired when the key for a new minion is accepted on the master using `salt-key`.

```
/etc/salt/master.d/reactor.conf:

```

```
reactor:
- 'salt/key':
  - /srv/salt/haproxy/react_new_minion.sls
```

The Reactor then fires a `state.apply` command targeted to the HAProxy servers and passes the ID of the new minion from the event to the state file via inline Pillar.

```
/srv/salt/haproxy/react_new_minion.sls:

{% if data['act'] == 'accept' and data['id'].startswith('web') %}
add_new_minion_to_pool:
  local.state.apply:
    - tgt: 'haproxy*'
    - args:
      - mods: haproxy.refresh_pool
      - pillar:
        new_minion: {{ data['id'] }}
{% endif %}
```

The above command is equivalent to the following command at the CLI:

```
salt 'haproxy*' state.apply haproxy.refresh_pool pillar='{{new_minion: minionid}}'
```

This works with Orchestrate files as well:

```
call_some_orchestrate_file:
  runner.state.orchestrate:
    - args:
      - mods: orchestrate.some_orchestrate_file
      - pillar:
        stuff: things
```

Which is equivalent to the following command at the CLI:

```
salt-run state.orchestrate orchestrate.some_orchestrate_file pillar='{{stuff: things}}'
```

Finally, that data is available in the state file using the normal Pillar lookup syntax. The following example is grabbing web server names and IP addresses from Salt Mine. If this state is invoked from the Reactor then the custom Pillar value from above will be available and the new minion will be added to the pool but with the `disabled` flag so that HAProxy won’t yet direct traffic to it.
/srv/salt/haproxy/refresh_pool.sls:

```python
{% set new_minion = salt['pillar.get']('new_minion') %}

listen web *:80
  balance source
  {% for server,ip in salt['mine.get']('web*', 'network.interfaces', ['eth0']).items() %}
    {% if server == new_minion %}
      server {{ server }} {{ ip }}:80 disabled
    {% else %}
      server {{ server }} {{ ip }}:80 check
    {% endif %}
  {% endfor %}
```

### 11.3.13 A Complete Example

In this example, we're going to assume that we have a group of servers that will come online at random and need to have keys automatically accepted. We'll also add that we don't want all servers being automatically accepted. For this example, we'll assume that all hosts that have an id that starts with 'ink' will be automatically accepted and have state.apply executed. On top of this, we're going to add that a host coming up that was replaced (meaning a new key) will also be accepted.

Our master configuration will be rather simple. All minions that attempt to authenticate will match the tag of `salt/auth`. When it comes to the minion key being accepted, we get a more refined tag that includes the minion id, which we can use for matching.

```
/etc/salt/master.d/reactor.conf:

reactor:
  - 'salt/auth':
    - /srv/reactor/auth-pending.sls
  - 'salt/minion/ink*/start':
    - /srv/reactor/auth-complete.sls
```

In this SLS file, we say that if the key was rejected we will delete the key on the master and then also tell the master to ssh in to the minion and tell it to restart the minion, since a minion process will die if the key is rejected.

We also say that if the key is pending and the id starts with ink we will accept the key. A minion that is waiting on a pending key will retry authentication every ten seconds by default.

```
/srv/reactor/auth-pending.sls:

{# Ink server failed to authenticate -- remove accepted key #}
{% if not data['result'] and data['id'].startswith('ink') %}
minion_remove:
  wheel.key.delete:
    - args:
      - match: {{ data['id'] }}
minion_rejoin:
  local.cmd.run:
    - tgt: salt-master.domain.tld
    - args:
      - cmd: ssh -o UserKnownHostsFile=/dev/null -o StrictHostKeyChecking=no "{{ data['id'] }}" 'sleep 10 && /etc/init.d/salt-minion restart'
{# endif %}
```

(continues on next page)
No if statements are needed here because we already limited this action to just Ink servers in the master configuration.

/srv/reactor/auth-complete.sls:

```powershell
{# When an Ink server connects, run state.apply. #}
highstate_run:
  local.state.apply:
    - tgt: {{ data['id'] }}
    - ret: smtp
```

The above will also return the `highstate` result data using the `smtp_return` returner (use virtualname like when using from the command line with `--return`). The returner needs to be configured on the minion for this to work. See `salt.returners.smtp_return` documentation for that.

### 11.3.14 Syncing Custom Types on Minion Start

Salt will sync all custom types (by running a `saltutil.sync_all`) on every `highstate`. However, there is a chicken-and-egg issue where, on the initial `highstate`, a minion will not yet have these custom types synced when the top file is first compiled. This can be worked around with a simple reactor which watches for `salt/minion/*/start` events, which each minion fires when it first starts up and connects to the master.

On the master, create `/srv/reactor/sync_grains.sls` with the following contents:

```powershell
sync_grains:
  local.saltutil.sync_grains:
    - tgt: {{ data['id'] }}
```

And in the master config file, add the following reactor configuration:

```powershell
reactor:
  - 'salt/minion/*/start':
    - /srv/reactor/sync_grains.sls
```

This will cause the master to instruct each minion to sync its custom grains when it starts, making these grains available when the initial `highstate` is executed.

Other types can be synced by replacing `local.saltutil.sync_grains` with `local.saltutil.sync_modules,local.saltutil.sync_all`, or whatever else suits the intended use case.

Also, if it is not desirable that every minion syncs on startup, the `*` can be replaced with a different glob to narrow down the set of minions which will match that reactor (e.g. `salt/minion/appsrv*/start`, which would only match minion IDs beginning with `appsrv`).

11.3. Reactor System
11.3.15 Reactor Tuning for Large-Scale Installations

The reactor uses a thread pool implementation that’s contained inside `salt.utils.process.ThreadPool`. It uses Python’s stdlib Queue to enqueue jobs which are picked up by standard Python threads. If the queue is full, `False` is simply returned by the firing method on the thread pool.

As such, there are a few things to say about the selection of proper values for the reactor.

For situations where it is expected that many long-running jobs might be executed by the reactor, `reactor_worker_hwm` should be increased or even set to 0 to bound it only by available memory. If set to zero, a close eye should be kept on memory consumption.

If many long-running jobs are expected and execution concurrency and performance are a concern, you may also increase the value for `reactor_worker_threads`. This will control the number of concurrent threads which are pulling jobs from the queue and executing them. Obviously, this bears a relationship to the speed at which the queue itself will fill up. The price to pay for this value is that each thread will contain a copy of Salt code needed to perform the requested action.
12.1 Orchestrate Runner

Executing states or highstate on a minion is perfect when you want to ensure that minion configured and running the way you want. Sometimes however you want to configure a set of minions all at once.

For example, if you want to set up a load balancer in front of a cluster of web servers you can ensure the load balancer is set up first, and then the same matching configuration is applied consistently across the whole cluster.

Orchestration is the way to do this.

12.1.1 The Orchestrate Runner

New in version 0.17.0.

Note: Orchestrate Deprecates OverState

The Orchestrate Runner (originally called the state.sls runner) offers all the functionality of the OverState, but with some advantages:

- All Requisites and Other Global State Arguments available in states can be used.
- The states/functions will also work on salt-ssh minions.

The Orchestrate Runner replaced the OverState system in Salt 2015.8.0.

The orchestrate runner generalizes the Salt state system to a Salt master context. Whereas the state.sls.state.highstate, et al. functions are concurrently and independently executed on each Salt minion, the state.orchestrate runner is executed on the master, giving it a master-level view and control over requisites, such as state ordering and conditionals. This allows for inter minion requisites, like ordering the application of states on different minions that must not happen simultaneously, or for halting the state run on all minions if a minion fails one of its states.

The state.sls, state.highstate, et al. functions allow you to statefully manage each minion and the state.orchestrate runner allows you to statefully manage your entire infrastructure.
Writing SLS Files

Orchestrate SLS files are stored in the same location as State SLS files. This means that both file_roots and gitfs_remotes impact what SLS files are available to the reactor and orchestrator.

It is recommended to keep reactor and orchestrator SLS files in their own uniquely named subdirectories such as _orch/, orch/, _orchestrate/, react/, _reactor/, etc. This will avoid duplicate naming and will help prevent confusion.

Executing the Orchestrate Runner

The Orchestrate Runner command format is the same as for the state.sls function, except that since it is a runner, it is executed with salt-run rather than salt. Assuming you have a state.sls file called /srv/salt/orch/webserver.sls the following command, run on the master, will apply the states defined in that file.

```bash
salt-run state.orchestrate orch.webserver
```

Note: state.orch is a synonym for state.orchestrate

Changed in version 2014.1.1: The runner function was renamed to state.orchestrate to avoid confusion with the state.sls execution function. In versions 0.17.0 through 2014.1.0, state.sls must be used.

Masterless Orchestration

New in version 2016.11.0.

To support salt orchestration on masterless minions, the Orchestrate Runner is available as an execution module. The syntax for masterless orchestration is exactly the same, but it uses the salt-call command and the minion configuration must contain the file_mode: local option. Alternatively, use salt-call --local on the command line.

```bash
salt-call --local state.orchestrate orch.webserver
```

Note: Masterless orchestration supports only the salt.state command in an sls file; it does not (currently) support the salt.function command.

Examples

Function

To execute a function, use salt.function:

```bash
#/srv/salt/orch/cleanfoo.sls

cmd.run:
  salt.function:
    - tgt: '*'
    - arg:
      - rm -rf /tmp/foo
```
salt-run state.orchestrate orch.cleanfoo

If you omit the "name" argument, the ID of the state will be the default name, or in the case of `salt.function`, the execution module function to run. You can specify the "name" argument to avoid conflicting IDs:

```yaml
copy_some_file:
  salt.function:
    - name: file.copy
    - tgt: '*'
    - arg:
      - /path/to/file
      - /tmp/copy_of_file
    - kwarg:
      remove_existing: true
```

Fail Functions

When running a remote execution function in orchestration, certain return values for those functions may indicate failure, while the function itself doesn't set a return code. For those circumstances, using a "fail function" allows for a more flexible means of assessing success or failure.

A fail function can be written as part of a custom execution module. The function should accept one argument, and return a boolean result. For example:

```python
def check_func_result(retval):
    if some_condition:
        return True
    else:
        return False
```

The function can then be referenced in orchestration SLS like so:

```yaml
do_stuff:
  salt.function:
    - name: modname.funcname
    - tgt: '*'
    - fail_function: mymod.check_func_result
```

**Important:** Fail functions run on the master, so they must be synced using `salt-run saltutil sync_modules`.

State

To execute a state, use `salt.state`.

```yaml
# /srv/salt/orch/webserver.sls
install_nginx:
  salt.state:
    - tgt: 'web*'
    - sls:
      - nginx
```

12.1. Orchestrate Runner
```
salt-run state.orchestrate orch.webserver
```

Highstate

To run a highstate, set `highstate: True` in your state config:

```
# /srv/salt/orch/web_setup.sls
webserver_setup:
  salt.state:
    - tgt: 'web*'
    - highstate: True
```

```
salt-run state.orchestrate orch.web_setup
```

Runner

To execute another runner, use `salt.runner`. For example to use the `cloud.profile` runner in your orchestration state additional options to replace values in the configured profile, use this:

```
# /srv/salt/orch/deploy.sls
create_instance:
  salt.runner:
    - name: cloud.profile
    - prof: cloud-centos
    - provider: cloud
    - instances:
      - server1
    - opts:
      - minion:
        master: master1
```

To get a more dynamic state, use Jinja variables together with inline pillar data. Using the same example but passing on pillar data, the state would be like this.

```
# /srv/salt/orch/deploy.sls
{% set servers = salt['pillar.get']( 'servers' , 'test' ) %}
{% set master = salt['pillar.get']( 'master' , 'salt' ) %}
create_instance:
  salt.runner:
    - name: cloud.profile
    - prof: cloud-centos
    - provider: cloud
    - instances:
      - {{ servers }}
    - opts:
      - minion:
        master: {{ master }}
```

To execute with pillar data.

```
salt-run state.orch orch.deploy pillar='{"servers": "newsystem1",
"master": "mymaster"}'
```
Return Codes in Runner/Wheel Jobs

New in version 2018.3.0.

State (salt.state) jobs are able to report failure via the state return dictionary. Remote execution (salt.function) jobs are able to report failure by setting a retcode key in the __context__ dictionary. However, runner (salt.runner) and wheel (salt.wheel) jobs would only report a False result when the runner/wheel function raised an exception. As of the 2018.3.0 release, it is now possible to set a retcode in runner and wheel functions just as you can do in remote execution functions. Here is some example pseudocode:

```python
def myrunner():
    ...
    # do stuff
    ...
    if some_error_condition:
        __context__['retcode'] = 1
    return result
```

This allows a custom runner/wheel function to report its failure so that requisites can accurately tell that a job has failed.

More Complex Orchestration

Many states/functions can be configured in a single file, which when combined with the full suite of Requisites and Other Global State Arguments, can be used to easily configure complex orchestration tasks. Additionally, the states/functions will be executed in the order in which they are defined, unless prevented from doing so by any Requisites and Other Global State Arguments, as is the default in SLS files since 0.17.0.

```yaml
bootstrap_servers:
salt.function:
    - name: cmd.run
    - tgt: 10.0.0.0/24
    - tgt_type: ipcidr
    - arg:
        - bootstrap

storage_setup:
salt.state:
    - tgt: 'role:storage'
    - tgt_type: grain
    - sls: ceph
    - require:
        - salt: webserver_setup

webserver_setup:
salt.state:
    - tgt: 'web*'
    - highstate: True
```

Given the above setup, the orchestration will be carried out as follows:

1. The shell command bootstrap will be executed on all minions in the 10.0.0.0/24 subnet.
2. A Highstate will be run on all minions whose ID starts with "web", since the storage_setup state requires it.
3. Finally, the ceph SLS target will be executed on all minions which have a grain called role with a value of storage.
12.1.2 Parsing Results Programmatically

Orchestration jobs return output in a specific data structure. That data structure is represented differently depending on the outputter used. With the default outputter for orchestration, you get a nice human-readable output. Assume the following orchestration SLS:

```yaml
good_state:
    salt.state:
        - tgt: myminion
        - sls: succeed_with_changes

bad_state:
    salt.state:
        - tgt: myminion
        - sls: fail_with_changes

mymod.myfunc:
    salt.function:
        - tgt: myminion

mymod.myfunc_false_result:
    salt.function:
        - tgt: myminion
```

Running this using the default outputter would produce output which looks like this:

```bash
fa5944a73aa8_master:
-----------------
ID: good_state
Function: salt.state
Result: True
Comment: States ran successfully. Updating myminion.
Started: 21:08:02.681604
Duration: 265.565 ms
Changes:
    myminion:
        ----------
        ID: test succeed with changes
        Function: test.succeed_with_changes
        Result: True
        Comment: Success!
        Started: 21:08:02.835893
        Duration: 0.375 ms
        Changes:
            testing:
                ----------
                new:
                    Something pretended to change
                old:
```

(continues on next page)
Unchanged

Summary for myminion
-------------
Succeeded: 1 (changed=1)
Failed: 0
-------------
Total states run: 1
Total run time: 0.375 ms

ID: bad_state
Function: salt.state
Result: False
Comment: Run failed on minions: myminion
Started: 21:08:02.947702
Duration: 177.01 ms
Changes:

myminion:

ID: test fail with changes
Function: test.fail_with_changes
Result: False
Comment: Failure!
Started: 21:08:03.116634
Duration: 0.502 ms
Changes:

testing:

ID: mymod.myfunc
Function: salt.function
Result: True
Comment: Function ran successfully. Function mymod.myfunc ran on myminion.
Started: 21:08:03.125011
Duration: 159.488 ms
Changes:

myminion: True

ID: mymod.myfunc_false_result
Function: salt.function
Result: False
Comment: Running function mymod.myfunc_false_result failed on minions: myminion.

Function mymod.myfunc_false_result ran on myminion.
Summary for fa5944a73aa8_master
-------------
Succeeded: 2 (changed=4)
Failed: 2
-------------
Total states run: 4
Total run time: 778.850 ms

However, using the json outputter, you can get the output in an easily loadable and parsable format:

```
salt-run state.orchestrate test --out=json
```
"salt_|-bad_state_|-bad_state_|-state": {
    "comment": "Run failed on minions: test",
    "name": "bad_state",
    "start_time": "21:35:17.136511",
    "result": false,
    "duration": 197.635,
    "__run_num__": 1,
    "__jid__": "20171130213517202203",
    "__sls__": "test",
    "changes": {
        "ret": {
            "myminion": {
                "test_|-test fail with changes_|-test fail with changes_|-
                --fail_with_changes": {
                    "comment": "Failure!",
                    "name": "test fail with changes",
                    "start_time": "21:35:17.326268",
                    "result": false,
                    "duration": 0.509,
                    "__run_num__": 0,
                    "__sls__": "fail_with_changes",
                    "changes": {
                        "testing": {
                            "new": "Something pretended to change",
                            "old": "Unchanged"
                        }
                    },
                    "__id__": "test fail with changes"
                }
            }
        },
        "out": "highstate"
    },
    "__id__": "bad_state"
},
"salt_|-mymod.myfunc_|-mymod.myfunc_|-function": {
    "comment": "Function ran successfully. Function mymod.myfunc ran on
    myminion."
},
"name": "mymod.myfunc",
"start_time": "21:35:17.334373",
"result": true,
"duration": 151.716,
"__run_num__": 2,
"__jid__": "20171130213517361706",
"__sls__": "test",
"changes": {
    "ret": {
        "myminion": true
    },
    "out": "highstate"
},
"__id__": "mymod.myfunc"
},
"salt_|-mymod.myfunc_false_result-mymod.myfunc_false_result-function": {
    "comment": "Running function mymod.myfunc_false_result failed on
    minions: myminion. Function mymod.myfunc_false_result ran on myminion."
}
The 2018.3.0 release includes a couple fixes to make parsing this data easier and more accurate. The first is the ability to set a *return code* in a custom runner or wheel function, as noted above. The second is a change to how failures are included in the return data. Prior to the 2018.3.0 release, minions that failed a *salt.state* orchestration job would show up in the comment field of the return data, in a human-readable string that was not easily parsed. They are now included in the *changes* dictionary alongside the minions that succeeded. In addition, *salt.function* jobs which failed because the *fail function* returned *False* used to handle their failures in the same way *salt.state* jobs did, and this has likewise been corrected.

**Running States on the Master without a Minion**

The orchestrate runner can be used to execute states on the master without using a minion. For example, assume that *salt://foo.sls* contains the following SLS:

```
/etc/foo.conf:
  file.managed:
    - source: salt://files/foo.conf
    - mode: 0600
```

In this case, running `salt-run state.orchestrate foo` would be the equivalent of running a *state.sls* job, but it would execute on the master only, and would not require a minion daemon to be running on the master. This is not technically orchestration, but it can be useful in certain use cases.

**Limitations**

Only one SLS target can be run at a time using this method, while using *state.sls* allows for multiple SLS files to be passed in a comma-separated list.
This section contains details on Solaris specific quirks and workarounds.

Note: Solaris refers to both Solaris 10 compatible platforms like Solaris 10, illumos, SmartOS, OmniOS, OpenIndiana,... and Oracle Solaris 11 platforms.

### 13.1 Solaris-specific Behaviour

Salt is capable of managing Solaris systems, however due to various differences between the operating systems, there are some things you need to keep in mind.

This document will contain any quirks that apply across Salt or limitations in some modules.

#### 13.1.1 FQDN/UQDN

On Solaris platforms the FQDN will not always be properly detected. If an IPv6 address is configured python's `socket.getfqdn()` fails to return a FQDN and returns the nodename instead. For a full breakdown see the following issue on github: #37027

#### 13.1.2 Grains

Not all grains are available or some have empty or 0 as value. Mostly grains that are dependent on hardware discovery like: - `num_gpus` - `gpus`

Also some resolver related grains like: - `domain` - `dns:options` - `dns:sortlist`
14.1 Getting Started

Salt SSH is very easy to use, simply set up a basic **roster** file of the systems to connect to and run **salt-ssh** commands in a similar way as standard **salt** commands.

- Salt ssh is considered production ready in version 2014.7.0
- Python is required on the remote system (unless using the `-r` option to send raw ssh commands). The python version requirement is the same as that for a standard Salt installation.
- On many systems, the **salt-ssh** executable will be in its own package, usually named **salt-ssh**
- The Salt SSH system does not supersede the standard Salt communication systems, it simply offers an SSH-based alternative that does not require ZeroMQ and a remote agent. Be aware that since all communication with Salt SSH is executed via SSH it is substantially slower than standard Salt with ZeroMQ.
- At the moment fileserver operations must be wrapped to ensure that the relevant files are delivered with the **salt-ssh** commands. The state module is an exception, which compiles the state run on the master, and in the process finds all the references to `salt://` paths and copies those files down in the same tarball as the state run. However, needed fileserver wrappers are still under development.

14.2 Salt SSH Roster

The roster system in Salt allows for remote minions to be easily defined.

**Note:** See the **SSH roster docs** for more details.

Simply create the roster file, the default location is `/etc/salt/roster`:

```
web1: 192.168.42.1
```

This is a very basic roster file where a Salt ID is being assigned to an IP address. A more elaborate roster can be created:

```
web1:
  host: 192.168.42.1  # The IP addr or DNS hostname
  user: fred          # Remote executions will be executed as user fred
  passwd: foobarbaz   # The password to use for login, if omitted, keys are used
  sudo: True          # Whether to sudo to root, not enabled by default
web2:
  host: 192.168.42.2
```
Note: sudo works only if NOPASSWD is set for user in /etc/sudoers: fred ALL=(ALL) NOPASSWD: ALL

14.3 Deploy ssh key for salt-ssh

By default, salt-ssh will generate key pairs for ssh, the default path will be /etc/salt/pki/master/ssh/salt-ssh.rsa. The key generation happens when you run salt-ssh for the first time.

You can use ssh-copy-id, (the OpenSSH key deployment tool) to deploy keys to your servers.

```
ssh-copy-id -i /etc/salt/pki/master/ssh/salt-ssh.rsa.pub user@server.demo.com
```

One could also create a simple shell script, named salt-ssh-copy-id.sh as follows:

```
#!/bin/bash
if [ -z $1 ]; then
echo $0 user@host.com
exit 0
fi
ssh-copy-id -i /etc/salt/pki/master/ssh/salt-ssh.rsa.pub $1
```

Note: Be certain to chmod +x salt-ssh-copy-id.sh.

```
./salt-ssh-copy-id.sh user@server1.host.com
./salt-ssh-copy-id.sh user@server2.host.com
```

Once keys are successfully deployed, salt-ssh can be used to control them.
Alternatively ssh agent forwarding can be used by setting the priv to agent-forwarding.

14.4 Calling Salt SSH

Note: salt-ssh on target hosts without Python 3

The salt-ssh command requires at least python 3, which is not installed by default on some target hosts. An easy workaround in this situation is to use the -r option to run a raw shell command that installs python26:

```
salt-ssh centos-5-minion -r 'yum -y install epel-release ; yum -y install python26'
```

Note: salt-ssh on systems with Python 3.x

Salt, before the 2017.7.0 release, does not support Python 3.x which is the default on for example the popular 16.04 LTS release of Ubuntu. An easy workaround for this scenario is to use the -r option similar to the example above:

```
salt-ssh ubuntu-1604-minion -r 'apt update ; apt install -y python-minimal'
```

The salt-ssh command can be easily executed in the same way as a salt command:
salt-ssh '*' test.version

Commands with salt-ssh follow the same syntax as the salt command. The standard salt functions are available! The output is the same as salt and many of the same flags are available. Please see http://docs.saltstack.com/ref/cli/salt-ssh.html for all of the available options.

14.4.1 Raw Shell Calls

By default salt-ssh runs Salt execution modules on the remote system, but salt-ssh can also execute raw shell commands:
salt-ssh '*' -r 'ifconfig'

14.5 States Via Salt SSH

The Salt State system can also be used with salt-ssh. The state system abstracts the same interface to the user in salt-ssh as it does when using standard salt. The intent is that Salt Formulas defined for standard salt will work seamlessly with salt-ssh and vice-versa.

The standard Salt States walkthroughs function by simply replacing salt commands with salt-ssh.

14.6 Targeting with Salt SSH

Due to the fact that the targeting approach differs in salt-ssh, only glob and regex targets are supported as of this writing, the remaining target systems still need to be implemented.

Note: By default, Grains are settable through salt-ssh. By default, these grains will not be persisted across reboots.

See the "thin_dir" setting in Roster documentation for more details.

14.7 Configuring Salt SSH

Salt SSH takes its configuration from a master configuration file. Normally, this file is in /etc/salt/master. If one wishes to use a customized configuration file, the -c option to Salt SSH facilitates passing in a directory to look inside for a configuration file named master.
14.7.1 Minion Config

New in version 2015.5.1.

Minion config options can be defined globally using the master configuration option `ssh_minion_opts`. It can also be defined on a per-minion basis with the `minion_opts` entry in the roster.

14.8 Running Salt SSH as non-root user

By default, Salt read all the configuration from `/etc/salt/`. If you are running Salt SSH with a regular user you have to modify some paths or you will get "Permission denied" messages. You have to modify two parameters: `pki_dir` and `cachedir`. Those should point to a full path writable for the user.

It’s recommended not to modify `/etc/salt` for this purpose. Create a private copy of `/etc/salt` for the user and run the command with `-c /new/config/path`.

14.9 Define CLI Options with Saltfile

If you are commonly passing in CLI options to `salt-ssh`, you can create a Saltfile to automatically use these options. This is common if you’re managing several different salt projects on the same server.

So you can cd into a directory that has a Saltfile with the following YAML contents:

```yaml
salt-ssh:
  config_dir: path/to/config/dir
  ssh_log_file: salt-ssh.log
  ssh_max_procs: 30
  ssh_wipe: True
```

Instead of having to call `salt-ssh --config-dir=path/to/config/dir --max-procs=30 --wipe \* test.version` you can call `salt-ssh \* test.version`.

Boolean-style options should be specified in their YAML representation.

**Note:** The option keys specified must match the destination attributes for the options specified in the parser `salt.utils.parsers.SaltSSHOptionParser`. For example, in the case of the `--wipe` command line option, its dest is configured to be `ssh_wipe` and thus this is what should be configured in the Saltfile. Using the names of flags for this option, being `wipe: True` or `w: True`, will not work.

**Note:** For the Saltfile to be automatically detected it needs to be named `Saltfile` with a capital S and be readable by the user running salt-ssh.

At last you can create `~/.salt/Saltfile` and `salt-ssh` will automatically load it by default.
14.10 Advanced options with salt-ssh

Salt’s ability to allow users to have custom grains and custom modules is also applicable to using salt-ssh. This is done through first packing the custom grains into the thin tarball before it is deployed on the system.

For this to happen, the config file must be explicit enough to indicate where the custom grains are located on the machine like so:

```yaml
file_client: local
file_roots:
  base:
    - /home/user/.salt
    - /home/user/.salt/_states
    - /home/user/.salt/_grains
module_dirs:
  - /home/user/.salt
pillar_roots:
  base:
    - /home/user/.salt/_pillar
root_dir: /tmp/.salt-root
```

It’s better to be explicit rather than implicit in this situation. This will allow urls all under salt:// to be resolved such as salt://_grains/custom_grain.py.

One can confirm this action by executing a properly setup salt-ssh minion with `salt-ssh minion grains.items`. During this process, a saltutil.sync_all is ran to discover the thin tarball and then consumed. Output similar to this indicates a successful sync with custom grains.

```yaml
local:  
        -------------
        ...
        executors:
        grains:
          - grains.custom_grain
        log_handlers:
        ...
```

This is especially important when using a custom file_roots that differ from /etc/salt/.

Note: Please see https://docs.saltstack.com/en/latest/topics/grains/ for more information on grains and custom grains.

14.11 Debugging salt-ssh

One common approach for debugging salt-ssh is to simply use the tarball that salt ships to the remote machine and call salt-call directly.

To determine the location of salt-call, simply run salt-ssh with the -ltrace flag and look for a line containing the string, SALT_ARGV. This contains the salt-call command that salt-ssh attempted to execute.

It is recommended that one modify this command a bit by removing the -l quiet, --metadata and --output json to get a better idea of what’s going on the target system.
14.11.1 Salt Rosters

Salt rosters are pluggable systems added in Salt 0.17.0 to facilitate the `salt-ssh` system. The roster system was created because `salt-ssh` needs a means to identify which systems need to be targeted for execution.

See also:

`roster modules`

**Note:** The Roster System is not needed or used in standard Salt because the master does not need to be initially aware of target systems, since the Salt Minion checks itself into the master.

Since the roster system is pluggable, it can be easily augmented to attach to any existing systems to gather information about what servers are presently available and should be attached to by `salt-ssh`. By default the roster file is located at `/etc/salt/roster`.

**How Rosters Work**

The roster system compiles a data structure internally referred to as `targets`. The `targets` is a list of target systems and attributes about how to connect to said systems. The only requirement for a roster module in Salt is to return the `targets` data structure.

**Targets Data**

The information which can be stored in a roster `target` is the following:

```
<Salt ID>:  # The id to reference the target system with
    host:    # The IP address or DNS name of the remote host
    user:    # The user to log in as
    passwd:  # The password to log in with

    # Optional parameters
    port:     # The target system's ssh port number
    sudo:     # Boolean to run command via sudo
    sudo_user: # Str: Set this to execute Salt as a sudo user other than root.
                # This user must be in the same system group as the remote user
                # that is used to login and is specified above. Alternatively,
                # the user must be a super-user.
    tty:      # Boolean: Set this option to True if sudo is also set to
                # True and requiretty is also set on the target system
    priv:     # File path to ssh private key, defaults to salt-ssh.rsa
                # The priv can also be set to agent-forwarding to not specify
                # a key, but use ssh agent forwarding
    priv_passwd: # Passphrase for ssh private key
    timeout:  # Number of seconds to wait for response when establishing
                # an SSH connection
    minion_opts: # Dictionary of minion opts
    thin_dir:   # The target system's storage directory for Salt
                # components. Defaults to /tmp/salt-<hash>.
    cmd_umask: # umask to enforce for the salt-call command. Should be in
                # octal (so for 00077 in YAML you would do 0077, or 63)
    ssh_pre_flight: # Path to a script that will run before all other salt-ssh
                    # commands. Will only run the first time when the thin dir
                    # does not exist, unless --pre-flight is passed to salt-ssh
```
# command or ssh_run_pre_flight is set to true in the config
# Added in 3001 Release.

**set_path:**  # Set the path environment variable, to ensure the expected python binary is in the salt-ssh path, when running the command.
# Example: `$PATH:/usr/local/bin/`. Added in 3001 Release.

**ssh_options:**  # List of options (as `option=argument`) to pass to `ssh`.

**ssh_pre_flight**

A Salt-SSH roster option `ssh_pre_flight` was added in the 3001 release. This enables you to run a script before Salt-SSH tries to run any commands. You can set this option in the roster for a specific minion or use the `roster_defaults` to set it for all minions. This script will only run if the thin dir is not currently on the minion. This means it will only run on the first run of salt-ssh or if you have recently wiped out your thin dir. If you want to intentionally run the script again you have a couple of options:

- Wipe out your thin dir by using the `-w` salt-ssh arg.
- Set `ssh_run_pre_flight` to True in the config
- Run salt-ssh with the `--pre-flight` arg.

**Target Defaults**

The `roster_defaults` dictionary in the master config is used to set the default login variables for minions in the roster so that the same arguments do not need to be passed with commandline arguments.

```plaintext
roster_defaults:
  user: daniel
  sudo: True
  priv: /root/.ssh/id_rsa
  tty: True
```

**thin_dir**

Salt needs to upload a standalone environment to the target system, and this defaults to `/tmp/salt-<hash>`. This directory will be cleaned up per normal systems operation.

If you need a persistent Salt environment, for instance to set persistent grains, this value will need to be changed.

14.11.2 SSH Ext Alternatives

In the 2019.2.0 release the `ssh_ext_alternatives` feature was added. This allows salt-ssh to work across different supported python versions. You will need to ensure you have the following:

- Salt is installed, with all required dependencies for the Python version.
- Everything needs to be importable from the respective Python environment.

To enable using this feature you will need to edit the master configuration similar to below:
### ssh_ext_alternatives:

- **2019.2:**
  - **py-version:** [2, 7]  
  - **path:** /opt/2019.2/salt  
  - **dependencies:**
    - jinja2: /opt/jinja2
    - yaml: /opt/yaml
    - tornado: /opt/tornado
    - msgpack: /opt/msgpack
    - certifi: /opt/certifi
    - singledispatch: /opt/singledispatch.py
    - singledispatch_helpers: /opt/singledispatch_helpers.py
    - markupsafe: /opt/markupsafe
    - backports_abc: /opt/backports_abc.py

**Warning:** When using Salt versions ≥ 3001 and Python 2 is your py-version you need to use an older version of Salt that supports Python 2. For example, if using Salt-SSH version 3001 and you do not want to install Python 3 on your target host you can use `ssh_ext_alternatives`'s path option. This option needs to point to a 2019.2.3 Salt installation directory on your Salt-SSH host, which still supports Python 2.

### auto_detect

In the 3001 release the auto_detect feature was added for `ssh_ext_alternatives`. This allows salt-ssh to automatically detect the path to all of your dependencies and does not require you to define them under `dependencies`.

- **2019.2:**
  - **py-version:** [2, 7]  
  - **path:** /opt/2019.2/salt  
  - **auto_detect:** True  
  - **py_bin:** /usr/bin/python2.7  

If `py_bin` is not set alongside `auto_detect`, it will attempt to auto detect the dependencies using the major version set in py-version. For example if you have [2, 7] set as your py-version, it will attempt to use the binary python2.

You can also use `auto_detect` and `dependencies` together.

- **2019.2:**
  - **py-version:** [2, 7]  
  - **path:** /opt/2019.2/salt  
  - **auto_detect:** True  
  - **dependencies:**
    - jinja2: /opt/jinja2

If a dependency is defined in the `dependencies` list `ssh_ext_alternatives` will use this dependency, instead of the path that `auto_detect` finds. For example, if you define /opt/jinja2 under your `dependencies` for jinja2, it will not try to autodetect the file path to the jinja2 module, and will favor /opt/jinja2.
14.12 Different Python Versions

The 3001 release removed python 2 support in Salt. Even though this python 2 support is being dropped we have provided multiple ways to work around this with Salt-SSH. You can use the following options:

- `ssh_pre_flight`
- Using the Salt-SSH raw shell calls to install Python3.
- Use an older version of Salt on the target host that still supports Python 2 using the feature `SSH ext alternatives`
The original Salt Reactor is based on the idea of listening for a specific event and then reacting to it. This model comes with many logical limitations, for instance it is very difficult (and hacky) to fire a reaction based on aggregate data or based on multiple events.

The Thorium reactor is intended to alleviate this problem in a very elegant way. Instead of using extensive jinja routines or complex python sls files the aggregation of data and the determination of what should run becomes isolated to the sls data logic, makes the definitions much cleaner.

15.1 Starting the Thorium Engine

To enable the thorium engine add the following configuration to the engines section of your Salt Master or Minion configuration file and restart the daemon:

```
environments:
  - thorium: {}
```

15.2 Thorium Modules

Because of its specialized nature, Thorium uses its own set of modules. However, many of these modules are designed to wrap the more commonly-used Salt subsystems. These modules are:

- local: Execution modules
- runner: Runner modules
- wheel: Wheel modules

There are other modules that ship with Thorium as well. Some of these will be highlighted later in this document.

15.3 Writing Thorium Formulas

Like some other Salt subsystems, Thorium uses its own directory structure. The default location for this structure is `/srv/thorium/`, but it can be changed using the `thorium_roots` setting in the `master` configuration file.

This would explicitly set the roots to the default:

```
thorium_roots:
  base:
    - /srv/thorium
```
Example thorium_roots configuration:

```yaml
thorium_roots:
  base:
    - /etc/salt/thorium
```

It is also possible to use gitfs with Thorium, using the thoriumenv or thorium_top settings.

Example using thorium_top:

```yaml
thorium_top: salt://thorium/top.sls
gitfs_provider: pygit2
gitfs_remotes:
  - git@github.com:user/repo.git:
    - name: salt-backend
    - root: salt
    - base: master
  - git@github.com:user/repo.git:
    - name: thorium-backend
    - root: thorium
    - base: master
    - mountpoint: salt://thorium
```

**Note:** When using this method don't forget to prepend the mountpoint to files served by this repo, for example top.sls:

```yaml
base:
  '*':
    - thorium.key_clean
```

Example using thoriumenv:

```yaml
thoriumenv: thorium
gitfs_provider: pygit2
gitfs_remotes:
  - git@github.com:user/repo.git:
    - name: salt-backend
    - root: salt
    - base: master
  - git@github.com:user/repo.git:
    - name: thorium-backend
    - root: thorium
    - saltenv:
      - thorium:
        - ref: master
```

**Note:** When using this method all state will run under the defined environment, for example top.sls:

```yaml
thorium:
  '*':
    - key_clean
15.3.1 The Thorium top.sls File

Thorium uses its own top.sls file, which follows the same convention as is found in /srv/salt:

```
<srv>:
  <target>:
    - <formula 1>
    - <formula 2>
    - <etc...>
```

For instance, a top.sls using a standard base environment and a single Thorium formula called key_clean, would look like:

```
base:
  '*':
    - key_clean
```

Take note that the target in a Thorium top.sls is not used; it only exists to follow the same convention as other top.sls files. Leave this set to '*' in your own Thorium top.sls.

15.3.2 Thorium Formula Files

Thorium SLS files are processed by the same state compiler that processes Salt state files. This means that features like requisites, templates, and so on are available.

Let's take a look at an example, and then discuss each component of it. This formula uses Thorium to detect when a minion has disappeared and then deletes the key from the master when the minion has been gone for 60 seconds:

```
statreg:
  status.reg

keydel:
  key.timeout:
    - delete: 60
    - require:
      - status: statreg
```

There are two stanzas in this formula, whose IDs are statreg and keydel. The first stanza, statreg, tells Thorium to keep track of minion status beacons in its register. We'll talk more about the register in a moment.

The second stanza, keydel, is the one that does the real work. It uses the key module to apply an expiration (using the timeout function) to a minion. Because delete is set to 60, this is a 60 second expiration. If a minion does not check in at least once every 60 seconds, its key will be deleted from the master. This particular function also allows you to use reject instead of delete, allowing for a minion to be rejected instead of deleted if it does not check in within the specified time period.

There is also a require requisite in this stanza. It states that the key.timeout function will not be called unless the status.reg function in the statreg codeblock has been successfully called first.
15.3.3 Thorium Links to Beacons

The above example was added in the 2016.11.0 release of Salt and makes use of the `status` beacon also added in the 2016.11.0 release. For the above Thorium state to function properly you will also need to enable the `status` beacon in the minion configuration file:

```yaml
beacons:
  status:
    - interval: 10
```

This will cause the minion to use the status beacon to check in with the master every 10 seconds.

15.4 The Thorium Register

In order to keep track of information, Thorium uses an in-memory register (or rather, collection of registers) on the master. These registers are only populated when told to by a formula, and they normally will be erased when the master is restarted. It is possible to persist the registers to disk, but we'll get to that in a moment.

The example above uses `status.reg` to populate a register for you, which is automatically used by the `key.timeout` function. However, you can set your own register values as well, using the `reg` module.

Because Thorium watches the event bus, the `reg` module is designed to look for user-specified tags, and then extract data from the payload of events that match those tags. For instance, the following stanza will look for an event with a tag of `my/custom/event`:

```yaml
foo:
  reg.list:
    - add: bar
    - match: my/custom/event
```

When such an event is found, the data found in the payload dictionary key of `bar` will be stored in a register called `foo`. This register will store that data in a `list`. You may also use `reg.set` to add data to a `set()` instead.

If you would like to see a copy of the register as it is stored in memory, you can use the `file.save` function:

```yaml
myreg:
  file.save
```

In this case, each time the register is updated, a copy will be saved in JSON format at `/var/cache/salt/master/thorium/saves/myreg`. If you would like to see when particular events are added to a list-type register, you may add a `stamp` option to `reg.list` (but not `reg.set`). With the above two stanzas put together, this would look like:

```yaml
foo:
  reg.list:
    - add: bar
    - match: my/custom/event
    - stamp: True
myreg:
  file.save
```

If you would like to only keep a certain number of the most recent register entries, you may also add a `prune` option to `reg.list` (but not `reg.set`):
foo:
  reg.list:
    - add: bar
    - match: my/custom/event
    - stamp: True
    - prune: 50

This example will only keep the 50 most recent entries in the `foo` register.

### 15.4.1 Using Register Data

Putting data in a register is useless if you don’t do anything with it. The `check` module is designed to examine register data and determine whether it matches the given parameters. For instance, the `check.contains` function will return `True` if the given `value` is contained in the specified register:

```yaml
foo:
  reg.list:
    - add: bar
    - match: my/custom/event
    - stamp: True
    - prune: 50
  check.contains:
    - value: somedata
```

Used with a `require` requisite, we can call one of the wrapper modules and perform an operation. For example:

```yaml
shell_test:
  local.cmd:
    - tgt: dufresne
    - func: cmd.run
    - arg:
      - echo 'thorium success' > /tmp/thorium.txt
    - require:
      - check: foo
```

This stanza will only run if the `check.contains` function under the `foo` ID returns true (meaning the match was found).

There are a number of other functions in the `check` module which use different means of comparing values:

- **gt**: Check whether the register entry is greater than the given value
- **gte**: Check whether the register entry is greater than or equal to the given value
- **lt**: Check whether the register entry is less than the given value
- **lte**: Check whether the register entry is less than or equal to the given value
- **eq**: Check whether the register entry is equal to the given value
- **ne**: Check whether the register entry is not equal to the given value

There is also a function called `check.event` which does not examine the register. Instead, it looks directly at an event as it is coming in on the event bus, and returns `True` if that event’s tag matches. For example:

```yaml
salt/foo/*/bar:
  check.event
```

(continues on next page)
This formula will look for an event whose tag is `salt/foo/<anything>/bar` and if it comes in, issue a `test.version` to all minions.

### 15.4.2 Register Persistence

It is possible to persist the register data to disk when a master is stopped gracefully, and reload it from disk when the master starts up again. This functionality is provided by the returner subsystem, and is enabled whenever any returner containing a `load_reg` and a `save_reg` function is used.
16.1 Configuration

Salt Cloud provides a powerful interface to interact with cloud hosts. This interface is tightly integrated with Salt, and new virtual machines are automatically connected to your Salt master after creation.

Since Salt Cloud is designed to be an automated system, most configuration is done using the following YAML configuration files:

- `/etc/salt/cloud`: The main configuration file, contains global settings that apply to all cloud hosts. See Salt Cloud Configuration.

- `/etc/salt/cloud.providers.d/*.conf`: Contains settings that configure a specific cloud host, such as credentials, region settings, and so on. Since configuration varies significantly between each cloud host, a separate file should be created for each cloud host. In Salt Cloud, a provider is synonymous with a cloud host (Amazon EC2, Google Compute Engine, Rackspace, and so on). See Provider Specifics.

- `/etc/salt/cloud.profiles.d/*.conf`: Contains settings that define a specific VM type. A profile defines the systems specs and image, and any other settings that are specific to this VM type. Each specific VM type is called a profile, and multiple profiles can be defined in a profile file. Each profile references a parent provider that defines the cloud host in which the VM is created (the provider settings are in the provider configuration explained above). Based on your needs, you might define different profiles for web servers, database servers, and so on. See VM Profiles.

16.2 Configuration Inheritance

Configuration settings are inherited in order from the cloud config => providers => profile.

For example, if you wanted to use the same image for all virtual machines for a specific provider, the image name could be placed in the provider file. This value is inherited by all profiles that use that provider, but is overridden if a image name is defined in the profile.

Most configuration settings can be defined in any file, the main difference being how that setting is inherited.
16.3 QuickStart

The Salt Cloud Quickstart walks you through defining a provider, a VM profile, and shows you how to create virtual machines using Salt Cloud.

Note that if you installed Salt via Salt Bootstrap, it may not have automatically installed salt-cloud for you. Use your distribution's package manager to install the salt-cloud package from the same repo that you used to install Salt. These repos will automatically be setup by Salt Bootstrap.

Alternatively, the -L option can be passed to the Salt Bootstrap script when installing Salt. The -L option will install salt-cloud and the required libcloud package.

16.4 Using Salt Cloud

16.4.1 salt-cloud

Provision virtual machines in the cloud with Salt

Synopsis

```
salt-cloud -m /etc/salt/cloud.map
salt-cloud -m /etc/salt/cloud.map NAME
salt-cloud -m /etc/salt/cloud.map NAME1 NAME2
salt-cloud -p PROFILE NAME
salt-cloud -p PROFILE NAME1 NAME2 NAME3 NAME4 NAME5 NAME6
```

Description

Salt Cloud is the system used to provision virtual machines on various public clouds via a cleanly controlled profile and mapping system.

Options

```
--version
    Print the version of Salt that is running.

--versions-report
    Show program's dependencies and version number, and then exit

-h, --help
    Show the help message and exit

-c CONFIG_DIR, --config-dir=CONFIG_dir
    The location of the Salt configuration directory. This directory contains the configuration files for Salt master and minions. The default location on most systems is /etc/salt.
```
Execution Options

- **L** LOCATION, **--location**=LOCATION
  Specify which region to connect to.

- **a** ACTION, **--action**=ACTION
  Perform an action that may be specific to this cloud provider. This argument requires one or more instance names to be specified.

- **f** <FUNC-NAME> <PROVIDER>, **--function**=<FUNC-NAME> <PROVIDER>
  Perform an function that may be specific to this cloud provider, that does not apply to an instance. This argument requires a provider to be specified (i.e.: nova).

- **p** PROFILE, **--profile**=PROFILE
  Select a single profile to build the named cloud VMs from. The profile must be defined in the specified profiles file.

- **m** MAP, **--map**=MAP
  Specify a map file to use. If used without any other options, this option will ensure that all of the mapped VMs are created. If the named VM already exists then it will be skipped.

- **H**, **--hard**
  When specifying a map file, the default behavior is to ensure that all of the VMs specified in the map file are created. If the --hard option is set, then any VMs that exist on configured cloud providers that are not specified in the map file will be destroyed. Be advised that this can be a destructive operation and should be used with care.

- **d**, **--destroy**
  Pass in the name(s) of VMs to destroy, salt-cloud will search the configured cloud providers for the specified names and destroy the VMs. Be advised that this is a destructive operation and should be used with care. Can be be used in conjunction with the -m option to specify a map of VMs to be deleted.

- **P**, **--parallel**
  Normally when building many cloud VMs they are executed serially. The -P option will run each cloud vm build in a separate process allowing for large groups of VMs to be build at once.

  Be advised that some cloud provider's systems don't seem to be well suited for this influx of vm creation. When creating large groups of VMs watch the cloud provider carefully.

- **u**, **--update-bootstrap**
  Update salt-bootstrap to the latest stable bootstrap release.

- **y**, **--assume-yes**
  Default yes in answer to all confirmation questions.

- **k**, **--keep-tmp**
  Do not remove files from /tmp/ after deploy.sh finishes.

- **--show-deploy-args**
  Include the options used to deploy the minion in the data returned.

- **--script-args**=SCRIPT_ARGS
  Script arguments to be fed to the bootstrap script when deploying the VM.
Query Options

- **Q, --query**
  Execute a query and return some information about the nodes running on configured cloud providers.

- **F, --full-query**
  Execute a query and print out all available information about all cloud VMs. Can be used in conjunction with -m to display only information about the specified map.

- **S, --select-query**
  Execute a query and print out selected information about all cloud VMs. Can be used in conjunction with -m to display only information about the specified map.

--list-providers
Display a list of configured providers.

--list-profiles
New in version 2014.7.0.
Display a list of configured profiles. Pass in a cloud provider to view the provider's associated profiles, such as digitalocean, or pass in all to list all the configured profiles.

Cloud Providers Listings

--list-locations=LIST_LOCATIONS
Display a list of locations available in configured cloud providers. Pass the cloud provider that available locations are desired on, such as "linode", or pass "all" to list locations for all configured cloud providers.

--list-images=LIST_IMAGES
Display a list of images available in configured cloud providers. Pass the cloud provider that available images are desired on, such as "linode", or pass "all" to list images for all configured cloud providers.

--list-sizes=LIST_SIZES
Display a list of sizes available in configured cloud providers. Pass the cloud provider that available sizes are desired on, such as "AWS", or pass "all" to list sizes for all configured cloud providers.

Cloud Credentials

--set-password=<USERNAME> <PROVIDER>
Configure password for a cloud provider and save it to the keyring. PROVIDER can be specified with or without a driver, for example: "--set-password bob rackspace" or more specific "--set-password bob rackspace:openstack" DEPRECATED!

Output Options

--out
Pass in an alternative outputter to display the return of data. This outputter can be any of the available outputters:

    highstate, json, key, overstatestage, pprint, raw, txt, yaml, and many others.

Some outputters are formatted only for data returned from specific functions. If an outputter is used that does not support the data passed into it, then Salt will fall back on the pprint outputter and display the return data using the Python pprint standard library module.
--out-indent  OUTPUT_INDENT, --output-indent  OUTPUT_INDENT
Print the output indented by the provided value in spaces. Negative values disable indentation. Only applicable in oututters that support indentation.

--out-file=OUTPUT_FILE, --output-file=OUTPUT_FILE
Write the output to the specified file.

--out-file-append, --output-file-append
Append the output to the specified file.

--no-color
Disable all colored output

--force-color
Force colored output

Note: When using colored output the color codes are as follows:
green denotes success, red denotes failure, blue denotes changes and success and yellow denotes a expected future change in configuration.

--state-output=STATE_OUTPUT, --state_output=STATE_OUTPUT
Override the configured state_output value for minion output. One of 'full', 'terse', 'mixed', 'changes' or 'filter'. Default: 'none'.

--state-verbose=STATE_VERBOSE, --state_verbose=STATE_VERBOSE
Override the configured state_verbose value for minion output. Set to True or False. Default: none.

Examples

To create 4 VMs named web1, web2, db1, and db2 from specified profiles:
salt-cloud -p fedora_rackspace web1 web2 db1 db2

To read in a map file and create all VMs specified therein:
salt-cloud -m /path/to/cloud.map

To read in a map file and create all VMs specified therein in parallel:
salt-cloud -m /path/to/cloud.map -P

To delete any VMs specified in the map file:
salt-cloud -m /path/to/cloud.map -d

To delete any VMs NOT specified in the map file:
salt-cloud -m /path/to/cloud.map -H

To display the status of all VMs specified in the map file:
salt-cloud -m /path/to/cloud.map -Q
See also

salt-cloud(7) salt(7) salt-master(1) salt-minion(1)

16.4.2 Salt Cloud basic usage

Salt Cloud needs, at least, one configured Provider and Profile to be functional.

Creating a VM

To create a VM with salt cloud, use command:

```
salt-cloud -p <profile> name_of_vm
```

Assuming there is a profile configured as following:

```
fedora_rackspace:
    provider: my-rackspace-config
    image: Fedora 17
    size: 256 server
    script: bootstrap-salt
```

Then, the command to create new VM named fedora_http_01 is:

```
salt-cloud -p fedora_rackspace fedora_http_01
```

Destroying a VM

To destroy a created-by-salt-cloud VM, use command:

```
salt-cloud -d name_of_vm
```

For example, to delete the VM created on above example, use:

```
salt-cloud -d fedora_http_01
```

16.4.3 VM Profiles

Salt cloud designates virtual machines inside the profile configuration file. The profile configuration file defaults to /etc/salt/cloud.profiles and is a yaml configuration. The syntax for declaring profiles is simple:

```
fedora_rackspace:
    provider: my-rackspace-config
    image: Fedora 17
    size: 256 server
    script: bootstrap-salt
```

It should be noted that the script option defaults to bootstrap-salt, and does not normally need to be specified. Further examples in this document will not show the script option.

A few key pieces of information need to be declared and can change based on the cloud provider. A number of additional parameters can also be inserted:
centos_rackspace:
    provider: my-rackspace-config
    image: CentOS 6.2
    size: 1024 server
    minion:
        master: salt.example.com
        append_domain: webs.example.com
        grains:
            role: webserver

The image must be selected from available images. Similarly, sizes must be selected from the list of sizes. To get a list of available images and sizes use the following command:

```
salt-cloud --list-images openstack
salt-cloud --list-sizes openstack
```

Some parameters can be specified in the main Salt cloud configuration file and then are applied to all cloud profiles. For instance if only a single cloud provider is being used then the provider option can be declared in the Salt cloud configuration file.

Multiple Configuration Files

In addition to `/etc/salt/cloud.profiles`, profiles can also be specified in any file matching `cloud.profiles.d/*.conf` which is a sub-directory relative to the profiles configuration file(with the above configuration file as an example, `/etc/salt/cloud.profiles.d/*.conf`). This allows for more extensible configuration, and plays nicely with various configuration management tools as well as version control systems.

Larger Example

```
rhel_ec2:
    provider: my-ec2-config
    image: ami-e565ba8c
    size: t1.micro
    minion:
        cheese: edam

ubuntu_ec2:
    provider: my-ec2-config
    image: ami-7e2da54e
    size: t1.micro
    minion:
        cheese: edam

ubuntu_rackspace:
    provider: my-rackspace-config
    image: Ubuntu 12.04 LTS
    size: 256 server
    minion:
        cheese: edam

fedora_rackspace:
    provider: my-rackspace-config
    image: Fedora 17
    size: 256 server
```

(continues on next page)
16.4.4 Cloud Map File

A number of options exist when creating virtual machines. They can be managed directly from profiles and the command line execution, or a more complex map file can be created. The map file allows for a number of virtual machines to be created and associated with specific profiles. The map file is designed to be run once to create these more complex scenarios using salt-cloud.

Map files have a simple format, specify a profile and then a list of virtual machines to make from said profile:

```
-fedora_small:
  - web1
  - web2
  - web3
-fedora_high:
  - redis1
  - redis2
  - redis3
-cent_high:
  - riak1
  - riak2
  - riak3
```

This map file can then be called to roll out all of these virtual machines. Map files are called from the salt-cloud command with the -m option:

```
$ salt-cloud -m /path/to/mapfile
```

Remember, that as with direct profile provisioning the -P option can be passed to create the virtual machines in parallel:

```
$ salt-cloud -m /path/to/mapfile -P
```

---

**Note:** Due to limitations in the GoGrid API, instances cannot be provisioned in parallel with the GoGrid driver. Map files will work with GoGrid, but the -P argument should not be used on maps referencing GoGrid instances.
A map file can also be enforced to represent the total state of a cloud deployment by using the --hard option. When using the hard option any vms that exist but are not specified in the map file will be destroyed:

```
$ salt-cloud -m /path/to/mapfile -P -H
```

Be careful with this argument, it is very dangerous! In fact, it is so dangerous that in order to use it, you must explicitly enable it in the main configuration file.

```
enable_hard_maps: True
```

A map file can include grains and minion configuration options:

```
fedora_small:
  - web1:
    ̶  minion:
    ̶    log_level: debug
    ̶    grains:
    ̶      cheese: tasty
    ̶      omelet: du fromage
  - web2:
    ̶  minion:
    ̶    log_level: warn
    ̶    grains:
    ̶      cheese: more tasty
    ̶      omelet: with peppers
```

Any top level data element from your profile may be overridden in the map file:

```
fedora_small:
  - web1:
    ̶    size: t2.micro
  - web2:
    ̶    size: t2.nano
```

As of Salt 2017.7.0, nested elements are merged, and can be specified individually without having to repeat the complete definition for each top level data element. In this example a separate MAC is assigned to each VMware instance while inheriting device parameters for for disk and network configuration:

```
nyc-vm:
  - db1:
    ̶    devices:
    ̶      network:
    ̶        Network Adapter 1:
    ̶          mac: '44:44:44:44:44:41'
  - db2:
    ̶    devices:
    ̶      network:
    ̶        Network Adapter 1:
    ̶          mac: '44:44:44:44:44:42'
```

A map file may also be used with the various query options:

```
$ salt-cloud -m /path/to/mapfile -Q
{'ec2': {'web1': {'id': 'i-e6aqfegb',
  'image': None,
  'private_ips': [],
  'public_ips': []},
(continues on next page)
...or with the delete option:

```bash
$ salt-cloud -m /path/to/mapfile -d
The following virtual machines are set to be destroyed:
  web1
  web2
Proceed? [N/y]
```

**Warning**: Specifying Nodes with Maps on the Command Line Specifying the name of a node or nodes with the maps options on the command line is not supported. This is especially important to remember when using `--destroy` with maps; `salt-cloud` will ignore any arguments passed in which are not directly relevant to the map file. *When using `--destroy` with a map, every node in the map file will be deleted!* Maps don’t provide any useful information for destroying individual nodes, and should not be used to destroy a subset of a map.

### Requiring Other Instances

The `requires` directive can be used in map files to ensure that one instance is created and available before another is created.

```
fedora_high:
  - db1:
    size: m5.xlarge
  - web1:
    size: m5.large
    requires:
      - db1
```

This requisite is passed to the instance definition dictionary in a map file and accepts a list of instance names as defined in the map.

### Setting up New Salt Masters

Bootstrapping a new master in the map is as simple as:

```
fedora_small:
  - web1:
    make_master: True
  - web2
  - web3
```

Notice that ALL bootstrapped minions from the map will answer to the newly created salt-master.

To make any of the bootstrapped minions answer to the bootstrapping salt-master as opposed to the newly created salt-master, as an example:

```bash
{'size': None,
 'state': 0},
 'web2': {'Absent'}
```
### Using Direct Map Data

When using modules that access the `CloudClient` directly (notably, the `cloud` execution and runner modules), it is possible to pass in the contents of a map file, rather than a path to the location of the map file.

Normally when using these modules, the path to the map file is passed in using:

```shell
grep CloudClientPlugin /etc/salt/cloud.d/cloud.conf
```

To pass in the actual map data, use the `map_data` argument:

```shell
grep CloudClientPlugin /etc/salt/cloud.d/cloud.conf
```

### 16.4.5 Cloud Actions

Once a VM has been created, there are a number of actions that can be performed on it. The "reboot" action can be used across all providers, but all other actions are specific to the cloud provider. In order to perform an action, you may specify it from the command line, including the name(s) of the VM to perform the action on:

```shell
grep CloudClientPlugin /etc/salt/cloud.d/cloud.conf
```

Or you may specify a map which includes all VMs to perform the action on:

```shell
grep CloudClientPlugin /etc/salt/cloud.d/cloud.conf
```

The following is an example list of actions currently supported by `salt-cloud`:
Another useful reference for viewing more `salt-cloud` actions is the `Salt Cloud Feature Matrix`.

### 16.4.6 Cloud Functions

Cloud functions work much the same way as cloud actions, except that they don't perform an operation on a specific instance, and so do not need a machine name to be specified. However, since they perform an operation on a specific cloud provider, that provider must be specified.

```
$ salt-cloud -f show_image ec2 image=ami-fd20ad94
```

There are three universal salt-cloud functions that are extremely useful for gathering information about instances on a provider basis:

- `list_nodes`: Returns some general information about the instances for the given provider.
- `list_nodes_full`: Returns all information about the instances for the given provider.
- `list_nodes_select`: Returns select information about the instances for the given provider.

```
$ salt-cloud -f list_nodes linode
$ salt-cloud -f list_nodes_full linode
$ salt-cloud -f list_nodes_select linode
```

Another useful reference for viewing `salt-cloud` functions is the `Salt Cloud Feature Matrix`.

### 16.5 Core Configuration

#### 16.5.1 Install Salt Cloud

Salt Cloud is now part of Salt proper. It was merged in as of `Salt version 2014.1.0`.

On Ubuntu, install Salt Cloud by using following command:

```
sudo add-apt-repository ppa:saltstack/salt
sudo apt-get update
sudo apt-get install salt-cloud
```

If using Salt Cloud on macOS, `curl-ca-bundle` must be installed. Presently, this package is not available via `brew`, but it is available using MacPorts:

```
sudo port install curl-ca-bundle
```

Salt Cloud depends on `apache-libcloud`. `Libcloud` can be installed via pip with `pip install apache-libcloud`.

---

**Table:**

<table>
<thead>
<tr>
<th><strong>all providers:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- reboot</td>
</tr>
<tr>
<td><strong>ec2:</strong></td>
</tr>
<tr>
<td>- start</td>
</tr>
<tr>
<td>- stop</td>
</tr>
<tr>
<td><strong>joyent:</strong></td>
</tr>
<tr>
<td>- stop</td>
</tr>
<tr>
<td><strong>linode:</strong></td>
</tr>
<tr>
<td>- start</td>
</tr>
<tr>
<td>- stop</td>
</tr>
</tbody>
</table>

---
Installing Salt Cloud for development

Installing Salt for development enables Salt Cloud development as well, just make sure apache-libcloud is installed as per above paragraph.

See these instructions: *Installing Salt for development*.

### 16.5.2 Core Configuration

A number of core configuration options and some options that are global to the VM profiles can be set in the cloud configuration file. By default this file is located at /etc/salt/cloud.

#### Thread Pool Size

When saltcloud is operating in parallel mode via the -P argument, you can control the thread pool size by specifying the pool_size parameter with a positive integer value.

By default, the thread pool size will be set to the number of VMs that salt cloud is operating on.

```plaintext
pool_size: 10
```

#### Minion Configuration

The default minion configuration is set up in this file. Minions created by salt-cloud derive their configuration from this file. Almost all parameters found in *Configuring the Salt Minion* can be used here.

```plaintext
minion:
  master: saltmaster.example.com
```

In particular, this is the location to specify the location of the salt master and its listening port, if the port is not set to the default.

Similar to most other settings, Minion configuration settings are inherited across configuration files. For example, the master setting might be contained in the main cloud configuration file as demonstrated above, but additional settings can be placed in the provider, profile or map configuration files:

```plaintext
ec2-web:
  size: t1.micro
  minion:
    environment: test
    startup_states: sls
    sls_list:
    - web
```

When salt cloud creates a new minion, it can automatically add grain information to the minion configuration file identifying the sources originally used to define it.

The generated grain information will appear similar to:

```plaintext
grains:
  salt-cloud:
    driver: ec2
    provider: my_ec2:ec2
    profile: ec2-web
```
The generation of the salt-cloud grain can be suppressed by the option `enable_cloud_grains: 'False'` in the cloud configuration file.

Cloud Configuration Syntax

The data specific to interacting with public clouds is set up here.

Cloud provider configuration settings can live in several places. The first is in `/etc/salt/cloud`:

```bash
# /etc/salt/cloud
providers:
  my-aws-migrated-config:
    id: HJGRYCILJLKJYG
    key: 'kdjgfsgm;woormgl/aserigjksjdasdflgn'
    keyname: test
    securitygroup: quick-start
    private_key: /root/test.pem
    driver: ec2
```

Cloud provider configuration data can also be housed in `/etc/salt/cloud.providers` or any file matching `/etc/salt/cloud.providers.d/*.conf`. All files in any of these locations will be parsed for cloud provider data.

Using the example configuration above:

```bash
# /etc/salt/cloud.providers
# or could be /etc/salt/cloud.providers.d/*.conf
my-aws-config:
  id: HJGRYCILJLKJYG
  key: 'kdjgfsgm;woormgl/aserigjksjdasdflgn'
  keyname: test
  securitygroup: quick-start
  private_key: /root/test.pem
  driver: ec2
```

Note: Salt Cloud provider configurations within `/etc/cloud.provider.d/` should not specify the providers starting key.

It is also possible to have multiple cloud configuration blocks within the same alias block. For example:

```bash
production-config:
  - id: HJGRYCILJLKJYG
    key: 'kdjgfsgm;woormgl/aserigjksjdasdflgn'
    keyname: test
    securitygroup: quick-start
    private_key: /root/test.pem
    driver: ec2
  - user: example_user
    apikey: 123984bjjas87034
    driver: rackspace
```

However, using this configuration method requires a change with profile configuration blocks. The provider alias needs to have the provider key value appended as in the following example:
rhel_aws_dev:
  provider: production-config:ec2
  image: ami-e565ba8c
  size: t1.micro

rhel_aws_prod:
  provider: production-config:ec2
  image: ami-e565ba8c
  size: High-CPU Extra Large Instance

database_prod:
  provider: production-config:rackspace
  image: Ubuntu 12.04 LTS
  size: 256 server

Notice that because of the multiple entries, one has to be explicit about the provider alias and name, from the above example, production-config: ec2.

This data interactions with the salt-cloud binary regarding its --list-location, --list-images, and --list-sizes which needs a cloud provider as an argument. The argument used should be the configured cloud provider alias. If the provider alias has multiple entries, <provider-alias>: <provider-name> should be used.

To allow for a more extensible configuration, --providers-config, which defaults to /etc/salt/cloud.providers, was added to the cli parser. It allows for the providers' configuration to be added on a per-file basis.

Pillar Configuration

It is possible to configure cloud providers using pillars. This is only used when inside the cloud module. You can setup a variable called cloud that contains your profile, provider, and map to pass that information to the cloud servers instead of having to copy the full configuration to every minion. In your pillar file, you would use something like this:

```yaml
cloud:
  ssh_key_name: saltstack
  ssh_key_file: /root/.ssh/id_rsa
  update_cachedir: True
  diff_cache_events: True

providers:
  my-openstack:
    driver: openstack
    region_name: ORD
    cloud: mycloud

profiles:
  ubuntu-openstack:
    provider: my-openstack
    size: ds512M
    image: CentOS 7
    script_args: git develop

maps:
  my-dev-map:
    ubuntu-openstack:
      - dev-test01
```

(continues on next page)
- dev-test02
- dev-test03
- dev-test04

my-prd-map:
  ubuntu-openstack:
    - prd-web01
    - prd-web02
  minion:
    id: custom-minion-id-app1-stack1-frontend
  grains:
    roles:
    - webserver
  deployment: datacenter4-openstack
    - prod-db01
    - prod-db02

Cloud Configurations

Scaleway

To use Salt Cloud with Scaleway, you need to get an access key and an API token. API tokens are unique identifiers associated with your Scaleway account. To retrieve your access key and API token, log-in to the Scaleway control panel, open the pull-down menu on your account name and click on "My Credentials" link.

If you do not have API token you can create one by clicking the "Create New Token" button on the right corner.

my-scaleway-config:
  access_key: 15cf404d-4560-41b1-9a0c-21c3d5c4ff1f
  token: a7347ec8-5de1-4024-a5e3-24b77d1ba91d
  driver: scaleway

Note: In the cloud profile that uses this provider configuration, the syntax for the provider required field would be provider: my-scaleway-config.

Rackspace

Rackspace cloud requires two configuration options; a user and an apikey:

my-rackspace-config:
  user: example_user
  apikey: 123984bjjas87034
  driver: rackspace

Note: In the cloud profile that uses this provider configuration, the syntax for the provider required field would be provider: my-rackspace-config.
Amazon AWS

A number of configuration options are required for Amazon AWS including id, key, keyname, securitygroup, and private_key:

```yaml
my-aws-quick-start:
  id: HJGRYCILJLKJYG
  key: 'kdjgfsgrwoormgl/aserigjksdjhasdfgn'
  keyname: test
  securitygroup: quick-start
  private_key: /root/test.pem
  driver: ec2

my-aws-default:
  id: HJGRYCILJLKJYG
  key: 'kdjgfsgrwoormgl/aserigjksdjhasdfgn'
  keyname: test
  securitygroup: default
  private_key: /root/test.pem
  driver: ec2
```

Note: In the cloud profile that uses this provider configuration, the syntax for the provider required field would be either provider: my-aws-quick-start or provider: my-aws-default.

Linode

Linode requires a single API key, but the default root password also needs to be set:

```yaml
my-linode-config:
  apikey: asldkgfakl;sdjfsjaslfjaaklsdjf;askldjfaaklsjdfhasladsdfghdkf
  password: F00barbaz
  ssh_pubkey: ssh-ed25519AAAAC3NzaC1lZDI1NTE5AAAAIKHEOLLbeXgaqRQT9NBAopVz366SdYc0KKX33vAnq+2R user@host
  ssh_key_file: ~/.ssh/id_ed25519
  driver: linode
```

The password needs to be 8 characters and contain lowercase, uppercase, and numbers.

Note: In the cloud profile that uses this provider configuration, the syntax for the provider required field would be provider: my-linode-config.

Joyent Cloud

The Joyent cloud requires three configuration parameters: The username and password that are used to log into the Joyent system, as well as the location of the private SSH key associated with the Joyent account. The SSH key is needed to send the provisioning commands up to the freshly created virtual machine.

```yaml
my-joyent-config:
  user: fred
  password: saltybacon
```

(continues on next page)
private_key: /root/joyent.pem
driver: joyent

Note: In the cloud profile that uses this provider configuration, the syntax for the provider required field would be provider: my-joyent-config

GoGrid

To use Salt Cloud with GoGrid, log into the GoGrid web interface and create an API key. Do this by clicking on "My Account" and then going to the API Keys tab.

The apikey and the sharedsecret configuration parameters need to be set in the configuration file to enable interfacing with GoGrid:

my-gogrid-config:
  apikey: asdff7896asdh789
  sharedsecret: saltybacon
  driver: gogrid

Note: In the cloud profile that uses this provider configuration, the syntax for the provider required field would be provider: my-gogrid-config.

OpenStack

Using Salt for OpenStack uses the shade <https://docs.openstack.org/shade/latest/> driver managed by the openstack-infra team.

This driver can be configured using the /etc/openstack/clouds.yml file with os-client-config <https://docs.openstack.org/os-client-config/latest/>.

myopenstack:
  driver: openstack
  region_name: RegionOne
  cloud: mycloud

Or by just configuring the same auth block directly in the cloud provider config.

myopenstack:
  driver: openstack
  region_name: RegionOne
  auth:
    username: 'demo'
    password: secret
    project_name: 'demo'
    auth_url: 'http://openstack/identity'

Both of these methods support using the vendor <https://docs.openstack.org/os-client-config/latest/user/vendor-support.html> options.

For more information, look at Openstack Cloud Driver Docs.
DigitalOcean

Using Salt for DigitalOcean requires a `client_key` and an `api_key`. These can be found in the DigitalOcean web interface, in the "My Settings" section, under the API Access tab.

```
my-digitalocean-config:
  driver: digitalocean
  personal_access_token: xxx
  location: New York 1
```

Note: In the cloud profile that uses this provider configuration, the syntax for the `provider` required field would be `provider: my-digital-ocean-config`.

Parallels

Using Salt with Parallels requires a `user`, `password` and `URL`. These can be obtained from your cloud provider.

```
my-parallels-config:
  user: myuser
  password: xyzzy
  url: https://api.cloud.xmission.com:4465/paci/v1.0/
  driver: parallels
```

Note: In the cloud profile that uses this provider configuration, the syntax for the `provider` required field would be `provider: my-parallels-config`.

Proxmox

Using Salt with Proxmox requires a `user`, `password`, and `URL`. These can be obtained from your cloud host. Both PAM and PVE users can be used.

```
my-proxmox-config:
  driver: proxmox
  user: saltcloud@pve
  password: xyzzy
  url: your.proxmox.host
```

Note: In the cloud profile that uses this provider configuration, the syntax for the `provider` required field would be `provider: my-proxmox-config`. 
LXC

The lxc driver uses saltify to install salt and attach the lxc container as a new lxc minion. As soon as we can, we manage baremetal operation over SSH. You can also destroy those containers via this driver.

```
devhost10-lxc:
    target: devhost10
    driver: lxc
```

And in the map file:

```
devhost10-lxc:
    provider: devhost10-lxc
    from_container: ubuntu
    backing: lvm
    sudo: True
    size: 3g
    ip: 10.0.3.9
    minion:
        master: 10.5.0.1
        master_port: 4506
    lxc_conf:
        - lxc.utsname: superlxc
```

Note: In the cloud profile that uses this provider configuration, the syntax for the `provider` required field would be `provider: devhost10-lxc`.

Saltify

The Saltify driver is a new, experimental driver designed to install Salt on a remote machine, virtual or bare metal, using SSH. This driver is useful for provisioning machines which are already installed, but not Salted. For more information about using this driver and for configuration examples, please see the Getting Started with Saltify documentation.

Vagrant

The Vagrant driver is a new, experimental driver for controlling a VagrantBox virtual machine, and installing Salt on it. The target host machine must be a working salt minion, which is controlled via the salt master using salt-api. For more information, see Getting Started With Vagrant.

Extending Profiles and Cloud Providers Configuration

As of 0.8.7, the option to extend both the profiles and cloud providers configuration and avoid duplication was added. The extends feature works on the current profiles configuration, but, regarding the cloud providers configuration, only works in the new syntax and respective configuration files, i.e. `/etc/salt/salt/cloud.providers` or `/etc/salt/cloud.providers.d/*.conf`.

Note: Extending cloud profiles and providers is not recursive. For example, a profile that is extended by a second profile is possible, but the second profile cannot be extended by a third profile.
Also, if a profile (or provider) is extending another profile and each contains a list of values, the lists from the extending profile will override the list from the original profile. The lists are not merged together.

Extending Profiles

Some example usage on how to use `extends` with profiles. Consider `/etc/salt/salt/cloud.profiles` containing:

```yaml
development-instances:
  provider: my-ec2-config
  size: t1.micro
  ssh_username: ec2_user
  securitygroup: [default]
  deploy: False

Amazon-Linux-AMI-2012.09-64bit:
  image: ami-54cf5c3d
  extends: development-instances

Fedora-17:
  image: ami-08d97e61
  extends: development-instances

CentOS-5:
  provider: my-aws-config
  image: ami-09b61d60
  extends: development-instances
```

The above configuration, once parsed would generate the following profiles data:

```json
[
  {
    "deploy": false,
    "image": "ami-08d97e61",
    "profile": "Fedora-17",
    "provider": "my-ec2-config",
    "securitygroup": ["default"],
    "size": "t1.micro",
    "ssh_username": "ec2_user",
  },
  {
    "deploy": false,
    "image": "ami-09b61d60",
    "profile": "CentOS-5",
    "provider": "my-aws-config",
    "securitygroup": ["default"],
    "size": "t1.micro",
    "ssh_username": "ec2_user",
  },
  {
    "deploy": false,
    "image": "ami-54cf5c3d",
    "profile": "Amazon-Linux-AMI-2012.09-64bit",
    "provider": "my-ec2-config",
  }
]
```

(continues on next page)
Pretty cool right?

Extending Providers

Some example usage on how to use `extends` within the cloud providers configuration. Consider `/etc/salt/salt/cloud.providers` containing:

```yaml
my-develop-envs:
  - id: HJGRYCLJLKJYG
    key: 'kdjgfsgh;woormgl/aserigjksjdhasdfgn'
    keyname: test
    securitygroup: quick-start
    private_key: /root/test.pem
    location: ap-southeast-1
    availability_zone: ap-southeast-1b
    driver: ec2

  - user: myuser@mycorp.com
    password: mypass
    ssh_key_name: mykey
    ssh_key_file: '/etc/salt/ibm/mykey.pem'
    location: Raleigh
    driver: ibmsce

my-productions-envs:
  - extends: my-develop-envs:ibmsce
    user: my-production-user@mycorp.com
    location: us-east-1
    availability_zone: us-east-1
```

The above configuration, once parsed would generate the following providers data:

```json
{
    "providers": {
        "my-develop-envs": [
            {
                "availability_zone": "ap-southeast-1b",
                "id": "HJGRYCLJLKJYG",
                "key": "kdjgfsgh;woormgl/aserigjksjdhasdfgn",
                "keyname": "test",
                "securitygroup": "quick-start",
            }
        ]
    }
}
```

(continues on next page)
"location": "ap-southeast-1",
"private_key": "/root/test.pem",
"driver": "aws",
"securitygroup": "quick-start",
},
{
"location": "Raleigh",
"password": "mypass",
"driver": "ibmsce",
"ssh_key_file": "/etc/salt/ibm/mykey.pem",
"ssh_key_name": "mykey",
"user": "myuser@mycorp.com",
},
"my-productions-envs": [
{
"availability_zone": "us-east-1",
"location": "us-east-1",
"password": "mypass",
"driver": "ibmsce",
"ssh_key_file": "/etc/salt/ibm/mykey.pem",
"ssh_key_name": "mykey",
"user": "my-production-user@mycorp.com",
}
},

16.6 Windows Configuration

16.6.1 Spinning up Windows Minions

It is possible to use Salt Cloud to spin up Windows instances, and then install Salt on them. This functionality is available on all cloud providers that are supported by Salt Cloud. However, it may not necessarily be available on all Windows images.

Requirements

Note: Support winexe and impacket has been deprecated and will be removed in 3001. These dependencies are replaced by pypsexec and smbprotocol respectively. These are pure python alternatives that are compatible with all supported python versions.

Salt Cloud makes use of impacket and winexe to set up the Windows Salt Minion installer.

impacket is usually available as either the impacket or the python-impacket package, depending on the distribution. More information on impacket can be found at the project home:

- impacket project home

winexe is less commonly available in distribution-specific repositories. However, it is currently being built for various distributions in 3rd party channels:
• RPMs at phone.net
• openSUSE Build Service
• pypsexec project home
• smbprotocol project home

Optionally WinRM can be used instead of winexe if the python module pywinrm is available and WinRM is supported on the target Windows version. Information on pywinrm can be found at the project home:
• pywinrm project home

Additionally, a copy of the Salt Minion Windows installer must be present on the system on which Salt Cloud is running. This installer may be downloaded from saltstack.com:
• SaltStack Download Area

Self Signed Certificates with WinRM

Salt-Cloud can use versions of pywinrm<=0.1.1 or pywinrm>=0.2.1.
For versions greater than 0.2.1, winrm_verify_ssl needs to be set to False if the certificate is self signed and not verifiable.

Firewall Settings

Because Salt Cloud makes use of smbclient and winexe, port 445 must be open on the target image. This port is not generally open by default on a standard Windows distribution, and care must be taken to use an image in which this port is open, or the Windows firewall is disabled.

If supported by the cloud provider, a PowerShell script may be used to open up this port automatically, using the cloud provider's userdata. The following script would open up port 445, and apply the changes:

```powershell
<powershell>
New-NetFirewallRule -Name "SMB445" -DisplayName "SMB445" -Protocol TCP -LocalPort 445
Set-Item (dir wsman:\localhost\Listener\*\Port -Recurse).pspath 445 -Force
Restart-Service winrm
</powershell>
```

For EC2, this script may be saved as a file, and specified in the provider or profile configuration as userdata_file. For instance:

```
my-ec2-config:
  # Pass userdata to the instance to be created
  userdata_file: /etc/salt/windows-firewall.ps1
```

Note: From versions 2016.11.0 and 2016.11.3, this file was passed through the master's renderer to template it. However, this caused issues with non-YAML data, so templating is no longer performed by default. To template the userdata_file, add a userdata_template option to the cloud profile:

```
my-ec2-config:
  # Pass userdata to the instance to be created
  userdata_file: /etc/salt/windows-firewall.ps1
  userdata_template: jinja
```
If no `userdata_template` is set in the cloud profile, then the master configuration will be checked for a `userdata_template` value. If this is not set, then no templating will be performed on the `userdata_file`.

To disable templating in a cloud profile when a `userdata_template` has been set in the master configuration file, simply set `userdata_template` to `False` in the cloud profile:

```
my-ec2-config:
  # Pass userdata to the instance to be created
  userdata_file: /etc/salt/windows-firewall.ps1
  userdata_template: False
```

If you are using WinRM on EC2 the HTTPS port for the WinRM service must also be enabled in your userdata. By default EC2 Windows images only have insecure HTTP enabled. To enable HTTPS and basic authentication required by pywinrm consider the following userdata example:

```
<powershell>
New-NetFirewallRule -Name "SMB445" -DisplayName "SMB445" -Protocol TCP -LocalPort 445
New-NetFirewallRule -Name "WINRM5986" -DisplayName "WINRM5986" -Protocol TCP -LocalPort 5986

winrm quickconfig -q
winrm set winrm/config/winrs '@{MaxMemoryPerShellMB="300"}''
winrm set winrm/config '@{Maxtimeoutms="1800000"}''
winrm set winrm/config/service/auth '@{Basic="true"}''

$SourceStoreScope = 'LocalMachine'
$SourceStorename = 'Remote Desktop'

$cert = $SourceStore.Certificates | Where-Object -FilterScript {$_._.subject -like '*'}

$DestStoreScope = 'LocalMachine'
$DestStoreName = 'My'

$DestStore = New-Object -TypeName System.Security.Cryptography.X509Certificates.X509Store -ArgumentList $DestStoreName, $DestStoreScope
$DestStore.Add($cert)
$SourceStore.Close()
$DestStore.Close()

winrm create winrm/config/listener?Address="*"+Transport=HTTPS @{CertificateThumbprint=""($cert.Thumbprint)""}

Restart-Service winrm
</powershell>
```

No certificate store is available by default on EC2 images and creating one does not seem possible without an MMC (cannot be automated). To use the default EC2 Windows images the above copies the RDP store.

16.6. Windows Configuration
Configuration

Configuration is set as usual, with some extra configuration settings. The location of the Windows installer on the machine that Salt Cloud is running on must be specified. This may be done in any of the regular configuration files (main, providers, profiles, maps). For example:

Setting the installer in /etc/salt/cloud.providers:

```
my-softlayer:
  driver: softlayer
  user: MYUSER1138
  apikey: 'e3b68aa711e6deadc62d5b76355674beef7cc3116062d$dbacafe5f7e465bfdc9'
  minion:
    master: saltmaster.example.com
  win_installer: /root/Salt-Minion-2014.7.0-AMD64-Setup.exe
  win_username: Administrator
  win_password: letmein
  smb_port: 445
```

The default Windows user is Administrator, and the default Windows password is blank.

If WinRM is to be used use_winrm needs to be set to True. winrm_port can be used to specify a custom port (must be HTTPS listener). And winrm_verify_ssl can be set to False to use a self signed certificate.

Auto-Generated Passwords on EC2

On EC2, when the win_password is set to auto, Salt Cloud will query EC2 for an auto-generated password. This password is expected to take at least 4 minutes to generate, adding additional time to the deploy process.

When the EC2 API is queried for the auto-generated password, it will be returned in a message encrypted with the specified keyname. This requires that the appropriate private_key file is also specified. Such a profile configuration might look like:

```
windows-server-2012:
  provider: my-ec2-config
  image: ami-c49c0dac
  size: m1.small
  securitygroup: windows
  keyname: mykey
  private_key: /root/mykey.pem
  userdata_file: /etc/salt/windows-firewall.ps1
  win_installer: /root/Salt-Minion-2014.7.0-AMD64-Setup.exe
  win_username: Administrator
  win_password: auto
```

16.7 Cloud Provider Specifics

16.7.1 Getting Started With Aliyun ECS

The Aliyun ECS (Elastic Computer Service) is one of the most popular public cloud hosts in China. This cloud host can be used to manage aliyun instance using salt-cloud.

http://www.aliyun.com/
Dependencies

This driver requires the Python requests library to be installed.

Configuration

Using Salt for Aliyun ECS requires aliyun access key id and key secret. These can be found in the aliyun web interface, in the "User Center" section, under "My Service" tab.

```yaml
my-aliyun-config:
  # aliyun Access Key ID
  id: wDGEwGregedg3435gDgxd
  # aliyun Access Key Secret
  key: GDd45t43RDBTrkkkg43934t34qT43t4dgegerGEGg
  location: cn-qingdao
  driver: aliyun
```

Note: Changed in version 2015.8.0.

The `provider` parameter in cloud provider definitions was renamed to `driver`. This change was made to avoid confusion with the `provider` parameter that is used in cloud profile definitions. Cloud provider definitions now use `driver` to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use `provider` to refer to provider configurations that you define.

Profiles

Cloud Profiles

Set up an initial profile at `/etc/salt/cloud.profiles` or in the `/etc/salt/cloud.profiles.d/` directory:

```yaml
aliyun_centos:
  provider: my-aliyun-config
  size: ecs.t1.small
  location: cn-qingdao
  securitygroup: G1989096784427999
  image: centos6u3_64_20G_aliaegis_20130816.vhd
```

Sizes can be obtained using the `--list-sizes` option for the `salt-cloud` command:

```bash
# salt-cloud --list-sizes my-aliyun-config
my-aliyun-config:
  ----------
  aliyun:
  ----------
  ecs.c1.large:
  ----------
  CpuCoreCount: 8
  InstanceTypeId:
```

(continues on next page)
Images can be obtained using the `--list-images` option for the `salt-cloud` command:

```
# salt-cloud --list-images my-aliyun-config
my-aliyun-config:
    ---------
    aliyun:
    ---------
    centos5u8_64_20G_aliaegis_20131231.vhd:
        --------
        Architecture:
        x86_64
        Description:
        ImageId:
            centos5u8_64_20G_aliaegis_20131231.vhd
        ImageName:
            CentOS 5.8 64位
        ImageOwnerAlias:
            system
        ImageVersion:
            1.0
        OSName:
            CentOS 5.8 64位
        Platform:
            CENTOS5
        Size:
            20
        Visibility:
            public
```

Locations can be obtained using the `--list-locations` option for the `salt-cloud` command:

```
my-aliyun-config:
    ---------
    aliyun:
    ---------
    cn-beijing:
        -------
        LocalName:
        RegionId:
            cn-beijing
cn-hangzhou:
        -------
        LocalName:
        RegionId:
            cn-hangzhou
cn-hongkong:
```
Security Group can be obtained using the `-f list_securitygroup` option for the `salt-cloud` command:

```
# salt-cloud --location=cn-qingdao -f list_securitygroup my-aliyun-config
```

```
my-aliyun-config:
    --------------
    aliyun:
        --------------
        G1989096784427999:
            --------------
            Description:
                G1989096784427999
            SecurityGroupId:
                G1989096784427999
```

Note: Aliyun ECS REST API documentation is available from [Aliyun ECS API](http://aliyun.com/).

### 16.7.2 Getting Started With Azure

New in version 2014.1.0.

Azure is a cloud service by Microsoft providing virtual machines, SQL services, media services, and more. This document describes how to use Salt Cloud to create a virtual machine on Azure, with Salt installed.


Dependencies

- Microsoft Azure SDK for Python >= 1.0.2
- The python-requests library, for Python < 2.7.9.
- A Microsoft Azure account
- OpenSSL (to generate the certificates)
- Salt
Configuration

Set up the provider config at /etc/salt/cloud.providers.d/azure.conf:

```
# Note: This example is for /etc/salt/cloud.providers.d/azure.conf

my-azure-config:
  driver: azure
  subscription_id: 3287abc8-f98a-c678-3bde-326766fd3617
  certificate_path: /etc/salt/azure.pem

# Set up the location of the salt master
#
# minion:
#  master: saltmaster.example.com

# Optional
management_host: management.core.windows.net
```

The certificate used must be generated by the user. OpenSSL can be used to create the management certificates. Two certificates are needed: a .cer file, which is uploaded to Azure, and a .pem file, which is stored locally.

To create the .pem file, execute the following command:

```
openssl req -x509 -nodes -days 365 -newkey rsa:1024 -keyout /etc/salt/azure.pem -out /etc/salt/azure.pem
```

To create the .cer file, execute the following command:

```
openssl x509 -inform pem -in /etc/salt/azure.pem -outform der -out /etc/salt/azure.cer
```

After creating these files, the .cer file will need to be uploaded to Azure via the "Upload a Management Certificate" action of the "Management Certificates" tab within the "Settings" section of the management portal.

Optionally, a management_host may be configured, if necessary for the region.

---

**Note:** Changed in version 2015.8.0.

The provider parameter in cloud provider definitions was renamed to driver. This change was made to avoid confusion with the provider parameter that is used in cloud profile definitions. Cloud provider definitions now use driver to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use provider to refer to provider configurations that you define.

---

Cloud Profiles

Set up an initial profile at /etc/salt/cloud.profiles:

```
azure-ubuntu:
  provider: my-azure-config
  image: 'b39f27a88b8c64d52b05eac6a62ebad85__Ubuntu-12_04_3-LTS-amd64-server-20131003__en-us-30GB'
  size: Small
  location: 'East US'
  ssh_username: azureuser
  ssh_password: verybadpass
```
These options are described in more detail below. Once configured, the profile can be realized with a salt command:

```
salt-cloud -p azure-ubuntu newinstance
```

This will create an salt minion instance named `newinstance` in Azure. If the command was executed on the salt-master, its Salt key will automatically be signed on the master.

Once the instance has been created with salt-minion installed, connectivity to it can be verified with Salt:

```
salt newinstance test.version
```

### Profile Options

The following options are currently available for Azure.

#### provider

The name of the provider as configured in `/etc/salt/cloud.providers.d/azure.conf`.

#### image

The name of the image to use to create a VM. Available images can be viewed using the following command:

```
salt-cloud --list-images my-azure-config
```

#### size

The name of the size to use to create a VM. Available sizes can be viewed using the following command:

```
salt-cloud --list-sizes my-azure-config
```

#### location

The name of the location to create a VM in. Available locations can be viewed using the following command:

```
salt-cloud --list-locations my-azure-config
```
affinity_group

The name of the affinity group to create a VM in. Either a location or an affinity_group may be specified, but not both. See Affinity Groups below.

ssh_username

The user to use to log into the newly-created VM to install Salt.

ssh_password

The password to use to log into the newly-created VM to install Salt.

slot

The environment to which the hosted service is deployed. Valid values are staging or production. When set to production, the resulting URL of the new VM will be <vm_name>.cloudapp.net. When set to staging, the resulting URL will contain a generated hash instead.

media_link

This is the URL of the container that will store the disk that this VM uses. Currently, this container must already exist. If a VM has previously been created in the associated account, a container should already exist. In the web interface, go into the Storage area and click one of the available storage selections. Click the Containers link, and then copy the URL from the container that will be used. It generally looks like:

```
http://portalvhdabcdefghijklmn.blob.core.windows.net/vhds
```

service_name

The name of the service in which to create the VM. If this is not specified, then a service will be created with the same name as the VM.

virtual_network_name

Optional. The name of the virtual network for the VM to join. If this is not specified, then no virtual network will be joined.
**subnet_name**

Optional. The name of the subnet in the virtual network for the VM to join. Requires that a `virtual_network_name` is specified.

**Show Instance**

This action is a thin wrapper around `--full-query`, which displays details on a single instance only. In an environment with several machines, this will save a user from having to sort through all instance data, just to examine a single instance.

```
salt-cloud -a show_instance myinstance
```

**Destroying VMs**

There are certain options which can be specified in the global cloud configuration file (usually `/etc/salt/cloud`) which affect Salt Cloud's behavior when a VM is destroyed.

**cleanup_disks**

New in version 2015.8.0.

Default is `False`. When set to `True`, Salt Cloud will wait for the VM to be destroyed, then attempt to destroy the main disk that is associated with the VM.

**cleanup_vhds**

New in version 2015.8.0.

Default is `False`. Requires `cleanup_disks` to be set to `True`. When also set to `True`, Salt Cloud will ask Azure to delete the VHD associated with the disk that is also destroyed.

**cleanup_services**

New in version 2015.8.0.

Default is `False`. Requires `cleanup_disks` to be set to `True`. When also set to `True`, Salt Cloud will wait for the disk to be destroyed, then attempt to remove the service that is associated with the VM. Because the disk belongs to the service, the disk must be destroyed before the service can be.

**Managing Hosted Services**

New in version 2015.8.0.

An account can have one or more hosted services. A hosted service is required in order to create a VM. However, as mentioned above, if a hosted service is not specified when a VM is created, then one will automatically be created with the name of the name. The following functions are also available.
create_service

Create a hosted service. The following options are available.

name

Required. The name of the hosted service to create.

label

Required. A label to apply to the hosted service.

description

Optional. A longer description of the hosted service.

location

Required, if affinity_group is not set. The location in which to create the hosted service. Either the location or the affinity_group must be set, but not both.

affinity_group

Required, if location is not set. The affinity group in which to create the hosted service. Either the location or the affinity_group must be set, but not both.

extended_properties

Optional. Dictionary containing name/value pairs of hosted service properties. You can have a maximum of 50 extended property name/value pairs. The maximum length of the Name element is 64 characters, only alphanumeric characters and underscores are valid in the Name, and the name must start with a letter. The value has a maximum length of 255 characters.

CLI Example

The following example illustrates creating a hosted service.

```
salt-cloud -f create_service my-azure name=my-service label=my-service location='West US'
```
show_service

Return details about a specific hosted service. Can also be called with `get_service`.

```
salt-cloud -f show_storage my-azure name=my-service
```

list_services

List all hosted services associates with the subscription.

```
salt-cloud -f list_services my-azure-config
```

delete_service

Delete a specific hosted service.

```
salt-cloud -f delete_service my-azure name=my-service
```

Managing Storage Accounts

New in version 2015.8.0.

Salt Cloud can manage storage accounts associated with the account. The following functions are available. Deprecated marked as deprecated are marked as such as per the SDK documentation, but are still included for completeness with the SDK.

create_storage

Create a storage account. The following options are supported.

**name**

Required. The name of the storage account to create.

**label**

Required. A label to apply to the storage account.
description

Optional. A longer description of the storage account.

location

Required, if `affinity_group` is not set. The location in which to create the storage account. Either the location or the `affinity_group` must be set, but not both.

affinity_group

Required, if `location` is not set. The affinity group in which to create the storage account. Either the `location` or the `affinity_group` must be set, but not both.

extended_properties

Optional. Dictionary containing name/value pairs of storage account properties. You can have a maximum of 50 extended property name/value pairs. The maximum length of the Name element is 64 characters, only alphanumeric characters and underscores are valid in the Name, and the name must start with a letter. The value has a maximum length of 255 characters.

geo_replication_enabled

Deprecated. Replaced by the `account_type` parameter.

account_type

Specifies whether the account supports locally-redundant storage, geo-redundant storage, zone-redundant storage, or read access geo-redundant storage. Possible values are:

- Standard_LRS
- Standard_ZRS
- Standard_GRS
- Standard_RAGRS

CLI Example

The following example illustrates creating a storage account.

```
salt-cloud -f create_storage my-azure name=my-storage label=my-storage location='West\nUS'
```
list_storage

List all storage accounts associates with the subscription.

```
salt-cloud -f list_storage my-azure-config
```

show_storage

Return details about a specific storage account. Can also be called with get_storage.

```
salt-cloud -f show_storage my-azure name=my-storage
```

update_storage

Update details concerning a storage account. Any of the options available in create_storage can be used, but the name cannot be changed.

```
salt-cloud -f update_storage my-azure name=my-storage label=my-storage
```

delete_storage

Delete a specific storage account.

```
salt-cloud -f delete_storage my-azure name=my-storage
```

show_storage_keys

Returns the primary and secondary access keys for the specified storage account.

```
salt-cloud -f show_storage_keys my-azure name=my-storage
```

regenerate_storage_keys

Regenerate storage account keys. Requires a key_type ("primary" or "secondary") to be specified.

```
salt-cloud -f regenerate_storage_keys my-azure name=my-storage key_type=primary
```

Managing Disks

New in version 2015.8.0.

When a VM is created, a disk will also be created for it. The following functions are available for managing disks. Deprecated marked as deprecated are marked as such as per the SDK documentation, but are still included for completeness with the SDK.
show_disk

Return details about a specific disk. Can also be called with get_disk.

```
salt-cloud -f show_disk my-azure name=my-disk
```

list_disks

List all disks associates with the account.

```
salt-cloud -f list_disks my-azure
```

update_disk

Update details for a disk. The following options are available.

**name**

Required. The name of the disk to update.

**has_operating_system**

Deprecated.

**label**

Required. The label for the disk.

**media_link**

Deprecated. The location of the disk in the account, including the storage container that it is in. This should not need to be changed.

**new_name**

Deprecated. If renaming the disk, the new name.
os

Deprecated.

CLI Example

The following example illustrates updating a disk.

```
salt-cloud -f update_disk my-azure name=my-disk label=my-disk
```

delete_disk

Delete a specific disk.

```
salt-cloud -f delete_disk my-azure name=my-disk
```

Managing Service Certificates

New in version 2015.8.0.

Stored at the cloud service level, these certificates are used by your deployed services. For more information on service certificates, see the following link:

- Manage Certificates

The following functions are available.

list_service_certificates

List service certificates associated with the account.

```
salt-cloud -f list_service_certificates my-azure
```

show_service_certificate

Show the data for a specific service certificate associated with the account. The name, thumbprint, and thumbalgorithm can be obtained from list_service_certificates. Can also be called with get_service_certificate.

```
salt-cloud -f show_service_certificate my-azure name=my_service_certificate \  thumbalgorithm=sha1 thumbprint=0123456789ABCDEF
```
add_service_certificate

Add a service certificate to the account. This requires that a certificate already exists, which is then added to the account. For more information on creating the certificate itself, see:

- Create a Service Certificate for Azure

The following options are available.

**name**

Required. The name of the hosted service that the certificate will belong to.

**data**

Required. The base-64 encoded form of the pfx file.

**certificate_format**

Required. The service certificate format. The only supported value is pfx.

**password**

The certificate password.

```
salt-cloud -f add_service_certificate my-azure name=my-cert \
   data='...CERT_DATA...' certificate_format=pfx password=verybadpass
```

delete_service_certificate

Delete a service certificate from the account. The name, thumbprint, and thumbalgorithm can be obtained from list_service_certificates.

```
salt-cloud -f delete_service_certificate my-azure \
   name=my_service_certificate \
   thumbalgorithm=sha1 thumbprint=0123456789ABCDEF
```

Managing Management Certificates

New in version 2015.8.0.

A Azure management certificate is an X.509 v3 certificate used to authenticate an agent, such as Visual Studio Tools for Windows Azure or a client application that uses the Service Management API, acting on behalf of the subscription owner to manage subscription resources. Azure management certificates are uploaded to Azure and stored at the subscription level. The management certificate store can hold up to 100 certificates per subscription. These certificates are used to authenticate your Windows Azure deployment.

For more information on management certificates, see the following link.

- Manage Certificates
The following functions are available.

**list_management_certificates**

List management certificates associated with the account.

```
salt-cloud -f list_management_certificates my-azure
```

**show_management_certificate**

Show the data for a specific management certificate associated with the account. The name, thumbprint, and thumbalgorithm can be obtained from `list_management_certificates`. Can also be called with `get_management_certificate`.

```
salt-cloud -f show_management_certificate my-azure name=my_management_certificate \
              thumbalgorithm=sha1 thumbprint=0123456789ABCDEF
```

**add_management_certificate**

Management certificates must have a key length of at least 2048 bits and should reside in the Personal certificate store. When the certificate is installed on the client, it should contain the private key of the certificate. To upload the certificate to the Microsoft Azure Management Portal, you must export it as a .cer format file that does not contain the private key. For more information on creating management certificates, see the following link:

- [Create and Upload a Management Certificate for Azure](#)

The following options are available.

**public_key**

A base64 representation of the management certificate public key.

**thumbprint**

The thumbprint that uniquely identifies the management certificate.

**data**

The certificate's raw data in base-64 encoded .cer format.

```
salt-cloud -f add_management_certificate my-azure public_key='...PUBKEY...' \
           thumbprint=0123456789ABCDEF data='...CERT_DATA...'
```
**delete_management_certificate**

Delete a management certificate from the account. The thumbprint can be obtained from `list_management_certificates`.

```
salt-cloud -f delete_management_certificate my-azure thumbprint=0123456789ABCDEF
```

**Virtual Network Management**

New in version 2015.8.0.

The following are functions for managing virtual networks.

**list_virtual_networks**

List input endpoints associated with the deployment.

```
salt-cloud -f list_virtual_networks my-azure service=myservice deployment=mydeployment
```

**Managing Input Endpoints**

New in version 2015.8.0.

Input endpoints are used to manage port access for roles. Because endpoints cannot be managed by the Azure Python SDK, Salt Cloud uses the API directly. With versions of Python before 2.7.9, the `requests-python` package needs to be installed in order for this to work. Additionally, the following needs to be set in the master's configuration file:

```
backend: requests
```

The following functions are available.

**list_input_endpoints**

List input endpoints associated with the deployment

```
salt-cloud -f list_input_endpoints my-azure service=myservice deployment=mydeployment
```

**show_input_endpoint**

Show an input endpoint associated with the deployment

```
salt-cloud -f show_input_endpoint my-azure service=myservice deployment=mydeployment name=SSH
```
add_input_endpoint

Add an input endpoint to the deployment. Please note that there may be a delay before the changes show up. The following options are available.

service

Required. The name of the hosted service which the VM belongs to.

deployment

Required. The name of the deployment that the VM belongs to. If the VM was created with Salt Cloud, the deployment name probably matches the VM name.

role

Required. The name of the role that the VM belongs to. If the VM was created with Salt Cloud, the role name probably matches the VM name.

name

Required. The name of the input endpoint. This typically matches the port that the endpoint is set to. For instance, port 22 would be called SSH.

port

Required. The public (Internet-facing) port that is used for the endpoint.

local_port

Optional. The private port on the VM itself that will be matched with the port. This is typically the same as the port. If this value is not specified, it will be copied from port.

protocol

Required. Either tcp or udp.
enable_direct_server_return

Optional. If an internal load balancer exists in the account, it can be used with a direct server return. The default value is False. Please see the following article for an explanation of this option.

- Load Balancing for Azure Infrastructure Services

timeout_for_tcp_idle_connection

Optional. The default value is 4. Please see the following article for an explanation of this option.

- Configurable Idle Timeout for Azure Load Balancer

CLI Example

The following example illustrates adding an input endpoint.

```
salt-cloud -f add_input_endpoint my-azure service=myservice
  deployment=mydeployment role=myrole name=HTTP local_port=80
  port=80 protocol=tcp enable_direct_server_return=False
  timeout_for_tcp_idle_connection=4
```

update_input_endpoint

Updates the details for a specific input endpoint. All options from add_input_endpoint are supported.

```
salt-cloud -f update_input_endpoint my-azure service=myservice
  deployment=mydeployment role=myrole name=HTTP local_port=80
  port=80 protocol=tcp enable_direct_server_return=False
  timeout_for_tcp_idle_connection=4
```

delete_input_endpoint

Delete an input endpoint from the deployment. Please note that there may be a delay before the changes show up. The following items are required.

CLI Example

The following example illustrates deleting an input endpoint.
service

The name of the hosted service which the VM belongs to.

deployment

The name of the deployment that the VM belongs to. If the VM was created with Salt Cloud, the deployment name probably matches the VM name.

role

The name of the role that the VM belongs to. If the VM was created with Salt Cloud, the role name probably matches the VM name.

name

The name of the input endpoint. This typically matches the port that the endpoint is set to. For instance, port 22 would be called SSH.

```
salt-cloud -f delete_input_endpoint my-azure service=myservice \
   deployment=mydeployment role=myrole name=HTTP
```

Managing Affinity Groups

New in version 2015.8.0.

Affinity groups allow you to group your Azure services to optimize performance. All services and VMs within an affinity group will be located in the same region. For more information on Affinity groups, see the following link:

- Create an Affinity Group in the Management Portal

The following functions are available.

list_affinity_groups

List input endpoints associated with the account

```
salt-cloud -f list_affinity_groups my-azure
```

show_affinity_group

Show an affinity group associated with the account

```
salt-cloud -f show_affinity_group my-azure service=myservice \
   deployment=mydeployment name=SSH
```
create_affinity_group

Create a new affinity group. The following options are supported.

name

Required. The name of the new affinity group.

location

Required. The region in which the affinity group lives.

label

Required. A label describing the new affinity group.

description

Optional. A longer description of the affinity group.

```
salt-cloud -f create_affinity_group my-azure name=my_affinity_group \label=my-affinity-group location='West US'
```

update_affinity_group

Update an affinity group's properties

```
salt-cloud -f update_affinity_group my-azure name=my_group label=my_group
```

delete_affinity_group

Delete a specific affinity group associated with the account

```
salt-cloud -f delete_affinity_group my-azure name=my_affinity_group
```

Managing Blob Storage

New in version 2015.8.0.

Azure storage containers and their contents can be managed with Salt Cloud. This is not as elegant as using one of the other available clients in Windows, but it benefits Linux and Unix users, as there are fewer options available on those platforms.
Blob Storage Configuration

Blob storage must be configured differently than the standard Azure configuration. Both a `storage_account` and a `storage_key` must be specified either through the Azure provider configuration (in addition to the other Azure configuration) or via the command line.

```yaml
storage_account: mystorage
storage_key: ffhj334fDSGFEGDFGDewr34fwfsFSDFwe==
```

**storage_account**

This is one of the storage accounts that is available via the `list_storage` function.

**storage_key**

Both a primary and a secondary `storage_key` can be obtained by running the `show_storage_keys` function. Either key may be used.

Blob Functions

The following functions are made available through Salt Cloud for managing blob storage.

**make_blob_url**

Creates the URL to access a blob.

```bash
salt-cloud -f make_blob_url my-azure container=mycontainer blob=myblob
```

**container**

Name of the container.

**blob**

Name of the blob.

**account**

Name of the storage account. If not specified, derives the host base from the provider configuration.
protocol

Protocol to use: 'http' or 'https'. If not specified, derives the host base from the provider configuration.

host_base

Live host base URL. If not specified, derives the host base from the provider configuration.

list_storage_containers

List containers associated with the storage account

```
salt-cloud -f list_storage_containers my-azure
```

create_storage_container

Create a storage container

```
salt-cloud -f create_storage_container my-azure name=mycontainer
```

name

Name of container to create.

meta_name_values

Optional. A dict with name_value pairs to associate with the container as metadata. Example:{'Category':'test'}

blob_public_access

Optional. Possible values include: container, blob

fail_on_exist

Specify whether to throw an exception when the container exists.

show_storage_container

Show a container associated with the storage account

```
salt-cloud -f show_storage_container my-azure name=myservice
```
name

Name of container to show.

**show_storage_container_metadata**

Show a storage container's metadata

```
salt-cloud -f show_storage_container_metadata my-azure name=myservice
```

**name**

Name of container to show.

**lease_id**

If specified, `show_storage_container_metadata` only succeeds if the container's lease is active and matches this ID.

**set_storage_container_metadata**

Set a storage container's metadata

```
salt-cloud -f set_storage_container my-azure name=mycontainer \ 
    x_ms_meta_name_values='{"my_name": "my_value"}"
```

**name**

Name of existing container. `meta_name_values` \:\:\:\:\: A dict containing name, value for metadata. Example: `{"category":"test"}`. If specified, `set_storage_container_metadata` only succeeds if the container's lease is active and matches this ID.

**show_storage_container_acl**

Show a storage container's acl

```
salt-cloud -f show_storage_container_acl my-azure name=myservice
```

**name**

Name of existing container.
lease_id

If specified, show_storage_container_acl only succeeds if the container's lease is active and matches this ID.

set_storage_container_acl

Set a storage container's acl

```
salt-cloud -f set_storage_container my-azure name=mycontainer
```

name

Name of existing container.

signed_identifiers

SignedIdentifiers instance

blob_public_access

Optional. Possible values include: container, blob

lease_id

If specified, set_storage_container_acl only succeeds if the container's lease is active and matches this ID.

delete_storage_container

Delete a container associated with the storage account

```
salt-cloud -f delete_storage_container my-azure name=mycontainer
```

name

Name of container to create.

fail_not_exist

Specify whether to throw an exception when the container exists.
lease_id

If specified, delete_storage_container only succeeds if the container’s lease is active and matches this ID.

lease_storage_container

Lease a container associated with the storage account

```
salt-cloud -f lease_storage_container my-azure name=mycontainer
```

name

Name of container to create.

lease_action

Required. Possible values: acquire|renew|release|break|change

lease_id

Required if the container has an active lease.

lease_duration

Specifies the duration of the lease, in seconds, or negative one (-1) for a lease that never expires. A non-infinite lease can be between 15 and 60 seconds. A lease duration cannot be changed using renew or change. For backwards compatibility, the default is 60, and the value is only used on an acquire operation.

lease_break_period

Optional. For a break operation, this is the proposed duration of seconds that the lease should continue before it is broken, between 0 and 60 seconds. This break period is only used if it is shorter than the time remaining on the lease. If longer, the time remaining on the lease is used. A new lease will not be available before the break period has expired, but the lease may be held for longer than the break period. If this header does not appear with a break operation, a fixed-duration lease breaks after the remaining lease period elapses, and an infinite lease breaks immediately.

proposed_lease_id

Optional for acquire, required for change. Proposed lease ID, in a GUID string format.
list_blobs

List blobs associated with the container

```
salt-cloud -f list_blobs my-azure container=mycontainer
```

container

The name of the storage container

prefix

Optional. Filters the results to return only blobs whose names begin with the specified prefix.

marker

Optional. A string value that identifies the portion of the list to be returned with the next list operation. The operation returns a marker value within the response body if the list returned was not complete. The marker value may then be used in a subsequent call to request the next set of list items. The marker value is opaque to the client.

maxresults

Optional. Specifies the maximum number of blobs to return, including all BlobPrefix elements. If the request does not specify maxresults or specifies a value greater than 5,000, the server will return up to 5,000 items. Setting maxresults to a value less than or equal to zero results in error response code 400 (Bad Request).

include

Optional. Specifies one or more datasets to include in the response. To specify more than one of these options on the URI, you must separate each option with a comma. Valid values are:

```
snapshots:
  Specifies that snapshots should be included in the enumeration. Snapshots are listed from oldest to newest in the response.
metadata:
  Specifies that blob metadata be returned in the response.
uncommittedblobs:
  Specifies that blobs for which blocks have been uploaded, but which have not been committed using Put Block List (REST API), be included in the response.
copy:
  Version 2012-02-12 and newer. Specifies that metadata related to any current or previous Copy Blob operation should be included in the response.
```
delimiter

Optional. When the request includes this parameter, the operation returns a BlobPrefix element in the response body that acts as a placeholder for all blobs whose names begin with the same substring up to the appearance of the delimiter character. The delimiter may be a single character or a string.

show_blob_service_properties

Show a blob's service properties

```
salt-cloud -f show_blob_service_properties my-azure
```

set_blob_service_properties

Sets the properties of a storage account's Blob service, including Windows Azure Storage Analytics. You can also use this operation to set the default request version for all incoming requests that do not have a version specified.

```
salt-cloud -f set_blob_service_properties my-azure
```

properties

a StorageServiceProperties object.

timeout

Optional. The timeout parameter is expressed in seconds.

show_blob_properties

Returns all user-defined metadata, standard HTTP properties, and system properties for the blob.

```
salt-cloud -f show_blob_properties my-azure container=mycontainer blob=myblob
```

container

Name of existing container.
blob

Name of existing blob.

lease_id

Required if the blob has an active lease.

set_blob_properties

Set a blob's properties

```bash
salt-cloud -f set_blob_properties my-azure
```

container

Name of existing container.

blob

Name of existing blob.

blob_cache_control

Optional. Modifies the cache control string for the blob.

blob_content_type

Optional. Sets the blob's content type.

blob_content_md5

Optional. Sets the blob's MD5 hash.

blob_content_encoding

Optional. Sets the blob's content encoding.
**blob_content_language**

Optional. Sets the blob’s content language.

**lease_id**

Required if the blob has an active lease.

**blob_content_disposition**

Optional. Sets the blob’s Content-Disposition header. The Content-Disposition response header field conveys additional information about how to process the response payload, and also can be used to attach additional metadata. For example, if set to attachment, it indicates that the user-agent should not display the response, but instead show a Save As dialog with a filename other than the blob name specified.

**put_blob**

Upload a blob

```
salt-cloud -f put_blob my-azure container=base name=top.sls blob_path=/srv/salt/top.sls
salt-cloud -f put_blob my-azure container=base name=content.txt blob_content='Some content'
```

**container**

Name of existing container.

**name**

Name of existing blob.

**blob_path**

The path on the local machine of the file to upload as a blob. Either this or blob_content must be specified.

**blob_content**

The actual content to be uploaded as a blob. Either this or blob_path must me specified.
cache_control

Optional. The Blob service stores this value but does not use or modify it.

content_language

Optional. Specifies the natural languages used by this resource.

content_md5

Optional. An MD5 hash of the blob content. This hash is used to verify the integrity of the blob during transport. When this header is specified, the storage service checks the hash that has arrived with the one that was sent. If the two hashes do not match, the operation will fail with error code 400 (Bad Request).

blob_content_type

Optional. Set the blob's content type.

blob_content_encoding

Optional. Set the blob's content encoding.

blob_content_language

Optional. Set the blob's content language.

blob_content_md5

Optional. Set the blob's MD5 hash.

blob_cache_control

Optional. Sets the blob's cache control.

meta_name_values

A dict containing name, value for metadata.
lease_id

Required if the blob has an active lease.

get_blob

Download a blob

```
salt-cloud -f get_blob my-azure container=base name=top.sls local_path=/srv/salt/top.sls
salt-cloud -f get_blob my-azure container=base name=content.txt return_content=True
```

container

Name of existing container.

name

Name of existing blob.

local_path

The path on the local machine to download the blob to. Either this or return_content must be specified.

return_content

Whether or not to return the content directly from the blob. If specified, must be True or False. Either this or the local_path must be specified.

snapshot

Optional. The snapshot parameter is an opaque DateTime value that, when present, specifies the blob snapshot to retrieve.

lease_id

Required if the blob has an active lease.
progress_callback

callback for progress with signature function(current, total) where current is the number of bytes transferred so far, and total is the size of the blob.

max_connections

Maximum number of parallel connections to use when the blob size exceeds 64MB. Set to 1 to download the blob chunks sequentially. Set to 2 or more to download the blob chunks in parallel. This uses more system resources but will download faster.

max_retries

Number of times to retry download of blob chunk if an error occurs.

retry_wait

Sleep time in secs between retries.

16.7.3 Getting Started With Azure ARM

New in version 2016.11.0.

Azure is a cloud service by Microsoft providing virtual machines, SQL services, media services, and more. Azure ARM (aka, the Azure Resource Manager) is a next generation version of the Azure portal and API. This document describes how to use Salt Cloud to create a virtual machine on Azure ARM, with Salt installed.


Dependencies

- azure >= 2.0.0rc6
- azure-common >= 1.1.4
- azure-mgmt >= 0.30.0rc6
- azure-mgmt-compute >= 0.33.0
- azure-mgmt-network >= 0.30.0rc6
- azure-mgmt-resource >= 0.30.0
- azure-mgmt-storage >= 0.30.0rc6
- azure-mgmt-web >= 0.30.0rc6
- azure-storage >= 0.32.0
- msrestazure >= 0.4.21
- A Microsoft Azure account
- Salt
Installation Tips

Because the azure library requires the cryptography library, which is compiled on-the-fly by pip, you may need to install the development tools for your operating system.

Before you install azure with pip, you should make sure that the required libraries are installed.

Debian

For Debian and Ubuntu, the following command will ensure that the required dependencies are installed:

```
sudo apt-get install build-essential libssl-dev libffi-dev python-dev
```

Red Hat

For Fedora and RHEL-derivatives, the following command will ensure that the required dependencies are installed:

```
sudo yum install gcc libffi-devel python-devel openssl-devel
```

Configuration

Set up the provider config at `/etc/salt/cloud.providers.d/azurearm.conf`:

```
# Note: This example is for /etc/salt/cloud.providers.d/azurearm.conf

my-azurearm-config:
  driver: azurearm
  master: salt.example.com
  subscription_id: 01234567-890a-bcde-f012-34567890abdc

# https://apps.dev.microsoft.com/#/applist
username: <username>@<subdomain>.onmicrosoft.com
password: verybadpass
location: westus
resource_group: my_rg

# Optional
network_resource_group: my_net_rg
cleanup_disks: True
cleanup_vhds: True
cleanup_data_disks: True
cleanup_interfaces: True
custom_data: 'This is custom data'
expire_publisher_cache: 604800 # 7 days
expire_offer_cache: 518400 # 6 days
expire_sku_cache: 432000 # 5 days
expire_version_cache: 345600 # 4 days
expire_group_cache: 14400 # 4 hours
expire_interface_cache: 3600 # 1 hour
expire_network_cache: 3600 # 1 hour
```
Cloud Profiles

Set up an initial profile at `/etc/salt/cloud.profiles`:

<table>
<thead>
<tr>
<th>profile</th>
<th>provider</th>
<th>image</th>
<th>size</th>
<th>location</th>
<th>ssh_username</th>
<th>ssh_password</th>
</tr>
</thead>
<tbody>
<tr>
<td>azure-ubuntu-pass</td>
<td>my-azure-config</td>
<td>CanonicalUbuntuServer</td>
<td>14.04.5-LTS</td>
<td>14.04.201612050</td>
<td>Standard_D1_v2</td>
<td>eastus</td>
</tr>
</tbody>
</table>

These options are described in more detail below. Once configured, the profile can be realized with a salt command:

```
salt-cloud -p azure-ubuntu newinstance
```

This will create an salt minion instance named `newinstance` in Azure. If the command was executed on the salt-master, its Salt key will automatically be signed on the master.

Once the instance has been created with salt-minion installed, connectivity to it can be verified with Salt:

```
salt newinstance test.version
```

Profile Options

The following options are currently available for Azure ARM.

**provider**

The name of the provider as configured in `/etc/salt.cloud.providers.d/azure.conf`. 

**image**

Required. The name of the image to use to create a VM. Available images can be viewed using the following command:

```
salt-cloud --list-images my-azure-config
```

As you will see in `--list-images`, image names are comprised of the following fields, separated by the pipe (|) character:

- **publisher**: For example, Canonical or MicrosoftWindowsServer
- **offer**: For example, UbuntuServer or WindowsServer
- **sku**: Such as 14.04.5-LTS or 2012-R2-Datacenter
- **version**: Such as 14.04.201612050 or latest

It is possible to specify the URL or resource ID path of a custom image that you have access to, such as:

```
```

or:

```
/subscriptions/XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX/resourceGroups/myRG/providers/Microsoft.Compute/images/myImage
```

**size**

Required. The name of the size to use to create a VM. Available sizes can be viewed using the following command:

```
salt-cloud --list-sizes my-azure-config
```

**location**

Required. The name of the location to create a VM in. Available locations can be viewed using the following command:

```
salt-cloud --list-locations my-azure-config
```

**ssh_username**

Required for Linux. The admin user to add on the instance. It is also used to log into the newly-created VM to install Salt.
ssh_keyfile

Required if using SSH key authentication. The path on the Salt master to the SSH private key used during the minion bootstrap process.

ssh_publickeyfile

Use either ssh_publickeyfile or ssh_password. The path on the Salt master to the SSH public key which will be pushed to the Linux VM.

ssh_password

Use either ssh_publickeyfile or ssh_password. The password for the admin user on the newly-created Linux virtual machine.

win_username

Required for Windows. The user to use to log into the newly-created Windows VM to install Salt.

win_password

Required for Windows. The password to use to log into the newly-created Windows VM to install Salt.

win_installer

Required for Windows. The path to the Salt installer to be uploaded.

resource_group

Required. The resource group that all VM resources (VM, network interfaces, etc) will be created in.

network_resource_group

Optional. If specified, then the VM will be connected to the virtual network in this resource group, rather than the parent resource group of the instance. The VM interfaces and IPs will remain in the configured resource_group with the VM.
network

Required. The virtual network that the VM will be spun up in.

subnet

Optional. The subnet inside the virtual network that the VM will be spun up in. Default is `default`.

allocate_public_ip

Optional. Default is `False`. If set to `True`, a public IP will be created and assigned to the VM.

load_balancer

Optional. The load-balancer for the VM's network interface to join. If specified the backend_pool option need to be set.

backend_pool

Optional. Required if the load_balancer option is set. The load-balancer's Backend Pool the VM's network interface will join.

iface_name

Optional. The name to apply to the VM's network interface. If not supplied, the value will be set to `<VM name>-iface0`.

dns_servers

Optional. A list of the DNS servers to configure for the network interface (will be set on the VM by the DHCP of the VNET).

```
my-azurearm-profile:
    provider: azurearm-provider
    network: mynetwork
    dns_servers:
        - 10.1.1.4
        - 10.1.1.5
```
availability_set

Optional. If set, the VM will be added to the specified availability set.

volumes

Optional. A list of dictionaries describing data disks to attach to the instance can be specified using this setting. The data disk dictionaries are passed entirely to the Azure DataDisk object, so ad-hoc options can be handled as long as they are valid properties of the object.

```
volumes:
- disk_size_gb: 50
  caching: ReadWrite
- disk_size_gb: 100
  caching: ReadWrite
  managed_disk:
    storage_account_type: Standard_LRS
```

cleanup_disks

Optional. Default is False. If set to True, disks will be cleaned up when the VM that they belong to is deleted.

cleanup_vhds

Optional. Default is False. If set to True, VHDs will be cleaned up when the VM and disk that they belong to are deleted. Requires cleanup_disks to be set to True.

cleanup_data_disks

Optional. Default is False. If set to True, data disks (non-root volumes) will be cleaned up when the VM that they are attached to is deleted. Requires cleanup_disks to be set to True.

cleanup_interfaces

Optional. Default is False. Normally when a VM is deleted, its associated interfaces and IPs are retained. This is useful if you expect the deleted VM to be recreated with the same name and network settings. If you would like interfaces and IPs to be deleted when their associated VM is deleted, set this to True.

userdata

Optional. Any custom cloud data that needs to be specified. How this data is used depends on the operating system and image that is used. For instance, Linux images that use cloud-init will import this data for use with that program. Some Windows images will create a file with a copy of this data, and others will ignore it. If a Windows image creates a file, then the location will depend upon the version of Windows. This will be ignored if the userdata_file is specified.
userdata_file

Optional. The path to a file to be read and submitted to Azure as user data. How this is used depends on the operating system that is being deployed. If used, any `userdata` setting will be ignored.

userdata_sendkeys

Optional. Set to `True` in order to generate salt minion keys and provide them as variables to the userdata script when running it through the template renderer. The keys can be referenced as `{{opts['priv_key']}}` and `{{opts['pub_key']}}`.

userdata_template

Optional. Enter the renderer, such as jinja, to be used for the userdata script template.

wait_for_ip_timeout

Optional. Default is 600. When waiting for a VM to be created, Salt Cloud will attempt to connect to the VM's IP address until it starts responding. This setting specifies the maximum time to wait for a response.

wait_for_ip_interval

Optional. Default is 10. How long to wait between attempts to connect to the VM's IP.

wait_for_ip_interval_multiplier

Optional. Default is 1. Increase the interval by this multiplier after each request; helps with throttling.

expire_publisher_cache

Optional. Default is 604800. When fetching image data using `--list-images`, a number of web calls need to be made to the Azure ARM API. This is normally very fast when performed using a VM that exists inside Azure itself, but can be very slow when made from an external connection.

By default, the publisher data will be cached, and only updated every 604800 seconds (7 days). If you need the publisher cache to be updated at a different frequency, change this setting. Setting it to 0 will turn off the publisher cache.

expire_offer_cache

Optional. Default is 518400. See `expire_publisher_cache` for details on why this exists.

By default, the offer data will be cached, and only updated every 518400 seconds (6 days). If you need the offer cache to be updated at a different frequency, change this setting. Setting it to 0 will turn off the publisher cache.
expire_sku_cache

Optional. Default is 432000. See expire_publisher_cache for details on why this exists.
By default, the sku data will be cached, and only updated every 432000 seconds (5 days). If you need the sku cache to be updated at a different frequency, change this setting. Setting it to 0 will turn off the sku cache.

expire_version_cache

Optional. Default is 345600. See expire_publisher_cache for details on why this exists.
By default, the version data will be cached, and only updated every 345600 seconds (4 days). If you need the version cache to be updated at a different frequency, change this setting. Setting it to 0 will turn off the version cache.

expire_group_cache

Optional. Default is 14400. See expire_publisher_cache for details on why this exists.
By default, the resource group data will be cached, and only updated every 14400 seconds (4 hours). If you need the resource group cache to be updated at a different frequency, change this setting. Setting it to 0 will turn off the resource group cache.

expire_interface_cache

Optional. Default is 3600. See expire_publisher_cache for details on why this exists.
By default, the interface data will be cached, and only updated every 3600 seconds (1 hour). If you need the interface cache to be updated at a different frequency, change this setting. Setting it to 0 will turn off the interface cache.

expire_network_cache

Optional. Default is 3600. See expire_publisher_cache for details on why this exists.
By default, the network data will be cached, and only updated every 3600 seconds (1 hour). If you need the network cache to be updated at a different frequency, change this setting. Setting it to 0 will turn off the network cache.

Other Options

Other options relevant to Azure ARM.

storage_account

Required for actions involving an Azure storage account.
storage_key

Required for actions involving an Azure storage account.

Show Instance

This action is a thin wrapper around --full-query, which displays details on a single instance only. In an environment with several machines, this will save a user from having to sort through all instance data, just to examine a single instance.

```
salt-cloud -a show_instance myinstance
```

16.7.4 Getting Started with CloudStack

CloudStack is one the most popular cloud projects. It's an open source project to build public and/or private clouds. You can use Salt Cloud to launch CloudStack instances.

Dependencies

- Libcloud >= 0.13.2

Configuration

Using Salt for CloudStack, requires an API key and a secret key along with the API address endpoint information.

```
# Note: This example is for /etc/salt/cloud.providers or any file in the #
#/etc/salt/cloud.providers.d/ directory.

exoscale:
  driver: cloudstack
  host: api.exoscale.com
  path: /compute
  apikey: EXOAPIKEY
  secretkey: EXOSECRETKEYINYOURACCOUNT
```

Note: Changed in version 2015.8.0.

The provider parameter in cloud provider definitions was renamed to driver. This change was made to avoid confusion with the provider parameter that is used in cloud profile definitions. Cloud provider definitions now use driver to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use provider to refer to provider configurations that you define.
Profiles

Cloud Profiles

Set up an initial profile at /etc/salt/cloud.profiles or in the /etc/salt/cloud.profiles.d/ directory:

```
exoscale-ubuntu:
  provider: exoscale-config
  image: Linux Ubuntu 18.04
  size: Small
  location: ch-gva-2
  ssh_username: ubuntu
```

Locations can be obtained using the --list-locations option for the salt-cloud command:

```
# salt-cloud --list-locations exoscale-config
exoscale:
  -------
  cloudstack:
  -------
    ch-dk-2:
    -------
      country: Unknown
      driver:
      id: 91e5e9e4-c9ed-4b76-bee4-427004b3baf9
      name: ch-dk-2
    ch-gva-2:
    -------
      country: Unknown
      driver:
      id: 1128bd56-b4d9-4ac6-a7b9-c715b187ce11
      name: ch-gva-2
```

Sizes can be obtained using the --list-sizes option for the salt-cloud command:

```
# salt-cloud --list-sizes exoscale
exoscale:
  -------
  cloudstack:
  -------
    Extra-large:
    -------
      bandwidth: 0
      disk: 0
      driver: extra:
      -------
      cpu:
```

(continues on next page)
get_uuid:
id: 350dc5ea-fe6d-42ba-b6c0-efb8b75617ad
name: Extra-large
price: 0
ram: 16384
uuid: edb4cd4ae14bbf152d451b30c4b417ab095a5bfe

Images can be obtained using the --list-images option for the salt-cloud command:

```
# salt-cloud --list-images exoscale
exoscale:
     --------
cloudstack:
     --------
     Linux CentOS 6.6 64-bit:
     --------
driver:
extra:
     --------
displaytext:
     Linux CentOS 6.6 64-bit 10G Disk (2014-12-01-bac8e0)
format:
     QCOW2
hypervisor:
     KVM
os:
     Other PV (64-bit)
size:
     10737418240
get_uuid:
id: aa69ae64-1ea9-40af-8824-c2c3344e8d7c
name:
     Linux CentOS 6.6 64-bit
uuid:
     f26b4f54ec8591abdb6b5feb3b58f720aa438fee

...SNIP...
```

CloudStack specific settings

securitygroup

New in version 2017.7.0.

You can specify a list of security groups (by name or id) that should be assigned to the VM:

```
exoscale:
     provider: cloudstack
```

(continues on next page)
securitygroup:
- default
- salt-master

16.7.5 Getting Started With DigitalOcean

DigitalOcean is a public cloud host that specializes in Linux instances.

Configuration

Using Salt for DigitalOcean requires a personal_access_token, an ssh_key_file, and at least one SSH key name in ssh_key_names. More ssh_key_names can be added by separating each key with a comma. The personal_access_token can be found in the DigitalOcean web interface in the "Apps & API" section. The SSH key name can be found under the "SSH Keys" section.

```bash
# Note: This example is for /etc/salt/cloud.providers or any file in the
# /etc/salt/cloud.providers.d/ directory.

my-digitalocean-config:
  driver: digitalocean
  personal_access_token: xxx
  ssh_key_file: /path/to/ssh/key/file
  ssh_key_names: my-key-name,my-key-name-2
  location: New York 1
```

Note: Changed in version 2015.8.0.

The provider parameter in cloud provider definitions was renamed to driver. This change was made to avoid confusion with the provider parameter that is used in cloud profile definitions. Cloud provider definitions now use driver to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use provider to refer to provider configurations that you define.

Profiles

Cloud Profiles

Set up an initial profile at /etc/salt/cloud.profiles or in the /etc/salt/cloud.profiles.d/ directory:

```bash
digitalocean-ubuntu:
  provider: my-digitalocean-config
  image: 14.04 x64
  size: 512MB
  location: New York 1
  private_networking: True
  backups_enabled: True
  ipv6: True
  create_dns_record: True
  userdata_file: /etc/salt/cloud.userdata.d/setup
```

(continues on next page)
Locations can be obtained using the `--list-locations` option for the `salt-cloud` command:

```bash
# salt-cloud --list-locations my-digitalocean-config
my-digitalocean-config:
   -------
   digitalocean:
      -------
      Amsterdam 1:
        -------
        available: False
        features: [u'backups']
        name: Amsterdam 1
        sizes:
          []
        slug: ams1
...SNIP...
```

Sizes can be obtained using the `--list-sizes` option for the `salt-cloud` command:

```bash
# salt-cloud --list-sizes my-digitalocean-config
my-digitalocean-config:
   -------
   digitalocean:
      -------
      512MB:
        -------
        cost_per_hour: 0.00744
        cost_per_month: 5.0
        cpu: 1
        disk: 20
        id: 66
        memory: 512
        name: 512MB
        slug: None
...SNIP...
```

Images can be obtained using the `--list-images` option for the `salt-cloud` command:

```bash
# salt-cloud --list-images my-digitalocean-config
```

(continues on next page)
Profile Specifics:

ssh_username

If using a FreeBSD image from DigitalOcean, you'll need to set the ssh_username setting to freebsd in your profile configuration.

```
digitalocean-freebsd:
  provider: my-digitalocean-config
  image: 10.2
  size: 512MB
  ssh_username: freebsd
```

userdata_file

New in version 2016.11.6.

Use `userdata_file` to specify the userdata file to upload for use with cloud-init if available.

```
my-openstack-config:
  # Pass userdata to the instance to be created
  userdata_file: /etc/salt/cloud-init/packages.yml

my-do-config:
  # Pass userdata to the instance to be created
  userdata_file: /etc/salt/cloud-init/packages.yml
  userdata_template: jinja
```

If no `userdata_template` is set in the cloud profile, then the master configuration will be checked for a `userdata_template` value. If this is not set, then no templating will be performed on the userdata_file.

To disable templating in a cloud profile when a `userdata_template` has been set in the master configuration file, simply set `userdata_template` to `False` in the cloud profile.
my-do-config:
# Pass userdata to the instance to be created
userdata_file: /etc/salt/cloud-init/packages.yml
userdata_template: False

Miscellaneous Information

Note: DigitalOcean's concept of Applications is nothing more than a pre-configured instance (same as a normal Droplet). You will find examples such as Docker 0.7 Ubuntu 13.04 x64 and Wordpress on Ubuntu 12.10 when using the --list-images option. These names can be used just like the rest of the standard instances when specifying an image in the cloud profile configuration.

Note: If your domain's DNS is managed with DigitalOcean, and your minion name matches your DigitalOcean managed DNS domain, you can automatically create A and AAA records for newly created droplets. Use create_dns_record: True in your config to enable this. Adding delete_dns_record: True to also delete records when a droplet is destroyed is optional. Due to limitations in salt-cloud design, the destroy code does not have access to the VM config data. WHETHER YOU ADD create_dns_record: True OR NOT, salt-cloud WILL attempt to delete your DNS records if the minion name matches. This will prevent advertising any recycled IP addresses for destroyed minions.

Note: If you need to perform the bootstrap using the local interface for droplets, this can be done by setting ssh_interface: private in your config. By default the salt-cloud script would run on the public interface however if firewall is preventing the connection to the Droplet over the public interface you might need to set this option to connect via private interface. Also, to use this feature private_networking: True must be set in the config.

Note: Additional documentation is available from DigitalOcean.

16.7.6 Getting Started With Dimension Data Cloud

Dimension Data are a global IT Services company and form part of the NTT Group. Dimension Data provide IT-as-a-Service to customers around the globe on their cloud platform (Compute as a Service). The CaaS service is available either on one of the public cloud instances or as a private instance on premises.

http://cloud.dimensiondata.com/

CaaS has its own non-standard API, SaltStack provides a wrapper on top of this API with common methods with other IaaS solutions and Public cloud providers. Therefore, you can use the Dimension Data module to communicate with both the public and private clouds.
Dependencies

This driver requires the Python apache-libcloud and netaddr library to be installed.

Configuration

When you instantiate a driver you need to pass the following arguments to the driver constructor:

- **user_id** - Your Dimension Data Cloud username
- **key** - Your Dimension Data Cloud password
- **region** - The region key, one of the possible region keys

Possible regions:

- **dd-na**: Dimension Data North America (USA)
- **dd-eu**: Dimension Data Europe
- **dd-af**: Dimension Data Africa
- **dd-au**: Dimension Data Australia
- **dd-latam**: Dimension Data Latin America
- **dd-ap**: Dimension Data Asia Pacific
- **dd-canada**: Dimension Data Canada region

```yaml
# Note: This example is for /etc/salt/cloud.providers or any file in the
# /etc/salt/cloud.providers.d/ directory.

my-dimensiondata-config:
  user_id: my_username
  key: myPassword!
  region: dd-na
  driver: dimensiondata
```

Note: In version 2015.8.0, the `provider` parameter in cloud provider definitions was renamed to `driver`. This change was made to avoid confusion with the `provider` parameter that is used in cloud profile definitions. Cloud provider definitions now use `driver` to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use `provider` to refer to provider configurations that you define.

Profiles

Cloud Profiles

Dimension Data images have an inbuilt size configuration, there is no list of sizes (although, if the command `--list-sizes` is run a default will be returned).

Images can be obtained using the `--list-images` option for the `salt-cloud` command:
```
# salt-cloud --list-images my-dimensiondata-config
my-dimensiondata-config:

dimensiondata:

  __________
  CSfM SharePoint 2013 Trial:
  __________
  driver:
  extra:

    __________
    OS_displayName:
    WIN2012R2S/64
    OS_type:
      None
    cpu:
    created:
      2015-03-19T18:36:06.000Z
    description:
      Windows 2012 R2 Standard 64-bit installed with SharePoint 2013 and Visual Studio 2013 Pro (Trial Version)
    location:
    memoryGb:
    osImageKey:
      T-WIN-2012R2-STD-SP2013-VS2013-64-4-12-100
    get_uuid:
    id:
      0df4677e-d380-4e9b-9469-b529ee0214c5
    name:
      CSfM SharePoint 2013 Trial
    uuid:
      28c077f1be970ee904541407b377e3ff87a9ac69

CentOS 5 32-bit 2 CPU:

__________
driver:
extra:

    __________
    OS_displayName:
    CENTOS5/32
    OS_type:
      None
    cpu:
    created:
      2015-10-21T14:52:29.000Z
    description:
      CentOS Release 5.11 32-bit
    location:
    memoryGb:
    osImageKey:
      T-CENT-5-32-2-4-10
    get_uuid:
    id:
      a8046bd1-04ea-4668-bf32-bf8d5540faed
    name:
      CentOS 5 32-bit 2 CPU
    uuid:
Locations can be obtained using the `--list-locations` option for the `salt-cloud` command:

```yaml
my-dimensiondata-config:
  dimensiondata:
    Australia - Melbourne:
      country: Australia
      driver: id: AU2
      name: Australia - Melbourne
    Australia - Melbourne MCP2:
      country: Australia
      driver: id: AU10
      name: Australia - Melbourne MCP2
    Australia - Sydney:
      country: Australia
      driver: id: AU1
      name: Australia - Sydney
    Australia - Sydney MCP2:
      country: Australia
      driver: id: AU9
      name: Australia - Sydney MCP2
    New Zealand:
      country: New Zealand
      driver: id: AU8
      name: New Zealand
```
16.7.7 Getting Started With AWS EC2

Amazon EC2 is a very widely used public cloud platform and one of the core platforms Salt Cloud has been built to support.

Previously, the suggested driver for AWS EC2 was the `aws` driver. This has been deprecated in favor of the `ec2` driver. Configuration using the old `aws` driver will still function, but that driver is no longer in active development.

Dependencies

This driver requires the Python `requests` library to be installed.

Configuration

The following example illustrates some of the options that can be set. These parameters are discussed in more detail below.

```yaml
my-ec2-southeast-public-ips:
  # Set up the location of the salt master
  minion:
    master: saltmaster.example.com

  # Set up grains information, which will be common for all nodes
  grains:
    node_type: broker
    release: 1.0.1

  # Specify whether to use public or private IP for deploy script.
  ssh_interface: public_ips
```

Note: Dimension Data Cloud REST API documentation is available from Dimension Data MCP 2.
# Optionally configure the Windows credential validation number of
# retries and delay between retries. This defaults to 10 retries
# with a one second delay between retries
win_deploy_auth_retries: 10
win_deploy_auth_retry_delay: 1

# Set the EC2 access credentials (see below)
#
# id: 'use-instance-role-credentials'
# key: 'use-instance-role-credentials'

# If 'role_arn' is specified the above credentials are used to
# to assume the role. By default, role_arn is set to None.
role_arn: arn:aws:iam::012345678910:role/SomeRoleName

# Make sure this key is owned by corresponding user (default 'salt') with
# permissions 0400.
#
# private_key: /etc/salt/my_test_key.pem
# keyname: my_test_key
# securitygroup: default

# Optionally configure default region
# Use salt-cloud --list-locations <provider> to obtain valid regions
#
# location: ap-southeast-1
# availability_zone: ap-southeast-1b

# Configure which user to use to run the deploy script. This setting is
# dependent upon the AMI that is used to deploy. It is usually safer to
# configure this individually in a profile, than globally. Typical users
# are:
#
# # Amazon Linux -> ec2-user
# # RHEL -> ec2-user
# # CentOS -> ec2-user
# # Ubuntu -> ubuntu
# # Debian -> admin
# #
# ssh_username: ec2-user

# Optionally add an IAM profile
iam_profile: 'arn:aws:iam::123456789012:instance-profile/ExampleInstanceProfile'

# Optionally add an IAM profile
iam_profile: 'arn:aws:iam::123456789012:instance-profile/ExampleInstanceProfile'

driver: ec2

my-ec2-southeast-private-ips:
# Set up the location of the salt master
#
# minion:
#   master: saltmaster.example.com

# Specify whether to use public or private IP for deploy script.
# #
# # Valid options are:
# private_ips - The salt-master is also hosted with EC2
# public_ips - The salt-master is hosted outside of EC2
#

**ssh_interface**: private_ips

# Optionally configure the Windows credential validation number of
# retries and delay between retries. This defaults to 10 retries
# with a one second delay between retries
**win_deploy_auth_retries**: 10
**win_deploy_auth_retry_delay**: 1

# Set the EC2 access credentials (see below)
#
**id**: 'use-instance-role-credentials'
**key**: 'use-instance-role-credentials'

# Make sure this key is owned by root with permissions 0400.
#
**private_key**: /etc/salt/my_test_key.pem
**keyname**: my_test_key

# This one should NOT be specified if VPC was not configured in AWS to be
# the default. It might cause an error message which says that network
# interfaces and an instance-level security groups may not be specified
# on the same request.
#
**securitygroup**: default

# Optionally configure default region
#
**location**: ap-southeast-1
**availability_zone**: ap-southeast-1b

# Configure which user to use to run the deploy script. This setting is
# dependent upon the AMI that is used to deploy. It is usually safer to
# configure this individually in a profile, than globally. Typical users
# are:
#
# Amazon Linux -> ec2-user
# RHEL -> ec2-user
# CentOS -> ec2-user
# Ubuntu -> ubuntu
#
**ssh_username**: ec2-user

# Optionally add an IAM profile
**iam_profile**: 'my other profile name'

**driver**: ec2

---

**Note**: Changed in version 2015.8.0.

The `provider` parameter in cloud provider definitions was renamed to `driver`. This change was made to avoid confusion with the `provider` parameter that is used in cloud profile definitions. Cloud provider definitions now use `driver` to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host,
while cloud profiles continue to use `provider` to refer to provider configurations that you define.

**Access Credentials**

The `id` and `key` settings may be found in the Security Credentials area of the AWS Account page:

https://portal.aws.amazon.com/gp/aws/securityCredentials

Both are located in the Access Credentials area of the page, under the Access Keys tab. The `id` setting is labeled Access Key ID, and the `key` setting is labeled Secret Access Key.

Note: if either `id` or `key` is set to 'use-instance-role-credentials' it is assumed that Salt is running on an AWS instance, and the instance role credentials will be retrieved and used. Since both the `id` and `key` are required parameters for the AWS ec2 provider, it is recommended to set both to 'use-instance-role-credentials' for this functionality.

A "static" and "permanent" Access Key ID and Secret Key can be specified, but this is not recommended. Instance role keys are rotated on a regular basis, and are the recommended method of specifying AWS credentials.

**Windows Deploy Timeouts**

For Windows instances, it may take longer than normal for the instance to be ready. In these circumstances, the provider configuration can be configured with a `win_deploy_auth_retries` and/or a `win_deploy_auth_retry_delay` setting, which default to 10 retries and a one second delay between retries. These retries and timeouts relate to validating the Administrator password once AWS provides the credentials via the AWS API.

**Key Pairs**

In order to create an instance with Salt installed and configured, a key pair will need to be created. This can be done in the EC2 Management Console, in the Key Pairs area. These key pairs are unique to a specific region. Keys in the us-east-1 region can be configured at:

https://console.aws.amazon.com/ec2/home?region=us-east-1#s=KeyPairs

Keys in the us-west-1 region can be configured at

https://console.aws.amazon.com/ec2/home?region=us-west-1#s=KeyPairs

...and so on. When creating a key pair, the browser will prompt to download a pem file. This file must be placed in a directory accessible by Salt Cloud, with permissions set to either 0400 or 0600.

**Security Groups**

An instance on EC2 needs to belong to a security group. Like key pairs, these are unique to a specific region. These are also configured in the EC2 Management Console. Security groups for the us-east-1 region can be configured at:

https://console.aws.amazon.com/ec2/home?region=us-east-1#s=SecurityGroups

...and so on.

A security group defines firewall rules which an instance will adhere to. If the salt-master is configured outside of EC2, the security group must open the SSH port (usually port 22) in order for Salt Cloud to install Salt.
IAM Profile

Amazon EC2 instances support the concept of an instance profile, which is a logical container for the IAM role. At the time that you launch an EC2 instance, you can associate the instance with an instance profile, which in turn corresponds to the IAM role. Any software that runs on the EC2 instance is able to access AWS using the permissions associated with the IAM role.

Scaffolding the profile is a 2-step configuration process:

1. Configure an IAM Role from the IAM Management Console.
2. Attach this role to a new profile. It can be done with the AWS CLI:

```bash
> aws iam create-instance-profile --instance-profile-name PROFILE_NAME
> aws iam add-role-to-instance-profile --instance-profile-name PROFILE_NAME
    --role-name ROLE_NAME
```

Once the profile is created, you can use the PROFILE_NAME to configure your cloud profiles.

Cloud Profiles

Set up an initial profile at /etc/salt/cloud.profiles:

```yaml
base_ec2_private:
  provider: my-ec2-southeast-private-ips
  image: ami-e565ba8c
  size: t2.micro
  ssh_username: ec2-user

base_ec2_public:
  provider: my-ec2-southeast-public-ips
  image: ami-e565ba8c
  size: t2.micro
  ssh_username: ec2-user

base_ec2_db:
  provider: my-ec2-southeast-public-ips
  image: ami-e565ba8c
  size: m1.xlarge
  ssh_username: ec2-user
  volumes:
    - { size: 10, device: /dev/sdf }
    - { size: 10, device: /dev/sdg, type: io1, iops: 1000 }
    - { size: 10, device: /dev/sdh, type: io1, iops: 1000 }
    - { size: 10, device: /dev/sdi, tags: {"Environment": "production"} }
  # optionally add tags to profile:
  tag: {"Environment": 'production', 'Role': 'database'}
  # force grains to sync after install
  sync_after_install: grains

base_ec2_vpc:
  provider: my-ec2-southeast-public-ips
  image: ami-a73264ce
  size: m1.xlarge
  ssh_username: ec2-user
  script: /etc/salt/cloud.deploy.d/user_data.sh
  network_interfaces: (continues on next page)
```
- **DeviceIndex**: 0  
  **PrivateIpAddresses**:  
  - **Primary**: True  
    #auto assign public ip (not EIP)  
  **AssociatePublicIpAddress**: True  
  **SubnetId**: subnet-813d4bbf  
  **SecurityGroupId**:  
    - sg-750af413  
  **del_root_vol_on_destroy**: True  
  **del_all_vols_on_destroy**: True  
  **volumes**:  
    - { **size**: 10, **device**: /dev/sdf }  
    - { **size**: 10, **device**: /dev/sdg, **type**: io1, **iops**: 1000 }  
    - { **size**: 10, **device**: /dev/sdh, **type**: io1, **iops**: 1000 }  
  **tag**: { 'Environment': 'production', 'Role': 'database' }  
  **sync_after_install**: grains

The profile can now be realized with a salt command:

```
# salt-cloud -p base_ec2 ami.example.com
# salt-cloud -p base_ec2_public ami.example.com
# salt-cloud -p base_ec2_private ami.example.com
```

This will create an instance named `ami.example.com` in EC2. The minion that is installed on this instance will have an **id** of `ami.example.com`. If the command was executed on the salt-master, its Salt key will automatically be signed on the master.

Once the instance has been created with salt-minion installed, connectivity to it can be verified with Salt:

```
# salt 'ami.example.com' test.version
```

### Required Settings

The following settings are always required for EC2:

```
# Set the EC2 login data
my-ec2-config:
  id: HJGRYCIILJKJYG
  key: 'kdjgfgsm;woormgjjasrjksjhasdfgn'
  keyname: test
  securitygroup: quick-start
  private_key: /root/test.pem
  driver: ec2
```

### Optional Settings

EC2 allows a userdata file to be passed to the instance to be created. This functionality was added to Salt in the 2015.5.0 release.

```
my-ec2-config:
  # Pass userdata to the instance to be created
  userdata_file: /etc/salt/my-userdata-file
```
**Note:** From versions 2016.11.0 and 2016.11.3, this file was passed through the master’s `renderer` to template it. However, this caused issues with non-YAML data, so templating is no longer performed by default. To template the `userdata_file`, add a `userdata_template` option to the cloud profile:

```yaml
my-ec2-config:
  # Pass userdata to the instance to be created
  userdata_file: /etc/salt/my-userdata-file
  userdata_template: jinja
```

If no `userdata_template` is set in the cloud profile, then the master configuration will be checked for a `userdata_template` value. If this is not set, then no templating will be performed on the `userdata_file`.

To disable templating in a cloud profile when a `userdata_template` has been set in the master configuration file, simply set `userdata_template` to `False` in the cloud profile:

```yaml
my-ec2-config:
  # Pass userdata to the instance to be created
  userdata_file: /etc/salt/my-userdata-file
  userdata_template: False
```

EC2 allows a location to be set for servers to be deployed in. Availability zones exist inside regions, and may be added to increase specificity.

```yaml
my-ec2-config:
  # Optionally configure default region
  location: ap-southeast-1
  availability_zone: ap-southeast-1b
```

EC2 instances can have a public or private IP, or both. When an instance is deployed, Salt Cloud needs to log into it via SSH to run the deploy script. By default, the public IP will be used for this. If the `salt-cloud` command is run from another EC2 instance, the private IP should be used.

```yaml
my-ec2-config:
  # Specify whether to use public or private IP for deploy script
  # private_ips or public_ips
  ssh_interface: public_ips
```

Many EC2 instances do not allow remote access to the root user by default. Instead, another user must be used to run the deploy script using `sudo`. Some common usernames include `ec2-user` (for Amazon Linux), `ubuntu` (for Ubuntu instances), `admin` (official Debian) and `bitnami` (for images provided by Bitnami).

```yaml
my-ec2-config:
  # Configure which user to use to run the deploy script
  ssh_username: ec2-user
```

Multiple usernames can be provided, in which case Salt Cloud will attempt to guess the correct username. This is mostly useful in the main configuration file:

```yaml
my-ec2-config:
  ssh_username:
    - ec2-user
    - ubuntu
    - admin
    - bitnami
```

Multiple security groups can also be specified in the same fashion:
EC2 instances can be added to an AWS Placement Group by specifying the `placementgroup` option:

```yaml
my-ec2-config:
  placementgroup: my-aws-placement-group
```

Your instances may optionally make use of EC2 Spot Instances. The following example will request that spot instances be used and your maximum bid will be $0.10. Keep in mind that different spot prices may be needed based on the current value of the various EC2 instance sizes. You can check current and past spot instance pricing via the EC2 API or AWS Console.

```yaml
my-ec2-config:
  spot_config:
    spot_price: 0.10
```

You can optionally specify tags to apply to the EC2 spot instance request. A spot instance request itself is an object in AWS. The following example will set two tags on the spot instance request.

```yaml
my-ec2-config:
  spot_config:
    spot_price: 0.10
    tag:
      tag0: value
      tag1: value
```

By default, the spot instance type is set to 'one-time', meaning it will be launched and, if it's ever terminated for whatever reason, it will not be recreated. If you would like your spot instances to be relaunched after a termination (by you or AWS), set the `type` to 'persistent'.

NOTE: Spot instances are a great way to save a bit of money, but you do run the risk of losing your spot instances if the current price for the instance size goes above your maximum bid.

The following parameters may be set in the cloud configuration file to control various aspects of the spot instance launching:

- `wait_for_spot_timeout`: seconds to wait before giving up on spot instance launch (default=600)
- `wait_for_spot_interval`: seconds to wait in between polling requests to determine if a spot instance is available (default=30)
- `wait_for_spot_interval_multiplier`: a multiplier to add to the interval in between requests, which is useful if AWS is throttling your requests (default=1)
- `wait_for_spot_max_failures`: maximum number of failures before giving up on launching your spot instance (default=10)

If you find that you're being throttled by AWS while polling for spot instances, you can set the following in your core cloud configuration file that will double the polling interval after each request to AWS.

```yaml
wait_for_spot_timeout: 1
wait_for_spot_interval: 2
wait_for_spot_interval_multiplier: 2
```

See the AWS Spot Instances documentation for more information.

Block device mappings enable you to specify additional EBS volumes or instance store volumes when the instance is launched. This setting is also available on each cloud profile. Note that the number of instance stores varies by...
instance type. If more mappings are provided than are supported by the instance type, mappings will be created in the order provided and additional mappings will be ignored. Consult the AWS documentation for a listing of the available instance stores, and device names.

```yaml
my-ec2-config:
  block_device_mappings:
  - DeviceName: /dev/sdb
    VirtualName: ephemeral0
  - DeviceName: /dev/sdc
    VirtualName: ephemeral1
```

You can also use block device mappings to change the size of the root device at the provisioning time. For example, assuming the root device is '/dev/sda', you can set its size to 100G by using the following configuration.

```yaml
my-ec2-config:
  block_device_mappings:
  - DeviceName: /dev/sda
    Ebs.VolumeSize: 100
    Ebs.VolumeType: gp2
    Ebs.SnapshotId: dummy0
  - DeviceName: /dev/sdb
    # required for devices > 2TB
    Ebs.VolumeType: gp2
    Ebs.VolumeSize: 3001
```

Tagging of block devices can be set on a per device basis. For example, you may have multiple devices defined in your block_device_mappings structure. You have the option to set tags on any of one device or all of them as shown in the following configuration.

```yaml
my-ec2-config:
  block_device_mappings:
  - DeviceName: /dev/sda
    Ebs.VolumeSize: 100
    Ebs.VolumeType: gp2
    tag:
      tag0: myserver
      tag1: value
  - DeviceName: /dev/sdb
    Ebs.VolumeType: gp2
    Ebs.VolumeSize: 3001
    tag:
      tagX: value
      tagY: value
```

You can configure any AWS valid tag name as shown in the above example, including 'Name'. If you do not configure the tag 'Name', it will be automatically created with a value set to the virtual machine name. If you configure the tag 'Name', the value you configure will be used rather than defaulting to the virtual machine name as shown in the following configuration.

```yaml
my-ec2-config:
  block_device_mappings:
  - DeviceName: /dev/sda
    Ebs.VolumeSize: 100
    Ebs.VolumeType: gp2
    tag:
      Name: myserver
      tag0: value
```

(continues on next page)
Existing EBS volumes may also be attached (not created) to your instances or you can create new EBS volumes based on EBS snapshots. To simply attach an existing volume use the `volume_id` parameter.

```yaml
device: /dev/xvdj
volume_id: vol-12345abcd
```

Or, to create a volume from an EBS snapshot, use the `snapshot` parameter.

```yaml
device: /dev/xvdj
snapshot: snap-abcd12345
```

Note that `volume_id` will take precedence over the `snapshot` parameter.

Tags can be set once an instance has been launched.

```yaml
my-ec2-config:
  tag:
    tag0: value
    tag1: value
```

### Setting up a Master inside EC2

Salt Cloud can configure Salt Masters as well as Minions. Use the `make_master` setting to use this functionality.

```yaml
my-ec2-config:
  # Optionally install a Salt Master in addition to the Salt Minion
  make_master: True
```

When creating a Salt Master inside EC2 with `make_master: True`, or when the Salt Master is already located and configured inside EC2, by default, minions connect to the master's public IP address during Salt Cloud's provisioning process. Depending on how your security groups are defined, the minions may or may not be able to communicate with the master. In order to use the master's private IP in EC2 instead of the public IP, set the `salt_interface` to `private_ips`.

```yaml
my-ec2-config:
  # Optionally set the IP configuration to private_ips
  salt_interface: private_ips
```
Modify EC2 Tags

One of the features of EC2 is the ability to tag resources. In fact, under the hood, the names given to EC2 instances by salt-cloud are actually just stored as a tag called Name. Salt Cloud has the ability to manage these tags:

```
salt-cloud -a get_tags mymachine
salt-cloud -a set_tags mymachine tag1=somestuff tag2='Other stuff'
salt-cloud -a del_tags mymachine tag1,tag2,tag3
```

It is possible to manage tags on any resource in EC2 with a Resource ID, not just instances:

```
salt-cloud -f get_tags my_ec2 resource_id=af5467ba
salt-cloud -f set_tags my_ec2 resource_id=af5467ba tag1=somestuff
salt-cloud -f del_tags my_ec2 resource_id=af5467ba tags=tag1,tag2,tag3
```

Rename EC2 Instances

As mentioned above, EC2 instances are named via a tag. However, renaming an instance by renaming its tag will cause the salt keys to mismatch. A rename function exists which renames both the instance, and the salt keys.

```
salt-cloud -a rename mymachine newname=yourmachine
```

Rename on Destroy

When instances on EC2 are destroyed, there will be a lag between the time that the action is sent, and the time that Amazon cleans up the instance. During this time, the instance still retains a Name tag, which will cause a collision if the creation of an instance with the same name is attempted before the cleanup occurs. In order to avoid such collisions, Salt Cloud can be configured to rename instances when they are destroyed. The new name will look something like:

```
myinstance-DEL20f5b8ad4eb64ed8f2c428df80a1a0c
```

In order to enable this, add rename_on_destroy line to the main configuration file:

```
my-ec2-config:
    rename_on_destroy: True
```

Listing Images

Normally, images can be queried on a cloud provider by passing the --list-images argument to Salt Cloud. This still holds true for EC2:

```
salt-cloud --list-images my-ec2-config
```

However, the full list of images on EC2 is extremely large, and querying all of the available images may cause Salt Cloud to behave as if frozen. Therefore, the default behavior of this option may be modified, by adding an owner argument to the provider configuration:

```
owner: aws-marketplace
```

The possible values for this setting are amazon, aws-marketplace, self, <AWS account ID> or all. The default setting is amazon. Take note that all and aws-marketplace may cause Salt Cloud to appear as if it is freezing, as it tries to handle the large amount of data.
It is also possible to perform this query using different settings without modifying the configuration files. To do this, call the `avail_images` function directly:

```
salt-cloud -f avail_images my-ec2-config owner=aws-marketplace
```

**EC2 Images**

The following are lists of available AMI images, generally sorted by OS. These lists are on 3rd-party websites, are not managed by Salt Stack in any way. They are provided here as a reference for those who are interested, and contain no warranty (express or implied) from anyone affiliated with Salt Stack. Most of them have never been used, much less tested, by the Salt Stack team.

- Arch Linux
- FreeBSD
- Fedora
- CentOS
- Ubuntu
- Debian
- OmniOS
- All Images on Amazon

**NOTE:** If `image` of a profile does not start with `ami-`, latest image with that name will be used. For example, to create a CentOS 7 profile, instead of using the AMI like `image: ami-1caef165`, we can use its name like `image: 'CentOS Linux 7 x86_64 HVM EBS ENA 1803_01'`. We can also use a pattern like below to get the latest CentOS 7:

```
profile-id: provider: provider-name
            subnetid: subnet-XXXXXXXX
            image: 'CentOS Linux 7 x86_64 HVM EBS *'
            size: m1.medium
            ssh_username: centos
            securitygroupid:
              - sg-XXXXXXXX
            securitygroupname:
              - AnotherSecurityGroup
              - AndThirdSecurityGroup
```

**show_image**

This is a function that describes an AMI on EC2. This will give insight as to the defaults that will be applied to an instance using a particular AMI.

```
$ salt-cloud -f show_image ec2 image=ami-fd20ad94
```
show_instance

This action is a thin wrapper around --full-query, which displays details on a single instance only. In an environment with several machines, this will save a user from having to sort through all instance data, just to examine a single instance.

```bash
$ salt-cloud -a show_instance myinstance
```

ebs_optimized

This argument enables switching of the EbsOptimized setting which default to 'false'. Indicates whether the instance is optimized for EBS I/O. This optimization provides dedicated throughput to Amazon EBS and an optimized configuration stack to provide optimal Amazon EBS I/O performance. This optimization isn't available with all instance types. Additional usage charges apply when using an EBS-optimized instance.

This setting can be added to the profile or map file for an instance.

If set to True, this setting will enable an instance to be EbsOptimized

```
ebs_optimized: True
```

This can also be set as a cloud provider setting in the EC2 cloud configuration:

```
my-ec2-config:
  ebs_optimized: True
```

del_root_vol_on_destroy

This argument overrides the default DeleteOnTermination setting in the AMI for the EBS root volumes for an instance. Many AMIs contain 'false' as a default, resulting in orphaned volumes in the EC2 account, which may unknowingly be charged to the account. This setting can be added to the profile or map file for an instance.

If set, this setting will apply to the root EBS volume

```
del_root_vol_on_destroy: True
```

This can also be set as a cloud provider setting in the EC2 cloud configuration:

```
my-ec2-config:
  del_root_vol_on_destroy: True
```

del_all_vols_on_destroy

This argument overrides the default DeleteOnTermination setting in the AMI for the not-root EBS volumes for an instance. Many AMIs contain 'false' as a default, resulting in orphaned volumes in the EC2 account, which may unknowingly be charged to the account. This setting can be added to the profile or map file for an instance.

If set, this setting will apply to any (non-root) volumes that were created by salt-cloud using the 'volumes' setting.

The volumes will not be deleted under the following conditions:
* If a volume is detached before terminating the instance
* If a volume is created without this setting and attached to the instance

```
del_all_vols_on_destroy: True
```

This can also be set as a cloud provider setting in the EC2 cloud configuration:
The setting for this may be changed on all volumes of an existing instance using one of the following commands:

```
salt-cloud -a delvol_on_destroy myinstance
salt-cloud -a keepvol_on_destroy myinstance
salt-cloud -a show_delvol_on_destroy myinstance
```

The setting for this may be changed on a volume on an existing instance using one of the following commands:

```
salt-cloud -a delvol_on_destroy myinstance device=/dev/sda1
salt-cloud -a delvol_on_destroy myinstance volume_id=vol-1a2b3c4d
salt-cloud -a keepvol_on_destroy myinstance device=/dev/sda1
salt-cloud -a keepvol_on_destroy myinstance volume_id=vol-1a2b3c4d
salt-cloud -a show_delvol_on_destroy myinstance device=/dev/sda1
salt-cloud -a show_delvol_on_destroy myinstance volume_id=vol-1a2b3c4d
```

### EC2 Termination Protection

EC2 allows the user to enable and disable termination protection on a specific instance. An instance with this protection enabled cannot be destroyed. The EC2 driver adds a `show_term_protect` action to the regular EC2 functionality.

```
salt-cloud -a show_term_protect mymachine
salt-cloud -a enable_term_protect mymachine
salt-cloud -a disable_term_protect mymachine
```

### Alternate Endpoint

Normally, EC2 endpoints are build using the region and the service_url. The resulting endpoint would follow this pattern:

```
ec2.<region>.<service_url>
```

This results in an endpoint that looks like:

```
ec2.us-east-1.amazonaws.com
```

There are other projects that support an EC2 compatibility layer, which this scheme does not account for. This can be overridden by specifying the endpoint directly in the main cloud configuration file:

```
my-ec2-config:
  endpoint: myendpoint.example.com:1138/services/Cloud
```
Volume Management

The EC2 driver has several functions and actions for management of EBS volumes.

Creating Volumes

A volume may be created, independent of an instance. A zone must be specified. A size or a snapshot may be specified (in GiB). If neither is given, a default size of 10 GiB will be used. If a snapshot is given, the size of the snapshot will be used.

The following parameters may also be set (when providing a snapshot OR size):

- **type**: choose between standard (magnetic disk), gp2 (SSD), or io1 (provisioned IOPS). (default=standard)
- **iops**: the number of IOPS (only applicable to io1 volumes) (default varies on volume size)
- **encrypted**: enable encryption on the volume (default=false)

```
salt-cloud -f create_volume ec2  zone=us-east-1b
salt-cloud -f create_volume ec2  zone=us-east-1b  size=10
salt-cloud -f create_volume ec2  zone=us-east-1b  snapshot=snap12345678
salt-cloud -f create_volume ec2  size=10  type=standard
salt-cloud -f create_volume ec2  size=10  type=gp2
salt-cloud -f create_volume ec2  size=10  type=io1  iops=1000
```

Attaching Volumes

Unattached volumes may be attached to an instance. The following values are required; name or instance_id, volume_id, and device.

```
salt-cloud -a attach_volume myinstance  volume_id=vol-12345  device=/dev/sdb1
```

Show a Volume

The details about an existing volume may be retrieved.

```
salt-cloud -a show_volume myinstance  volume_id=vol-12345
salt-cloud -f show_volume ec2  volume_id=vol-12345
```

Detaching Volumes

An existing volume may be detached from an instance.

```
salt-cloud -a detach_volume myinstance  volume_id=vol-12345
```
Deleting Volumes

A volume that is not attached to an instance may be deleted.

```
salt-cloud -f delete_volume ec2 volume_id=vol-12345
```

Managing Key Pairs

The EC2 driver has the ability to manage key pairs.

Creating a Key Pair

A key pair is required in order to create an instance. When creating a key pair with this function, the return data will contain a copy of the private key. This private key is not stored by Amazon, will not be obtainable past this point, and should be stored immediately.

```
salt-cloud -f create_keypair ec2 keyname=mykeypair
```

Importing a Key Pair

```
salt-cloud -f import_keypair ec2 keyname=mykeypair file=/path/to/id_rsa.pub
```

Show a Key Pair

This function will show the details related to a key pair, not including the private key itself (which is not stored by Amazon).

```
salt-cloud -f show_keypair ec2 keyname=mykeypair
```

Delete a Key Pair

This function removes the key pair from Amazon.

```
salt-cloud -f delete_keypair ec2 keyname=mykeypair
```

Launching instances into a VPC

Simple launching into a VPC

In the amazon web interface, identify the id or the name of the subnet into which your image should be created. Then, edit your cloud.profiles file like so:-

```
profile-id:
  provider: provider-name
  subnetid: subnet-XXXXXXXX
  image: ami-XXXXXXXX
```

(continues on next page)
size: m1.medium
ssh_username: ubuntu
securitygroupid:
  - sg-XXXXXXXX
securitygroupname:
  - AnotherSecurityGroup
  - AndThirdSecurityGroup

Note that 'subnetid' takes precedence over 'subnetname', but 'securitygroupid' and 'securitygroupname' are merged together to generate a single list for SecurityGroups of instances.

Specifying interface properties

New in version 2014.7.0.

Launching into a VPC allows you to specify more complex configurations for the network interfaces of your virtual machines, for example:

```yaml
profile-id:
  provider: provider-name
  image: ami-XXXXXXXX
  size: m1.medium
  ssh_username: ubuntu

# Do not include either 'subnetid', 'subnetname', 'securitygroupid' or
# 'securitygroupname' here if you are going to manually specify
# interface configuration
#
# network_interfaces:
#  - DeviceIndex: 0
#    SubnetId: subnet-XXXXXXXX
#    SecurityGroupId:
#      - sg-XXXXXXXX

# Uncomment this line if you would like to set an explicit private
# IP address for the ec2 instance
#
# PrivateIpAddress: 192.168.1.66
#
# Uncomment this to associate an existing Elastic IP Address with
# this network interface:
#
# associate_eip: eipalloc-XXXXXXXX
#
# You can allocate more than one IP address to an interface. Use the
# 'ip addr list' command to see them.
#
# SecondaryPrivateIpAddressCount: 2
#
# Uncomment this to allocate a new Elastic IP Address to this
# interface (will be associated with the primary private ip address
# of the interface
#
# allocate_new_eip: True
```

(continues on next page)
# Uncomment this instead to allocate a new Elastic IP Address to 
# both the primary private ip address and each of the secondary ones 
#
# allocate_new_eips: True

# Uncomment this if you're creating NAT instances. Allows an instance 
# to accept IP packets with destinations other than itself. 
# SourceDestCheck: False

- DeviceIndex: 1
  subnetname: XXXXXXXX-Subnet
  securitygroupname:
  - XXXXXXXX-SecurityGroup
  - YYYYYYY-SecurityGroup

Note that it is an error to assign a 'subnetid', 'subnetname', 'securitygroupid' or 'securitygroupname' to a profile 
where the interfaces are manually configured like this. These are both really properties of each network interface, 
not of the machine itself.

## 16.7.8 Getting Started With GoGrid

GoGrid is a public cloud host that supports Linux and Windows.

### Configuration

To use Salt Cloud with GoGrid log into the GoGrid web interface and create an API key. Do this by clicking on "My 
Account" and then going to the API Keys tab.

The apikey and the sharedsecret configuration parameters need to be set in the configuration file to enable 
interfacing with GoGrid:

```
# Note: This example is for /etc/salt/cloud.providers or any file in the 
# /etc/salt/cloud.providers.d/ directory.

my-gogrid-config:
  driver: gogrid
  apikey: asdff7896asdh789
  sharedsecret: saltybacon
```

Note: A Note about using Map files with GoGrid:

Due to limitations in the GoGrid API, instances cannot be provisioned in parallel with the GoGrid driver. Map files 
will work with GoGrid, but the `-P` argument should not be used on maps referencing GoGrid instances.

Note: Changed in version 2015.8.0.

The `provider` parameter in cloud provider definitions was renamed to `driver`. This change was made to avoid 
confusion with the `provider` parameter that is used in cloud profile definitions. Cloud provider definitions now 
use `driver` to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, 
while cloud profiles continue to use `provider` to refer to provider configurations that you define.
Profiles

Cloud Profiles

Set up an initial profile at `/etc/salt/cloud.profiles` or in the `/etc/salt/cloud.profiles.d/` directory:

```
gogrid_512:
  provider: my-gogrid-config
  size: 512MB
  image: CentOS 6.2 (64-bit) w/ None
```

Sizes can be obtained using the `--list-sizes` option for the `salt-cloud` command:

```
# salt-cloud --list-sizes my-gogrid-config
my-gogrid-config:
 ___________
gogrid:
 ___________
  512MB:
       ______
      | bandwidth: |
      | None |
      | disk: |
      | 30 |
      | driver: |
      | get_uuid: |
      | id: |
      | 512MB |
      | name: |
      | 512MB |
      | price: |
      | 0.095 |
      | ram: |
      | 512 |
      | uuid: |
      | bde1e4d7c3a643536e42a35142c7caac34b060e9

...SNIP...
```

Images can be obtained using the `--list-images` option for the `salt-cloud` command:

```
# salt-cloud --list-images my-gogrid-config
my-gogrid-config:
 ___________
gogrid:
 ___________
 CentOS 6.4 (64-bit) w/ None:
       ______
      | driver: |
      | extra: |
      | get_uuid: |
      | id: |
      | 18094 |
      | name: |
      | CentOS 6.4 (64-bit) w/ None |
      | uuid: |
```

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Assigning IPs

New in version 2015.8.0.

The GoGrid API allows IP addresses to be manually assigned. Salt Cloud supports this functionality by allowing an IP address to be specified using the assign_public_ip argument. This likely makes the most sense inside a map file, but it may also be used inside a profile.

```
gogrid_512:
  provider: my-gogrid-config
  size: 512MB
  image: CentOS 6.2 (64-bit) w/ None
  assign_public_ip: 11.38.257.42
```

16.7.9 Getting Started With Google Compute Engine

Google Compute Engine (GCE) is Google-infrastructure as a service that lets you run your large-scale computing workloads on virtual machines. This document covers how to use Salt Cloud to provision and manage your virtual machines hosted within Google's infrastructure.

You can find out more about GCE and other Google Cloud Platform services at https://cloud.google.com.

Dependencies

- LibCloud >= 1.0.0

Changed in version 2017.7.0.

- A Google Cloud Platform account with Compute Engine enabled
- A registered Service Account for authorization
- Oh, and obviously you'll need salt

Google Compute Engine Setup

1. Sign up for Google Cloud Platform

   Go to https://cloud.google.com and use your Google account to sign up for Google Cloud Platform and complete the guided instructions.

2. Create a Project

   Next, go to the console at https://cloud.google.com/console and create a new Project. Make sure to select your new Project if you are not automatically directed to the Project.

   Projects are a way of grouping together related users, services, and billing. You may opt to create multiple Projects and the remaining instructions will need to be completed for each Project if you wish to use GCE and Salt Cloud to manage your virtual machines.
3. Enable the Google Compute Engine service

In your Project, either just click Compute Engine to the left, or go to the APIs & auth section and APIs link and enable the Google Compute Engine service.

4. Create a Service Account

To set up authorization, navigate to APIs & auth section and then the Credentials link and click the CREATE NEW CLIENT ID button. Select Service Account and click the Create Client ID button. This will automatically download a .json file, which may or may not be used in later steps, depending on your version of libcloud.

Look for a new Service Account section in the page and record the generated email address for the matching key/fingerprint. The email address will be used in the service_account_email_address of the /etc/salt/cloud.providers or the /etc/salt/cloud.providers.d/*.conf file.

5. Key Format

Note: If you are using libcloud >= 0.17.0 it is recommended that you use the JSON format file you downloaded above and skip to the Provider Configuration section below, using the JSON file in place of 'NEW.pem' in the documentation.

If you are using an older version of libcloud or are unsure of the version you have, please follow the instructions below to generate and format a new P12 key.

In the new Service Account section, click Generate new P12 key, which will automatically download a .p12 private key file. The .p12 private key needs to be converted to a format compatible with libcloud. This new Google-generated private key was encrypted using notasecret as a passphrase. Use the following command and record the location of the converted private key and record the location for use in the service_account_private_key of the /etc/salt/cloud file:

```
openssl pkcs12 -in ORIG.p12 -passin pass:notasecret \
-nodes -nocerts | openssl rsa -out NEW.pem
```

Provider Configuration

Set up the provider cloud config at /etc/salt/cloud.providers or /etc/salt/cloud.providers.d/*.conf:

```
gce-config:
  # Set up the Project name and Service Account authorization
  project: "your-project-id"
  service_account_email_address: "123-a5gt@developer.gserviceaccount.com"
  service_account_private_key: "/path/to/your/NEW.pem"

  # Set up the location of the salt master
  minion:
      master: saltmaster.example.com

  # Set up grains information, which will be common for all nodes
  # using this provider
  grains:
    node_type: broker
    release: 1.0.1

  driver: gce
```

16.7. Cloud Provider Specifics
Note: Empty strings as values for service_account_private_key and service_account_email_address can be used on GCE instances. This will result in the service account assigned to the GCE instance being used.

Note: The value provided for project must not contain underscores or spaces and is labeled as "Project ID" on the Google Developers Console.

Note: Changed in version 2015.8.0.

The provider parameter in cloud provider definitions was renamed to driver. This change was made to avoid confusion with the provider parameter that is used in cloud profile definitions. Cloud provider definitions now use driver to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use provider to refer to provider configurations that you define.

Profile Configuration

Set up an initial profile at /etc/salt/cloud.profiles or /etc/salt/cloud.profiles.d/*.conf:

```yaml
my-gce-profile:
    image: centos-6
    size: n1-standard-1
    location: europe-west1-b
    network: default
    subnetnetwork: default
    tags: ['"one", "two", "three"]
    metadata: '{"one": "1", "2": "two"}'
    use_persistent_disk: True
    delete_boot_pd: False
    deploy: True
    make_master: False
    provider: gce-config
```

The profile can be realized now with a salt command:

```
salt-cloud -p my-gce-profile gce-instance
```

This will create an salt minion instance named gce-instance in GCE. If the command was executed on the salt-master, its Salt key will automatically be signed on the master.

Once the instance has been created with a salt-minion installed, connectivity to it can be verified with Salt:
salt gce-instance test.version

GCE Specific Settings

Consult the sample profile below for more information about GCE specific settings. Some of them are mandatory and are properly labeled below but typically also include a hard-coded default.

Initial Profile

Set up an initial profile at /etc/salt/cloud.profiles or /etc/salt/cloud.profiles.d/gce.conf:

```yaml
my-gce-profile:
  image: centos-6
  size: n1-standard-1
  location: europe-west1-b
  network: default
  subnetwork: default
  tags: ['one', 'two', 'three']
  metadata: {'one': '1', '2': 'two'}
  use_persistent_disk: True
  delete_boot_pd: False
  ssh_interface: public_ips
  external_ip: "ephemeral"
```

image

Image is used to define what Operating System image should be used for the instance. Examples are Debian 7 (wheezy) and CentOS 6. Required.

size

A 'size', in GCE terms, refers to the instance’s ‘machine type’. See the on-line documentation for a complete list of GCE machine types. Required.

location

A 'location', in GCE terms, refers to the instance’s ‘zone’. GCE has the notion of both Regions (e.g. us-central1, europe-west1, etc) and Zones (e.g. us-central1-a, us-central1-b, etc). Required.
network

Use this setting to define the network resource for the instance. All GCE projects contain a network named 'default' but it’s possible to use this setting to create instances belonging to a different network resource.

subnetwork

Use this setting to define the subnetwork an instance will be created in. This requires that the network your instance is created under has a mode of 'custom' or 'auto'. Additionally, the subnetwork your instance is created under is associated with the location you provide.

New in version 2017.7.0.

tags

GCE supports instance/network tags and this setting allows you to set custom tags. It should be a list of strings and must be parse-able by the python ast.literal_eval() function to convert it to a python list.

metadata

GCE supports instance metadata and this setting allows you to set custom metadata. It should be a hash of key/value strings and parse-able by the python ast.literal_eval() function to convert it to a python dictionary.

use_persistent_disk

Use this setting to ensure that when new instances are created, they will use a persistent disk to preserve data between instance terminations and re-creations.

delete_boot_pd

In the event that you wish the boot persistent disk to be permanently deleted when you destroy an instance, set delete_boot_pd to True.

ssh_interface

New in version 2015.5.0.

Specify whether to use public or private IP for deploy script.

Valid options are:

- private_ips: The salt-master is also hosted with GCE
- public_ips: The salt-master is hosted outside of GCE
external_ip

Per instance setting: Used a named fixed IP address to this host.

Valid options are:
  • ephemeral: The host will use a GCE ephemeral IP
  • None: No external IP will be configured on this host.

Optionally, pass the name of a GCE address to use a fixed IP address. If the address does not already exist, it will be created.

ex_disk_type

GCE supports two different disk types, pd-standard and pd-ssd. The default disk type setting is pd-standard. To specify using an SSD disk, set pd-ssd as the value.

New in version 2014.7.0.

ip_forwarding

GCE instances can be enabled to use IP Forwarding. When set to True, this options allows the instance to send/receive non-matching src/dst packets. Default is False.


Profile with scopes

Scopes can be specified by setting the optional ex_service_accounts key in your cloud profile. The following example enables the bigquery scope.

```yaml
my-gce-profile:
  image: centos-6
  ssh_username: salt
  size: f1-micro
  location: us-central1-a
  network: default
  subnetwork: default
  tags: 
  metadata: 
    sshKeys: ""
  use_persistent_disk: True
  delete_boot_pd: False
  deploy: False
  make_master: False
  provider: gce-config
  ex_service_accounts: 
    - scopes: 
      - bigquery
```

Email can also be specified as an (optional) parameter.
my-gce-profile:

```yaml
...snip
ex_service_accounts:
  - scopes:
    - bigquery
    email: default
```

There can be multiple entries for scopes since `ex-service_accounts` accepts a list of dictionaries. For more information refer to the libcloud documentation on specifying service account scopes.

### SSH Remote Access

GCE instances do not allow remote access to the root user by default. Instead, another user must be used to run the deploy script using `sudo`. Append something like this to `/etc/salt/cloud.profiles` or `/etc/salt/cloud.profiles.d/*.conf`:

```yaml
my-gce-profile:
  ...
  # SSH to GCE instances as gceuser
  ssh_username: gceuser
  # Use the local private SSH key file located here
  ssh_keyfile: /etc/cloud/google_compute_engine

# Use the local private SSH key file located here
# ssh_keyfile: /etc/cloud/google_compute_engine
```

If you have not already used this SSH key to login to instances in this GCE project you will also need to add the public key to your projects metadata at [https://cloud.google.com/console](https://cloud.google.com/console). You could also add it via the metadata setting too:

```yaml
my-gce-profile:
  ...
  metadata: '
    "one": "1",
    "2": "two",
    "sshKeys": "gceuser:ssh-rsa <Your SSH Public Key> gceuser@host"
  '
```

### Single instance details

This action is a thin wrapper around `--full-query`, which displays details on a single instance only. In an environment with several machines, this will save a user from having to sort through all instance data, just to examine a single instance.

```
salt-cloud -a show_instance myinstance
```

### Destroy, persistent disks, and metadata

As noted in the provider configuration, it's possible to force the boot persistent disk to be deleted when you destroy the instance. The way that this has been implemented is to use the instance metadata to record the cloud profile used when creating the instance. When `destroy` is called, if the instance contains a `salt-cloud-profile` key, its value is used to reference the matching profile to determine if `delete_boot_pd` is set to `True`.

Be aware that any GCE instances created with salt cloud will contain this custom `salt-cloud-profile` metadata entry.
List various resources

It's also possible to list several GCE resources similar to what can be done with other providers. The following commands can be used to list GCE zones (locations), machine types (sizes), and images.

```bash
salt-cloud --list-locations gce
salt-cloud --list-sizes gce
salt-cloud --list-images gce
```

Persistent Disk

The Compute Engine provider provides functions via salt-cloud to manage your Persistent Disks. You can create and destroy disks as well as attach and detach them from running instances.

Create

When creating a disk, you can create an empty disk and specify its size (in GB), or specify either an 'image' or 'snapshot'.

```bash
salt-cloud -f create_disk gce disk_name=pd location=us-central1-b size=200
```

Delete

Deleting a disk only requires the name of the disk to delete

```bash
salt-cloud -f delete_disk gce disk_name=old-backup
```

Attach

Attaching a disk to an existing instance is really an 'action' and requires both an instance name and disk name. It's possible to use this action to create bootable persistent disks if necessary. Compute Engine also supports attaching a persistent disk in READ_ONLY mode to multiple instances at the same time (but then cannot be attached in READ_WRITE to any instance).

```bash
salt-cloud -a attach_disk myinstance disk_name=pd mode=READ_WRITE boot=yes
```

Detach

Detaching a disk is also an action against an instance and only requires the name of the disk. Note that this does not safely sync and umount the disk from the instance. To ensure no data loss, you must first make sure the disk is unmounted from the instance.

```bash
salt-cloud -a detach_disk myinstance disk_name=pd
```
Show disk

It’s also possible to look up the details for an existing disk with either a function or an action.

```
salt-cloud -a show_disk myinstance disk_name=pd
salt-cloud -f show_disk gce disk_name=pd
```

Create snapshot

You can take a snapshot of an existing disk’s content. The snapshot can then in turn be used to create other persistent disks. Note that to prevent data corruption, it is strongly suggested that you unmount the disk prior to taking a snapshot. You must name the snapshot and provide the name of the disk.

```
salt-cloud -f create_snapshot gce name=backup-20140226 disk_name=pd
```

Delete snapshot

You can delete a snapshot when it’s no longer needed by specifying the name of the snapshot.

```
salt-cloud -f delete_snapshot gce name=backup-20140226
```

Show snapshot

Use this function to look up information about the snapshot.

```
salt-cloud -f show_snapshot gce name=backup-20140226
```

Networking

Compute Engine supports multiple private networks per project. Instances within a private network can easily communicate with each other by an internal DNS service that resolves instance names. Instances within a private network can also communicate with either directly without needing special routing or firewall rules even if they span different regions/zones.

Networks also support custom firewall rules. By default, traffic between instances on the same private network is open to all ports and protocols. Inbound SSH traffic (port 22) is also allowed but all other inbound traffic is blocked.

Create network

New networks require a name and CIDR range if they don't have a ‘mode’. Optionally, 'mode' can be provided. Supported modes are 'auto', 'custom', 'legacy'. Optionally, 'description' can be provided to add an extra note to your network. New instances can be created and added to this network by setting the network name during create. It is not possible to add/remove existing instances to a network.

```
salt-cloud -f create_network gce name=mynet cidr=10.10.10.0/24
salt-cloud -f create_network gce name=mynet mode=auto description=some optional info.
```

Changed in version 2017.7.0.
Destroy network

Destroy a network by specifying the name. If a resource is currently using the target network an exception will be raised.

```
salt-cloud -f delete_network gce name=mynet
```

Show network

Specify the network name to view information about the network.

```
salt-cloud -f show_network gce name=mynet
```

Create subnetwork

New subnetworks require a name, region, and CIDR range. Optionally, ‘description’ can be provided to add an extra note to your subnetwork. New instances can be created and added to this subnetwork by setting the subnetwork name during create. It is not possible to add/remove existing instances to a subnetwork.

```
salt-cloud -f create_subnetwork gce name=mynet network=mynet region=us-central10
    cidr=10.0.10.0/24
salt-cloud -f create_subnetwork gce name=mynet network=mynet region=us-central10
    cidr=10.10.10.0/24 description=some info about my subnet.
```

New in version 2017.7.0.

Destroy subnetwork

Destroy a subnetwork by specifying the name and region. If a resource is currently using the target subnetwork an exception will be raised.

```
salt-cloud -f delete_subnetwork gce name=mynet region=us-central1
```

New in version 2017.7.0.

Show subnetwork

Specify the subnetwork name to view information about the subnetwork.

```
salt-cloud -f show_subnetwork gce name=mynet
```

New in version 2017.7.0.
Create address

Create a new named static IP address in a region.

```
salt-cloud -f create_address gce name=my-fixed-ip region=us-central1
```

Delete address

Delete an existing named fixed IP address.

```
salt-cloud -f delete_address gce name=my-fixed-ip region=us-central1
```

Show address

View details on a named address.

```
salt-cloud -f show_address gce name=my-fixed-ip region=us-central1
```

Create firewall

You'll need to create custom firewall rules if you want to allow other traffic than what is described above. For instance, if you run a web service on your instances, you'll need to explicitly allow HTTP and/or SSL traffic. The firewall rule must have a name and it will use the 'default' network unless otherwise specified with a 'network' attribute. Firewalls also support instance tags for source/destination.

```
salt-cloud -f create_fwrule gce name=web allow=tcp:80,tcp:443,icmp
```

Delete firewall

Deleting a firewall rule will prevent any previously allowed traffic for the named firewall rule.

```
salt-cloud -f delete_fwrule gce name=web
```

Show firewall

Use this function to review an existing firewall rule's information.

```
salt-cloud -f show_fwrule gce name=web
```
**Load Balancer**

Compute Engine possess a load-balancer feature for splitting traffic across multiple instances. Please reference the documentation for a more complete description.

The load-balancer functionality is slightly different than that described in Google's documentation. The concept of TargetPool and ForwardingRule are consolidated in salt-cloud/libcloud. HTTP Health Checks are optional.

**HTTP Health Check**

HTTP Health Checks can be used as a means to toggle load-balancing across instance members, or to detect if an HTTP site is functioning. A common use-case is to set up a health check URL and if you want to toggle traffic on/off to an instance, you can temporarily have it return a non-200 response. A non-200 response to the load-balancer's health check will keep the LB from sending any new traffic to the "down" instance. Once the instance's health check URL begins returning 200-responses, the LB will again start to send traffic to it. Review Compute Engine's documentation for allowable parameters. You can use the following salt-cloud functions to manage your HTTP health checks.

```
salt-cloud -f create_hc gce name=myhc path=/ port=80
salt-cloud -f delete_hc gce name=myhc
salt-cloud -f show_hc gce name=myhc
```

**Load-balancer**

When creating a new load-balancer, it requires a name, region, port range, and list of members. There are other optional parameters for protocol, and list of health checks. Deleting or showing details about the LB only requires the name.

```
salt-cloud -f create_lb gce name=lb region=... ports=80 members=w1,w2,w3
salt-cloud -f delete_lb gce name=lb
salt-cloud -f show_lb gce name=lb
```

You can also create a load balancer using a named fixed IP address by specifying the name of the address. If the address does not exist yet it will be created.

```
salt-cloud -f create_lb gce name=my-lb region=us-central1 ports=234 members=s1,s2,s3, membertype=google_address
salt-cloud -f show_lb gce name=my-lb
```

**Attach and Detach LB**

It is possible to attach or detach an instance from an existing load-balancer. Both the instance and load-balancer must exist before using these functions.

```
salt-cloud -f attach_lb gce name=lb member=w4
salt-cloud -f detach_lb gce name=lb member=oops
```
16.7.10 Getting Started With HP Cloud

HP Cloud is a major public cloud platform and uses the libcloud openstack driver. The current version of OpenStack that HP Cloud uses is Havana. When an instance is booted, it must have a floating IP added to it in order to connect to it and further below you will see an example that adds context to this statement.

Set up a cloud provider configuration file

To use the openstack driver for HP Cloud, set up the cloud provider configuration file as in the example shown below: /etc/salt/cloud.providers.d/hpcloud.conf:

```
hpcloud-config:
  # Set the location of the salt-master
  #
  minion:
    master: saltmaster.example.com

  # Configure HP Cloud using the OpenStack plugin
  #
  identity_url: https://region-b.geo-1.identity.hpcloudsvc.com:35357/v2.0/tokens
  compute_name: Compute
  protocol: ipv4

  # Set the compute region:
  #
  compute_region: region-b.geo-1

  # Configure HP Cloud authentication credentials
  #
  user: myname
  tenant: myname-project1
  password: xxxxxxxxxx

  # keys to allow connection to the instance launched
  #
  ssh_key_name: yourkey
  ssh_key_file: /path/to/key/yourkey.priv

  driver: openstack
```

The subsequent example that follows is using the openstack driver.

Note: Changed in version 2015.8.0.

The provider parameter in cloud provider definitions was renamed to driver. This change was made to avoid confusion with the provider parameter that is used in cloud profile definitions. Cloud provider definitions now use driver to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use provider to refer to provider configurations that you define.
Compute Region

Originally, HP Cloud, in its OpenStack Essex version (1.0), had 3 availability zones in one region, US West (region-a.geo-1), which each behaved each as a region.

This has since changed, and the current OpenStack Havana version of HP Cloud (1.1) now has simplified this and now has two regions to choose from:

region-a.geo-1 -> US West
region-b.geo-1 -> US East

Authentication

The user is the same user as is used to log into the HP Cloud management UI. The tenant can be found in the upper left under “Project/Region/Scope”. It is often named the same as user albeit with a -project1 appended. The password is of course what you created your account with. The management UI also has other information such as being able to select US East or US West.

Set up a cloud profile config file

The profile shown below is a know working profile for an Ubuntu instance. The profile configuration file is stored in the following location:

/etc/salt/cloud.profiles.d/hp_ae1_ubuntu.conf:

```
hp_ae1_ubuntu:
    provider: hp_ae1
    image: 9302692b-b787-4b52-a3a6-daebb79cb498
    ignore_cidr: 10.0.0.1/24
    networks:
        - floating: Ext-Net
    size: standard.small
    ssh_key_file: /root/keys/test.key
    ssh_key_name: test
    ssh_username: ubuntu
```

Some important things about the example above:

- The image parameter can use either the image name or image ID which you can obtain by running in the example below (this case US East):

```
# salt-cloud --list-images hp_ae1
```

- The parameter ignore_cidr specifies a range of addresses to ignore when trying to connect to the instance. In this case, it's the range of IP addresses used for an private IP of the instance.

- The parameter networks is very important to include. In previous versions of Salt Cloud, this is what made it possible for salt-cloud to be able to attach a floating IP to the instance in order to connect to the instance and set up the minion. The current version of salt-cloud doesn't require it, though having it is of no harm either. Newer versions of salt-cloud will use this, and without it, will attempt to find a list of floating IP addresses to use regardless.

- The ssh_key_file and ssh_key_name are the keys that will make it possible to connect to the instance to set up the minion

- The ssh_username parameter, in this case, being that the image used will be ubuntu, will make it possible to not only log in but install the minion
Launch an instance

To instantiate a machine based on this profile (example):

```
# salt-cloud -p hp_ae1_ubuntu ubuntu_instance_1
```

After several minutes, this will create an instance named `ubuntu_instance_1` running in HP Cloud in the US East region and will set up the minion and then return information about the instance once completed.

Manage the instance

Once the instance has been created with salt-minion installed, connectivity to it can be verified with Salt:

```
# salt ubuntu_instance_1 ping
```

SSH to the instance

Additionally, the instance can be accessed via SSH using the floating IP assigned to it

```
# ssh ubuntu@<floating_ip>
```

Using a private IP

Alternatively, in the cloud profile, using the private IP to log into the instance to set up the minion is another option, particularly if salt-cloud is running within the cloud on an instance that is on the same network with all the other instances (minions)

The example below is a modified version of the previous example. Note the use of `ssh_interface`:

```
hp_ae1_ubuntu:
    provider: hp_ae1
    image: 9302692b-b787-4b52-a3a6-daeb79cb498
    size: standard.small
    ssh_key_file: /root/keys/test.key
    ssh_key_name: test
    ssh_username: ubuntu
    ssh_interface: private_ips
```

With this setup, salt-cloud will use the private IP address to ssh into the instance and set up the salt-minion

16.7.11 Getting Started With Joyent

Joyent is a public cloud host that supports SmartOS, Linux, FreeBSD, and Windows.
Dependencies

This driver requires the Python requests library to be installed.

Configuration

The Joyent cloud requires three configuration parameters. The user name and password that are used to log into the Joyent system, and the location of the private ssh key associated with the Joyent account. The ssh key is needed to send the provisioning commands up to the freshly created virtual machine.

```
# Note: This example is for /etc/salt/cloud.providers or any file in the
# /etc/salt/cloud.providers.d/ directory.

my-joyent-config:
  driver: joyent
  user: fred
  password: saltybacon
  private_key: /root/mykey.pem
  keyname: mykey
```

Note: Changed in version 2015.8.0.

The provider parameter in cloud provider definitions was renamed to driver. This change was made to avoid confusion with the provider parameter that is used in cloud profile definitions. Cloud provider definitions now use driver to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use provider to refer to provider configurations that you define.

Profiles

Cloud Profiles

Set up an initial profile at /etc/salt/cloud.profiles or in the /etc/salt/cloud.profiles.d/ directory:

```
joyent_512:
  provider: my-joyent-config
  size: g4-highcpu-512M
  image: ubuntu-16.04
```

Sizes can be obtained using the --list-sizes option for the salt-cloud command:

```
# salt-cloud --list-sizes my-joyent-config
my-joyent-config:
  -----------
  joyent:
  -----------
  g4-highcpu-512M:
  -----------
  default:
  False
description:
  Compute Optimized 512M RAM - 1 vCPU - 10 GB Disk
```

(continues on next page)
Images can be obtained using the `--list-images` option for the `salt-cloud` command:

```
# salt-cloud --list-images my-joyent-config
my-joyent-config:
    --------
    joyent:
    --------
    base:
    --------
    description:
        A 32-bit SmartOS image with just essential packages
        installed. Ideal for users who are comfortable with
        setting up their own environment and tools.
    files:
        |- 
        |    --------
        |    compression:
        |    gzip
        |    shal:
        |        b00a77408ddd9aeac85085b68b1cd22a07353956
        |    size:
        |        106918297
    homepage:
        http://wiki.joyent.com/jpc2/Base+Instance
    id:
        00aec452-6e81-11e4-8474-ebfeca9a1a911
    name:
        base
    os:
        smartos
    owner:
        9dce1468-0c4c-4417-ab8b-25ca478c5a78
    public:
        True
    published_at:
        2014-11-17T17:41:46Z
```
requirements:

- state: active
- type: smartmachine
- version: 14.3.0

SmartDataCenter

This driver can also be used with the Joyent SmartDataCenter project. More details can be found at:

Using SDC requires that an api_host_suffix is set. The default value for this is .api.joyentcloud.com. All characters, including the leading .. should be included:

```
api_host_suffix: .api.myhostname.com
```

Miscellaneous Configuration

The following configuration items can be set in either provider or profile configuration files.

use_ssl

When set to True (the default), attach https:// to any URL that does not already have http:// or https:// included at the beginning. The best practice is to leave the protocol out of the URL, and use this setting to manage it.

verify_ssl

When set to True (the default), the underlying web library will verify the SSL certificate. This should only be set to False for debugging.

16.7.12 Getting Started With Libvirt

Libvirt is a toolkit to interact with the virtualization capabilities of recent versions of Linux (and other OSes). This driver Salt cloud provider is currently geared towards libvirt with qemu-kvm.

https://libvirt.org/
Host Dependencies

- libvirt >= 1.2.18 (older might work)

Salt-Cloud Dependencies

- libvirt-python

Provider Configuration

For every KVM host a provider needs to be set up. The provider currently maps to one libvirt daemon (e.g. one KVM host).

Set up the provider cloud configuration file at /etc/salt/cloud.providers or /etc/salt/cloud.providers.d/*.conf.

```
# Set up a provider with qemu+ssh protocol
kvm-via-ssh:
    driver: libvirt
    url: qemu+ssh://user@kvm.company.com/system?socket=/var/run/libvirt/libvirt-sock

# Or connect to a local libvirt instance
local-kvm:
    driver: libvirt
    url: qemu:///system
    validate_xml: no
```

Cloud Profiles

Virtual machines get cloned from so called Cloud Profiles. Profiles can be set up at /etc/salt/cloud.profiles or /etc/salt/cloud.profiles.d/*.conf:

- Configure a profile to be used:

```
centos7:
    # points back at provider configuration
    provider: local-kvm
    base_domain: base-centos7-64
    ip_source: ip-learning
    ssh_username: root
    password: my-very-secret-password
    # /tmp is mounted noexec.. do workaround
    deploy_command: sh /tmp/.saltcloud/deploy.sh
    script_args: -F
    # grains to add to the minion
    grains:
        clones-are-awesome: true
    # override minion settings
    minion:
        master: 192.168.16.1
        master_port: 5506
```

The profile can be realized now with a salt command:
This will create an instance named `my-centos7-clone` on the cloud host. Also the minion id will be set to `my-centos7-clone`.

If the command was executed on the salt-master, its Salt key will automatically be accepted on the master.

Once the instance has been created with salt-minion installed, connectivity to it can be verified with Salt:

```bash
salt my-centos7-clone test.version
```

### Required Settings

The following settings are always required for libvirt:

```yaml
centos7:
  provider: local-kvm
  # the domain to clone
  base_domain: base-centos7-64
```

### SSH Key Authentication

Instead of specifying a password, an authorized key can be used for the minion setup. Ensure that the ssh user of your base image has the public key you want to use in `~/.ssh/authorized_keys`. If you want to use a non-root user you will likely want to configure salt-cloud to use sudo.

An example using root:

```yaml
centos7:
  provider: local-kvm
  # the domain to clone
  base_domain: base-centos7-64
  ssh_username: root
  private_key: /path/to/private/key
```

An example using a non-root user:

```yaml
centos7:
  provider: local-kvm
  # the domain to clone
  base_domain: base-centos7-64
  ssh_username: centos
  private_key: /path/to/private/key
  sudo: True
  sudo_password: "--redacted--"
```
Optional Settings

```
centos7:
    # ssh settings
    # use forwarded agent instead of a local key
    ssh_agent: True
    ssh_port: 4910

    # credentials
    ssh_username: root
    # password will be used for sudo if defined, use sudo_password if using ssh keys
    password: my-secret-password
    private_key: /path/to/private/key
    sudo: True
    sudo_password: "--redacted--"

    # bootstrap options
    deploy_command: sh /tmp/.saltcloud/deploy.sh
    script_args: -F

    # minion config
    grains:
        sushi: more tasty
    # point at the another master at another port
    minion:
        master: 192.168.16.1
        master_port: 5506

    # libvirt settings
    # clone_strategy: [ quick | full ] # default is full
    clone_strategy: quick
    # ip_source: [ ip-learning | qemu-agent ] # default is ip-learning
    ip_source: qemu-agent
    # validate_xml: [ false | true ] # default is true
    validate_xml: false
```

The `clone_strategy` controls how the clone is done. In case of `full` the disks are copied creating a standalone clone. If `quick` is used the disks of the base domain are used as backing disks for the clone. This results in nearly instantaneous clones at the expense of slower write performance. The quick strategy has a number of requirements:

- The disks must be of type qcow2
- The base domain must be turned off
- The base domain must not change after creating the clone

The `ip_source` setting controls how the IP address of the cloned instance is determined. When using `ip-learning` the IP is requested from libvirt. This needs a recent libvirt version and may only work for NAT/routed networks where libvirt runs the dhcp server. Another option is to use `qemu-agent` this requires that the qemu-agent is installed and configured to run at startup in the base domain.

The `validate_xml` setting is available to disable xml validation by libvirt when cloning.

See also `salt.cloud.clouds.libvirt`
16.7.13 Getting Started With Linode

Linode is a public cloud host with a focus on Linux instances.

Dependencies

This driver requires the Python `requests` library to be installed.

Provider Configuration

Configuration Options

- **apikey (Required)** The key to use to authenticate with the Linode API.
- **password (Required)** The default password to set on new VMs. Must be 8 characters with at least one lowercase, uppercase, and numeric.
- **api_version** The version of the Linode API to interact with. Defaults to `v3`.
- **poll_interval** The rate of time in milliseconds to poll the Linode API for changes. Defaults to 500.
- **ratelimit_sleep** The time in seconds to wait before retrying after a ratelimit has been enforced. Defaults to 0.

Example Configuration

Set up the provider cloud configuration file at `/etc/salt/cloud.providers` or `/etc/salt/cloud.providers.d/*.conf`.

```
my-linode-provider:
    driver: linode
    api_version: v4
    apikey: f4ZsmwtB1c7f85Jdu43RgXVDFlNjuJaeIYY8QMftTqKScEB2vSosFSr...
    password: F00barbaz
```

For use with APIv3 (deprecated):

```
my-linode-provider-v3:
    driver: linode
    apikey: f4ZsmwtB1c7f85Jdu43RgXVDFlNjuJaeIYY8QMftTqKScEB2vSosFSr...
    password: F00barbaz
```

Profile Configuration

Configuration Options

- **image (Required)** The image to deploy the boot disk from. This should be an image ID (e.g. `linode/ubuntu16.04`); official images start with `linode/`. For APIv3, this would be an image label (i.e. Ubuntu 16.04). See listing images for more options.
- **location (Required)** The location of the VM. This should be a Linode region (e.g. `us-east`). For APIv3, this would be a datacenter location (e.g. Newark, NJ, USA). See listing locations for more options.
- **size (Required)** The size of the VM. This should be a Linode instance type ID (e.g. `g6-standard-2`). For APIv3, this would be a plan ID (e.g. Linode 2GB). See listing sizes for more options.
password (overrides provider) (*Required) The default password for the VM. Must be provided at the profile or provider level.

assign_private_ip New in version 2016.3.0.

Whether or not to assign a private key to the VM. Defaults to False.

clonename The name of the Linode to clone from.

disk_size (Deprecated) The amount of disk space to allocate for the OS disk. This has no effect with APIv4; the size of the boot disk will be the remainder of disk space after the swap partition is allocated.

ssh_interface New in version 2016.3.0.

The interface with which to connect over SSH. Valid options are private_ips or public_ips. Defaults to public_ips.

If specifying private_ips, the Linodes must be hosted within the same data center and have the Network Helper enabled on your entire account. The instance that is running the Salt-Cloud provisioning command must also have a private IP assigned to it.

Newer accounts created on Linode have the Network Helper setting enabled by default, account-wide. Legacy accounts do not have this setting enabled by default. To enable the Network Helper on your Linode account, please see Linode's Network Helper documentation.

ssh_pubkey The public key to authorize for SSH with the VM.

swap The amount of disk space to allocate for the swap partition. Defaults to 256.

**Example Configuration**

Set up a profile configuration in /etc/salt/cloud.profiles.d/:

```
my-linode-profile:
  provider: my-linode-provider
  size: g6-standard-1
  image: linode/alpine3.12
  location: us-east
```

The my-linode-profile can be realized now with a salt command:

```
salt-cloud -p my-linode-profile my-linode-instance
```

This will create a salt minion instance named my-linode-instance in Linode. If the command was executed on the salt-master, its Salt key will automatically be signed on the master.

Once the instance has been created with a salt-minion installed, connectivity to it can be verified with Salt:

```
salt my-linode-instance test.version
```

A more advanced configuration utilizing all of the configuration options might look like:

```
my-linode-profile-advanced:
  provider: my-linode-provider
  size: g6-standard-3
  image: linode/alpine3.10
  location: eu-west
  password: bogus123X
  assign_private_ip: true
  ssh_interface: private_ips
```

(continues on next page)
A legacy configuration for use with APIv3 might look like:

```yaml
my-linode-profile-v3:
  provider: my-linode-provider-v3
  size: Nanode 1GB
  image: Alpine 3.12
  location: Fremont, CA, USA
```

**Migrating to APIv4**

Linode APIv3 has been deprecated and will be shutdown in the coming months. You can opt-in to using APIv4 by setting the `api_version` provider configuration option to `v4`.

When switching to APIv4, you will also need to generate a new token. See [here](#) for more information.

**Notable Changes**

* **Move from label references to ID references.** The profile configuration parameters `location`, `size`, and `image` have moved from accepting label based references to IDs. See the *profile configuration* section for more details.

* **The `disk_size` profile configuration parameter has been deprecated.** The parameter will not be taken into account when creating new VMs while targeting APIv4. See the `disk_size` description under the *profile configuration* section for more details.

* **The `boot` function no longer requires a `config_id`**. A config can be inferred by the API instead when booting.

* **The `clone` function has renamed parameters to match convention.** The old version of these parameters will not be supported when targeting APIv4. * `datacenter_id` has been deprecated in favor of `location`.* `plan_id` has been deprecated in favor of `size`.

* **The `get_plan_id` function has been deprecated and will not be supported by APIv4.** IDs are now the only way of referring to a "plan" (or type/size).

**Query Utilities**

**Listing Sizes**

Available sizes can be obtained by running one of:

```shell
salt-cloud --list-sizes my-linode-provider
salt-cloud -f avail_sizes my-linode-provider
```

This will list all Linode sizes/types which can be referenced in VM profiles.

```yaml
my-linode-config:
  g6-standard-1:
    class: standard
```

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<table>
<thead>
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<th>disk:</th>
<th>51200</th>
</tr>
</thead>
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<tr>
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<td>0</td>
</tr>
<tr>
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<td>g6-standard-1</td>
</tr>
<tr>
<td>label:</td>
<td>Linode 2GB</td>
</tr>
<tr>
<td>memory:</td>
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</tr>
<tr>
<td></td>
<td>backups:</td>
</tr>
<tr>
<td></td>
<td>price:</td>
</tr>
<tr>
<td></td>
<td>hourly: 0.004</td>
</tr>
<tr>
<td></td>
<td>monthly: 2.5</td>
</tr>
</tbody>
</table>

**Listing Images**

Available images can be obtained by running one of:

```
salt-cloud --list-images my-linode-provider
salt-cloud -f avail_images my-linode-provider
```

This will list all Linode images which can be referenced in VM profiles. Official images are available under the `linode` namespace.

```
my-linode-config:
-------------
linode:
-------------
linode/alpine3.10:
-------------
created: 2019-06-20T17:17:11
```
Listing Locations

Available locations can be obtained by running one of:

```bash
salt-cloud --list-locations my-linode-provider
salt-cloud -f avail_locations my-linode-provider
```

This will list all Linode regions which can be referenced in VM profiles.

```yaml
my-linode-config:
  ----------
  linode:
  ----------
  us-east:
    ----------
    capabilities:
      - Linodes
      - NodeBalancers
      - Block Storage
      - Object Storage
      - GPU Linodes
      - Kubernetes
  country:
    us
  id:
    us-east
  status:
    ok
...SNIP...
```
Cloning

To clone a Linode, add a profile with a `clonefrom` key, and a `script_args`: `-C clonefrom` should be the name of the Linode that is the source for the clone. `script_args`: `-C` passes a `-C` to the salt-bootstrap script, which only configures the minion and doesn’t try to install a new copy of salt-minion. This way the minion gets new keys and the keys get pre-seeded on the master, and the `/etc/salt/minion` file has the right minion `id:` declaration.

Cloning requires a post 2015-02-01 salt-bootstrap.

It is safest to clone a stopped machine. To stop a machine run

```
salt-cloud -a stop machine_to_clone
```

To create a new machine based on another machine, add an entry to your linode cloud profile that looks like this:

```
li-clone:
  provider: my-linode-config
  clonefrom: machine_to_clone
  script_args: -C -F
```

Then run salt-cloud as normal, specifying `-p li-clone`. The profile name can be anything; It doesn’t have to be `li-clone`.

`clonefrom:` is the name of an existing machine in Linode from which to clone. `script_args`: `-C -F` is necessary to avoid re-deploying Salt via salt-bootstrap. `-C` will just re-deploy keys so the new minion will not have a duplicate key or minion_id on the Master, and `-F` will force a rewrite of the Minion config file on the new Minion. If `-F` isn’t provided, the new Minion will have the `machine_to_clone`’s Minion ID, instead of its own Minion ID, which can cause problems.

Note: Pull Request #733 to the salt-bootstrap repo makes the `-F` argument non-necessary. Once that change is released into a stable version of the Bootstrap Script, the `-C` argument will be sufficient for the `script_args` setting.

If the `machine_to_clone` does not have Salt installed on it, refrain from using the `script_args`: `-C -F` altogether, because the new machine will need to have Salt installed.

### 16.7.14 Getting Started With LXC

The LXC module is designed to install Salt in an LXC container on a controlled and possibly remote minion.

In other words, Salt will connect to a minion, then from that minion:

- Provision and configure a container for networking access
- Use those modules to deploy salt and re-attach to master.
  - lxc runner
  - lxc module
  - seed
Limitations

- You can only act on one minion and one provider at a time.
- Listing images must be targeted to a particular LXC provider (nothing will be outputted with all)

Operation

Salt’s LXC support does use `lxc.init` via the `lxc.cloud_init_interface` and seeds the minion via `seed.mkconfig`.

You can provide to those lxc VMs a profile and a network profile like if you were directly using the minion module.

Order of operation:
- Create the LXC container on the desired minion (clone or template)
- Change LXC config options (if any need to be changed)
- Start container
- Change base passwords if any
- Change base DNS configuration if necessary
- Wait for LXC container to be up and ready for ssh
- Test SSH connection and bailout in error
- Upload deploy script and seeds, then re-attach the minion.

Provider configuration

Here is a simple provider configuration:

```
# Note: This example goes in /etc/salt/cloud.providers or any file in the
# /etc/salt/cloud.providers.d/ directory.

devhost10-lxc:
    target: devhost10
    driver: lxc
```

Note: Changed in version 2015.8.0.

The `provider` parameter in cloud provider definitions was renamed to `driver`. This change was made to avoid confusion with the `provider` parameter that is used in cloud profile definitions. Cloud provider definitions now use `driver` to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use `provider` to refer to provider configurations that you define.
Profile configuration

Please read LXC Management with Salt before anything else. And specially Profiles.

Here are the options to configure your containers:

- **target**  Host minion id to install the lxc Container into

- **lxc_profile**  Name of the profile or inline options for the LXC vm creation/cloning, please see Container Profiles.

- **network_profile**  Name of the profile or inline options for the LXC vm network settings, please see Network Profiles.

- **nic_opts**  Totally optional. Per interface new-style configuration options mappings which will override any profile default option:

  ```
  eth0: {'mac': '00:16:3e:01:29:40',
         'gateway': None, (default)
         'link': 'br0', (default)
         'gateway': None, (default)
         'netmask': '', (default)
         'ip': '22.1.4.25'}
  ```

- **password**  password for root and sysadmin users

- **dnsservers**  List of DNS servers to use. This is optional.

- **minion**  minion configuration (see Minion Configuration in Salt Cloud)

- **bootstrap_delay**  specify the time to wait (in seconds) between container creation and salt bootstrap execution. It is useful to ensure that all essential services have started before the bootstrap script is executed. By default there's no wait time between container creation and bootstrap unless you are on systemd where we wait that the system is no more in starting state.

- **bootstrap_shell**  shell for bootstraping script (default: /bin/sh)

- **script**  defaults to salt-bootstrap

- **script_args**  arguments which are given to the bootstrap script. the [0] placeholder will be replaced by the path which contains the minion config and key files, eg:

  ```
  script_args="-c {0}"
  ```

Using profiles:

```
# Note: This example would go in /etc/salt/cloud.profiles or any file in the
# /etc/salt/cloud.profiles.d/ directory.

devhost10-lxc:
    provider: devhost10-lxc
    lxc_profile: foo
    network_profile: bar
    minion:
      master: 10.5.0.1
      master_port: 4506
```

Using inline profiles (eg to override the network bridge):

```

devhost11-lxc:
    provider: devhost10-lxc
    lxc_profile:
```

(continues on next page)
Using a lxc template instead of a clone:

```yaml
devhost11-lxc:
  provider: devhost10-lxc
  lxc_profile:
    template: ubuntu
    # options:
    #  release: trusty
  network_profile:
    etho:
      link: lxcbr0
    minion:
      master: 10.5.0.1
      master_port: 4506
```

Static ip:

```yaml
# Note: This example would go in /etc/salt/cloud.profiles or any file in the
# /etc/salt/cloud.profiles.d/ directory.
devhost10-lxc:
  provider: devhost10-lxc
  nic_opts:
    eth0:
      ipv4: 10.0.3.9
    minion:
      master: 10.5.0.1
      master_port: 4506
```

DHCP:

```yaml
# Note: This example would go in /etc/salt/cloud.profiles or any file in the
# /etc/salt/cloud.profiles.d/ directory.
devhost10-lxc:
  provider: devhost10-lxc
  minion:
    master: 10.5.0.1
    master_port: 4506
```
Driver Support

- Container creation
- Image listing (LXC templates)
- Running container information (IP addresses, etc.)

16.7.15 Getting Started With 1and1

1&1 is one of the world’s leading Web hosting providers. 1&1 currently offers a wide range of Web hosting products, including email solutions and high-end servers in 10 different countries including Germany, Spain, Great Britain and the United States. From domains to 1&1 MyWebsite to eBusiness solutions like Cloud Hosting and Web servers for complex tasks, 1&1 is well placed to deliver a high quality service to its customers. All 1&1 products are hosted in 1&1’s high-performance, green data centers in the USA and Europe.

Dependencies

- 1and1 >= 1.2.0

Configuration

- Using the new format, set up the cloud configuration at /etc/salt/cloud.providers or /etc/salt/cloud.providers.d/oneandone.conf:

```
my-oneandone-config:
  driver: oneandone

  # Set the location of the salt-master
  #
  # minion:
  #    master: saltmaster.example.com

  # Configure oneandone authentication credentials
  #
  api_token: <api_token>
  ssh_private_key: /path/to/id_rsa
  ssh_public_key: /path/to/id_rsa.pub
```

Authentication

The api_key is used for API authorization. This token can be obtained from the CloudPanel in the Management section below Users.
Profiles

Here is an example of a profile:

```
oneandone_fixed_size:
  provider: my-oneandone-config
  description: Small instance size server
  fixed_instance_size: S
  appliance_id: 8E3BAA98E3DFD37857810E0288DD8FBA

oneandone_custom_size:
  provider: my-oneandone-config
  description: Custom size server
  vcore: 2
  cores_per_processor: 2
  ram: 8
  appliance_id: 8E3BAA98E3DFD37857810E0288DD8FBA
  hdds:
    - is_main: true
      size: 20
    - is_main: false
      size: 20
```

The following list explains some of the important properties.

- **fixed_instance_size_id** When creating a server, either `fixed_instance_size_id` or custom hardware params containing `vcore`, `cores_per_processor`, `ram`, and `hdds` must be provided. Can be one of the IDs listed among the output of the following command:

  ```
salt-cloud --list-sizes oneandone
  ```

- **vcore** Total amount of processors.
- **cores_per_processor** Number of cores per processor.
- **ram** RAM memory size in GB.
- **hdds** Hard disks.
- **appliance_id** ID of the image that will be installed on server. Can be one of the IDs listed in the output of the following command:

  ```
salt-cloud --list-images oneandone
  ```

- **datacenter_id** ID of the datacenter where the server will be created. Can be one of the IDs listed in the output of the following command:

  ```
salt-cloud --list-locations oneandone
  ```

- **description** Description of the server.
- **password** Password of the server. Password must contain more than 8 characters using uppercase letters, numbers and other special symbols.
- **power_on** Power on server after creation. Default is set to true.
- **firewall_policy_id** Firewall policy ID. If it is not provided, the server will assign the best firewall policy, creating a new one if necessary. If the parameter is sent with a 0 value, the server will be created with all ports blocked.
ip_id  IP address ID.
load_balancer_id  Load balancer ID.
monitoring_policy_id  Monitoring policy ID.
deploy  Set to False if Salt should not be installed on the node.
wait_for_timeout  The timeout to wait in seconds for provisioning resources such as servers. The default wait_for_timeout is 15 minutes.
public_key_ids  List of public key IDs (ssh key).

Functions

- Create an SSH key

```bash
sudo salt-cloud -f create_ssh_key my-oneandone-config name='SaltTest' description='SaltTestDescription'
```

- Create a block storage

```bash
sudo salt-cloud -f create_block_storage my-oneandone-config name='SaltTest2' description='SaltTestDescription' size=50 datacenter_id='5091F6D8CBFEF9C26ACE957C652D5D49'
```

For more information concerning cloud profiles, see here.

### 16.7.16 Getting Started with OpenNebula

OpenNebula is an open-source solution for the comprehensive management of virtualized data centers to enable the mixed use of private, public, and hybrid IaaS clouds.

**Dependencies**

The driver requires Python's `lxml` library to be installed. It also requires an OpenNebula installation running version 4.12 or greater.

**Configuration**

The following example illustrates some of the options that can be set. These parameters are discussed in more detail below.

```bash
# Note: This example is for /etc/salt/cloud.providers or any file in the
# /etc/salt/cloud.providers.d/ directory.

my-opennebula-provider:
  # Set up the location of the salt master
  #
  minion:
    master: saltmaster.example.com

  # Define xml_rpc setting which Salt-Cloud uses to connect to the OpenNebula API. Required.
  #
```

(continues on next page)
Access Credentials

The Salt Cloud driver for OpenNebula was written using OpenNebula’s native XML RPC API. Every interaction with OpenNebula’s API requires a username and password to make the connection from the machine running Salt Cloud to API running on the OpenNebula instance. Based on the access credentials passed in, OpenNebula filters the commands that the user can perform or the information for which the user can query. For example, the images that a user can view with a `--list-images` command are the images that the connected user and the connected user’s groups can access.

**Key Pairs**

Salt Cloud needs to be able to access a virtual machine in order to install the Salt Minion by using a public/private key pair. The virtual machine will need to be seeded with the public key, which is laid down by the OpenNebula template. Salt Cloud then uses the corresponding private key, provided by the `private_key` setting in the cloud provider file, to SSH into the new virtual machine.

To seed the virtual machine with the public key, the public key must be added to the OpenNebula template. If using the OpenNebula web interface, navigate to the template, then click Update. Click the Context tab. Under the Network & SSH section, click Add SSH Contextualization and paste the public key in the Public Key box. Don’t forget to save your changes by clicking the green Update button.

**Note:** The key pair must not have a pass-phrase.
Cloud Profiles

Set up an initial profile at either /etc/salt/cloud.profiles or the /etc/salt/cloud.profiles.d/ directory.

```
my-opennebula-profile:
  provider: my-opennebula-provider
  image: Ubuntu-14.04
```

The profile can now be realized with a salt command:

```
salt-cloud -p my-opennebula-profile my-new-vm
```

This will create a new instance named `my-new-vm` in OpenNebula. The minion that is installed on this instance will have a minion id of `my-new-vm`. If the command was executed on the salt-master, its Salt key will automatically be signed on the master.

Once the instance has been created with salt-minion installed, connectivity to it can be verified with Salt:

```
salt my-new-vm test.version
```

OpenNebula uses an image --> template --> virtual machine paradigm where the template draws on the image, or disk, and virtual machines are created from templates. Because of this, there is no need to define a size in the cloud profile. The size of the virtual machine is defined in the template.

Change Disk Size

You can now change the size of a VM on creation by cloning an image and expanding the size. You can accomplish this by the following cloud profile settings below.

```
my-opennebula-profile:
  provider: my-opennebula-provider
  image: Ubuntu-14.04
  disk:
    disk0:
      disk_type: clone
      size: 8096
      image: centos7-base-image-v2
    disk1:
      disk_type: volatile
      type: swap
      size: 4096
    disk2:
      disk_type: volatile
      size: 4096
      type: fs
      format: ext3
```

There are currently two different disk_types a user can use: volatile and clone. Clone which is required when specifying devices will clone an image in open nebula and will expand it to the size specified in the profile settings. By default this will clone the image attached to the template specified in the profile but a user can add the `image` argument under the disk definition.

For example the profile below will not use Ubuntu-14.04 for the cloned disk image. It will use the centos7-base-image image:
my-opennebula-profile:
  provider: my-opennebula-provider
  image: Ubuntu-14.04
  disk:
    disk0:
      disk_type: clone
      size: 8096
      image: centos7-base-image

If you want to use the image attached to the template set in the profile you can simply remove the image argument as show below. The profile below will clone the image Ubuntu-14.04 and expand the disk to 8GB:

my-opennebula-profile:
  provider: my-opennebula-provider
  image: Ubuntu-14.04
  disk:
    disk0:
      disk_type: clone
      size: 8096

A user can also currently specify swap or fs disks. Below is an example of this profile setting:

my-opennebula-profile:
  provider: my-opennebula-provider
  image: Ubuntu-14.04
  disk:
    disk0:
      disk_type: clone
      size: 8096
    disk1:
      disk_type: volatile
      type: swap
      size: 4096
    disk2:
      disk_type: volatile
      size: 4096
      type: fs
      format: ext3

The example above will attach both a swap disk and a ext3 filesystem with a size of 4GB. To note if you define other disks you have to define the image disk to clone because the template will write over the entire 'DISK=[]' template definition on creation.

Required Settings

The following settings are always required for OpenNebula:

my-opennebula-config:
  xml_rpc: http://localhost:26633/RPC2
  user: oneadmin
  password: JHGhgsayu32jsa
  driver: opennebula

16.7. Cloud Provider Specifics
Required Settings for VM Deployment

The settings defined in the Required Settings section are required for all interactions with OpenNebula. However, when deploying a virtual machine via Salt Cloud, an additional setting, private_key, is also required:

```
my-opennebula-config:
  private_key: /path/to/private/key
```

Listing Images

Images can be queried on OpenNebula by passing the --list-images argument to Salt Cloud:

```
salt-cloud --list-images opennebula
```

Listing Locations

In OpenNebula, locations are defined as hosts. Locations, or "hosts", can be queried on OpenNebula by passing the --list-locations argument to Salt Cloud:

```
salt-cloud --list-locations opennebula
```

Listing Sizes

Sizes are defined by templates in OpenNebula. As such, the --list-sizes call returns an empty dictionary since there are no sizes to return.

Additional OpenNebula API Functionality

The Salt Cloud driver for OpenNebula was written using OpenNebula's native XML RPC API. As such, many --function and --action calls were added to the OpenNebula driver to enhance support for an OpenNebula infrastructure with additional control from Salt Cloud. See the OpenNebula function definitions for more information.

Access via DNS entry instead of IP

Some OpenNebula installations do not assign IP addresses to new VMs, instead they establish the new VM's hostname based on OpenNebula's name of the VM, and then allocate an IP out of DHCP with dynamic DNS attaching the hostname. This driver supports this behavior by adding the entry fqdn_base to the driver configuration or the OpenNebula profile with a value matching the base fully-qualified domain. For example:

```
# Note: This example is for /etc/salt/cloud.providers or any file in the
# /etc/salt/cloud.providers.d/ directory.

my-opennebula-provider:
  [...]
  fqdn_base: corp.example.com
  [...]
```
16.7.17 Getting Started with Openstack

See salt.cloud.clouds.openstack

16.7.18 Getting Started With Parallels

Parallels Cloud Server is a product by Parallels that delivers a cloud hosting solution. The PARALLELS module for Salt Cloud enables you to manage instances hosted using PCS. Further information can be found at:
http://www.parallels.com/products/pcs/

• Using the old format, set up the cloud configuration at /etc/salt/cloud:

```shell
# Set up the location of the salt master
#
minion:
  master: saltmaster.example.com

# Set the PARALLELS access credentials (see below)
#
PARALLELS.user: myuser
PARALLELS.password: badpass

# Set the access URL for your PARALLELS host
#
PARALLELS.url: https://api.cloud.xmission.com:4465/paci/v1.0/
```

• Using the new format, set up the cloud configuration at /etc/salt/cloud.providers or /etc/salt/cloud.providers.d/parallels.conf:

```shell
my-parallels-config:
  # Set up the location of the salt master
  #
  minion:
    master: saltmaster.example.com

  # Set the PARALLELS access credentials (see below)
  #
  user: myuser
  password: badpass

  # Set the access URL for your PARALLELS provider
  #
  url: https://api.cloud.xmission.com:4465/paci/v1.0/
  driver: parallels
```

Note: Changed in version 2015.8.0.

The `provider` parameter in cloud provider definitions was renamed to `driver`. This change was made to avoid confusion with the `provider` parameter that is used in cloud profile definitions. Cloud provider definitions now use `driver` to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use `provider` to refer to provider configurations that you define.
Access Credentials

The user, password, and url will be provided to you by your cloud host. These are all required in order for the PARALLELS driver to work.

Cloud Profiles

Set up an initial profile at /etc/salt/cloud.profiles or /etc/salt/cloud.profiles.d/parallels.conf:

```yaml
parallels-ubuntu:
  provider: my-parallels-config
  image: ubuntu-12.04-x86_64
```

The profile can be realized now with a salt command:

```
# salt-cloud -p parallels-ubuntu myubuntu
```

This will create an instance named myubuntu on the cloud host. The minion that is installed on this instance will have an id of myubuntu. If the command was executed on the salt-master, its Salt key will automatically be signed on the master.

Once the instance has been created with salt-minion installed, connectivity to it can be verified with Salt:

```
# salt myubuntu test.version
```

Required Settings

The following settings are always required for PARALLELS:

- Using the old cloud configuration format:

```
PARALLELS.user: myuser
PARALLELS.password: badpass
PARALLELS.url: https://api.cloud.xmission.com:4465/paci/v1.0/
```

- Using the new cloud configuration format:

```
my-parallels-config:
  user: myuser
  password: badpass
  url: https://api.cloud.xmission.com:4465/paci/v1.0/
  driver: parallels
```

Optional Settings

Unlike other cloud providers in Salt Cloud, Parallels does not utilize a size setting. This is because Parallels allows the end-user to specify a more detailed configuration for their instances than is allowed by many other cloud hosts. The following options are available to be used in a profile, with their default settings listed.

```
# Description of the instance. Defaults to the instance name.
desc: <instance_name>

# How many CPU cores, and how fast they are (in MHz)
```
### 16.7.19 Getting Started With ProfitBricks

ProfitBricks provides an enterprise-grade Infrastructure as a Service (IaaS) solution that can be managed through a browser-based "Data Center Designer" (DCD) tool or via an easy to use API. A unique feature of the ProfitBricks platform is that it allows you to define your own settings for cores, memory, and disk size without being tied to a particular server size.

**Dependencies**

- profitbricks >= 4.1.1

**Configuration**

- Using the new format, set up the cloud configuration at `/etc/salt/cloud.providers` or `/etc/salt/cloud.providers.d/profitbricks.conf`:

```yaml
my-profitbricks-config:
  driver: profitbricks

# Set the location of the salt-master
#
# minion:
#   master: saltmaster.example.com

# Configure ProfitBricks authentication credentials
#
# username: user@domain.com
# password: 123456
# datacenter is the UUID of a pre-existing virtual data center.
# datacenter: 9e6709a0-6bf9-4bd6-8692-60349c70ce0e
```

(continues on next page)
# delete_volumes is forcing a deletion of all volumes attached to a server on a
# deletion of a server
delete_volumes: true
# Connect to public LAN ID 1.
public_lan: 1
ssh_public_key: /path/to/id_rsa.pub
ssh_private_key: /path/to/id_rsa

Note: Changed in version 2015.8.0.
The provider parameter in cloud provider definitions was renamed to driver. This change was made to avoid confusion with the provider parameter that is used in cloud profile definitions. Cloud provider definitions now use driver to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use provider to refer to provider configurations that you define.

Virtual Data Center

ProfitBricks uses the concept of Virtual Data Centers. These are logically separated from one another and allow you to have a self-contained environment for all servers, volumes, networking, snapshots, and so forth.

A list of existing virtual data centers can be retrieved with the following command:

```bash
salt-cloud -f list_datacenters my-profitbricks-config
```

A new data center can be created with the following command:

```bash
salt-cloud -f create_datacenter my-profitbricks-config name=example location=us/las description="my description"
```

Authentication

The username and password are the same as those used to log into the ProfitBricks "Data Center Designer".

Profiles

Here is an example of a profile:

```yaml
profitbricks_staging
  provider: my-profitbricks-config
  size: Micro Instance
  image_alias: 'ubuntu:latest'
  # image or image_alias must be provided
  # image: 2f98b678-6e7e-11e5-b680-52540066fee9
  cores: 2
  ram: 4096
  public_lan: 1
  private_lan: 2
  ssh_public_key: /path/to/id_rsa.pub
  ssh_private_key: /path/to/id_rsa
  ssh_interface: private_lan
```

(continues on next page)
profitbricks_production:
provider: my-profitbricks-config
image: Ubuntu-15.10-server-2016-05-01
image_password: MyPassword1
disk_type: SSD
disk_size: 40
cores: 8
cpu_family: INTEL_XEON
ram: 32768
public_lan: 1
public_ips:
  - 172.217.18.174
private_lan: 2
private_ips:
  - 192.168.100.10
public_firewall_rules:
  Allow SSH:
    protocol: TCP
    source_ip: 1.2.3.4
    port_range_start: 22
    port_range_end: 22
  Allow Ping:
    protocol: ICMP
    icmp_type: 8
ssh_public_key: /path/to/id_rsa.pub
ssh_private_key: /path/to/id_rsa
ssh_interface: private_lan
volumes:
  db_data:
    disk_size: 500
  db_log:
    disk_size: 50
disk_type: SSD

Locations can be obtained using the --list-locations option for the salt-cloud command:

```
# salt-cloud --list-locations my-profitbricks-config
```

Images can be obtained using the --list-images option for the salt-cloud command:

```
# salt-cloud --list-images my-profitbricks-config
```

Sizes can be obtained using the --list-sizes option for the salt-cloud command:

```
# salt-cloud --list-sizes my-profitbricks-config
```

Changed in version 2019.2.0: One or more public IP address can be reserved with the following command:

```
# salt-cloud -f reserve_ipblock my-profitbricks-config location='us/ewr' size=1
```
Profile Specifics:

The following list explains some of the important properties.

- **size** - Can be one of the options listed in the output of the following command:

  ```
salt-cloud --list-sizes my-profitbricks-config
  ```

- **image** - Can be one of the options listed in the output of the following command:

  ```
salt-cloud --list-images my-profitbricks-config
  ```

- **image_alias** - Can be one of the options listed in the output of the following command:

  ```
salt-cloud -f list_images my-profitbricks-config
  ```

- **disk_size** - This option allows you to override the size of the disk as defined by the size. The disk size is set in gigabytes (GB).

- **disk_type** - This option allow the disk type to be set to HDD or SSD. The default is HDD.
  
  New in version 2019.2.0.

- **image_password** - A password is set on the image for the "root" or "Administrator" account. This field may only be set during volume creation. Only valid with ProfitBricks supplied HDD (not ISO) images. The password must contain at least 8 and no more than 50 characters. Only these characters are allowed: [a-z][A-Z][0-9]

- **cores** - This option allows you to override the number of CPU cores as defined by the size.

- **ram** - This option allows you to override the amount of RAM defined by the size. The value must be a multiple of 256, e.g. 256, 512, 768, 1024, and so forth.

- **public_lan** - This option will connect the server to the specified public LAN. If no LAN exists, then a new public LAN will be created. The value accepts a LAN ID (integer).
  
  New in version 2019.2.0.

- **public_ips** - Public IPs assigned to the NIC in the public LAN.

- **public_firewall_rules** - This option allows for a list of firewall rules assigned to the public network interface.

  ```
Firewall Rule Name:
protocol: <protocol> (TCP, UDP, ICMP)
source_mac: <source-mac>
source_ip: <source-ip>
target_ip: <target-ip>
port_range_start: <port-range-start>
port_range_end: <port-range-end>
icmp_type: <icmp-type>
icmp_code: <icmp-code>
  ```

- **private_lan** - This option will connect the server to the specified private LAN. If no LAN exists, then a new private LAN will be created. The value accepts a LAN ID (integer).
  
  New in version 2019.2.0.

- **private_ips** - Private IPs assigned in the private LAN. NAT setting is ignored when this setting is active.

- **private_firewall_rules** - This option allows for a list of firewall rules assigned to the private network interface.
Firewall Rule Name:
protocol: <protocol> (TCP, UDP, ICMP)
source_mac: <source-mac>
source_ip: <source-ip>
target_ip: <target-ip>
port_range_start: <port-range-start>
port_range_end: <port-range-end>
icmp_type: <icmp-type>
icmp_code: <icmp-code>

- ssh_private_key - Full path to the SSH private key file
- ssh_public_key - Full path to the SSH public key file
- ssh_interface - This option will use the private LAN IP for node connections (such as as bootstrapping the node) instead of the public LAN IP. The value accepts 'private_lan'.
- cpu_family - This option allow the CPU family to be set to AMD_OPTERON or INTEL_XEON. The default is AMD_OPTERON.
- volumes - This option allows a list of additional volumes by name that will be created and attached to the server. Each volume requires 'disk_size' and, optionally, 'disk_type'. The default is HDD.
- deploy - Set to False if Salt should not be installed on the node.
- wait_for_timeout - The timeout to wait in seconds for provisioning resources such as servers. The default wait_for_timeout is 15 minutes.

For more information concerning cloud profiles, see here.

16.7.20 Getting Started With Proxmox

Proxmox Virtual Environment is a complete server virtualization management solution, based on OpenVZ(in Proxmox up to 3.4)/LXC(from Proxmox 4.0 and up) and full virtualization with KVM. Further information can be found at:

https://www.proxmox.com

Dependencies

- IPy >= 0.81
- requests >= 2.2.1

Please note: This module allows you to create OpenVZ/LXC containers and KVM VMs, but installing Salt on it will only be done on containers rather than a KVM virtual machine.

- Set up the cloud configuration at /etc/salt/cloud.providers or /etc/salt/cloud.providers.d/proxmox.conf:

```bash
my-proxmox-config:
  # Set up the location of the salt master
  #
  minion:
    master: saltmaster.example.com

  # Set the PROXMOX access credentials (see below)
  #
```

(continues on next page)
user: myuser@pve
password: badpass

# Set the access URL for your PROXMOX host
#
url: your.proxmox.host
driver: proxmox

Note: Changed in version 2015.8.0.

The provider parameter in cloud provider definitions was renamed to driver. This change was made to avoid confusion with the provider parameter that is used in cloud profile definitions. Cloud provider definitions now use driver to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use provider to refer to provider configurations that you define.

Access Credentials

The user, password, and url will be provided to you by your cloud host. These are all required in order for the PROXMOX driver to work.

Cloud Profiles

Set up an initial profile at /etc/salt/cloud.profiles or /etc/salt/cloud.profiles.d/proxmox.conf:

- Configure a profile to be used:

```
proxmox-ubuntu:
  provider: my-proxmox-config
  image: local:vztmpl/ubuntu-12.04-standard_12.04-1_amd64.tar.gz
  technology: lxc

  # host needs to be set to the configured name of the proxmox host
  # and not the ip address or FQDN of the server
  host: myvmhost
  ip_address: 192.168.100.155
  password: topsecret
```

The profile can be realized now with a salt command:

```
# salt-cloud -p proxmox-ubuntu myubuntu
```

This will create an instance named myubuntu on the cloud host. The minion that is installed on this instance will have a hostname of myubuntu. If the command was executed on the salt-master, its Salt key will automatically be signed on the master.

Once the instance has been created with salt-minion installed, connectivity to it can be verified with Salt:

```
# salt myubuntu test.version
```
Required Settings

The following settings are always required for PROXMOX:

- Using the new cloud configuration format:

```yaml
my-proxmox-config:
  driver: proxmox
  user: saltcloud@pve
  password: xyzzy
  url: your.proxmox.host
```

Optional Settings

Unlike other cloud providers in Salt Cloud, Proxmox does not utilize a size setting. This is because Proxmox allows the end-user to specify a more detailed configuration for their instances, than is allowed by many other cloud providers. The following options are available to be used in a profile, with their default settings listed.

```yaml
# Description of the instance.
desc: <instance_name>

# How many CPU cores, and how fast they are (in MHz)
cpus: 1
cpuunits: 1000

# How many megabytes of RAM
memory: 256

# How much swap space in MB
swap: 256

# Whether to auto boot the vm after the host reboots
onboot: 1

# Size of the instance disk (in GiB)
disk: 10

# Host to create this vm on
host: myvmhost

# Nameservers. Defaults to host
nameserver: 8.8.8.8 8.8.4.4

# Username and password
ssh_username: root
password: <value from PROXMOX.password>

# The name of the image, from `salt-cloud --list-images proxmox`
image: local:vztmpl/ubuntu-12.04-standard_12.04-1_amd64.tar.gz

# Whether or not to verify the SSL cert on the Proxmox host
verify_ssl: False

# Network interfaces, netX
net0: name=eth0,bridge=vmbr0,ip=dhcp
```

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**QEMU**

Some functionality works differently if you use `qemu` as technology. In order to create a new VM with `qemu`, you need to specify some more information. You can also clone a qemu template which already is on your Proxmox server.

**QEMU profile file (for a new VM):**

```
proxmox-win7:
  # Image of the new VM
  image: image.iso  # You can get all your available images using 'salt-cloud --list-images provider_name' (Ex: 'salt-cloud --list-images my-proxmox-config')

  # Technology used to create the VM ('qemu', 'openvz'(on Proxmox <4.x) or 'lxc'(on Proxmox 4.x+))
  technology: qemu

  # Proxmox node name
  host: node_name

  # Proxmox password
  password: your_password

  # Workaround https://github.com/saltstack/salt/issues/27821
  size: '

  # RAM size (MB)
  memory: 2048

  # OS Type enum (other / wxp / w2k / w2k3 / w2k8 / wvista / win7 / win8 / l24 / l26 / solaris)
  ostype: win7

  # Hard disk location
  sata0: <location>:<size>, format=qcow2/vmdk/raw, size=<size>GB  #Example: local:120,format=qcow2,size=120GB

  #CD/DVD Drive
  ide2: <content_location>,media=cdrom  #Example: local:iso/name.iso,media=cdrom

  # Network Device
  net0: <model>,bridge=<bridge>  #Example: e1000,bridge=vmbr0

  # Enable QEMU Guest Agent (0 / 1)
  agent: 1

  # VM name
  name: Test
```

More information about these parameters can be found on Proxmox API (http://pve.proxmox.com/pve2-api-doc/) under the 'POST' method of nodes/{node}/qemu

**QEMU profile file (for a clone):**
proxmox-win7:
  # Enable Clone
  clone: True

  # New VM description
  clone_description: 'description'

  # New VM name
  clone_name: 'name'

  # New VM format (qcow2 / raw / vmdk)
  clone_format: qcow2

  # Full clone (1) or Link clone (0)
  clone_full: 0

  # VMID of Template to clone
  clone_from: ID

  # Technology used to create the VM ('qemu' or 'lxc')
  technology: qemu

  # Proxmox node name
  host: node_name

  # Proxmox password
  password: your_password

  # Workaround https://github.com/saltstack/salt/issues/27821
  size: ''

More information can be found on Proxmox API under the 'POST' method of /nodes/{node}/qemu/{vmid}/clone

Note: The Proxmox API offers a lot more options and parameters, which are not yet supported by this salt-cloud 'overlay'. Feel free to add your contribution by forking the github repository and modifying the following file: salt/cloud/clouds/proxmox.py

An easy way to support more parameters for VM creation would be to add the names of the optional parameters in the 'create_nodes(vm_)' function, under the 'qemu' technology. But it requires you to dig into the code ...

16.7.21 Getting Started With Scaleway

Scaleway is the first IaaS host worldwide to offer an ARM based cloud. It’s the ideal platform for horizontal scaling with BareMetal SSD servers. The solution provides on demand resources: it comes with on-demand SSD storage, movable IPs, images, security group and an Object Storage solution. https://scaleway.com
Configuration

Using Salt for Scaleway, requires an access key and an API token. API tokens are unique identifiers associated with your Scaleway account. To retrieve your access key and API token, log-in to the Scaleway control panel, open the pull-down menu on your account name and click on ”My Credentials” link.

If you do not have API token you can create one by clicking the ”Create New Token” button on the right corner.

```yaml
# Note: This example is for /etc/salt/cloud.providers or any file in the
# /etc/salt/cloud.providers.d/ directory.

my-scaleway-config:
  access_key: 15cf404d-4560-41b1-9a0c-21c3d5c4ff1f
  token: a7347ec8-5de1-4024-a5e3-24b77d1ba91d
  driver: scaleway
```

Note: Changed in version 2015.8.0.

The provider parameter in cloud provider definitions was renamed to driver. This change was made to avoid confusion with the provider parameter that is used in cloud profile definitions. Cloud provider definitions now use driver to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use provider to refer to provider configurations that you define.

Profiles

Cloud Profiles

Set up an initial profile at /etc/salt/cloud.profiles or in the /etc/salt/cloud.profiles.d/ directory:

```yaml
scaleway-ubuntu:
  provider: my-scaleway-config
  image: Ubuntu Trusty (14.04 LTS)
```

Images can be obtained using the --list-images option for the salt-cloud command:

```
#salt-cloud --list-images my-scaleway-config
my-scaleway-config:
    ---------
    scaleway:
    ---------
069fd876-eb04-44ab-a9cd-47e2fa3e5309:
    arch: arm
    creation_date: 2015-03-12T09:35:45.764477+00:00
    default_bootscript:
        {u'kernel': {u'dtb': '', u'title': u'Pimouss 3.2.34-30-std', u'id': u'c5af0215-2516-4316-befc-5da1cf6609c'}, u'initrd': {u'path': u'initrd/c1-uInitrd', u'id': u'1be14b1b-e24c-48e5-b9b6-7ba452e42b92', u'title': u'C1 initrd'}, u'bootcmdargs': {u'id': u'd22c4dde-e5a4-47ad-abb9-d23b54d52ff', u'value': u'ip=dhcp boot=local root=/dev/nbd0 USE_XNBD=1 nbd.max_parts=8'}, u'organization': u'111111111111', u'public': True}
```
Execute a query and return all information about the nodes running on configured cloud providers using the `-Q` option for the `salt-cloud` command:

```bash
# salt-cloud -F
[INFO  ] salt-cloud starting
[INFO  ] Starting new HTTPS connection (1): api.scaleway.com
my-scaleway-config:
    -------
scaleway:
    -------
salt-manager:
        -------
    creation_date: 2015-06-03T08:17:38.818068+00:00
    hostname: salt-manager
    ...
```

**Note:** Additional documentation about Scaleway can be found at [https://www.scaleway.com/docs](https://www.scaleway.com/docs).

### 16.7.22 Getting Started With Saltify

The Saltify driver is a driver for installing Salt on existing machines (virtual or bare metal).

**Dependencies**

The Saltify driver has no external dependencies.
Configuration

Because the Saltify driver does not use an actual cloud provider host, it can have a simple provider configuration. The only thing that is required to be set is the driver name, and any other potentially useful information, like the location of the salt-master:

```
# Note: This example is for /etc/salt/cloud.providers file or any file in
# the /etc/salt/cloud.providers.d/ directory.

my-saltify-config:
  minion:
    master: 111.222.333.444
  driver: saltify
```

However, if you wish to use the more advanced capabilities of salt-cloud, such as rebooting, listing, and disconnecting machines, then the salt master must fill the role usually performed by a vendor’s cloud management system. The salt master must be running on the salt-cloud machine, and created nodes must be connected to the master.

Additional information about which configuration options apply to which actions can be studied in the Saltify Module documentation and the Miscellaneous Salt Cloud Options document.

Profiles

Saltify requires a separate profile to be configured for each machine that needs Salt installed. The initial profile can be set up at /etc/salt/cloud.profiles or in the /etc/salt/cloud.profiles.d/ directory. Each profile requires both an `ssh_host` and an `ssh_username` key parameter as well as either an `key_filename` or a `password`.

Profile configuration example:

```
# /etc/salt/cloud.profiles.d/saltify.conf

salt-this-machine:
  ssh_host: 12.34.56.78
  ssh_username: root
  key_filename: '/etc/salt/mysshkey.pem'
  provider: my-saltify-config
```

The machine can now be “Salted” with the following command:

```
salt-cloud -p salt-this-machine my-machine
```

This will install salt on the machine specified by the cloud profile, `salt-this-machine`, and will give the machine the minion id of `my-machine`. If the command was executed on the salt-master, its Salt key will automatically be accepted by the master.

Once a salt-minion has been successfully installed on the instance, connectivity to it can be verified with Salt:

```
salt my-machine test.version
```

---

1 Unless you are using a map file to provide the unique parameters.
Destroy Options

New in version 2018.3.0.

For obvious reasons, the destroy action does not actually vaporize hardware. If the salt master is connected, it can tear down parts of the client machines. It will remove the client's key from the salt master, and can execute the following options:

- **remove_config_on_destroy**: true
  
  - default: true
  - Deactivate salt-minion on reboot and delete the minion config and key files from its "/etc/salt" directory, NOTE: If deactivation was unsuccessful (older Ubuntu machines) then when salt-minion restarts it will automatically create a new, unwanted, set of key files. Use the "force_minion_config" option to replace them.

- **shutdown_on_destroy**: false
  
  - default: false
  - last of all, send a "shutdown" command to the client.

Wake On LAN

New in version 2018.3.0.

In addition to connecting a hardware machine to a Salt master, you have the option of sending a wake-on-LAN magic packet to start that machine running.

The "magic packet" must be sent by an existing salt minion which is on the same network segment as the target machine. (Or your router must be set up especially to route WoL packets.) Your target machine must be set up to listen for WoL and to respond appropriately.

You must provide the Salt node id of the machine which will send the WoL packet (parameter *wol_sender_node*), and the hardware MAC address of the machine you intend to wake, (parameter *wake_on_lan_mac*). If both parameters are defined, the WoL will be sent. The cloud master will then sleep a while (parameter *wol_boot_wait*) to give the target machine time to boot up before we start probing its SSH port to begin deploying Salt to it. The default sleep time is 30 seconds.

```bash
# /etc/salt/cloud.profiles.d/saltify.conf
salt-this-machine:
  ssh_host: 12.34.56.78
  ssh_username: root
  key_filename: '/etc/salt/mysshkey.pem'
  provider: my-saltify-config
  wake_on_lan_mac: '00:e0:4c:70:2a:b2'  # found with ifconfig
  wol_sender_node: bevymaster  # its on this network segment
  wol_boot_wait: 45  # seconds to sleep
```
Using Map Files

The settings explained in the section above may also be set in a map file. An example of how to use the Saltify driver with a map file follows:

```
# /etc/salt/saltify-map
make_salty:
  - my-instance-0:
    ssh_host: 12.34.56.78
    ssh_username: root
    password: very-bad-password
  - my-instance-1:
    ssh_host: 44.33.22.11
    ssh_username: root
    password: another-bad-pass
```

In this example, the names `my-instance-0` and `my-instance-1` will be the identifiers of the deployed minions.

Note: The `ssh_host` directive is also used for Windows hosts, even though they do not typically run the SSH service. It indicates IP address or host name for the target system.

Note: When using a cloud map with the Saltify driver, the name of the profile to use, in this case `make_salty`, must be defined in a profile config. For example:

```
# /etc/salt/cloud.profiles.d/saltify.conf
make_salty:
  provider: my-saltify-config
```

The machines listed in the map file can now be "Salted" by applying the following salt map command:

```
salt-cloud -m /etc/salt/saltify-map
```

This command will install salt on the machines specified in the map and will give each machine their minion id of `my-instance-0` and `my-instance-1`, respectively. If the command was executed on the salt-master, its Salt key will automatically be signed on the master.

Connectivity to the new "Salted" instances can now be verified with Salt:

```
salt 'my-instance-*' test.version
```

Bulk Deployments

When deploying large numbers of Salt Minions using Saltify, it may be preferable to organize the configuration in a way that duplicates data as little as possible. For example, if a group of target systems have the same credentials, they can be specified in the profile, rather than in a map file.

```
# /etc/salt/cloud.profiles.d/saltify.conf
make_salty:
  provider: my-saltify-config
  ssh_username: root
  password: very-bad-password
```
# /etc/salt/saltify-map

```makefile
make_salty:
  - my-instance-0:
    ssh_host: 12.34.56.78
  - my-instance-1:
    ssh_host: 44.33.22.11
```

If `ssh_host` is not provided, its default value will be the Minion identifier (`my-instance-0` and `my-instance-1`, in the example above). For deployments with working DNS resolution, this can save a lot of redundant data in the map. Here is an example map file using DNS names instead of IP addresses:

```
# /etc/salt/saltify-map
make_salty:
  - my-instance-0
  - my-instance-1
```

**Credential Verification**

Because the Saltify driver does not actually create VM’s, unlike other salt-cloud drivers, it has special behaviour when the `deploy` option is set to `False`. When the cloud configuration specifies `deploy: False`, the Saltify driver will attempt to authenticate to the target node(s) and return `True` for each one that succeeds. This can be useful to verify ports, protocols, services and credentials are correctly configured before a live deployment.

**Return values:**

- **True**: Credential verification succeeded
- **False**: Credential verification succeeded
- **None**: Credential verification was not attempted.

### 16.7.23 Getting Started With SoftLayer

SoftLayer is a public cloud host, and baremetal hardware hosting service.

**Dependencies**

The SoftLayer driver for Salt Cloud requires the softlayer package, which is available at PyPI:

https://pypi.org/project/SoftLayer/

This package can be installed using `pip` or `easy_install`:

```
# pip install softlayer
# easy_install softlayer
```
Configuration

Set up the cloud config at /etc/salt/cloud.providers:

```yaml
# Note: These examples are for /etc/salt/cloud.providers

my-softlayer:
  # Set up the location of the salt master
  minion:
    master: saltmaster.example.com

  # Set the SoftLayer access credentials (see below)
  user: MYUSER1138
  apikey: 'e3b68aa711e6deadc62d5b76355674beef7cc3116062ddbacafe5f7e465bfdc9'
  driver: softlayer

my-softlayer-hw:
  # Set up the location of the salt master
  minion:
    master: saltmaster.example.com

  # Set the SoftLayer access credentials (see below)
  user: MYUSER1138
  apikey: 'e3b68aa711e6deadc62d5b76355674beef7cc3116062ddbacafe5f7e465bfdc9'
  driver: softlayer_hw
```

Note: Changed in version 2015.8.0.

The `provider` parameter in cloud provider definitions was renamed to `driver`. This change was made to avoid confusion with the `provider` parameter that is used in cloud profile definitions. Cloud provider definitions now use `driver` to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use `provider` to refer to provider configurations that you define.

Access Credentials

The `user` setting is the same user as is used to log into the SoftLayer Administration area. The `apikey` setting is found inside the Admin area after logging in:

- Hover over the Account menu item.
- Click the Users link.
- Find the API Key column and click View.
Profiles

Cloud Profiles

Set up an initial profile at `/etc/salt/cloud.profiles`:

```yaml
base_softlayer_ubuntu:
  provider: my-softlayer
  image: UBUNTU_LATEST
  cpu_number: 1
  ram: 1024
  disk_size: 100
  local_disk: True
  hourly_billing: True
  domain: example.com
  location: sjc01
  # Optional
  max_net_speed: 1000
  private_vlan: 396
  private_network: True
  private_ssh: True
  # Use a dedicated host instead of cloud
  dedicated_host_id: 1234
  # May be used _instead_of_ image
  global_identifier: 320d8be5-46c0-dead-cafe-13e3c51
```

Most of the above items are required; optional items are specified below.

image

Images to build an instance can be found using the `--list-images` option:

```
# salt-cloud --list-images my-softlayer
```

The setting used will be labeled as `template`.

cpu_number

This is the number of CPU cores that will be used for this instance. This number may be dependent upon the image that is used. For instance:

```json
Red Hat Enterprise Linux 6 - Minimal Install (64 bit) (1 - 4 Core):
  name: Red Hat Enterprise Linux 6 - Minimal Install (64 bit) (1 - 4 Core)
  template: REDHAT_6_64
Red Hat Enterprise Linux 6 - Minimal Install (64 bit) (5 - 100 Core):
  name: Red Hat Enterprise Linux 6 - Minimal Install (64 bit) (5 - 100 Core)
  template: REDHAT_6_64
```
Note that the template (meaning, the `image` option) for both of these is the same, but the names suggests how many CPU cores are supported.

**ram**

This is the amount of memory, in megabytes, that will be allocated to this instance.

**disk_size**

The amount of disk space that will be allocated to this image, in gigabytes.

```yaml
base_softlayer_ubuntu:
  disk_size: 100
```

### Using Multiple Disks


SoftLayer allows up to 5 disks to be specified for a virtual machine upon creation. Multiple disks can be specified either as a list or a comma-delimited string. The first `disk_size` specified in the string or list will be the first disk size assigned to the VM.

List Example: .. code-block:: yaml

```yaml
  base_softlayer_ubuntu: disk_size: ['100', '20', '20']
```

String Example: .. code-block:: yaml

```yaml
  base_softlayer_ubuntu: disk_size: '100, 20, 20'
```

**local_disk**

When true the disks for the computing instance will be provisioned on the host which it runs, otherwise SAN disks will be provisioned.

**hourly_billing**

When true the computing instance will be billed on hourly usage, otherwise it will be billed on a monthly basis.

**domain**

The domain name that will be used in the FQDN (Fully Qualified Domain Name) for this instance. The `domain` setting will be used in conjunction with the instance name to form the FQDN.
**use_fqdn**

If set to True, the Minion will be identified by the FQDN (Fully Qualified Domain Name) which is a result of combining the `domain` configuration value and the Minion name specified either via the CLI or a map file rather than only using the short host name, or Minion ID. Default is False.

New in version 2016.3.0.

For example, if the value of `domain` is `example.com` and a new VM was created via the CLI with `salt-cloud -p base_softlayer_ubuntu my-vm`, the resulting Minion ID would be `my-vm.example.com`.

---

**Note:** When enabling the `use_fqdn` setting, the Minion ID will be the FQDN and will interact with Salt commands with the FQDN instead of the short hostname. However, due to the way the SoftLayer API is constructed, some Salt Cloud functions such as listing nodes or destroying VMs will only list the short hostname of the VM instead of the FQDN.

Example output displaying the SoftLayer hostname quirk mentioned in the note above (note the Minion ID is `my-vm.example.com`, but the VM to be destroyed is listed with its short hostname, `my-vm`):

```bash
# salt-key -L
Accepted Keys:
my-vm.example.com
Denied Keys:
Unaccepted Keys:
Rejected Keys:
#
#
# salt my-vm.example.com test.version
my-vm.example.com:
   2018.3.4
#
#
# salt-cloud -d my-vm.example.com
[INFO ] salt-cloud starting
The following virtual machines are set to be destroyed:
   softlayer-config:
     softlayer:
       my-vm
Proceed? [N/y] y
... proceeding
[INFO ] Destroying in non-parallel mode.
softlayer-config:
   softlayer:
     my-vm:
       True
```
location

Images to build an instance can be found using the `--list-locations` option:

```bash
# salt-cloud --list-location my-softlayer
```

max_net_speed

Specifies the connection speed for the instance's network components. This setting is optional. By default, this is set to 10.

post_uri

Specifies the uri location of the script to be downloaded and run after the instance is provisioned.


Example: .. code-block:: yaml

```yaml
```

public_vlan

If it is necessary for an instance to be created within a specific frontend VLAN, the ID for that VLAN can be specified in either the provider or profile configuration.

This ID can be queried using the `list_vlans` function, as described below. This setting is optional.

If this setting is set to `None`, salt-cloud will connect to the private ip of the server.

Note: If this setting is not provided and the server is not built with a public vlan, `private_ssh` or `private_wds` will need to be set to make sure that salt-cloud attempts to connect to the private ip.

private_vlan

If it is necessary for an instance to be created within a specific backend VLAN, the ID for that VLAN can be specified in either the provider or profile configuration.

This ID can be queried using the `list_vlans` function, as described below. This setting is optional.

private_network

If a server is to only be used internally, meaning it does not have a public VLAN associated with it, this value would be set to True. This setting is optional. The default is False.
private_ssh or private_wds

Whether to run the deploy script on the server using the public IP address or the private IP address. If set to True, Salt Cloud will attempt to SSH or WinRM into the new server using the private IP address. The default is False. This setting is optional.

global_identifier

When creating an instance using a custom template, this option is set to the corresponding value obtained using the list_custom_images function. This option will not be used if an image is set, and if an image is not set, it is required.

The profile can be realized now with a salt command:

```
# salt-cloud -p base_softlayer_ubuntu myserver
```

Using the above configuration, this will create myserver.example.com.

Once the instance has been created with salt-minion installed, connectivity to it can be verified with Salt:

```
# salt 'myserver.example.com' test.version
```

Dedicated Host

Softlayer allows the creation of new VMs in a dedicated host. This means that you can order and pay a fixed amount for a bare metal dedicated host and use it to provision as many VMs as you can fit in there. If you want your VMs to be launched in a dedicated host, instead of Softlayer’s cloud, set the dedicated_host_id parameter in your profile.

dedicated_host_id

The id of the dedicated host where the VMs should be created. If not set, VMs will be created in Softlayer’s cloud instead.

Bare metal Profiles

Set up an initial profile at /etc/salt/cloud.profiles:

```
base_softlayer_hw_centos:
    provider: my-softlayer-hw
    # CentOS 6.0 - Minimal Install (64 bit)
    image: 13963
    # 2 x 2.0 GHz Core Bare Metal Instance - 2 GB Ram
    size: 1921
    # 500GB SATA II
    hdd: 1267
    # San Jose 01
    location: 168642
    domain: example.com
    # Optional
    vlan: 396
    port_speed: 273
    bandwidth: 248
```
Most of the above items are required; optional items are specified below.

**image**

Images to build an instance can be found using the `--list-images` option:

```
# salt-cloud --list-images my-softlayer-hw
```

A list of id’s and names will be provided. The `name` will describe the operating system and architecture. The `id` will be the setting to be used in the profile.

**size**

Sizes to build an instance can be found using the `--list-sizes` option:

```
# salt-cloud --list-sizes my-softlayer-hw
```

A list of id’s and names will be provided. The `name` will describe the speed and quantity of CPU cores, and the amount of memory that the hardware will contain. The `id` will be the setting to be used in the profile.

**hdd**

There is currently only one size of hard disk drive (HDD) that is available for hardware instances on SoftLayer:

| 1267 | 500GB SATA II |

The `hdd` setting in the profile should be 1267. Other sizes may be added in the future.

**location**

Locations to build an instance can be found using the `--list-images` option:

```
# salt-cloud --list-locations my-softlayer-hw
```

A list of IDs and names will be provided. The `location` will describe the location in human terms. The `id` will be the setting to be used in the profile.

**domain**

The domain name that will be used in the FQDN (Fully Qualified Domain Name) for this instance. The `domain` setting will be used in conjunction with the instance name to form the FQDN.
**vlan**

If it is necessary for an instance to be created within a specific VLAN, the ID for that VLAN can be specified in either the provider or profile configuration.

This ID can be queried using the `list_vlans` function, as described below.

**port_speed**

Specifies the speed for the instance’s network port. This setting refers to an ID within the SoftLayer API, which sets the port speed. This setting is optional. The default is 273, or, 100 Mbps Public & Private Networks. The following settings are available:

- 273: 100 Mbps Public & Private Networks
- 274: 1 Gbps Public & Private Networks
- 21509: 10 Mbps Dual Public & Private Networks (up to 20 Mbps)
- 21513: 100 Mbps Dual Public & Private Networks (up to 200 Mbps)
- 2314: 1 Gbps Dual Public & Private Networks (up to 2 Gbps)
- 272: 10 Mbps Public & Private Networks

**bandwidth**

Specifies the network bandwidth available for the instance. This setting refers to an ID within the SoftLayer API, which sets the bandwidth. This setting is optional. The default is 248, or, 5000 GB Bandwidth. The following settings are available:

- 248: 5000 GB Bandwidth
- 129: 6000 GB Bandwidth
- 130: 8000 GB Bandwidth
- 131: 10000 GB Bandwidth
- 36: Unlimited Bandwidth (10 Mbps Uplink)
- 125: Unlimited Bandwidth (100 Mbps Uplink)

**Actions**

The following actions are currently supported by the SoftLayer Salt Cloud driver.
show_instance

This action is a thin wrapper around `--full-query`, which displays details on a single instance only. In an environment with several machines, this will save a user from having to sort through all instance data, just to examine a single instance.

```bash
$ salt-cloud -a show_instance myinstance
```

Functions

The following functions are currently supported by the SoftLayer Salt Cloud driver.

list_vlans

This function lists all VLANs associated with the account, and all known data from the SoftLayer API concerning those VLANs.

```bash
$ salt-cloud -f list_vlans my-softlayer
$ salt-cloud -f list_vlans my-softlayer-hw
```

The `id` returned in this list is necessary for the `vlan` option when creating an instance.

list_custom_images

This function lists any custom templates associated with the account, that can be used to create a new instance.

```bash
$ salt-cloud -f list_custom_images my-softlayer
```

The `globalIdentifier` returned in this list is necessary for the `global_identifier` option when creating an image using a custom template.

Optional Products for SoftLayer HW

The softlayer_hw driver supports the ability to add optional products, which are supported by SoftLayer's API. These products each have an ID associated with them, that can be passed into Salt Cloud with the `optional_products` option:

```yaml
softlayer_hw_test:
  provider: my-softlayer-hw
  # CentOS 6.0 - Minimal Install (64 bit)
  image: 13963
  # 2 x 2.0 GHz Core Bare Metal Instance - 2 GB Ram
  size: 1921
  # 500GB SATA II
  hdd: 1267
  # San Jose 01
  location: 168642
  domain: example.com
  optional_products:
    # MySQL for Linux
    - id: 28
    # Business Continuance Insurance
    - id: 104
```
These values can be manually obtained by looking at the source of an order page on the SoftLayer web interface. For convenience, many of these values are listed here:

**Public Secondary IP Addresses**

- 22: 4 Public IP Addresses
- 23: 8 Public IP Addresses

**Primary IPv6 Addresses**

- 17129: 1 IPv6 Address

**Public Static IPv6 Addresses**

- 1481: /64 Block Static Public IPv6 Addresses

**OS-Specific Addon**

- 17139: XenServer Advanced for XenServer 6.x
- 17141: XenServer Enterprise for XenServer 6.x
- 2334: XenServer Advanced for XenServer 5.6
- 2335: XenServer Enterprise for XenServer 5.6
- 13915: Microsoft WebMatrix
- 21276: VMware vCenter 5.1 Standard

**Control Panel Software**

- 121: cPanel/WHM with Fantastico and RVskin
- 20778: Parallels Plesk Panel 11 (Linux) 100 Domain w/ Power Pack
- 20786: Parallels Plesk Panel 11 (Windows) 100 Domain w/ Power Pack
- 20787: Parallels Plesk Panel 11 (Linux) Unlimited Domain w/ Power Pack
- 20792: Parallels Plesk Panel 11 (Windows) Unlimited Domain w/ Power Pack
- 2340: Parallels Plesk Panel 10 (Linux) 100 Domain w/ Power Pack
- 2339: Parallels Plesk Panel 10 (Linux) Unlimited Domain w/ Power Pack
- 13704: Parallels Plesk Panel 10 (Windows) Unlimited Domain w/ Power Pack
Database Software

- 29: MySQL 5.0 for Windows
- 28: MySQL for Linux
- 21501: Riak 1.x
- 20893: MongoDB
- 30: Microsoft SQL Server 2005 Express
- 92: Microsoft SQL Server 2005 Workgroup
- 90: Microsoft SQL Server 2005 Standard
- 94: Microsoft SQL Server 2005 Enterprise
- 1330: Microsoft SQL Server 2008 Express
- 1340: Microsoft SQL Server 2008 Web
- 1337: Microsoft SQL Server 2008 Workgroup
- 1334: Microsoft SQL Server 2008 Standard
- 1331: Microsoft SQL Server 2008 Enterprise
- 2179: Microsoft SQL Server 2008 Express R2
- 2173: Microsoft SQL Server 2008 Web R2
- 2183: Microsoft SQL Server 2008 Workgroup R2
- 2180: Microsoft SQL Server 2008 Standard R2
- 2176: Microsoft SQL Server 2008 Enterprise R2

Anti-Virus & Spyware Protection

- 594: McAfee VirusScan Anti-Virus - Windows
- 414: McAfee Total Protection - Windows

Insurance

- 104: Business Continuance Insurance

Monitoring

- 55: Host Ping
- 56: Host Ping and TCP Service Monitoring
Notification

- 57: Email and Ticket

Advanced Monitoring

- 2302: Monitoring Package - Basic
- 2303: Monitoring Package - Advanced
- 2304: Monitoring Package - Premium Application

Response

- 58: Automated Notification
- 59: Automated Reboot from Monitoring
- 60: 24x7x365 NOC Monitoring, Notification, and Response

Intrusion Detection & Protection

- 413: McAfee Host Intrusion Protection w/Reporting

Hardware & Software Firewalls

- 411: APF Software Firewall for Linux
- 894: Microsoft Windows Firewall
- 410: 10Mbps Hardware Firewall
- 409: 100Mbps Hardware Firewall
- 408: 1000Mbps Hardware Firewall

16.7.24 Getting Started With Tencent Cloud

Tencent Cloud is a secure, reliable and high-performance cloud compute service provided by Tencent. It is the 2nd largest Cloud Provider in China.

Dependencies

The Tencent Cloud driver for Salt Cloud requires the `tencentcloud-sdk-python` package, which is available at PyPI:

https://pypi.org/project/tencentcloud-sdk-python/

This package can be installed using `pip` or `easy_install`:

```
# pip install tencentcloud-sdk-python
# easy_install tencentcloud-sdk-python
```
Provider Configuration

To use this module, set up the cloud configuration at `/etc/salt/cloud.providers` or `/etc/salt/cloud.providers.d/*.conf`:

```yaml
my-tencentcloud-config:
  driver: tencentcloud
  # Tencent Cloud Secret Id
  id: AKIDA64p0109BMemkApzex0HS169S4b750A
  # Tencent Cloud Secret Key
  key: Br2xmPn9C5FDyRAImc3imiTZKVRsk260
  # Tencent Cloud Region
  location: ap-guangzhou
```

Configuration Parameters

**driver**

Required. `tencentcloud` to use this module.

**id**

Required. Your Tencent Cloud secret id.

**key**

Required. Your Tencent Cloud secret key.

**location**

Optional. If this value is not specified, the default is `ap-guangzhou`. Available locations can be found using the `--list-locations` option:

```
# salt-cloud --list-location my-tencentcloud-config
```

Profile Configuration

Tencent Cloud profiles require a `provider`, `availability_zone`, `image` and `size`. Set up an initial profile at `/etc/salt/cloud.profiles` or `/etc/salt/cloud.profiles.d/*.conf`:

```yaml
tencentcloud-guangzhou-s1sm1:
  provider: my-tencentcloud-config
  availability_zone: ap-guangzhou-3
  image: img-31tjrtp
  size: S1.SMALL1
  allocate_public_ip: True
  internet_max_bandwidth_out: 1
  password: 153e41ec96140152
  securitygroups:
    - sg-5e90804b
```

880 Chapter 16. Salt Cloud
Configuration Parameters

**provider**

*Required.* Name of entry in `salt/cloud.providers.d/???.` file.

**availability_zone**

*Required.* The availability zone that the instance is located in. Available zones can be found using the `list_availability_zones` function:

```
# salt-cloud -f list_availability_zones my-tencentcloud-config
```

**image**

*Required.* The image id to use for the instance. Available images can be found using the `--list-images` option:

```
# salt-cloud --list-images my-tencentcloud-config
```

**size**

*Required.* Instance type for instance can be found using the `--list-sizes` option.

```
# salt-cloud --list-sizes my-tencentcloud-config
```

**securitygroups**

*Optional.* A list of security group ids to associate with. Available security group ids can be found using the `list_securitygroups` function:

```
# salt-cloud -f list_securitygroups my-tencentcloud-config
```

Multiple security groups are supported:

```
tencentcloud-guangzhou-s1sm1:
  securitygroups:
    - sg-5e90804b
    - sg-8kpynf2t
```

**hostname**

*Optional.* The hostname of the instance.
instance_charge_type

Optional. The charge type of the instance. Valid values are PREPAID, POSTPAID_BY_HOUR and SPOTPAID. The default is POSTPAID_BY_HOUR.

instance_charge_type_prepaid_renew_flag

Optional. When enabled, the instance will be renew automatically when it reaches the end of the prepaid tenancy. Valid values are NOTIFY_AND_AUTO_RENEW, NOTIFY_AND_MANUAL_RENEW and DISABLE_NOTIFY_AND_MANUAL_RENEW.

Note: This value is only used when instance_charge_type is set to PREPAID.

instance_charge_type_prepaid_period

Optional. The tenancy time in months of the prepaid instance, Valid values are 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 24, 36.

Note: This value is only used when instance_charge_type is set to PREPAID.

allocate_public_ip

Optional. Associate a public ip address with an instance in a VPC or Classic. Boolean value, default is false.

internet_max_bandwidth_out

Optional. Maximum outgoing bandwidth to the public network, measured in Mbps (Mega bits per second). Value range: [0, 100]. If this value is not specified, the default is 0 Mbps.

internet_charge_type

Optional. Internet charge type of the instance. Valid values are BANDWIDTH_PREPAID, TRAFFIC_POSTPAID_BY_HOUR, BANDWIDTH_POSTPAID_BY_HOUR and BANDWIDTH_PACKAGE. The default is TRAFFIC_POSTPAID_BY_HOUR.

key_name

Optional. The key pair to use for the instance, for example skey-16jig7tx.
password

Optional. Login password for the instance.

private_ip

Optional. The private ip to be assigned to this instance, must be in the provided subnet and available.

project_id

Optional. The project this instance belongs to, defaults to 0.

vpc_id

Optional. The id of a VPC network. If you want to create instances in a VPC network, this parameter must be set.

subnet_id

Optional. The id of a VPC subnet. If you want to create instances in VPC network, this parameter must be set.

system_disk_size

Optional. Size of the system disk. Value range: [50, 1000], and unit is GB. Default is 50 GB.

system_disk_type

Optional. Type of the system disk. Valid values are CLOUD_BASIC, CLOUD_SSD and CLOUD_PREMIUM, default value is CLOUD_BASIC.

Actions

The following actions are supported by the Tencent Cloud Salt Cloud driver.

show_instance

This action is a thin wrapper around --full-query, which displays details on a single instance only. In an environment with several machines, this will save a user from having to sort through all instance data, just to examine a single instance.

$ salt-cloud -a show_instance myinstance
show_disk

Return disk details about a specific instance.

```bash
$ salt-cloud -a show_disk myinstance
```

destroy

Destroy a Tencent Cloud instance.

```bash
$ salt-cloud -a destroy myinstance
```

start

Start a Tencent Cloud instance.

```bash
$ salt-cloud -a start myinstance
```

stop

Stop a Tencent Cloud instance.

```bash
$ salt-cloud -a stop myinstance
```

reboot

Reboot a Tencent Cloud instance.

```bash
$ salt-cloud -a reboot myinstance
```

Functions

The following functions are currently supported by the Tencent Cloud Salt Cloud driver.

list_securitygroups

Lists all Tencent Cloud security groups in current region.

```bash
$ salt-cloud -f list_securitygroups my-tencentcloud-config
```
list_availability_zones

Lists all Tencent Cloud availability zones in current region.

```bash
$ salt-cloud -f list_availability_zones my-tencentcloud-config
```

list_custom_images

Lists any custom images associated with the account. These images can be used to create a new instance.

```bash
$ salt-cloud -f list_custom_images my-tencentcloud-config
```

show_image

Return details about a specific image. This image can be used to create a new instance.

```bash
$ salt-cloud -f show_image tencentcloud image=img-31tjrtp
```

16.7.25 Getting Started With Vagrant

The Vagrant driver is a new, experimental driver for spinning up a VagrantBox virtual machine, and installing Salt on it.

Dependencies

The Vagrant driver itself has no external dependencies.

The machine which will host the VagrantBox must be an already existing minion of the cloud server's Salt master. It must have Vagrant installed, and a Vagrant-compatible virtual machine engine, such as VirtualBox. (Note: The Vagrant driver does not depend on the salt-cloud VirtualBox driver in any way.)

[Caution: The version of Vagrant packaged for apt install in Ubuntu 16.04 will not connect a bridged network adapter correctly. Use a version downloaded directly from the web site.]

Include the Vagrant guest editions plugin: `vagrant plugin install vagrant-vbguest`.

Configuration

Configuration of the client virtual machine (using VirtualBox, VMware, etc) will be done by Vagrant as specified in the Vagrantfile on the host machine.

Salt-cloud will push the commands to install and provision a salt minion on the virtual machine, so you need not (perhaps should not) provision salt in your Vagrantfile, in most cases.

If, however, your cloud master cannot open an SSH connection to the child VM, you may need to let Vagrant provision the VM with Salt, and use some other method (such as passing a pillar dictionary to the VM) to pass the master's IP address to the VM. The VM can then attempt to reach the salt master in the usual way for non-cloud minions. Specify the profile configuration argument as `deploy: False` to prevent the cloud master from trying.
Because the Vagrant driver needs a place to store the mapping between the node name you use for Salt commands and the Vagrantfile which controls the VM, you must configure your salt minion as a Salt smb server. (See host provisioning example below.)

Profiles

Vagrant requires a profile to be configured for each machine that needs Salt installed. The initial profile can be set up at /etc/salt/cloud.profiles or in the /etc/salt/cloud.profiles.d/ directory.

Each profile requires a `vagrantfile` parameter. If the Vagrantfile has definitions for multiple machines then you need a `machine` parameter.

Salt-cloud uses SSH to provision the minion. There must be a routable path from the cloud master to the VM. Usually, you will want to use a bridged network adapter for SSH. The address may not be known until DHCP assigns it. If `ssh_host` is not defined, and `target_network` is defined, the driver will attempt to read the address from the output of an `ifconfig` command. Lacking either setting, the driver will try to use the value Vagrant returns as its `ssh_host`, which will work only if the cloud master is running somewhere on the same host.

The `target_network` setting should be used to identify the IP network your bridged adapter is expected to appear on. Use CIDR notation, like `target_network: '2001:DB8::/32'` or `target_network: '192.0.2.0/24'`.

Profile configuration example:

```
# /etc/salt/cloud.profiles.d/vagrant.conf
vagrant-machine:
    host: my-vhost    # the Salt id of the virtual machine's host computer.
    provider: my-vagrant-config
    cwd: /srv/machines # the path to your Vagrantfile.
    vagrant_runas: my-username # the username who defined the Vagrantbox on the host
    vagrant_up_timeout: 300 # (seconds) timeout for cmd.run of the "vagrant up" command
    vagrant_provider: '' # option for "vagrant up" like: "--provider vmware_fusion"
    ssh_host: None # "None" means try to find the routable IP address from "ifconfig"
    ssh_username: '' # also required when ssh_host is used.
    target_network: None # Expected CIDR address range of your bridged network
    force_minion_config: false # Set "true" to re-purpose an existing VM
```

The machine can now be created and configured with the following command:

```
salt-cloud -p vagrant-machine my-id
```

This will create the machine specified by the cloud profile `vagrant-machine`, and will give the machine the minion id of `my-id`. If the cloud master is also the salt-master, its Salt key will automatically be accepted on the master.

Once a salt-minion has been successfully installed on the instance, connectivity to it can be verified with Salt:
Provisioning a Vagrant cloud host (example)

In order to query or control minions it created, each host minion needs to track the Salt node names associated with any guest virtual machines on it. It does that using a Salt sdb database.

The Salt sdb is not configured by default. The following example shows a simple installation.

This example assumes:

- you are on a large network using the 10.x.x.x IP address space
- your Salt master's Salt id is "bevymaster"
- it will also be your salt-cloud controller
- it is at hardware address 10.124.30.7
- it is running a recent Debian family Linux (raspbian)
- your workstation is a Salt minion of bevymaster
- your workstation's minion id is "my_laptop"
- VirtualBox has been installed on "my_laptop" (apt install is okay)
- Vagrant was installed from vagrantup.com. (not the 16.04 Ubuntu apt)
- "my_laptop" has done "vagrant plugin install vagrant-vbguest"
- the VM you want to start is on "my_laptop" at "/home/my_username/Vagrantfile"

```ruby
# file /etc/salt/minion.d/vagrant_sdb.conf on host computer "my_laptop"
# -- this sdb database is required by the Vagrant module --
vagrant_sdb_data:  # The sdb database must have this name.
    driver: sqlite3  # Let's use SQLite to store the data ...
    database: /var/cache/salt/vagrant.sqlite  # ... in this file ...
    table: sdb      # ... using this table name.
    create_table: True  # if not present
```

Remember to re-start your minion after changing its configuration files...

```
sudo systemctl restart salt-minion
```

```
# -- mode: ruby --
# file /home/my_username/Vagrantfile on host computer "my_laptop"
BEVY = "bevy1"
DOMAIN = BEVY + ".test"  # .test is an ICANN reserved non-public TLD

# must supply a list of names to avoid Vagrant asking for interactive input
def get_good_ifc()  # try to find a working Ubuntu network adapter name
    addr_infos = Socket.getifaddrs
    addr_infos.each do |info|
        a = info.addr
        if a and a.ip? and not a.ip_address.start_with?("127.")
            return info.name
        end
    end
    return "eth0"  # fall back to an old reliable name
end
```

(continues on next page)
Vagrant.configure(2) do |config|
  config.ssh.forward_agent = true # so you can use git ssh://...
  
  # add a bridged network interface. (try to detect name, then guess MacOS names, too)
  interface_guesses = [get_good_ifc(), 'en0: Ethernet', 'en1: Wi-Fi (AirPort)']
  config.vm.network "public_network", bridge: interface_guesses
  if ARGV[0] == "up"
    puts "Trying bridge network using interfaces: #{interface_guesses}"
  end
  config.vm.provision "shell", inline: "ip address", run: "always" # make user feel good
  
  # . . . . . . . . . . . . Define machine QUAIL1 . . . . . . . . . . . . .
  config.vm.define "quail1", primary: true do |quail_config|
    quail_config.vm.box = "boxesio/xenial64-standard" # a public VMware & Virtualbox box
    quail_config.vm.hostname = "quail1." + DOMAIN # supply a name in our bevy
    quail_config.vm.provider "virtualbox" do |v|
      v.memory = 1024 # limit memory for the virtual box
      v.cpus = 1
      v.linked_clone = true # make a soft copy of the base Vagrant box
      v.customize ["modifyvm", :id, "--natnet1", "192.168.128.0/24"] # do not use 10.x network for NAT
    end
  end
end

# file /etc/salt/cloud.profiles.d/my_vagrant_profiles.conf on bevymaster
q1:
  host: my_laptop # the Salt id of your virtual machine host
  machine: quail1 # a machine name in the Vagrantfile (if not primary)
  vagrant_runas: my_username # owner of Vagrant box files on "my_laptop"
  cwd: '/home/my_username' # the path (on "my_laptop") of the Vagrantfile
  provider: my_vagrant_provider # name of entry in provider.conf file
  target_network: '10.0.0.0/8' # VM external address will be somewhere here

# file /etc/salt/cloud.providers.d/vagrant_provider.conf on bevymaster
my_vagrant_provider:
  driver: vagrant
  minion:
    master: 10.124.30.7 # the hard address of the master

Create and use your new Salt minion

- Typing on the Salt master computer bevymaster, tell it to create a new minion named v1 using profile q1...
  ```bash
  sudo salt-cloud -p q1 v1
  sudo salt v1 network.ip_addrs
  [ you get a list of IP addresses, including the bridged one ]
  ```

- logged in to your laptop (or some other computer known to GitHub)...
  ```bash
  [NOTE:] if you are using MacOS, you need to type ssh-add -K after each boot, unless you use one of the methods in this gist.
  ```
ssh -A vagrant@< the bridged network address >
    # [ or, if you are at /home/my_username/ on my_laptop ]
vagrant ssh quail1

- then typing on your new node "v1" (a.k.a. quail1.bevy1.test)...

password: vagrant
    # [ stuff types out ... ]
ls -al /vagrant
    # [ should be shared /home/my_username from my_laptop ]

# you can access other network facilities using the ssh authorization
# as recorded in your ~/.ssh/ directory on my_laptop ...

sudo apt update
sudo apt install git
git clone ssh://git@github.com/yourID/your_project
    # etc...

16.7.26 Getting Started with VEXXHOST

VEXXHOST is a cloud computing host which provides Canadian cloud computing services which are based in Montreal and use the libcloud OpenStack driver. VEXXHOST currently runs the Havana release of OpenStack. When provisioning new instances, they automatically get a public IP and private IP address. Therefore, you do not need to assign a floating IP to access your instance after it’s booted.

Cloud Provider Configuration

To use the openstack driver for the VEXXHOST public cloud, you will need to set up the cloud provider configuration file as in the example below:

/etc/salt/cloud.providers.d/vexxhost.conf: In order to use the VEXXHOST public cloud, you will need to setup a cloud provider configuration file as in the example below which uses the OpenStack driver.

```
my-vexxhost-config:
    # Set the location of the salt-master
    #
    minion:
        master: saltmaster.example.com

    # Configure VEXXHOST using the OpenStack plugin
    #
    identity_url: http://auth.api.thenebulacloud.com:5000/v2.0/tokens
    compute_name: nova

    # Set the compute region:
    #
    compute_region: na-yul-nhs1

    # Configure VEXXHOST authentication credentials
    #
    user: your-tenant-id
    password: your-api-key
```

(continues on next page)
tenant: your-tenant-name

# keys to allow connection to the instance launched
#
ssh_key_name: yourkey
ssh_key_file: /path/to/key/yourkey.priv

driver: openstack

Note: Changed in version 2015.8.0.

The provider parameter in cloud provider definitions was renamed to driver. This change was made to avoid confusion with the provider parameter that is used in cloud profile definitions. Cloud provider definitions now use driver to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use provider to refer to provider configurations that you define.

Authentication

All of the authentication fields that you need can be found by logging into your VEXXHOST customer center. Once you’ve logged in, you will need to click on ”CloudConsole” and then click on ”API Credentials”.

Cloud Profile Configuration

In order to get the correct image UUID and the instance type to use in the cloud profile, you can run the following command respectively:

```bash
# salt-cloud --list-images=vexxhost-config
# salt-cloud --list-sizes=vexxhost-config
```

Once you have that, you can go ahead and create a new cloud profile. This profile will build an Ubuntu 12.04 LTS nb.2G instance.

```
/etc/salt/cloud.profiles.d/vh_ubuntu1204_2G.conf:
```

```bash
vh_ubuntu1204_2G:
    provider: my-vexxhost-config
    image: 40511139f-756d-4d72-8ef0-074f2ccc7e5a
    size: nb.2G
```

Provision an instance

To create an instance based on the sample profile that we created above, you can run the following salt-cloud command.

```bash
# salt-cloud -p vh_ubuntu1204_2G vh_instance1
```

Typically, instances are provisioned in under 30 seconds on the VEXXHOST public cloud. After the instance provisions, it will be set up a minion and then return all the instance information once it’s complete.

Once the instance has been setup, you can test connectivity to it by running the following command:
You can now continue to provision new instances and they will all automatically be set up as minions of the master you've defined in the configuration file.

### 16.7.27 Getting Started With Virtualbox

The Virtualbox cloud module allows you to manage a local Virtualbox hypervisor. Remote hypervisors may come later on.

#### Dependencies

The virtualbox module for Salt Cloud requires the Virtualbox SDK which is contained in a virtualbox installation from

https://www.virtualbox.org/wiki/Downloads

#### Configuration

The Virtualbox cloud module just needs to use the virtualbox driver for now. Virtualbox will be run as the running user.

```
/etc/salt/cloud.providers or /etc/salt/cloud.providers.d/virtualbox.conf:
```

```
virtualbox-config:
  driver: virtualbox
```

#### Profiles

Set up an initial profile at /etc/salt/cloud.profiles or /etc/salt/cloud.profiles.d/virtualbox.conf:

```
virtualbox-test:
  provider: virtualbox-config
  clonefrom: VM_to_clone_from
  # Optional
  power_on: True
  deploy: True
  ssh_username: a_username
  password: a_password
  sudo: a_username
  sudo_password: a_password
  # Example minion config
  minion:
    master: localhost
    make_master: True
```

**clonefrom** Mandatory Enter the name of the VM/template to clone from.

So far only machines can only be cloned and automatically provisioned by Salt Cloud.
Provisioning

In order to provision when creating a new machine `power_on` and `deploy` have to be `True`. Furthermore to connect to the VM `ssh_username` and `password` will have to be set. `sudo` and `sudo_password` are the credentials for getting root access in order to deploy salt.

**Actions**

- **start** Attempt to boot a VM by name. VMs should have unique names in order to boot the correct one.
- **stop** Attempt to stop a VM. This is akin to a force shutdown or 5 second press.

**Functions**

- **show_image** Show all available information about a VM given by the `image` parameter

  ```
  $ salt-cloud -f show_image virtualbox image=my_vm_name
  ```

16.7.28 Getting Started With VMware

New in version 2015.5.4.

**Author:** Nitin Madhok <nmadhok@g.clemson.edu>

The VMware cloud module allows you to manage VMware ESX, ESXi, and vCenter.

**Dependencies**

The vmware module for Salt Cloud requires the `pyVmomi` package, which is available at PyPI:

https://pypi.org/project/pyvmomi/

This package can be installed using `pip` or `easy_install`:

```
pip install pyvmomi
easy_install pyvmomi
```

**Note:** Version 6.0 of pyVmomi has some problems with SSL error handling on certain versions of Python. If using version 6.0 of pyVmomi, the machine that you are running the proxy minion process from must have either Python 2.7.9 or newer. This is due to an upstream dependency in pyVmomi 6.0 that is not supported in Python version 2.6 to 2.7.8. If the version of Python running the salt-cloud command is not in the supported range, you will need to install an earlier version of pyVmomi. See Issue #29537 for more information.

**Note:** pyVmomi doesn’t expose the ability to specify the locale when connecting to VMware. This causes parsing issues when connecting to an instance of VMware running under a non-English locale. Until this feature is added upstream Issue #38402 contains a workaround.
Configuration

The VMware cloud module needs the vCenter or ESX/ESXi URL, username and password to be set up in the cloud configuration at `/etc/salt/cloud.providers` or `/etc/salt/cloud.providers.d/vmware.conf`:

```yaml
my-vmware-config:
  driver: vmware
  user: 'DOMAIN\user'
  password: 'verybadpass'
  url: '10.20.30.40'

vcenter01:
  driver: vmware
  user: 'DOMAIN\user'
  password: 'verybadpass'
  url: 'vcenter01.domain.com'
  protocol: 'https'
  port: 443

vcenter02:
  driver: vmware
  user: 'DOMAIN\user'
  password: 'verybadpass'
  url: 'vcenter02.domain.com'
  protocol: 'http'
  port: 80

esx01:
  driver: vmware
  user: 'admin'
  password: 'verybadpass'
  url: 'esx01.domain.com'
```

Note: Optionally, `protocol` and `port` can be specified if the vCenter server is not using the defaults. Default is `protocol: https` and `port: 443`.

Note: Changed in version 2015.8.0.

The `provider` parameter in cloud provider configuration was renamed to `driver`. This change was made to avoid confusion with the `provider` parameter that is used in cloud profile configuration. Cloud provider configuration now uses `driver` to refer to the salt-cloud driver that provides the underlying functionality to connect to a cloud provider, while cloud profile configuration continues to use `provider` to refer to the cloud provider configuration that you define.
Profiles

Set up an initial profile at /etc/salt/cloud.profiles or /etc/salt/cloud.profiles.d/vmware.conf:

```
vmware-centos6.5:
    provider: vcenter01
    clonefrom: test-vm

    ## Optional arguments
    num_cpus: 4
    memory: 8GB
    devices:
        cd:
            CD/DVD drive 1:
                device_type: datastore_iso_file
                iso_path: "[nap004-1] vmimages/tools-isoimages/linux.iso"
            CD/DVD drive 2:
                device_type: client_device
                mode: atapi
                controller: IDE 2
            CD/DVD drive 3:
                device_type: client_device
                mode: passthrough
                controller: IDE 3
        disk:
            Hard disk 1:
                size: 30
            Hard disk 2:
                size: 20
                controller: SCSI controller 2
            Hard disk 3:
                size: 5
                controller: SCSI controller 3
                datastore: smalldiskdatastore
        network:
            Network adapter 1:
                name: 10.20.30-400-Test
                switch_type: standard
                ip: 10.20.30.123
                gateway: [10.20.30.110]
                subnet_mask: 255.255.255.128
                domain: example.com
            Network adapter 2:
                name: 10.30.40-500-Dev-DHCP
                adapter_type: e1000
                switch_type: distributed
                mac: '00:16:3e:e8:19:0f'
            Network adapter 3:
                name: 10.40.50-600-Prod
                adapter_type: vmxnet3
                switch_type: distributed
                ip: 10.40.50.123
                gateway: [10.40.50.110]
                subnet_mask: 255.255.255.128
                domain: example.com
        scsi:
            SCSI controller 1:
```

(continues on next page)
type: lsilogic
SCSI controller 2:
    type: lsilogic_sas
    bus_sharing: virtual
SCSI controller 3:
    type: paravirtual
    bus_sharing: physical
ide:
    IDE 2: {}
    IDE 3: {}

domain: example.com
dns_servers:
    - 123.127.255.240
    - 123.127.255.241
    - 123.127.255.242

resourcepool: Resources
cluster: Prod
datastore: HUGE-DATASTORE-Cluster
folder: Development
datacenter: DC1
host: c4212n-002.domain.com
template: False
power_on: True
extra_config:
    mem.hotadd: 'yes'
    guestinfo.foo: bar
    guestinfo.domain: foobar.com
    guestinfo.customVariable: customValue
annotation: Created by Salt-Cloud
deploy: True
customization: True
private_key: /root/.ssh/mykey.pem
ssh_username: cloud-user
password: veryVeryBadPassword
minion:
    master: 123.127.193.105

file_map:
    /path/to/local/custom/script: /path/to/remote/script
    /path/to/local/file: /path/to/remote/file
    /srv/salt/yum/epel.repo: /etc/yum.repos.d/epel.repo

hardware_version: 10
image: centos64Guest

#For Windows VM
win_username: Administrator
win_password: administrator
win_organization_name: ABC-Corp
plain_text: True
win_installer: /root/Salt-Minion-2015.8.4-AMD64-Setup.exe
win_user_fullname: Windows User
**provider** Enter the name that was specified when the cloud provider config was created.

**clonefrom** Enter the name of the VM/template to clone from. If not specified, the VM will be created without cloning.

**num_cpus** Enter the number of vCPUS that you want the VM/template to have. If not specified, the current VM/template's vCPU count is used.

**cores_per_socket** Enter the number of cores per vCPU that you want the VM/template to have. If not specified, this will default to 1.

**memory** Enter the memory size (in MB or GB) that you want the VM/template to have. If not specified, the current VM/template's memory size is used. Example `memory: 8GB` or `memory: 8192MB`.

**devices** Enter the device specifications here. Currently, the following devices can be created or reconfigured:

- **cd** Enter the CD/DVD drive specification here. If the CD/DVD drive doesn't exist, it will be created with the specified configuration. If the CD/DVD drive already exists, it will be reconfigured with the specifications. The following options can be specified per CD/DVD drive:
  - **device_type** Specify how the CD/DVD drive should be used. Currently supported types are `client_device` and `datastore_iso_file`. Default is `device_type: client_device`.
  - **iso_path** Enter the path to the iso file present on the datastore only if `device_type: datastore_iso_file`. The syntax to specify this is `iso_path: "[datastoreName] vmimages/tools-isoimages/linux.iso"`. This field is ignored if `device_type: client_device`.
  - **mode** Enter the mode of connection only if `device_type: client_device`. Currently supported modes are `passthrough` and `atapi`. This field is ignored if `device_type: datastore_iso_file`. Default is `mode: passthrough`.
  - **controller** Specify the IDE controller label to which this drive should be attached. This should be specified only when creating both the specified IDE controller as well as the CD/DVD drive at the same time.

- **disk** Enter the disk specification here. If the hard disk doesn't exist, it will be created with the provided size. If the hard disk already exists, it will be expanded if the provided size is greater than the current size of the disk.
  - **size** Enter the size of disk in GB
  - **thin_provision** Specifies whether the disk should be thin provisioned or not. Default is `thin_provision: False`... `versionadded:: 2016.3.0`.
  - **eagerly_scrub** Specifies whether the disk should be rewrite with zeros during thick provisioning or not. Default is `eagerly_scrub: False`... `versionadded:: 2018.3.0`.

- **controller** Specify the SCSI controller label to which this disk should be attached. This should be specified only when creating both the specified SCSI controller as well as the hard disk at the same time.

- **datastore** The name of a valid datastore should you wish the new disk to be in a datastore other than the default for the VM.

- **network** Enter the network adapter specification here. If the network adapter doesn't exist, a new network adapter will be created with the specified network name, type and other configuration. If the network

---

New in version 2016.11.0.

---

Chapter 16. Salt Cloud
adapter already exists, it will be reconfigured with the specifications. The following additional options can be specified per network adapter (See example above):

**name** Enter the network name you want the network adapter to be mapped to.

**adapter_type** Enter the network adapter type you want to create. Currently supported types are `vmxnet`, `vmxnet2`, `vmxnet3`, `e1000` and `e1000e`. If no type is specified, by default `vmxnet3` will be used.

**switch_type** Enter the type of switch to use. This decides whether to use a standard switch network or a distributed virtual portgroup. Currently supported types are `standard` for standard portgroups and `distributed` for distributed virtual portgroups.

**ip** Enter the static IP you want the network adapter to be mapped to. If the network specified is DHCP enabled, you do not have to specify this.

**gateway** Enter the gateway for the network as a list. If the network specified is DHCP enabled, you do not have to specify this.

**subnet_mask** Enter the subnet mask for the network. If the network specified is DHCP enabled, you do not have to specify this.

**domain** Enter the domain to be used with the network adapter. If the network specified is DHCP enabled, you do not have to specify this.

**mac** Enter the MAC for this network adapter. If not specified an address will be selected automatically.

**scsi** Enter the SCSI controller specification here. If the SCSI controller doesn't exist, a new SCSI controller will be created of the specified type. If the SCSI controller already exists, it will be reconfigured with the specifications. The following additional options can be specified per SCSI controller:

**type** Enter the SCSI controller type you want to create. Currently supported types are `lsilogic`, `lsilogic_sas` and `paravirtual`. Type must be specified when creating a new SCSI controller.

**bus_sharing** Specify this if sharing of virtual disks between virtual machines is desired. The following can be specified:

- `virtual` Virtual disks can be shared between virtual machines on the same server.
- `physical` Virtual disks can be shared between virtual machines on any server.
- `no` Virtual disks cannot be shared between virtual machines.

**ide** Enter the IDE controller specification here. If the IDE controller doesn’t exist, a new IDE controller is created. If the IDE controller already exists, no further changes to it are made. The IDE controller specification is a dictionary.

```yaml
ide:
  IDE 2: {}
```

**domain** Enter the global domain name to be used for DNS. If not specified and if the VM name is a FQDN, `domain` is set to the domain from the VM name. Default is `local`.

**dns_servers** Enter the list of DNS servers to use in order of priority.

**resourcepool** Enter the name of the resourcepool to which the new virtual machine should be attached. This determines what compute resources will be available to the clone.

---

**Note:**

- For a clone operation from a virtual machine, it will use the same resourcepool as the original virtual machine unless specified.
• For a clone operation from a template to a virtual machine, specifying either this or cluster is required. If both are specified, the resourcepool value will be used.
• For a clone operation to a template, this argument is ignored.

**cluster** Enter the name of the cluster whose resource pool the new virtual machine should be attached to.

**Note:**
• For a clone operation from a virtual machine, it will use the same cluster’s resourcepool as the original virtual machine unless specified.
• For a clone operation from a template to a virtual machine, specifying either this or resourcepool is required. If both are specified, the resourcepool value will be used.
• For a clone operation to a template, this argument is ignored.

**datastore** Enter the name of the datastore or the datastore cluster where the virtual machine should be located on physical storage. If not specified, the current datastore is used.

**Note:**
• If you specify a datastore cluster name, DRS Storage recommendation is automatically applied.
• If you specify a datastore name, DRS Storage recommendation is disabled.

**folder** Enter the name of the folder that will contain the new virtual machine.

**Note:**
• For a clone operation from a VM/template, the new VM/template will be added to the same folder that the original VM/template belongs to unless specified.
• If both folder and datacenter are specified, the folder value will be used.

**datacenter** Enter the name of the datacenter that will contain the new virtual machine.

**Note:**
• For a clone operation from a VM/template, the new VM/template will be added to the same folder that the original VM/template belongs to unless specified.
• If both folder and datacenter are specified, the folder value will be used.

**host** Enter the name of the target host where the virtual machine should be registered.

If not specified:

**Note:**
• If resource pool is not specified, current host is used.
• If resource pool is specified, and the target pool represents a stand-alone host, the host is used.
• If resource pool is specified, and the target pool represents a DRS-enabled cluster, a host selected by DRS is used.
• If resource pool is specified and the target pool represents a cluster without DRS enabled, an InvalidArgument exception be thrown.

**template** Specifies whether the new virtual machine should be marked as a template or not. Default is `template: False`.

**power_on** Specifies whether the new virtual machine should be powered on or not. If `template: True` is set, this field is ignored. Default is `power_on: True`.

**extra_config** Specifies the additional configuration information for the virtual machine. This describes a set of modifications to the additional options. If the key is already present, it will be reset with the new value provided. Otherwise, a new option is added. Keys with empty values will be removed.

**annotation** User-provided description of the virtual machine. This will store a message in the vSphere interface, under the annotations section in the Summary view of the virtual machine.

**deploy** Specifies if salt should be installed on the newly created VM. Default is `True` so salt will be installed using the bootstrap script. If `template: True` or `power_on: False` is set, this field is ignored and salt will not be installed.

**wait_for_ip_timeout** When `deploy: True`, this timeout determines the maximum time to wait for VMware tools to be installed on the virtual machine. If this timeout is reached, an attempt to determine the client's IP will be made by resolving the VM's name. By lowering this value a salt bootstrap can be fully automated for systems that are not built with VMware tools. Default is `wait_for_ip_timeout: 1200`.

**customization** Specify whether the new virtual machine should be customized or not. If `customization: False` is set, the new virtual machine will not be customized. Default is `customization: True`.

**private_key** Specify the path to the private key to use to be able to ssh to the VM.

**ssh_username** Specify the username to use in order to ssh to the VM. Default is `root`.

**password** Specify a password to use in order to ssh to the VM. If `private_key` is specified, you do not need to specify this.

**minion** Specify custom minion configuration you want the salt minion to have. A good example would be to specify the master as the IP/DNS name of the master.

**file_map** Specify file/files you want to copy to the VM before the bootstrap script is run and salt is installed. A good example of using this would be if you need to put custom repo files on the server in case your server will be in a private network and cannot reach external networks.

**hardware_version** Specify the virtual hardware version for the vm/template that is supported by the host.

**image** Specify the guest id of the VM. For a full list of supported values see the VMware vSphere documentation:


**Note:** For a clone operation, this argument is ignored.

**win_username** Specify windows vm administrator account.

**Note:** Windows template should have "administrator" account.

**win_password** Specify windows vm administrator account password.
Note: During network configuration (if network specified), it is used to specify new administrator password for the machine.

**win_organization_name**

Specify windows vm user's organization. Default organization name is Organization VMware vSphere documentation:


**win_user_fullname**

Specify windows vm user's fullname. Default fullname is "Windows User" VMware vSphere documentation:


**plain_text** Flag to specify whether or not the password is in plain text, rather than encrypted. VMware vSphere documentation:


**win_installer** Specify windows minion client installer path

**win_run_once** Specify a list of commands to run on first login to a windows minion


### Cloning a VM

Cloning VMs/templates is the easiest and the preferred way to work with VMs using the VMware driver.

- Cloning operations are unsupported on standalone ESXi hosts, a vCenter server will be required.

Example of a minimal profile:

```yaml
my-minimal-clone:
  provider: vcenter01
  clonefrom: 'test-vm'
```

When cloning a VM, all the profile configuration parameters are optional and the configuration gets inherited from the clone.

Example to add/resize a disk:

```yaml
my-disk-example:
  provider: vcenter01
  clonefrom: 'test-vm'

  devices:
    disk:
      Hard disk 1:
        size: 30
```
Depending on the configuration of the VM that is getting cloned, the disk in the resulting clone will differ.

Note:
- If the VM has no disk named ‘Hard disk 1’ an empty disk with the specified size will be added to the clone.
- If the VM has a disk named ‘Hard disk 1’ and the size specified is larger than the original disk, an empty disk with the specified size will be added to the clone.
- If the VM has a disk named ‘Hard disk 1’ and the size specified is smaller than the original disk, an empty disk with the original size will be added to the clone.

Example to reconfigure the memory and number of vCPUs:

```yaml
my-disk-example:
  provider: vcenter01
  clonefrom: 'test-vm'
  memory: 16GB
  num_cpus: 8
```

Cloning a Template

Cloning a template works similar to cloning a VM except for the fact that a resource pool or cluster must be specified additionally in the profile.

Example of a minimal profile:

```yaml
my-template-clone:
  provider: vcenter01
  clonefrom: 'test-template'
  cluster: 'Prod'
```

Cloning from a Snapshot

New in version 2016.3.5.

Cloning from a snapshot requires that one of the supported options be set in the cloud profile.

Supported options are `createNewChildDiskBacking`, `moveChildMostDiskBacking`, `moveAllDiskBackingsAndAllowSharing` and `moveAllDiskBackingsAndDisallowSharing`.

Example of a minimal profile:

```yaml
my-template-clone:
  provider: vcenter01
  clonefrom: 'salt_vm'
  snapshot:
    disk_move_type: createNewChildDiskBacking
    # these types are also supported
    # disk_move_type: moveChildMostDiskBacking
    # disk_move_type: moveAllDiskBackingsAndAllowSharing
    # disk_move_type: moveAllDiskBackingsAndDisallowSharing
```
Creating a VM

New in version 2016.3.0.

Creating a VM from scratch means that more configuration has to be specified in the profile because there is no place to inherit configuration from.

Note: Unlike most cloud drivers that use prepared images, creating VMs using VMware cloud driver needs an installation method that requires no human interaction. For Example: preseeded ISO, kickstart URL or network PXE boot.

Example of a minimal profile:

```yaml
my-minimal-profile:
  provider: esx01
datastore: esx01-datastore
resourcepool: Resources
folder: vm
```

Note: The example above contains the minimum required configuration needed to create a VM from scratch. The resulting VM will only have 1 VCPU, 32MB of RAM and will not have any storage or networking.

Example of a complete profile:

```yaml
my-complete-example:
  provider: esx01
datastore: esx01-datastore
resourcepool: Resources
folder: vm

num_cpus: 2
memory: 8GB

image: debian7_64Guest

devices:
  scsi:
    SCSI controller 0:
      type: lsilogic_sas
  ide:
    IDE 0: {}
    IDE 1: {}
  disk:
    Hard disk 0:
      controller: 'SCSI controller 0'
      size: 20
      mode: 'independent_nonpersistent'
  cd:
    CD/DVD drive 0:
      controller: 'IDE 0'
      device_type: datastore_iso_file
      iso_path: '[esx01-datastore] debian-8-with-preseed.iso'
  network:
    Network adapter 0:
```

(continues on next page)
name: 'VM Network'
swith_type: standard

Note: Depending on VMware ESX/ESXi version, an exact match for image might not be available. In such cases, the closest match to another image should be used. In the example above, a Debian 8 VM is created using the image debian7_64Guest which is for a Debian 7 guest.

Specifying disk backing mode

New in version 2016.3.5.

Disk backing mode can now be specified when cloning a VM. This option can be set in the cloud profile as shown in example below:

```yaml
my-vm:
  provider: esx01
  datastore: esx01-datastore
  resourcepool: Resources
  folder: vm

  devices:
    disk:
      Hard disk 1:
        mode: 'independent_nonpersistent'
        size: 42
      Hard disk 2:
        mode: 'independent_nonpersistent'
```

16.7.29 Getting Started With Xen

The Xen cloud driver works with Citrix XenServer.
It can be used with a single XenServer or a XenServer resource pool.

Setup Dependencies

This driver requires a copy of the freely available XenAPI .py Python module.
Information about the Xen API Python module in the XenServer SDK can be found at https://pypi.org/project/XenAPI/
Place a copy of this module on your system. For example, it can be placed in the site packages location on your system.
The location of site packages can be determined by running:

```
python -m site --user-site
```
Provider Configuration

Xen requires login credentials to a XenServer.

Set up the provider cloud configuration file at /etc/salt/cloud.providers or /etc/salt/cloud.providers.d/*.conf.

```
# /etc/salt/cloud.providers.d/myxen.conf
myxen:
  driver: xen
  url: https://10.0.0.120
  user: root
  password: p@ssw0rd
```

url: The url option supports both http and https uri prefixes.

user: A valid user id to login to the XenServer host.

password: The associated password for the user.

Note: Changed in version 2015.8.0.

The provider parameter in cloud provider definitions was renamed to driver. This change was made to avoid confusion with the provider parameter that is used in cloud profile definitions. Cloud provider definitions now use driver to refer to the Salt cloud module that provides the underlying functionality to connect to a cloud host, while cloud profiles continue to use provider to refer to provider configurations that you define.

Profile Configuration

Xen profiles require a provider and image.

provider: This will be the name of your defined provider.

image: The name of the VM template used to clone or copy.

clone: The default behavior is to clone a template or VM. This is very fast, but requires the source template or VM to be in the same storage repository of the new target system. If the source and target are in different storage repositories then you must copy the source and not clone it by setting clone: False.

deploy: The provisioning process will attempt to install the Salt minion service on the new target system by default. This will require login credentials for Salt cloud to login via ssh to it. The user and password options are required. If deploy is set to False then these options are not needed.

resource_pool: The name of the resource pool used for this profile.

storage_repo: The name of the storage repository for the target system.

ipv4_cidr: If template is Windows, and running guest tools then a static ip address can be set.

ipv4_gw: If template is Windows, and running guest tools then a gateway can be set.

Set up an initial profile at /etc/salt/cloud.profiles or in the /etc/salt/cloud.profiles.d/ directory:

```
# file: /etc/salt/cloud.profiles.d/xenprofiles.conf
sles:
  provider: myxen
  deploy: False
  image: sles12sp2-template
```
The first example will create a clone of the sles12sp2-template in the same storage repository without deploying the Salt minion.

The second example will make a copy of the image and deploy a new suse VM with the Salt minion installed.

The third example will create a clone of the Windows 2012 template and deploy the Salt minion.

The profile can be used with a salt command:

```
salt-cloud -p suse xenvm02
```

This will create an salt minion instance named xenvm02 in Xen. If the command was executed on the salt-master, its Salt key will automatically be signed on the master.

Once the instance has been created with a salt-minion installed, connectivity to it can be verified with Salt:

```
salt xenvm02 test.version
```

**Listing Sizes**

Sizes can be obtained using the `--list-sizes` option for the `salt-cloud` command:

```
# salt-cloud --list-sizes myxen
```

**Note:** Since size information is build in a template this command is not implemented.
Listing Images

Images can be obtained using the --list-images option for the salt-cloud command:

```
# salt-cloud --list-images myxen
```

This command will return a list of templates with details.

Listing Locations

Locations can be obtained using the --list-locations option for the salt-cloud command:

```
# salt-cloud --list-locations myxen
```

Returns a list of resource pools.

16.8 Miscellaneous Options

16.8.1 Miscellaneous Salt Cloud Options

This page describes various miscellaneous options available in Salt Cloud

Deploy Script Arguments

Custom deploy scripts are unlikely to need custom arguments to be passed to them, but salt-bootstrap has been extended quite a bit, and this may be necessary. script_args can be specified in either the profile or the map file, to pass arguments to the deploy script:

```
ec2-amazon:
  provider: my-ec2-config
  image: ami-1624987f
  size: t1.micro
  ssh_username: ec2-user
  script: bootstrap-salt
  script_args: -c /tmp/
```

This has also been tested to work with pipes, if needed:

```
script_args: ' | head'
```

Selecting the File Transport

By default, Salt Cloud uses SFTP to transfer files to Linux hosts. However, if SFTP is not available, or specific SCP functionality is needed, Salt Cloud can be configured to use SCP instead.

```
file_transport: sftp
file_transport: scp
```
Sync After Install

Salt allows users to create custom modules, grains, and states which can be synchronised to minions to extend Salt with further functionality.

This option will inform Salt Cloud to synchronise your custom modules, grains, states or all these to the minion just after it has been created. For this to happen, the following line needs to be added to the main cloud configuration file:

```
sync_after_install: all
```

The available options for this setting are:

- modules
- grains
- states
- all

Setting Up New Salt Masters

It has become increasingly common for users to set up multi-hierarchal infrastructures using Salt Cloud. This sometimes involves setting up an instance to be a master in addition to a minion. With that in mind, you can now lay down master configuration on a machine by specifying master options in the profile or map file.

```
make_master: True
```

This will cause Salt Cloud to generate master keys for the instance, and tell salt-bootstrap to install the salt-master package, in addition to the salt-minion package.

The default master configuration is usually appropriate for most users, and will not be changed unless specific master configuration has been added to the profile or map:

```
master:
  user: root
  interface: 0.0.0.0
```

Setting Up a Salt Syndic with Salt Cloud

In addition to setting up new Salt Masters, syndics can also be provisioned using Salt Cloud. In order to set up a Salt Syndic via Salt Cloud, a Salt Master needs to be installed on the new machine and a master configuration file needs to be set up using the `make_master` setting. This setting can be defined either in a profile config file or in a map file:

```
make_master: True
```

To install the Salt Syndic, the only other specification that needs to be configured is the `syndic_master` key to specify the location of the master that the syndic will be reporting to. This modification needs to be placed in the `master` setting, which can be configured either in the profile, provider, or `/etc/salt/cloud` config file:

```
master:
  syndic_master: 123.456.789  # may be either an IP address or a hostname
```

Many other Salt Syndic configuration settings and specifications can be passed through to the new syndic machine via the `master` configuration setting. See the `Salt Syndic` documentation for more information.
**SSH Port**

By default ssh port is set to port 22. If you want to use a custom port in provider, profile, or map blocks use ssh_port option.

New in version 2015.5.0.

```
ssh_port: 2222
```

**Delete SSH Keys**

When Salt Cloud deploys an instance, the SSH pub key for the instance is added to the known_hosts file for the user that ran the salt-cloud command. When an instance is deployed, a cloud host generally recycles the IP address for the instance. When Salt Cloud attempts to deploy an instance using a recycled IP address that has previously been accessed from the same machine, the old key in the known_hosts file will cause a conflict.

In order to mitigate this issue, Salt Cloud can be configured to remove old keys from the known_hosts file when destroying the node. In order to do this, the following line needs to be added to the main cloud configuration file:

```
delete_sshkeys: True
```

**Keeping /tmp/ Files**

When Salt Cloud deploys an instance, it uploads temporary files to /tmp/ for salt-bootstrap to put in place. After the script has run, they are deleted. To keep these files around (mostly for debugging purposes), the --keep-tmp option can be added:

```
salt-cloud -p myprofile mymachine --keep-tmp
```

For those wondering why /tmp/ was used instead of /root/, this had to be done for images which require the use of sudo, and therefore do not allow remote root logins, even for file transfers (which makes /root/ unavailable).

**Hide Output From Minion Install**

By default Salt Cloud will stream the output from the minion deploy script directly to STDOUT. Although this can been very useful, in certain cases you may wish to switch this off. The following config option is there to enable or disable this output:

```
display_ssh_output: False
```

**Connection Timeout**

There are several stages when deploying Salt where Salt Cloud needs to wait for something to happen. The VM getting its IP address, the VM’s SSH port is available, etc.

If you find that the Salt Cloud defaults are not enough and your deployment fails because Salt Cloud did not wait log enough, there are some settings you can tweak.

---

**Note**

All settings should be provided in lowercase All values should be provided in seconds
You can tweak these settings globally, per cloud provider, or event per profile definition.

**wait_for_ip_timeout**

The amount of time Salt Cloud should wait for a VM to start and get an IP back from the cloud host. Default: varies by cloud provider (between 5 and 25 minutes)

**wait_for_ip_interval**

The amount of time Salt Cloud should sleep while querying for the VM's IP. Default: varies by cloud provider (between .5 and 10 seconds)

**ssh_connect_timeout**

The amount of time Salt Cloud should wait for a successful SSH connection to the VM. Default: varies by cloud provider (between 5 and 15 minutes)

**wait_for_passwd_timeout**

The amount of time until an ssh connection can be established via password or ssh key. Default: varies by cloud provider (mostly 15 seconds)

**wait_for_passwd_maxtries**

The number of attempts to connect to the VM until we abandon. Default: 15 attempts

**wait_for_fun_timeout**

Some cloud drivers check for an available IP or a successful SSH connection using a function, namely, SoftLayer, and SoftLayer-HW. So, the amount of time Salt Cloud should retry such functions before failing. Default: 15 minutes.

**wait_for_spot_timeout**

The amount of time Salt Cloud should wait before an EC2 Spot instance is available. This setting is only available for the EC2 cloud driver. Default: 10 minutes

**Salt Cloud Cache**

Salt Cloud can maintain a cache of node data, for supported providers. The following options manage this functionality.
update_cachedir

On supported cloud providers, whether or not to maintain a cache of nodes returned from a --full-query. The data will be stored in msgpack format under `<SALT_CACHEDIR>/cloud/active/<DRIVER>/<PROVIDER>/<NODE_NAME>.p`. This setting can be True or False.

diff_cache_events

When the cloud cachedir is being managed, if differences are encountered between the data that is returned live from the cloud host and the data in the cache, fire events which describe the changes. This setting can be True or False.

Some of these events will contain data which describe a node. Because some of the fields returned may contain sensitive data, the `cache_event_strip_fields` configuration option exists to strip those fields from the event return.

```
cache_event_strip_fields:
  - password
  - priv_key
```

The following are events that can be fired based on this data.

salt/cloud/minionid/cache_node_new

A new node was found on the cloud host which was not listed in the cloud cachedir. A dict describing the new node will be contained in the event.

salt/cloud/minionid/cache_node_missing

A node that was previously listed in the cloud cachedir is no longer available on the cloud host.

salt/cloud/minionid/cache_node_diff

One or more pieces of data in the cloud cachedir has changed on the cloud host. A dict containing both the old and the new data will be contained in the event.

SSH Known Hosts

Normally when bootstrapping a VM, salt-cloud will ignore the SSH host key. This is because it does not know what the host key is before starting (because it doesn't exist yet). If strict host key checking is turned on without the key in the `known_hosts` file, then the host will never be available, and cannot be bootstrapped.

If a provider is able to determine the host key before trying to bootstrap it, that provider's driver can add it to the `known_hosts` file, and then turn on strict host key checking. This can be set up in the main cloud configuration file (normally `/etc/salt/cloud`) or in the provider-specific configuration file:

```
known_hosts_file: /path/to/.ssh/known_hosts
```
If this is not set, it will default to /dev/null, and strict host key checking will be turned off.

It is highly recommended that this option is not set, unless the user has verified that the provider supports this functionality, and that the image being used is capable of providing the necessary information. At this time, only the EC2 driver supports this functionality.

**SSH Agent**

New in version 2015.5.0.

If the ssh key is not stored on the server salt-cloud is being run on, set ssh_agent, and salt-cloud will use the forwarded ssh-agent to authenticate.

```
ssh_agent: True
```

**File Map Upload**

New in version 2014.7.0.

The `file_map` option allows an arbitrary group of files to be uploaded to the target system before running the deploy script. This functionality requires a provider uses `salt.utils.cloud.bootstrap()`, which is currently limited to the ec2, gce, openstack and nova drivers.

The `file_map` can be configured globally in `/etc/salt/cloud`, or in any cloud provider or profile file. For example, to upload an extra package or a custom deploy script, a cloud profile using `file_map` might look like:

```yaml
ubuntu14:
    provider: ec2-config
    image: ami-98aa1cf0
    size: t1.micro
    ssh_username: root
    securitygroup: default
    file_map:
        /local/path/to/custom/script: /remote/path/to/use/custom/script
        /local/path/to/package: /remote/path/to/store/package
```

**Running Pre-Flight Commands**

New in version 2018.3.0.

To execute specified preflight shell commands on a VM before the deploy script is run, use the `preflight_cmds` option. These must be defined as a list in a cloud configuration file. For example:

```yaml
my-cloud-profile:
    provider: linode-config
    image: Ubuntu 16.04 LTS
    size: Linode 2048
    preflight_cmds:
        - whoami
        - echo 'hello world!'```

These commands will run in sequence before the bootstrap script is executed.
Force Minion Config

New in version 2018.3.0.

The force_minion_config option requests the bootstrap process to overwrite an existing minion configuration file and public/private key files. Default: False

This might be important for drivers (such as saltify) which are expected to take over a connection from a former salt master.

```yaml
my_saltify_provider:
  driver: saltify
  force_minion_config: true
```

16.9 Troubleshooting Steps

16.9.1 Troubleshooting Salt Cloud

This page describes various steps for troubleshooting problems that may arise while using Salt Cloud.

Virtual Machines Are Created, But Do Not Respond

Are TCP ports 4505 and 4506 open on the master? This is easy to overlook on new masters. Information on how to open firewall ports on various platforms can be found [here](#).

Generic Troubleshooting Steps

This section describes a set of instructions that are useful to a large number of situations, and are likely to solve most issues that arise.

Debug Mode

Frequently, running Salt Cloud in debug mode will reveal information about a deployment which would otherwise not be obvious:

```bash
salt-cloud -p myprofile myinstance -l debug
```

Keep in mind that a number of messages will appear that look at first like errors, but are in fact intended to give developers factual information to assist in debugging. A number of messages that appear will be for cloud providers that you do not have configured; in these cases, the message usually is intended to confirm that they are not configured.
Salt Bootstrap

By default, Salt Cloud uses the Salt Bootstrap script to provision instances:

This script is packaged with Salt Cloud, but may be updated without updating the Salt package:

```bash
salt-cloud -u
```

The Bootstrap Log

If the default deploy script was used, there should be a file in the `/tmp/` directory called `bootstrap-salt.log`.
This file contains the full output from the deployment, including any errors that may have occurred.

Keeping Temp Files

Salt Cloud uploads minion-specific files to instances once they are available via SSH, and then executes a deploy script to put them into the correct place and install Salt. The `--keep-temp` option will instruct Salt Cloud not to remove those files when finished with them, so that the user may inspect them for problems:

```bash
salt-cloud -p myprofile myinstance --keep-temp
```

By default, Salt Cloud will create a directory on the target instance called `/tmp/.saltcloud/`. This directory should be owned by the user that is to execute the deploy script, and should have permissions of `0700`.

Most cloud hosts are configured to use `root` as the default initial user for deployment, and as such, this directory and all files in it should be owned by the `root` user.

The `/tmp/.saltcloud/` directory should have the following files:

- A `deploy.sh` script. This script should have permissions of `0755`.
- A `.pem` and `.pub` key named after the minion. The `.pem` file should have permissions of `0600`. Ensure that the `.pem` and `.pub` files have been properly copied to the `/etc/salt/pki/minion/` directory.
- A file called `minion`. This file should have been copied to the `/etc/salt/` directory.
- Optionally, a file called `grains`. This file, if present, should have been copied to the `/etc/salt/` directory.

Unprivileged Primary Users

Some cloud hosts, most notably EC2, are configured with a different primary user. Some common examples are `ec2-user`, `ubuntu`, `fedora`, and `bitnami`. In these cases, the `/tmp/.saltcloud/` directory and all files in it should be owned by this user.

Some cloud hosts, such as EC2, are configured to not require these users to provide a password when using the `sudo` command. Because it is more secure to require `sudo` users to provide a password, other hosts are configured that way.

If this instance is required to provide a password, it needs to be configured in Salt Cloud. A password for `sudo` to use may be added to either the provider configuration or the profile configuration:

```bash
sudo_password: mypassword
```
**/tmp/ is Mounted as noexec**

It is more secure to mount the /tmp/ directory with a noexec option. This is uncommon on most cloud hosts, but very common in private environments. To see if the /tmp/ directory is mounted this way, run the following command:

```
mount | grep tmp
```

The if the output of this command includes a line that looks like this, then the /tmp/ directory is mounted as noexec:

```
tmpfs on /tmp type tmpfs (rw,noexec)
```

If this is the case, then the deploy_command will need to be changed in order to run the deploy script through the sh command, rather than trying to execute it directly. This may be specified in either the provider or the profile config:

```
deploy_command: sh /tmp/.saltcloud/deploy.sh
```

Please note that by default, Salt Cloud will place its files in a directory called /tmp/.saltcloud/. This may be also be changed in the provider or profile configuration:

```
tmp_dir: /tmp/.saltcloud/
```

If this directory is changed, then the deploy_command need to be changed in order to reflect the tmp_dir configuration.

**Executing the Deploy Script Manually**

If all of the files needed for deployment were successfully uploaded to the correct locations, and contain the correct permissions and ownerships, the deploy script may be executed manually in order to check for other issues:

```
cd /tmp/.saltcloud/
./deploy.sh
```

### 16.10 Extending Salt Cloud

#### 16.10.1 Writing Cloud Driver Modules

Salt Cloud runs on a module system similar to the main Salt project. The modules inside saltcloud exist in the salt/cloud/clouds directory of the salt source.

There are two basic types of cloud modules. If a cloud host is supported by libcloud, then using it is the fastest route to getting a module written. The Apache Libcloud project is located at:

http://libcloud.apache.org/

Not every cloud host is supported by libcloud. Additionally, not every feature in a supported cloud host is necessarily supported by libcloud. In either of these cases, a module can be created which does not rely on libcloud.
All Driver Modules

The following functions are required by all driver modules, whether or not they are based on libcloud.

The __virtual__() Function

This function determines whether or not to make this cloud module available upon execution. Most often, it uses `get_configured_provider()` to determine if the necessary configuration has been set up. It may also check for necessary imports, to decide whether to load the module. In most cases, it will return a `True` or `False` value. If the name of the driver used does not match the filename, then that name should be returned instead of `True`. An example of this may be seen in the Azure module:

https://github.com/saltstack/salt/tree/master/salt/cloud/clouds/msazure.py

The get_configured_provider() Function

This function uses `config.is_provider_configured()` to determine whether all required information for this driver has been configured. The last value in the list of required settings should be followed by a comma.

Libcloud Based Modules

Writing a cloud module based on libcloud has two major advantages. First of all, much of the work has already been done by the libcloud project. Second, most of the functions necessary to Salt have already been added to the Salt Cloud project.

The create() Function

The most important function that does need to be manually written is the `create()` function. This is what is used to request a virtual machine to be created by the cloud host, wait for it to become available, and then (optionally) log in and install Salt on it.

A good example to follow for writing a cloud driver module based on libcloud is the module provided for Linode:

https://github.com/saltstack/salt/tree/master/salt/cloud/clouds/linode.py

The basic flow of a `create()` function is as follows:

- Send a request to the cloud host to create a virtual machine.
- Wait for the virtual machine to become available.
- Generate kwargs to be used to deploy Salt.
- Log into the virtual machine and deploy Salt.
- Return a data structure that describes the newly-created virtual machine.

At various points throughout this function, events may be fired on the Salt event bus. Four of these events, which are described below, are required. Other events may be added by the user, where appropriate.

When the `create()` function is called, it is passed a data structure called `vm_`. This dict contains a composite of information describing the virtual machine to be created. A dict called `__opts__` is also provided by Salt, which contains the options used to run Salt Cloud, as well as a set of configuration and environment variables.
The first thing the `create()` function must do is fire an event stating that it has started the create process. This event is tagged `salt/cloud/<vm name>/creating`. The payload contains the names of the VM, profile, and provider.

A set of kwargs is then usually created, to describe the parameters required by the cloud host to request the virtual machine.

An event is then fired to state that a virtual machine is about to be requested. It is tagged as `salt/cloud/<vm name>/requesting`. The payload contains most or all of the parameters that will be sent to the cloud host. Any private information (such as passwords) should not be sent in the event.

After a request is made, a set of deploy kwargs will be generated. These will be used to install Salt on the target machine. Windows options are supported at this point, and should be generated, even if the cloud host does not currently support Windows. This will save time in the future if the host does eventually decide to support Windows.

An event is then fired to state that the deploy process is about to begin. This event is tagged `salt/cloud/<vm name>/deploying`. The payload for the event will contain a set of deploy kwargs, useful for debugging purposes. Any private data, including passwords and keys (including public keys) should be stripped from the deploy kwargs before the event is fired.

If any Windows options have been passed in, the `salt.utils.cloud.deploy_windows()` function will be called. Otherwise, it will be assumed that the target is a Linux or Unix machine, and the `salt.utils.cloud.deploy_script()` will be called.

Both of these functions will wait for the target machine to become available, then the necessary port to log in, then a successful login that can be used to install Salt. Minion configuration and keys will then be uploaded to a temporary directory on the target by the appropriate function. On a Windows target, the Windows Minion Installer will be run in silent mode. On a Linux/Unix target, a deploy script (bootstrap-salt.sh, by default) will be run, which will auto-detect the operating system, and install Salt using its native package manager. These do not need to be handled by the developer in the cloud module.

The `salt.utils.cloud.validate_windows_credential()` function has been extended to take the number of retries and retry_delay parameters in case a specific cloud host has a delay between providing the Windows credentials and the credentials being available for use. In their `create()` function, or as a sub-function called during the creation process, developers should use the `win_deploy_auth_retry_retries` and `win_deploy_auth_retry_delay` parameters from the provider configuration to allow the end-user the ability to customize the number of tries and delay between tries for their particular host.

After the appropriate deploy function completes, a final event is fired which describes the virtual machine that has just been created. This event is tagged `salt/cloud/<vm name>/created`. The payload contains the names of the VM, profile, and provider.

Finally, a dict (queried from the provider) which describes the new virtual machine is returned to the user. Because this data is not fired on the event bus it can, and should, return any passwords that were returned by the cloud host. In some cases (for example, Rackspace), this is the only time that the password can be queried by the user; post-creation queries may not contain password information (depending upon the host).

The `libcloudfuncs` Functions

A number of other functions are required for all cloud hosts. However, with libcloud-based modules, these are all provided for free by the `libcloudfuncs` library. The following two lines set up the imports:

```
from salt.cloud.libcloudfuncs import *  # pylint: disable=W0614,W0401
import salt.utils.functools
```

And then a series of declarations will make the necessary functions available within the cloud module.
get_size = salt.utils.functools.namespaced_function(get_size, globals())
geet_image = salt.utils.functools.namespaced_function(get_image, globals())
avail_locations = salt.utils.functools.namespaced_function(avail_locations, globals())
avail_images = salt.utils.functools.namespaced_function(avail_images, globals())
avail_sizes = salt.utils.functools.namespaced_function(avail_sizes, globals())
script = salt.utils.functools.namespaced_function(script, globals())
destroy = salt.utils.functools.namespaced_function(destroy, globals())
list_nodes = salt.utils.functools.namespaced_function(list_nodes, globals())
list_nodes_full = salt.utils.functools.namespaced_function(list_nodes_full, globals())
list_nodes_select = salt.utils.functools.namespaced_function(
    list_nodes_select, globals())
show_instance = salt.utils.functools.namespaced_function(show_instance, globals())

If necessary, these functions may be replaced by removing the appropriate declaration line, and then adding the
function as normal.

These functions are required for all cloud modules, and are described in detail in the next section.

Non-Libcloud Based Modules

In some cases, using libcloud is not an option. This may be because libcloud has not yet included the necessary
driver itself, or it may be that the driver that is included with libcloud does not contain all of the necessary features
required by the developer. When this is the case, some or all of the functions in libcloudfuncs may be replaced.
If they are all replaced, the libcloud imports should be absent from the Salt Cloud module.

A good example of a non-libcloud driver is the DigitalOcean driver:
https://github.com/saltstack/salt/tree/master/salt/cloud/clouds/digitalocean.py

The create() Function

The create() function must be created as described in the libcloud-based module documentation.

The get_size() Function

This function is only necessary for libcloud-based modules, and does not need to exist otherwise.

The get_image() Function

This function is only necessary for libcloud-based modules, and does not need to exist otherwise.
The avail_locations() Function

This function returns a list of locations available, if the cloud host uses multiple data centers. It is not necessary if the cloud host uses only one data center. It is normally called using the --list-locations option.

```
salt-cloud --list-locations my-cloud-provider
```

The avail_images() Function

This function returns a list of images available for this cloud provider. There are not currently any known cloud providers that do not provide this functionality, though they may refer to images by a different name (for example, "templates"). It is normally called using the --list-images option.

```
salt-cloud --list-images my-cloud-provider
```

The avail_sizes() Function

This function returns a list of sizes available for this cloud provider. Generally, this refers to a combination of RAM, CPU, and/or disk space. This functionality may not be present on some cloud providers. For example, the Parallels module breaks down RAM, CPU, and disk space into separate options, whereas in other providers, these options are baked into the image. It is normally called using the --list-sizes option.

```
salt-cloud --list-sizes my-cloud-provider
```

The script() Function

This function builds the deploy script to be used on the remote machine. It is likely to be moved into the salt.utils.cloud library in the near future, as it is very generic and can usually be copied wholesale from another module. An excellent example is in the Azure driver.

The destroy() Function

This function irreversibly destroys a virtual machine on the cloud provider. Before doing so, it should fire an event on the Salt event bus. The tag for this event is salt/cloud/<vm name>/destroying. Once the virtual machine has been destroyed, another event is fired. The tag for that event is salt/cloud/<vm name>/destroyed.

This function is normally called with the -d options:

```
salt-cloud -d myinstance
```
The list_nodes() Function

This function returns a list of nodes available on this cloud provider, using the following fields:

- id (str)
- image (str)
- size (str)
- state (str)
- private_ips (list)
- public_ips (list)

No other fields should be returned in this function, and all of these fields should be returned, even if empty. The private_ips and public_ips fields should always be of a list type, even if empty, and the other fields should always be of a str type. This function is normally called with the -Q option:

```
salt-cloud -Q
```

The list_nodes_full() Function

All information available about all nodes should be returned in this function. The fields in the list_nodes() function should also be returned, even if they would not normally be provided by the cloud provider. This is because some functions both within Salt and 3rd party will break if an expected field is not present. This function is normally called with the -F option:

```
salt-cloud -F
```

The list_nodes_select() Function

This function returns only the fields specified in the query.selection option in /etc/salt/cloud. Because this function is so generic, all of the heavy lifting has been moved into the salt.utils.cloud library.

A function to call list_nodes_select() still needs to be present. In general, the following code can be used as-is:

```python
def list_nodes_select(call=None):
    
    """Return a list of the VMs that are on the provider, with select fields"
    ""
    return salt.utils.cloud.list_nodes_select(
        list_nodes_full("function"), __opts__["query.selection"], call,
    )
```

However, depending on the cloud provider, additional variables may be required. For instance, some modules use a conn object, or may need to pass other options into list_nodes_full(). In this case, be sure to update the function appropriately:

```python
def list_nodes_select(conn=None, call=None):
    """Return a list of the VMs that are on the provider, with select fields"
    ""
    if not conn:
```

(continues on next page)
conn = get_conn()  # pylint: disable=E0602

return salt.utils.cloud.list_nodes_select(
    list_nodes_full(conn, "function"), __opts__["query.selection"], call,
)

This function is normally called with the -S option:
salt-cloud -S

The show_instance() Function

This function is used to display all of the information about a single node that is available from the cloud provider. The simplest way to provide this is usually to call list_nodes_full(), and return just the data for the requested node. It is normally called as an action:
salt-cloud -a show_instance myinstance

Actions and Functions

Extra functionality may be added to a cloud provider in the form of an --action or a --function. Actions are performed against a cloud instance/virtual machine, and functions are performed against a cloud provider.

Actions

Actions are calls that are performed against a specific instance or virtual machine. The show_instance action should be available in all cloud modules. Actions are normally called with the -a option:
salt-cloud -a show_instance myinstance

Actions must accept a name as a first argument, may optionally support any number of kwargs as appropriate, and must accept an argument of call, with a default of None.

Before performing any other work, an action should normally verify that it has been called correctly. It may then perform the desired feature, and return useful information to the user. A basic action looks like:

```python
def show_instance(name, call=None):
    """
    Show the details from EC2 concerning an AMI
    """
    if call != "action":
        raise SaltCloudSystemExit(
            "The show_instance action must be called with -a or --action."
        )
    return _get_node(name)
```

Please note that generic kwargs, if used, are passed through to actions as kwargs and not **kwargs. An example of this is seen in the Functions section.
Functions

Functions are called that are performed against a specific cloud provider. An optional function that is often useful is `show_image`, which describes an image in detail. Functions are normally called with the `-f` option:

```
salt-cloud -f show_image my-cloud-provider image='Ubuntu 13.10 64-bit'
```

A function may accept any number of kwargs as appropriate, and must accept an argument of `call` with a default of `None`.

Before performing any other work, a function should normally verify that it has been called correctly. It may then perform the desired feature, and return useful information to the user. A basic function looks like:

```python
def show_image(kwargs, call=None):
    """
    Show the details from EC2 concerning an AMI
    """
    if call != "function":
        raise SaltCloudSystemExit(
            "The show_image action must be called with -f or --function."
        )
    params = {"ImageId.1": kwargs["image"], "Action": "DescribeImages"}
    result = query(params)
    log.info(result)
    return result
```

Take note that generic kwargs are passed through to functions as `kwargs` and not `**kwargs`.

16.10.2 Cloud deployment scripts

Salt Cloud works primarily by executing a script on the virtual machines as soon as they become available. The script that is executed is referenced in the cloud profile as the `script`. In older versions, this was the `os` argument. This was changed in 0.8.2.

A number of legacy scripts exist in the deploy directory in the saltcloud source tree. The preferred method is currently to use the salt-bootstrap script. A stable version is included with each release tarball starting with 0.8.4. The most updated version can be found at:

https://github.com/saltstack/salt-bootstrap

Note that, somewhat counter-intuitively, this script is referenced as `bootstrap-salt` in the configuration.

You can specify a deploy script in the cloud configuration file (`/etc/salt/cloud` by default):

```
script: bootstrap-salt
```

Or in a provider:

```
my-provider:
    # snip...
    script: bootstrap-salt
```

Or in a profile:
If you do not specify a script argument in your cloud configuration file, provider configuration or profile configuration, the "bootstrap-salt" script will be used by default.

### Other Generic Deploy Scripts

If you want to be assured of always using the latest Salt Bootstrap script, there are a few generic templates available in the deploy directory of your saltcloud source tree:

```none
curl-bootstrap
curl-bootstrap-git
python-bootstrap
wget-bootstrap
wget-bootstrap-git
```

These are example scripts which were designed to be customized, adapted, and refit to meet your needs. One important use of them is to pass options to the salt-bootstrap script, such as updating to specific git tags.

### Custom Deploy Scripts

If the Salt Bootstrap script does not meet your needs, you may write your own. The script should be written in shell and is a Jinja template. Deploy scripts need to execute a number of functions to do a complete salt setup. These functions include:

1. Install the salt minion. If this can be done via system packages this method is HIGHLY preferred.
2. Add the salt minion keys before the minion is started for the first time. The minion keys are available as strings that can be copied into place in the Jinja template under the dict named "vm".
3. Start the salt-minion daemon and enable it at startup time.
4. Set up the minion configuration file from the "minion" data available in the Jinja template.

A good, well commented example of this process is the Fedora deployment script:


A number of legacy deploy scripts are included with the release tarball. None of them are as functional or complete as Salt Bootstrap, and are still included for academic purposes.

Custom deploy scripts are picked up from `/etc/salt/cloud.deploy.d` by default, but you can change the location of deploy scripts with the cloud configuration `deploy_scripts_search_path`. Additionally, if your deploy script has the extension `.sh`, you can leave out the extension in your configuration.

For example, if your custom deploy script is located in `/etc/salt/cloud.deploy.d/my_deploy.sh`, you could specify it in a cloud profile like this:

```yaml
my-profile:
  provider: my-provider
  # snip...
  script: my_deploy
```

You're also free to use the full path to the script if you like. Using full paths, your script doesn't have to live inside `/etc/salt/cloud.deploy.d` or whatever you've configured with `deploy_scripts_search_path`. 

Post-Deploy Commands

Once a minion has been deployed, it has the option to run a salt command. Normally, this would be the `state.apply`, which would finish provisioning the VM. Another common option (for testing) is to use `test.version`. This is configured in the main cloud config file:

```
start_action: state.apply
```

This is currently considered to be experimental functionality, and may not work well with all cloud hosts. If you experience problems with Salt Cloud hanging after Salt is deployed, consider using Startup States instead:

http://docs.saltstack.com/ref/states/startup.html

Skipping the Deploy Script

For whatever reason, you may want to skip the deploy script altogether. This results in a VM being spun up much faster, with absolutely no configuration. This can be set from the command line:

```
salt-cloud --no-deploy -p micro_aws my_instance
```

Or it can be set from the main cloud config file:

```
deploy: False
```

Or it can be set from the provider's configuration:

```
RACKSPACE.user: example_user
RACKSPACE.apikey: 123984bjjas87034
RACKSPACE.deploy: False
```

Or even on the VM's profile settings:

```
ubuntu_aws:
  provider: my-ec2-config
  image: ami-7e2da54e
  size: t1.micro
  deploy: False
```

The default for deploy is True.

In the profile, you may also set the script option to None:

```
script: None
```

This is the slowest option, since it still uploads the None deploy script and executes it.

Updating Salt Bootstrap

Salt Bootstrap can be updated automatically with `salt-cloud`:

```
salt-cloud -u
salt-cloud --update-bootstrap
```

Bear in mind that this updates to the latest stable version from:

To update Salt Bootstrap script to the develop version, run the following command on the Salt minion host with salt-cloud installed:

```
salt-call config.gather_bootstrap_script 'https://bootstrap.saltstack.com/develop/
   bootstrap-salt.sh'
```

Or just download the file manually:

```
curl -L 'https://bootstrap.saltstack.com/develop' > /etc/salt/cloud.deploy.d/
   bootstrap-salt.sh
```

### Keeping /tmp/ Files

When Salt Cloud deploys an instance, it uploads temporary files to /tmp/ for salt-bootstrap to put in place. After the script has run, they are deleted. To keep these files around (mostly for debugging purposes), the --keep-tmp option can be added:

```
salt-cloud -p myprofile mymachine --keep-tmp
```

For those wondering why /tmp/ was used instead of /root/, this had to be done for images which require the use of sudo, and therefore do not allow remote root logins, even for file transfers (which makes /root/ unavailable).

### Deploy Script Arguments

Custom deploy scripts are unlikely to need custom arguments to be passed to them, but salt-bootstrap has been extended quite a bit, and this may be necessary. `script_args` can be specified in either the profile or the map file, to pass arguments to the deploy script:

```
aws-amazon:
   provider: my-ec2-config
   image: ami-1624987f
   size: t1.micro
   ssh_username: ec2-user
   script: bootstrap-salt
   script_args: -c /tmp/
```

This has also been tested to work with pipes, if needed:

```
script_args: ' | head'
```

## 16.11 Using Salt Cloud from Salt

### 16.11.1 Using the Salt Modules for Cloud

In addition to the `salt-cloud` command, Salt Cloud can be called from Salt, in a variety of different ways. Most users will be interested in either the execution module or the state module, but it is also possible to call Salt Cloud as a runner.

Because the actual work will be performed on a remote minion, the normal Salt Cloud configuration must exist on any target minion that needs to execute a Salt Cloud command. Because Salt Cloud now supports breaking out configuration into individual files, the configuration is easily managed using Salt's own `file.managed` state function. For example, the following directories allow this configuration to be managed easily:
Minion Keys

Keep in mind that when creating minions, Salt Cloud will create public and private minion keys, upload them to the minion, and place the public key on the machine that created the minion. It will not attempt to place any public minion keys on the master, unless the minion which was used to create the instance is also the Salt Master. This is because granting arbitrary minions access to modify keys on the master is a serious security risk, and must be avoided.

Execution Module

The cloud module is available to use from the command line. At the moment, almost every standard Salt Cloud feature is available to use. The following commands are available:

**list_images**

This command is designed to show images that are available to be used to create an instance using Salt Cloud. In general they are used in the creation of profiles, but may also be used to create an instance directly (see below). Listing images requires a provider to be configured, and specified:

```
salt myminion cloud.list_images my-cloud-provider
```

**list_sizes**

This command is designed to show sizes that are available to be used to create an instance using Salt Cloud. In general they are used in the creation of profiles, but may also be used to create an instance directly (see below). This command is not available for all cloud providers; see the provider-specific documentation for details. Listing sizes requires a provider to be configured, and specified:

```
salt myminion cloud.list_sizes my-cloud-provider
```

**list_locations**

This command is designed to show locations that are available to be used to create an instance using Salt Cloud. In general they are used in the creation of profiles, but may also be used to create an instance directly (see below). This command is not available for all cloud providers; see the provider-specific documentation for details. Listing locations requires a provider to be configured, and specified:

```
salt myminion cloud.list_locations my-cloud-provider
```
query

This command is used to query all configured cloud providers, and display all instances associated with those accounts. By default, it will run a standard query, returning the following fields:

- **id** The name or ID of the instance, as used by the cloud provider.
- **image** The disk image that was used to create this instance.
- **private_ips** Any public IP addresses currently assigned to this instance.
- **public_ips** Any private IP addresses currently assigned to this instance.
- **size** The size of the instance; can refer to RAM, CPU(s), disk space, etc., depending on the cloud provider.
- **state** The running state of the instance; for example, running, stopped, pending, etc. This state is dependent upon the provider.

This command may also be used to perform a full query or a select query, as described below. The following usages are available:

```
salt myminion cloud.query
salt myminion cloud.query list_nodes
salt myminion cloud.query list_nodes_full
```

full_query

This command behaves like the query command, but lists all information concerning each instance as provided by the cloud provider, in addition to the fields returned by the query command.

```
salt myminion cloud.full_query
```

select_query

This command behaves like the query command, but only returned select fields as defined in the /etc/salt/cloud configuration file. A sample configuration for this section of the file might look like:

```
query.selection:
  - id
  - key_name
```

This configuration would only return the id and key_name fields, for those cloud providers that support those two fields. This would be called using the following command:

```
salt myminion cloud.select_query
```
**profile**

This command is used to create an instance using a profile that is configured on the target minion. Please note that the profile must be configured before this command can be used with it.

```
salt myminion cloud.profile ec2-centos64-x64 my-new-instance
```

Please note that the execution module does not run in parallel mode. Using multiple minions to create instances can effectively perform parallel instance creation.

**create**

This command is similar to the `profile` command, in that it is used to create a new instance. However, it does not require a profile to be pre-configured. Instead, all of the options that are normally configured in a profile are passed directly to Salt Cloud to create the instance:

```
salt myminion cloud.create my-ec2-config my-new-instance
   image=ami-1624987f size='t1.micro' ssh_username=ec2-user
   securitygroup=default delvol_on_destroy=True
```

Please note that the execution module does not run in parallel mode. Using multiple minions to create instances can effectively perform parallel instance creation.

**destroy**

This command is used to destroy an instance or instances. This command will search all configured providers and remove any instance(s) which matches the name(s) passed in here. The results of this command are non-reversible and should be used with caution.

```
salt myminion cloud.destroy myinstance
salt myminion cloud.destroy myinstance1,myinstance2
```

**action**

This command implements both the `action` and the `function` commands used in the standard `salt-cloud` command. If one of the standard `action` commands is used, an instance name must be provided. If one of the standard `function` commands is used, a provider configuration must be named.

```
salt myminion cloud.action start instance=myinstance
salt myminion cloud.action show_image provider=my-ec2-config
   image=ami-1624987f
```

The actions available are largely dependent upon the module for the specific cloud provider. The following actions are available for all cloud providers:

- **list_nodes** This is a direct call to the `query` function as described above, but is only performed against a single cloud provider. A provider configuration must be included.

- **list_nodes_select** This is a direct call to the `full_query` function as described above, but is only performed against a single cloud provider. A provider configuration must be included.

- **list_nodes_select** This is a direct call to the `select_query` function as described above, but is only performed against a single cloud provider. A provider configuration must be included.
**show_instance** This is a thin wrapper around `list_nodes`, which returns the full information about a single instance. An instance name must be provided.

**State Module**

A subset of the execution module is available through the `cloud` state module. Not all functions are currently included, because there is currently insufficient code for them to perform statefully. For example, a command to create an instance may be issued with a series of options, but those options cannot currently be statefully managed. Additional states to manage these options will be released at a later time.

`cloud.present`

This state will ensure that an instance is present inside a particular cloud provider. Any option that is normally specified in the `cloud.create` execution module and function may be declared here, but only the actual presence of the instance will be managed statefully.

```yaml
my-instance-name:
  cloud.present:
    - cloud_provider: my-ec2-config
    - image: ami-1624987f
    - size: 't1.micro'
    - ssh_username: ec2-user
    - securitygroup: default
    - delvol_on_destroy: True
```

`cloud.profile`

This state will ensure that an instance is present inside a particular cloud provider. This function calls the `cloud.profile` execution module and function, but as with `cloud.present`, only the actual presence of the instance will be managed statefully.

```yaml
my-instance-name:
  cloud.profile:
    - profile: ec2-centos64-x64
```

`cloud.absent`

This state will ensure that an instance (identified by name) does not exist in any of the cloud providers configured on the target minion. Please note that this state is *non-reversable* and may be considered especially destructive when issued as a cloud state.

```yaml
my-instance-name:
  cloud.absent
```
Runner Module

The `cloud` runner module is executed on the master, and performs actions using the configuration and Salt modules on the master itself. This means that any public minion keys will also be properly accepted by the master.

Using the functions in the runner module is no different than using those in the execution module, outside of the behavior described in the above paragraph. The following functions are available inside the runner:

- `list_images`
- `list_sizes`
- `list_locations`
- `query`
- `full_query`
- `select_query`
- `profile`
- `destroy`
- `action`

Outside of the standard usage of `salt-run` itself, commands are executed as usual:

```
salt-run cloud.profile ec2-centos64-x86_64 my-instance-name
```

CloudClient

The execution, state, and runner modules ultimately all use the CloudClient library that ships with Salt. To use the CloudClient library locally (either on the master or a minion), create a client object and issue a command against it:

```
import salt.cloud
import pprint
client = salt.cloud.CloudClient("/etc/salt/cloud")
node = client.query()
pprint.pprint(nodes)
```

Reactor

Examples of using the reactor with Salt Cloud are available in the `ec2-autoscale-reactor` and `salt-cloud-reactor` formulas.

16.12 Feature Comparison

16.12.1 Feature Matrix

A number of features are available in most cloud hosts, but not all are available everywhere. This may be because the feature isn't supported by the cloud host itself, or it may only be that the feature has not yet been added to Salt Cloud. In a handful of cases, it is because the feature does not make sense for a particular cloud provider (Saltify, for instance).
This matrix shows which features are available in which cloud hosts, as far as Salt Cloud is concerned. This is not a comprehensive list of all features available in all cloud hosts, and should not be used to make business decisions concerning choosing a cloud host. In most cases, adding support for a feature to Salt Cloud requires only a little effort.

### Legacy Drivers

Both AWS and Rackspace are listed as "Legacy". This is because those drivers have been replaced by other drivers, which are generally the preferred method for working with those hosts.

The EC2 driver should be used instead of the AWS driver, when possible. The OpenStack driver should be used instead of the Rackspace driver, unless the user is dealing with instances in "the old cloud" in Rackspace.

### Note for Developers

When adding new features to a particular cloud host, please make sure to add the feature to this table. Additionally, if you notice a feature that is not properly listed here, pull requests to fix them is appreciated.

### Standard Features

These are features that are available for almost every cloud host.

<table>
<thead>
<tr>
<th>Feature</th>
<th>AWS</th>
<th>CloudStack</th>
<th>DigitalOcean</th>
<th>EC2</th>
<th>GoGrid</th>
<th>Joyent</th>
<th>Linode</th>
<th>OpenStack</th>
<th>Parallels</th>
<th>Rackspace (Legacy)</th>
<th>Saltify</th>
<th>Vagrant</th>
<th>Softlayer</th>
<th>Softlayer Hardware</th>
<th>Aliyun</th>
<th>Tencent</th>
<th>Cloud</th>
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</table>

[1] Yes, if salt-api is enabled.
[2] Always returns {}.
Actions

These are features that are performed on a specific instance, and require an instance name to be passed in. For example:

```bash
# salt-cloud -a attach_volume ami.example.com
```

<table>
<thead>
<tr>
<th>Action</th>
<th>AWS (Legacy)</th>
<th>Cloud</th>
<th>Digital Ocean</th>
<th>EC2</th>
<th>GoGrid</th>
<th>JoyEnt</th>
<th>Linode</th>
<th>OpenStack</th>
<th>Parallels (Legacy)</th>
<th>Saltify &amp; Vagrant</th>
<th>Softlayer</th>
<th>Softlayer Hardware</th>
<th>Tencent Cloud</th>
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</table>

Functions

These are features that are performed against a specific cloud provider, and require the name of the provider to be passed in. For example:

```bash
# salt-cloud -f list_images my_digitalocean
```

<table>
<thead>
<tr>
<th>Function</th>
<th>AWS (Legacy)</th>
<th>Cloud</th>
<th>Digital Ocean</th>
<th>EC2</th>
<th>GoGrid</th>
<th>JoyEnt</th>
<th>Linode</th>
<th>OpenStack</th>
<th>Parallels (Legacy)</th>
<th>Saltify &amp; Vagrant</th>
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</table>

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Table 1 – continued from previous page

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<tr>
<th>Function</th>
<th>AWS (Legacy)</th>
<th>CloudStack</th>
<th>DigitalOcean</th>
<th>GoGrid</th>
<th>Joyent</th>
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[1] Yes, if salt-api is enabled.

### 16.13 Tutorials

#### 16.13.1 Salt Cloud Quickstart

Salt Cloud is built-in to Salt, and the easiest way to run Salt Cloud is directly from your Salt Master.

Note that if you installed Salt via Salt Bootstrap, it may not have automatically installed salt-cloud for you. Use your distribution’s package manager to install the `salt-cloud` package from the same repo that you used to install Salt. These repos will automatically be set up by Salt Bootstrap.

Alternatively, the `-L` option can be passed to the Salt Bootstrap script when installing Salt. The `-L` option will install `salt-cloud` and the required `libcloud` package.

This quickstart walks you through the basic steps of setting up a cloud host and defining some virtual machines to create.
Note: Salt Cloud has its own process and does not rely on the Salt Master, so it can be installed on a standalone
minion instead of your Salt Master.

Define a Provider

The first step is to add the credentials for your cloud host. Credentials and other settings provided by the cloud host
are stored in provider configuration files. Provider configurations contain the details needed to connect to a cloud
host such as EC2, GCE, Rackspace, etc., and any global options that you want set on your cloud minions (such as the
location of your Salt Master).

On your Salt Master, browse to /etc/salt/cloud.providers.d/ and create a file called <provider>.conf, replacing <provider>
with ec2, softlayer, and so on. The name helps you identify the contents, and
is not important as long as the file ends in .conf.

Next, browse to the Provider specifics and add any required settings for your cloud host to this file. Here is an example
for Amazon EC2:

```
my-ec2:
  driver: ec2
  # Set the EC2 access credentials (see below)
  id: 'HJGRYCIILJKJYG'
  key: 'kdjgfsgm;woormgl/aserigjksjhasdfgj'
  # Make sure this key is owned by root with permissions 0400.
  private_key: /etc/salt/my_test_key.pem
  keyname: my_test_key
  securitygroup: default
  # Optional: Set up the location of the Salt Master
  #
  minion:
    master: saltmaster.example.com
```

The required configuration varies between cloud hosts so make sure you read the provider specifics.

List Cloud Provider Options

You can now query the cloud provider you configured for available locations, images, and sizes. This information is
used when you set up VM profiles.

```
salt-cloud --list-locations <provider_name>  # my-ec2 in the previous example
salt-cloud --list-images <provider_name>
salt-cloud --list-sizes <provider_name>
```

Replace <provider_name> with the name of the provider configuration you defined.
Create VM Profiles

On your Salt Master, browse to /etc/salt/cloud.profiles.d/ and create a file called <profile>.conf, replacing <profile> with ec2, softlayer, and so on. The file must end in .conf.

You can now add any custom profiles you’d like to define to this file. Here are a few examples:

```yaml
micro_ec2:
    provider: my-ec2
    image: ami-d514f291
    size: t1.micro

medium_ec2:
    provider: my-ec2
    image: ami-d514f291
    size: m3.medium

large_ec2:
    provider: my-ec2
    image: ami-d514f291
    size: m3.large
```

Notice that the provider in our profile matches the provider name that we defined? That is how Salt Cloud knows how to connect to a cloud host to create a VM with these attributes.

Create VMs

VMs are created by calling salt-cloud with the following options:

```
salt-cloud -p <profile> <name1> <name2> ...
```

For example:

```
salt-cloud -p micro_ec2 minion1 minion2
```

Destroy VMs

Add a -d and the minion name you provided to destroy:

```
salt-cloud -d minion1 minion2
```

Query VMs

You can view details about the VMs you’ve created using --query:

```
salt-cloud --query
```
Cloud Map

Now that you know how to create and destroy individual VMs, next you should learn how to use a cloud map to create a number of VMs at once.

Cloud maps let you define a map of your infrastructure and quickly provision any number of VMs. On subsequent runs, any VMs that do not exist are created, and VMs that are already configured are left unmodified.

See Cloud Map File.

16.13.2 Using Salt Cloud with the Event Reactor

One of the most powerful features of the Salt framework is the Event Reactor. As the Reactor was in development, Salt Cloud was regularly updated to take advantage of the Reactor upon completion. As such, various aspects of both the creation and destruction of instances with Salt Cloud fire events to the Salt Master, which can be used by the Event Reactor.

Event Structure

As of this writing, all events in Salt Cloud have a tag, which includes the ID of the instance being managed, and a payload which describes the task that is currently being handled. A Salt Cloud tag looks like:

```
salt/cloud/<minion_id>/<task>
```

For instance, the first event fired when creating an instance named web1 would look like:

```
salt/cloud/web1/creating
```

Assuming this instance is using the ec2-centos profile, which is in turn using the ec2-config provider, the payload for this tag would look like:

```
{
"name": "web1", "profile": "ec2-centos", "provider": "ec2-config:ec2"
}
```

Available Events

When an instance is created in Salt Cloud, whether by map, profile, or directly through an API, a minimum of five events are normally fired. More may be available, depending upon the cloud provider being used. Some of the common events are described below.

```
salt/cloud/<minion_id>/creating
```

This event states simply that the process to create an instance has begun. At this point in time, no actual work has begun. The payload for this event includes:

```
name profile provider
```
Salt Cloud is about to make a request to the cloud provider to create an instance. At this point, all of the variables required to make the request have been gathered, and the payload of the event will reflect those variables which do not normally pose a security risk. What is returned here is dependent upon the cloud provider. Some common variables are:

- name
- image
- size
- location

The instance has been successfully requested, but the necessary information to log into the instance (such as IP address) is not yet available. This event marks the beginning of the process to wait for this information. The payload for this event normally only includes the `instance_id`.

The information required to log into the instance has been retrieved, but the instance is not necessarily ready to be accessed. Following this event, Salt Cloud will wait for the IP address to respond to a ping, then wait for the specified port (usually 22) to respond to a connection, and on Linux systems, for SSH to become available. Salt Cloud will attempt to issue the `date` command on the remote system, as a means to check for availability. If no `ssh_username` has been specified, a list of usernames (starting with `root`) will be attempted. If one or more usernames was configured for `ssh_username`, they will be added to the beginning of the list, in order.

The payload for this event normally only includes the `ip_address`.

The necessary port has been detected as available, and now Salt Cloud can log into the instance, upload any files used for deployment, and run the deploy script. Once the script has completed, Salt Cloud will log back into the instance and remove any remaining files.

A number of variables are used to deploy instances, and the majority of these will be available in the payload. Any keys, passwords or other sensitive data will be scraped from the payload. Most of the variables returned will be related to the profile or provider config, and any default values that could have been changed in the profile or provider, but weren't.

The deploy sequence has completed, and the instance is now available, Salted, and ready for use. This event is the final task for Salt Cloud, before returning instance information to the user and exiting. The payload for this event contains little more than the initial `creating` event. This event is required in all cloud providers.
Filtering Events

When creating a VM, it is possible with certain tags to filter how much information is sent to the event bus. The tags that can be filtered on any provider are:

- `salt/cloud/<minion_id>/creating`
- `salt/cloud/<minion_id>/requesting`
- `salt/cloud/<minion_id>/created`

Other providers may allow other tags to be filtered; when that is the case, the documentation for that provider will contain more details.

To filter information, create a section in your `/etc/salt/cloud` file called `filter_events`. Create a section for each tag that you want to filter, using the last segment of the tag. For instance, use `creating` to represent `salt/cloud/<minion_id>/creating`:

```yaml
filter_events:
  creating:
    keys:
    - name
    - profile
    - provider
```

Any keys listed here will be added to the default keys that are already set to be displayed for that provider. If you wish to start with a clean slate and only show the keys specified, add another option called `use_defaults` and set it to `False`.

```yaml
filter_events:
  creating:
    keys:
    - name
    - profile
    - provider
    use_defaults: False
```

Configuring the Event Reactor

The Event Reactor is built into the Salt Master process, and as such is configured via the master configuration file. Normally this will be a YAML file located at `/etc/salt/master`. Additionally, master configuration items can be stored, in YAML format, inside the `/etc/salt/master.d/` directory.

These configuration items may be stored in either location; however, they may only be stored in one location. For organizational and security purposes, it may be best to create a single configuration file, which contains only Event Reactor configuration, at `/etc/salt/master.d/reactor`.

The Event Reactor uses a top-level configuration item called `reactor`. This block contains a list of tags to be watched for, each of which also includes a list of SLS files. For instance:

```yaml
reactor:
  - 'salt/minion/*/start':
  - '/srv/reactor/custom-reactor.sls'
  - 'salt/cloud/*/created':
  - '/srv/reactor/cloud-alert.sls'
  - 'salt/cloud/*/destroyed':
  - '/srv/reactor/cloud-destroy-alert.sls'
```
The above configuration configures reactors for three different tags: one which is fired when a minion process has started and is available to receive commands, one which is fired when a cloud instance has been created, and one which is fired when a cloud instance is destroyed.

Note that each tag contains a wildcard (*) in it. For each of these tags, this will normally refer to a minion_id. This is not required of event tags, but is very common.

**Reactor SLS Files**

Reactor sls files should be placed in the /srv/reactor/ directory for consistency between environments, but this is not currently enforced by Salt.

Reactor sls files follow a similar format to other sls files in Salt. By default they are written in YAML and can be templated using Jinja, but since they are processed through Salt’s rendering system, any available renderer (JSON, Mako, Cheetah, etc.) can be used.

As with other sls files, each stanza will start with a declaration ID, followed by the function to run, and then any arguments for that function. For example:

```
# /srv/reactor/cloud-alert.sls
new_instance_alert:
  cmd.pagerduty.create_event:
    - tgt: alertserver
    - kwarg:
      description: "New instance: {{ data['name'] }}"
      details: "New cloud instance created on {{ data['provider'] }}"
      service_key: 1626dead5ecafe46231e968eb1be29c4
      profile: my-pagerduty-account
```

When the Event Reactor receives an event notifying it that a new instance has been created, this sls will create a new incident in PagerDuty, using the configured PagerDuty account.

The declaration ID in this example is new_instance_alert. The function called is cmd.pagerduty.create_event. The cmd portion of this function specifies that an execution module and function will be called, in this case, the pagerduty.create_event function.

Because an execution module is specified, a target (tgt) must be specified on which to call the function. In this case, a minion called alertserver has been used. Any arguments passed through to the function are declared in the kwarg block.

**Example: Reactor-Based Highstate**

When Salt Cloud creates an instance, by default it will install the Salt Minion onto the instance, along with any specified minion configuration, and automatically accept that minion’s keys on the master. One of the configuration options that can be specified is startup_states, which is commonly set to highstate. This will tell the minion to immediately apply a highstate, as soon as it is able to do so.

This can present a problem with some system images on some cloud hosts. For instance, Salt Cloud can be configured to log in as either the root user, or a user with sudo access. While some hosts commonly use images that lock out remote root access and require a user with sudo privileges to log in (notably EC2, with their ec2-user login), most cloud hosts fall back to root as the default login on all images, including for operating systems (such as Ubuntu) which normally disallow remote root login.

For users of these operating systems, it is understandable that a highstate would include configuration to block remote root logins again. However, Salt Cloud may not have finished cleaning up its deployment files by the time the minion process has started, and kicked off a highstate run. Users have reported errors from Salt Cloud getting locked out while trying to clean up after itself.
The goal of a startup state may be achieved using the Event Reactor. Because a minion fires an event when it is able to receive commands, this event can effectively be used inside the reactor system instead. The following will point the reactor system to the right `sls` file:

```yaml
reactor:
  - 'salt/cloud/*/created':
    - '/srv/reactor/startup_highstate.sls'
```

And the following `sls` file will start a `highstate` run on the target minion:

```yaml
# /srv/reactor/startup_highstate.sls
reactor_highstate:
  cmd.state.apply:
    - tgt: {{ data['name'] }}
```

Because this event will not be fired until Salt Cloud has cleaned up after itself, the `highstate` run will not step on salt-cloud's toes. And because every file on the minion is configurable, including `/etc/salt/minion`, the `startup_states` can still be configured for future minion restarts, if desired.
Proxy minions are a developing Salt feature that enables controlling devices that, for whatever reason, cannot run a standard salt-minion. Examples include network gear that has an API but runs a proprietary OS, devices with limited CPU or memory, or devices that could run a minion, but for security reasons, will not.

There are some proxy modules available, but if your device interface is not currently supported you will most likely have to write the interface yourself, because there are an infinite number of controllable devices. Fortunately, this is only as difficult as the actual interface to the proxied device. Devices that have an existing Python module (PyUSB for example) would be relatively simple to interface. Code to control a device that has an HTML REST-based interface should be easy. Code to control your typical housecat would be excellent source material for a PhD thesis.

Salt proxy-minions provide the 'plumbing' that allows device enumeration and discovery, control, status, remote execution, and state management.

See the Proxy Minion Walkthrough for an end-to-end demonstration of a working REST-based proxy minion.

See the Proxy Minion SSH Walkthrough for an end-to-end demonstration of a working SSH proxy minion.

See Proxyminion States to configure and run salt-proxy on a remote minion. Specify all your master side proxy (pillar) configuration and use this state to remotely configure proxies on one or more minions.

See Proxyminion Beacon to help with easy configuration and management of salt-proxy processes.

### 17.1 New in 2017.7.0

The proxy_merge_grains_in_module configuration variable introduced in 2016.3, has been changed, defaulting to True.

The connection with the remote device is kept alive by default, when the module implements the alive function and proxy_keep_alive is set to True. The polling interval is set using the proxy_keep_alive_interval option which defaults to 1 minute.

The developers are also able to use the proxy_always_alive, when designing a proxy module flexible enough to open the connection with the remote device only when required.
17.2 New in 2016.11.0

Proxy minions now support configuration files with names ending in "*.conf" and placed in /etc/salt/proxy.d.

Proxy minions can now be configured in /etc/salt/proxy or /etc/salt/proxy.d instead of just pillar. Configuration format is the same as it would be in pillar.

17.3 New in 2016.3

The deprecated config option enumerate_proxy_minions has been removed.

As mentioned in earlier documentation, the add_proxymodule_to_opts configuration variable defaults to False in this release. This means if you have proxymodules or other code looking in __opts__['proxymodule'] you will need to set this variable in your /etc/salt/proxy file, or modify your code to use the __proxy__ injected variable.

The __proxyenabled__ directive now only applies to grains and proxy modules themselves. Standard execution modules and state modules are not prevented from loading for proxy minions.

Enhancements in grains processing have made the __proxyenabled__ directive somewhat redundant in dynamic grains code. It is still required, but best practices for the __virtual__ function in grains files have changed. It is now recommended that the __virtual__ functions check to make sure they are being loaded for the correct proxitype, example below:

```python
__virtual__():
    """
    Only work on proxy
    """
    try:
        if (salt.utils.platform.is_proxy()
             and __opts__['proxy']['proxytype'] == "ssh_sample"):
            return __virtualname__
    except KeyError:
        pass

    return False
```

The try/except block above exists because grains are processed very early in the proxy minion startup process, sometimes earlier than the proxy key in the __opts__ dictionary is populated.

Grains are loaded so early in startup that no dunder dictionaries are present, so __proxy__, __salt__, etc. are not available. Custom grains located in /srv/salt/_grains and in the salt install grains directory can now take a single argument, proxy, that is identical to __proxy__. This enables patterns like

```python
def get_ip(proxy):
    """
    Ask the remote device what IP it has
    """
    return {"ip": proxy['proxymodulename.get_ip']}()
```

Then the grain ip will contain the result of calling the get_ip() function in the proxymodule called proxymodulename.

Proxy modules now benefit from including a function called initialized(). This function should return True if the proxy's init() function has been successfully called. This is needed to make grains processing easier.
Finally, if there is a function called grains in the proxymodule, it will be executed on proxy-minion startup and its contents will be merged with the rest of the proxy's grains. Since older proxy-minions might have used other methods to call such a function and add its results to grains, this is config-gated by a new proxy configuration option called proxy_merge_grains_in_module. This defaults to True in the 2017.7.0 release.

### 17.4 New in 2015.8.2

**BREAKING CHANGE:** Adding the proxymodule variable to __opts__ is deprecated. The proxymodule variable has been moved to a new globally-injected variable called __proxy__. A related configuration option called add_proxymodule_to_opts has been added and defaults to True. In the next major release, 2016.3.0, this variable will default to False.

In the meantime, proxies that functioned under 2015.8.0 and .1 should continue to work under 2015.8.2. You should rework your proxy code to use __proxy__ as soon as possible.

The rest_sample example proxy minion has been updated to use __proxy__.

This change was made because proxymodules are a LazyLoader object, but LazyLoaders cannot be serialized. __opts__ gets serialized, and so things like saltutil.sync_all and state.highstate would throw exceptions.

Support has been added to Salt's loader allowing custom proxymodules to be placed in salt://_proxy. Proxy minions that need these modules will need to be restarted to pick up any changes. A corresponding utility function, saltutil.sync_proxymodules, has been added to sync these modules to minions.

In addition, a salt.utils helper function called is_proxy() was added to make it easier to tell when the running minion is a proxy minion. **NOTE: This function was renamed to salt.utils.platform.is_proxy() for the 2018.3.0 release**

### 17.5 New in 2015.8

Starting with the 2015.8 release of Salt, proxy processes are no longer forked off from a controlling minion. Instead, they have their own script salt-proxy which takes mostly the same arguments that the standard Salt minion does with the addition of --proxyid. This is the id that the salt-proxy will use to identify itself to the master. Proxy configurations are still best kept in Pillar and their format has not changed.

This change allows for better process control and logging. Proxy processes can now be listed with standard process management utilities (ps from the command line). Also, a full Salt minion is no longer required (though it is still strongly recommended) on machines hosting proxies.

### 17.6 Getting Started

The following diagram may be helpful in understanding the structure of a Salt installation that includes proxy-minions:
The key thing to remember is the left-most section of the diagram. Salt’s nature is to have a minion connect to a master, then the master may control the minion. However, for proxy minions, the target device cannot run a minion. After the proxy minion is started and initiates its connection to the device, it connects back to the salt-master and for all intents and purposes looks like just another minion to the Salt master.

To create support for a proxied device one needs to create four things:

1. The `proxy_connection_module` (located in salt/proxy).
2. The `grains support code` (located in salt/grains).
3. Salt modules specific to the controlled device.
4. Salt states specific to the controlled device.
17.6.1 Configuration parameters

Proxy minions require no configuration parameters in /etc/salt/master.

Salt's Pillar system is ideally suited for configuring proxy-minions (though they can be configured in /etc/salt/proxy as well). Proxies can either be designated via a pillar file in pillar_roots, or through an external pillar. External pillars afford the opportunity for interfacing with a configuration management system, database, or other knowledgeable system that may already contain all the details of proxy targets. To use static files in pillar_roots, pattern your files after the following examples, which are based on the diagram above:

/srv/pillar/top.sls

```
base:
  net-device1:
    - net-device1
  net-device2:
    - net-device2
  net-device3:
    - net-device3
  i2c-device4:
    - i2c-device4
  i2c-device5:
    - i2c-device5
  433wireless-device6:
    - 433wireless-device6
  smsgate-device7:
    - device7
```

/srv/pillar/net-device1.sls

```
proxy:
  proxytype: networkswitch
  host: 172.23.23.5
  username: root
  passwd: letmein
```

/srv/pillar/net-device2.sls

```
proxy:
  proxytype: networkswitch
  host: 172.23.23.6
  username: root
  passwd: letmein
```

/srv/pillar/net-device3.sls

```
proxy:
  proxytype: networkswitch
  host: 172.23.23.7
  username: root
  passwd: letmein
```

/srv/pillar/i2c-device4.sls

```
proxy:
  proxytype: i2c_lightshow
  i2c_address: 1
```

/srv/pillar/i2c-device5.sls
proxy:
    proxysite: i2c_lightshow
    i2c_address: 2

/srv/pillar/433wireless-device6.sls

proxy:
    proxysite: 433mhz_wireless

/srv/pillar/smsgate-device7.sls

proxy:
    proxysite: sms_serial
    deventry: /dev/tty04

Note the contents of each minioncontroller key may differ widely based on the type of device that the proxy-minion is managing.

In the above example

- net-devices 1, 2, and 3 are network switches that have a management interface available at a particular IP address.
- i2c-devices 4 and 5 are very low-level devices controlled over an i2c bus. In this case the devices are physically connected to machine 'minioncontroller2', and are addressable on the i2c bus at their respective i2c addresses.
- 433wireless-device6 is a 433 MHz wireless transmitter, also physically connected to minioncontroller2
- smsgate-device7 is an SMS gateway connected to machine minioncontroller3 via a serial port.

Because of the way pillar works, each of the salt-proxy processes that fork off the proxy minions will only see the keys specific to the proxies it will be handling.

Proxies can be configured in /etc/salt/proxy or with files in /etc/salt/proxy.d as of Salt's 2016.11.0 release.

Also, in general, proxy-minions are lightweight, so the machines that run them could conceivably control a large number of devices. To run more than one proxy from a single machine, simply start an additional proxy process with --proxyid set to the id to which you want the proxy to bind. It is possible for the proxy services to be spread across many machines if necessary, or intentionally run on machines that need to control devices because of some physical interface (e.g. i2c and serial above). Another reason to divide proxy services might be security. In more secure environments only certain machines may have a network path to certain devices.

### 17.6.2 Proxymodules

A proxy module encapsulates all the code necessary to interface with a device. Proxymodules are located inside the salt.proxy module, or can be placed in the _proxy directory in your file_roots (default is /srv/salt/_proxy.

At a minimum a proxymodule object must implement the following functions:

- **__virtual__()**: This function performs the same duty that it does for other types of Salt modules. Logic goes here to determine if the module can be loaded, checking for the presence of Python modules on which the proxy depends. Returning False will prevent the module from loading.

- **init(opts)**: Perform any initialization that the device needs. This is a good place to bring up a persistent connection to a device, or authenticate to create a persistent authorization token.

- **initialized()**: Returns True if init() was successfully called.

- **shutdown()**: Code to cleanly shut down or close a connection to a controlled device goes here. This function must exist, but can contain only the keyword pass if there is no shutdown logic required.
ping(): While not required, it is highly recommended that this function also be defined in the proxymodule. The code for ping should contact the controlled device and make sure it is really available.

alive(opts): Another optional function, it is used together with the proxy_keep_alive option (default: True). This function should return a boolean value corresponding to the state of the connection. If the connection is down, will try to restart (shutdown followed by init). The polling frequency is controlled using the proxy_keep_alive_interval option, in minutes.

grains(): Rather than including grains in /srv/salt/_grains or in the standard install directories for grains, grains can be computed and returned by this function. This function will be called automatically if proxy_merge_grains_in_module is set to True in /etc/salt/proxy. This variable defaults to True in the release code-named 2017.7.0.

Pre 2015.8 the proxymodule also must have an id() function. 2015.8 and following don't use this function because the proxy's id is required on the command line.

Here is an example proxymodule used to interface to a very simple REST server. Code for the server is in the salt-contrib GitHub repository.

This proxymodule enables "service" enumeration, starting, stopping, restarting, and status; "package" installation, and a ping.

```python
# -*- coding: utf-8 -*-

# This is a simple proxy-minion designed to connect to and communicate with the bottle-based web service contained in https://github.com/saltstack/salt-contrib/tree/master/proxyminion_rest_example

HAS_REST_EXAMPLE = True

# This must be present or the Salt loader won't load this module
__proxyenabled__ = ["rest_sample"]

# Variables are scoped to this module so we can have persistent data
# across calls to fns in here.
GRAINS_CACHE = {}
DETAILS = {}

# Want logging!
log = logging.getLogger(__file__)

# This does nothing, it's here just as an example and to provide a log entry when the module is loaded.
def __virtual__():
    
    Only return if all the modules are available
    
    log.debug("rest_sample proxy __virtual__() called...")
    return True
```

(continues on next page)
def _complicated_function_that_determines_if_alive():
    return True

# Every proxy module needs an 'init', though you can
# just put DETAILS['initialized'] = True here if nothing
# else needs to be done.

def init(opts):
    log.debug("rest_sample proxy init() called...")
    DETAILS['initialized'] = True

    # Save the REST URL
    DETAILS['url'] = opts['proxy']['url']

    # Make sure the REST URL ends with a '/'
    if not DETAILS['url'].endswith('/'):
        DETAILS['url'] += '/'

def alive(opts):
    ""
    This function returns a flag with the connection state.
    It is very useful when the proxy minion establishes the communication
    via a channel that requires a more elaborated keep-alive mechanism, e.g.
    NETCONF over SSH.
    ""
    log.debug("rest_sample proxy alive() called...")
    return _complicated_function_that_determines_if_alive()

def initialized():
    ""
    Since grains are loaded in many different places and some of those
    places occur before the proxy can be initialized, return whether
    our init() function has been called
    ""
    return DETAILS.get('initialized', False)

def grains():
    ""
    Get the grains from the proxied device
    ""
    if not DETAILS.get('grains_cache', {}):
        r = salt.utils.http.query(
            DETAILS['url'] + 'info', decode_type='json', decode=True
        )
        DETAILS['grains_cache'] = r['dict']
    return DETAILS['grains_cache']

def grains_refresh():
    ""
    Refresh the grains from the proxied device
DETAILS['grains_cache'] = None
return grains()

def fns():
    return {
        "details": "This key is here because a function in "
        "grains/rest_sample.py called fns() here in the proxymodule."
    }

def service_start(name):
    """
    Start a "service" on the REST server
    """
    r = salt.utils.http.query(
        DETAILS['url'] + "service/start/" + name, decode_type="json", decode=True
    )
    return r["dict"]

def service_stop(name):
    """
    Stop a "service" on the REST server
    """
    r = salt.utils.http.query(
        DETAILS['url'] + "service/stop/" + name, decode_type="json", decode=True
    )
    return r["dict"]

def service_restart(name):
    """
    Restart a "service" on the REST server
    """
    r = salt.utils.http.query(
        DETAILS['url'] + "service/restart/" + name, decode_type="json", decode=True
    )
    return r["dict"]

def service_list():
    """
    List "services" on the REST server
    """
    r = salt.utils.http.query(
        DETAILS['url'] + "service/list", decode_type="json", decode=True
    )
    return r["dict"]

def service_status(name):
    """
    Check if a service is running on the REST server
    """
```
r = salt.utils.http.query(
    DETAILS['url'] + 'service/status/' + name, decode_type='json', decode=True
)
return r['dict']

def package_list():
    """
    List "packages" installed on the REST server
    """
    r = salt.utils.http.query(
        DETAILS['url'] + 'package/list', decode_type='json', decode=True
    )
    return r['dict']

def package_install(name, **kwargs):
    """
    Install a "package" on the REST server
    """
    cmd = DETAILS['url'] + 'package/install/' + name
    if kwargs.get('version', False):
        cmd += '/%s' % kwargs['version']
    else:
        cmd += '/1.0'
    r = salt.utils.http.query(cmd, decode_type='json', decode=True)
    return r['dict']

def fix_outage():
    r = salt.utils.http.query(DETAILS['url'] + 'fix_outage')
    return r

def uptodate(name):
    """
    Call the REST endpoint to see if the packages on the "server" are up to date.
    """
    r = salt.utils.http.query(
        DETAILS['url'] + 'package/remove/' + name, decode_type='json', decode=True
    )
    return r['dict']

def package_remove(name):
    """
    Remove a "package" on the REST server
    """
    r = salt.utils.http.query(
        DETAILS['url'] + 'package/remove/' + name, decode_type='json', decode=True
    )
    return r['dict']
```

(continues on next page)
Grains are data about minions. Most proxied devices will have a paltry amount of data as compared to a typical Linux server. By default, a proxy minion will have several grains taken from the host. Salt core code requires values for kernel, os, and os_family—all of these are forced to be proxy for proxy-minions.

To add others to your proxy minion for a particular device, create a file in salt/grains named [proxytype].py and place inside it the different functions that need to be run to collect the data you are interested in. Here's an example. Note the function below called proxy_functions. It demonstrates how a grains function can take a single argument, which will be set to the value of __proxy__. Dunder variables are not yet injected into Salt processes at the time grains are loaded, so this enables us to get a handle to the proxymodule so we can cross-call the functions therein used to communicate with the controlled device.

Note that as of 2016.3, grains values can also be calculated in a function called grains() in the proxymodule itself. This might be useful if a proxymodule author wants to keep all the code for the proxy interface in the same place instead of splitting it between the proxy and grains directories.

This function will only be called automatically if the configuration variable proxy_merge_grains_in_module is set to True in the proxy configuration file (default /etc/salt/proxy). This variable defaults to True in the release code-named 2017.7.0.
17.7 The __proxyenabled__ directive

In previous versions of Salt the __proxyenabled__ directive controlled loading of all Salt modules for proxies (e.g. grains, execution modules, state modules). From 2016.3 on, the only modules that respect __proxyenabled__ are grains and proxy modules. These modules need to be told which proxy they work with. __proxyenabled__ is a list, and can contain a single '*' to indicate a grains module works with all proxies.

Example from salt/grains/rest_sample.py:

```python
# -*- coding: utf-8 -*-
"
""" Generate baseline proxy minion grains """
from __future__ import absolute_import
import salt.utils.platform
__proxyenabled__ = [
    "rest_sample"
]
__virtualname__ = "rest_sample"

def __virtual__():
    try:
        if (salt.utils.platform.is_proxy()
            and __opts__["proxy"]['proxytype'] == "rest_sample"):
            return __virtualname__
    except KeyError:
        pass

    return False
```

17.7.1 Salt Proxy Minion End-to-End Example

The following is walkthrough that documents how to run a sample REST service and configure one or more proxy minions to talk to and control it.

1. Ideally, create a Python virtualenv in which to run the REST service. This is not strictly required, but without a virtualenv you will need to install bottle via pip globally on your system.

2. Clone https://github.com/saltstack/salt-contrib and copy the contents of the directory proxyminion_rest_example somewhere on a machine that is reachable from the machine on which you want to run the salt-proxy. This machine needs Python 2.7 or later.

3. Install bottle version 0.12.8 via pip or easy_install

   ```bash
   pip install bottle==0.12.8
   ```

4. Run python rest.py --help for usage

5. Start the REST API on an appropriate port and IP.

6. Load the REST service's status page in your browser by going to the IP/port combination (e.g. http://127.0.0.1:8000)
7. You should see a page entitled "Salt Proxy Minion" with two sections, one for "services" and one for "packages" and you should see a log entry in the terminal where you started the REST process indicating that the index page was retrieved.

Now, configure your salt-proxy.

1. Edit /etc/salt/proxy and add an entry for your master's location

```bash
master: localhost
```

2. On your salt-master, ensure that pillar is configured properly. Select an ID for your proxy (in this example we will name the proxy with the letter 'p' followed by the port the proxy is answering on). In your pillar topfile, place an entry for your proxy:

```yaml
base:
  'p8000':
    - p8000
```

This says that Salt's pillar should load some values for the proxy p8000 from the file /srv/pillar/p8000.sls (if you have not changed your default pillar_roots)

3. In the pillar root for your base environment, create the p8000.sls file with the following contents:

```yaml
proxy:
  proxytype: rest_sample
  url: http://<IP your REST listens on>:port
```

In other words, if your REST service is listening on port 8000 on 127.0.0.1 the 'url' key above should say `url: http://127.0.0.1:8000`

4. Make sure your salt-master is running.

5. Start the salt-proxy in debug mode

```bash
salt-proxy --proxyid=p8000 -l debug
```

6. Accept your proxy's key on your salt-master

```bash
salt-key -y -a p8000
The following keys are going to be accepted:
Unaccepted Keys:
p8000
Key for minion p8000 accepted.
```

17.7. The __proxyenabled__ directive
7. Now you should be able to ping your proxy. When you ping, you should see a log entry in the terminal where the REST service is running.

```
salt p8000 test.version
```

8. The REST service implements a degenerately simple pkg and service provider as well as a small set of grains. To "install" a package, use a standard `pkg.install`. If you pass `==` and a version number after the package name then the service will parse that and accept that as the package's version.

9. Try running `salt p8000 grains.items` to see what grains are available. You can target proxies via grains if you like.

10. You can also start and stop the available services (apache, redbull, and postgresql with `service.start`, etc.

11. States can be written to target the proxy. Feel free to experiment with them.

### 17.8 SSH Proxymodules

See above for a general introduction to writing proxy modules. All of the guidelines that apply to REST are the same for SSH. This sections specifically talks about the SSH proxy module and explains the working of the example proxy module `ssh_sample`.

Here is a simple example proxymodule used to interface to a device over SSH. Code for the SSH shell is in the salt-contrib GitHub repository.

This proxymodule enables "package" installation.

```python
# -*- coding: utf-8 -*-

""
This is a simple proxy-minion designed to connect to and communicate with
a server that exposes functionality via SSH.
This can be used as an option when the device does not provide
an api over HTTP and doesn't have the python stack to run a minion.
"

from __future__ import absolute_import

# Import python libs
import salt.utils.json
import logging

# Import Salt's libs
from salt.utils.vt_helper import SSHConnection
from salt.utils.vt import TerminalException

# This must be present or the Salt loader won't load this module
__proxyenabled__ = ['ssh_sample']

DETAILS = {}

# Want logging!
log = logging.getLogger(__file__)

# This does nothing, it's here just as an example and to provide a log
# entry when the module is loaded.
def _virtual__():
```

(continues on next page)
Only return if all the modules are available

```python
log.info("ssh_sample proxy __virtual__() called...")
return True
```

```python
def init(opts):
    
    Required.
    Can be used to initialize the server connection.
    
    try:
        DETAILS["server"] = SSHConnection(
            host=opts["proxy"]["host"],
            username=opts["proxy"]["username"],
            password=opts["proxy"]["password"],
        )
        # connected to the SSH server
        out, err = DETAILS["server"].sendline("help")
    except TerminalException as e:
        log.error(e)
    return False
```

```python
def shutdown(opts):
    
    Disconnect
    
    DETAILS["server"].close_connection()
```

```python
def parse(out):
    
    Extract json from out.

    Parameter
    out: Type string. The data returned by the ssh command.
    
    jsonret = []
    in_json = False
    for ln_ in out.split("\n"):
        if "{" in ln_:
            in_json = True
        if in_json:
            jsonret.append(ln_)
        if "}" in ln_:
            in_json = False
    return salt.utils.json.loads("\n".join(jsonret))
```

```python
def package_list():
    
    List "packages" by executing a command via ssh
```

(continues on next page)
This function is called in response to the salt command

```bash
salt target_minion pkg.list_pkgs
```

```
# Send the command to execute
out, err = DETAILS["server"].sendline("pkg_list")

# "scrape" the output and return the right fields as a dict
return parse(out)
```

```python
def package_install(name, **kwargs):
    
    # Send the command to execute
    out, err = DETAILS["server"].sendline(cmd)

    # "scrape" the output and return the right fields as a dict
    return parse(out)

def package_remove(name):
    
    # Send the command to execute
    out, err = DETAILS["server"].sendline(cmd)

    # "scrape" the output and return the right fields as a dict
    return parse(out)
```

### 17.8.1 Connection Setup

The `init()` method is responsible for connection setup. It uses the `host`, `username` and `password` config variables defined in the pillar data. The `prompt` kwarg can be passed to `SSHConnection` if your SSH server's prompt differs from the example's prompt (`Cmd`). Instantiating the `SSHConnection` class establishes an SSH connection to the ssh server (using Salt VT).
17.8.2 Command execution

The package_* methods use the SSH connection (established in init()) to send commands out to the SSH server. The sendline() method of SSHConnection class can be used to send commands out to the server. In the above example we send commands like pkg_list or pkg_install. You can send any SSH command via this utility.

17.8.3 Output parsing

Output returned by sendline() is a tuple of strings representing the stdout and the stderr respectively. In the toy example shown we simply scrape the output and convert it to a python dictionary, as shown in the parse method. You can tailor this method to match your parsing logic.

17.8.4 Connection teardown

The shutdown method is responsible for calling the close_connection() method of SSHConnection class. This ends the SSH connection to the server.

For more information please refer to class SSHConnection.

Salt Proxy Minion SSH End-to-End Example

The following is walkthrough that documents how to run a sample SSH service and configure one or more proxy minions to talk to and control it.

1. This walkthrough uses a custom SSH shell to provide an end to end example. Any other shells can be used too.

2. Setup the proxy command shell as shown https://github.com/saltstack/salt-contrib/tree/master/proxyminion_ssh_example

Now, configure your salt-proxy.

1. Edit /etc/salt/proxy and add an entry for your master's location

```
master: localhost
multiprocessing: False
```

2. On your salt-master, ensure that pillar is configured properly. Select an ID for your proxy (in this example we will name the proxy with the letter 'p' followed by the port the proxy is answering on). In your pillar topfile, place an entry for your proxy:

```
base:
  'p8000':
    - p8000
```

This says that Salt's pillar should load some values for the proxy p8000 from the file /srv/pillar/p8000.sls (if you have not changed your default pillar_roots)

3. In the pillar root for your base environment, create the p8000.sls file with the following contents:

```
proxy:
  proxytype: ssh_sample
  host: saltyVM
  username: salt
  password: badpass
```
4. Make sure your salt-master is running.

5. Start the salt-proxy in debug mode

   ```
salt-proxy --proxyid=p8000 -l debug
   ```

6. Accept your proxy's key on your salt-master

   ```
salt-key -y -a p8000
   The following keys are going to be accepted:
   Unaccepted Keys:
   p8000
   Key for minion p8000 accepted.
   ```

7. Now you should be able to run commands on your proxy.

   ```
salt p8000 pkg.list_pkgs
   ```

8. The SSH shell implements a degenerately simple pkg. To "install" a package, use a standard `pkg.install`. If you pass `==` and a version number after the package name then the service will parse that and accept that as the package's version.

New in version 2015.8.3.

**Proxy Minion Beacon**

The salt proxy beacon is meant to facilitate configuring multiple proxies on one or many minions. This should simplify configuring and managing multiple salt-proxy processes.

1. On your salt-master, ensure that pillar is configured properly. Select an ID for your proxy (in this example we will name the proxy 'p8000'). In your pillar topfile, place an entry for your proxy:

   ```
   base:
   'p8000':
   - p8000
   ```

This says that Salt's pillar should load some values for the proxy p8000 from the file `/srv/pillar/p8000.sls` (if you have not changed your default pillar_roots)

2. In the pillar root for your base environment, create the p8000.sls file with the following contents:

   ```
   proxy:
   # set proxitype for your proxymodule
   proxitype: ssh_sample
   host: saltyVM
   username: salt
   password: badpass
   ```

This should complete the proxy setup for p8000

3. Configure the salt_proxy beacon

   ```
   beacons:
   salt_proxy:
   - proxies:
     p8000: {}
     p8001: {}
   ```
Once this beacon is configured it will automatically start the salt-proxy process. If the salt-proxy process is terminated the beacon will re-start it.

4. Accept your proxy's key on your salt-master

```
salt-key -y -a p8000
The following keys are going to be accepted:
Unaccepted Keys:
p8000
Key for minion p8000 accepted.
```

5. Now you should be able to run commands on your proxy.

```
salt p8000 pkg.list_pkgs
```

New in version 2015.8.2.

**Proxy Minion States**

Salt proxy state can be used to deploy, configure and run a salt-proxy instance on your minion. Configure proxy settings on the master side and the state configures and runs salt-proxy on the remote end.

1. On your salt-master, ensure that pillar is configured properly. Select an ID for your proxy (in this example we will name the proxy 'p8000'). In your pillar topfile, place an entry for your proxy:

```
base:
  'p8000':
    - p8000
```

This says that Salt's pillar should load some values for the proxy p8000 from the file /srv/pillar/p8000.sls (if you have not changed your default pillar_roots)

2. In the pillar root for your base environment, create the p8000.sls file with the following contents:

```
proxy:
  # set proxatype for your proxymodule
  proxotype: ssh_sample
  host: saltyVM
  username: salt
  password: badpass
```

3. Create the following state in your state tree (let's name it salt_proxy.sls)

```
salt-proxy-configure:
  salt_proxy.configure_proxy:
    - proxynname: p8000
    - start: True # start the process if it isn't running
```

4. Make sure your salt-master and salt-minion are running.

5. Run the state salt_proxy on the minion where you want to run salt-proxy

Example using state.sls to configure and run salt-proxy

```
# salt device_minion state.sls salt_proxy
```

This starts salt-proxy on device_minion

6. Accept your proxy's key on your salt-master
7. Now you should be able to run commands on your proxy.

```
salt p8000 pkg.list_pkgs
```
Network automation is a continuous process of automating the configuration, management and operations of a computer network. Although the abstraction could be compared with the operations on the server side, there are many particular challenges, the most important being that a network device is traditionally closed hardware able to run proprietary software only. In other words, the user is not able to install the salt-minion package directly on a traditional network device. For these reasons, most network devices can be controlled only remotely via proxy minions or using the Salt SSH. However, there are also vendors producing whitebox equipment (e.g. Arista, Cumulus) or others that have moved the operating system in the container (e.g. Cisco NX-OS, Cisco IOS-XR), allowing the salt-minion to be installed directly on the platform.

18.1 New in Carbon (2016.11)

The methodologies for network automation have been introduced in 2016.11.0. Network automation support is based on proxy minions.
- NAPALM proxy
- Junos proxy
- Cisco NXOS
- Cisco NOS

18.2 NAPALM

NAPALM (Network Automation and Programmability Abstraction Layer with Multivendor support) is an opensourced Python library that implements a set of functions to interact with different router vendor devices using a unified API. Being vendor-agnostic simplifies operations, as the configuration and interaction with the network device does not rely on a particular vendor.
Beginning with 2017.7.0, the NAPALM modules have been transformed so they can run in both proxy and regular minions. That means, if the operating system allows, the salt-minion package can be installed directly on the network gear. The interface between the network operating system and Salt in that case would be the corresponding NAPALM sub-package.

For example, if the user installs the salt-minion on a Arista switch, the only requirement is **napalm-eos**.

The following modules are available in 2017.7.0:

- **NAPALM grains**
- **NET execution module** - Networking basic features
- **NTP execution module**
- **BGP execution module**
- **Routes execution module**
- **SNMP execution module**
- **Users execution module**
- **Probes execution module**
- **NTP peers management state**
- **SNMP configuration management state**
- **Users management state**

  - **Netconfig state module** - Manage the configuration of network devices using arbitrary templates and the Salt-specific advanced templating methodologies.

  - **Network ACL execution module** - Generate and load ACL (firewall) configuration on network devices.
- **Network ACL state** - Manage the firewall configuration. It only requires writing the pillar structure correctly!

- **NAPALM YANG execution module** - Parse, generate and load native device configuration in a standard way, using the OpenConfig/IETF models. This module contains also helpers for the states.

- **NAPALM YANG state module** - Manage the network device configuration according to the YANG models (OpenConfig or IETF).

- **NET finder** - Runner to find details easily and fast. It’s smart enough to know what you are looking for. It will search in the details of the network interfaces, IP addresses, MAC address tables, ARP tables and LLDP neighbors.

- **BGP finder** - Runner to search BGP neighbors details.

- **NAPALM syslog** - Engine to import events from the napalm-logs library into the Salt event bus. The events are based on the syslog messages from the network devices and structured following the OpenConfig/IETF YANG models.

- **NAPALM Helpers** - Generic helpers for NAPALM-related operations. For example, the Compliance report function can be used inside the state modules to compare the expected and the existing configuration.

### 18.2.1 Getting started

Install NAPALM - follow the notes and check the platform-specific dependencies.

Salt’s Pillar system is ideally suited for configuring proxy-minions (though they can be configured in /etc/salt/proxy as well). Proxies can either be designated via a pillar file in pillar_roots, or through an external pillar. External pillars afford the opportunity for interfacing with a configuration management system, database, or other knowledgeable system that may already contain all the details of proxy targets. To use static files in pillar_roots, pattern your files after the following examples:

/etc/salt/pillar/top.sls

```
base:
    router1:
        - router1
    router2:
        - router2
    switch1:
        - switch1
    switch2:
        - switch2
    cpe1:
        - cpe1
```

/etc/salt/pillar/router1.sls

```
proxy:
    proxytype: napalm
    driver: junos
    host: r1.bbone.as1234.net
    username: my_username
    password: my_password
```

/etc/salt/pillar/router2.sls
proxy:
  proxytype: napalm
driver: iosxr
host: r2.bbone.as1234.net
username: my_username
password: my_password
optional_args:
  port: 22022

/etc/salt/pillar/switch1.sls

proxy:
  proxytype: napalm
driver: eos
host: sw1.bbone.as1234.net
username: my_username
password: my_password
optional_args:
  enable_password: my_secret

/etc/salt/pillar/switch2.sls

proxy:
  proxytype: napalm
driver: nxos
host: sw2.bbone.as1234.net
username: my_username
password: my_password

/etc/salt/pillar/cpe1.sls

proxy:
  proxytype: napalm
driver: ios
host: cpe1.edge.as1234.net
username: '
password: '
optional_args:
  use_keys: True
  auto_rollback_on_error: True

18.2.2 CLI examples

Display the complete running configuration on router1:

```bash
$ sudo salt 'router1' net.config source='running'
```

Retrieve the NTP servers configured on all devices:

```bash
$ sudo salt '*' ntp.servers
```

router1:

```
---
comment: 
out: 
  - 1.2.3.4
```
result:
    True
cpe1:
    -----------
    comment:
    out:
        - 1.2.3.4
    result:
        True
switch2:
    -----------
    comment:
    out:
        - 1.2.3.4
    result:
        True
router2:
    -----------
    comment:
    out:
        - 1.2.3.4
    result:
        True
switch1:
    -----------
    comment:
    out:
        - 1.2.3.4
    result:
        True

Display the ARP tables on all Cisco devices running IOS-XR 5.3.3:

$ sudo salt -G 'os:iosxr and version:5.3.3' net.arp

Return operational details for interfaces from Arista switches:

$ sudo salt -C 'sw* and os:eos' net.interfaces

Execute traceroute from the edge of the network:

$ sudo salt 'router*' net.traceroute 8.8.8.8 vrf='CUSTOMER1-VRF'

Verbatim display from the CLI of Juniper routers:

$ sudo salt -C 'router* and @os:junos' net.cli 'show version and haiku'

Retrieve the results of the RPM probes configured on Juniper MX960 routers:

$ sudo salt -C 'router* and @os:junos and @model:MX960' probes.results

Return the list of configured users on the CPEs:

$ sudo salt 'cpe*' users.config

Using the BGP finder, return the list of BGP neighbors that are down:
Using the NET finder, determine the devices containing the pattern "PX-1234-LHR" in their interface description:

```bash
$ sudo salt-run net.find PX-1234-LHR
```

### 18.2.3 Cross-platform configuration management example: NTP

Assuming that the user adds the following two lines under `file_roots`:

```yaml
file_roots:
  base:
    - /etc/salt/pillar/
    - /etc/salt/templates/
    - /etc/salt/states/
```

Define the list of NTP peers and servers wanted:

```
/etc/salt/pillar/ntp.sls
```

```yaml
ntp.servers:
  - 1.2.3.4
  - 5.6.7.8
ntp.peers:
  - 10.11.12.13
  - 14.15.16.17
```

Include the new file: for example, if we want to have the same NTP servers on all network devices, we can add the following line inside the `top.sls` file:

```yaml
'*':
  - ntp
```

```
/etc/salt/pillar/top.sls
```

```yaml
base:
  '*':
    - ntp
router1:
  - router1
router2:
  - router2
switch1:
  - switch1
switch2:
  - switch2
cpe1:
  - cpe1
```

Or include only where needed:

```
/etc/salt/pillar/top.sls
```

```yaml
base:
  router1:
    - router1
```

(continues on next page)
Define the cross-vendor template:

/etc/salt/templates/ntp.jinja

{% if grains.vendor|lower == 'cisco' %}
  no ntp
  ntp server {{ server }}
  ntp peer {{ peer }}
{% endif %}

{% elif grains.os|lower == 'junos' %}
  system {
    replace:
    ntp {
      server {{ server }}
      peer {{ peer }}
    }
  }
{% endif %}

Define the SLS state file, making use of the Netconfig state module:

/etc/salt/states/router/ntp.sls

ntp_config_example:
  netconfig.managed:
    - template_name: salt://ntp.jinja
    - peers: {{ pillar.get('ntp.peers', []) | json }}
    - servers: {{ pillar.get('ntp.servers', []) | json }}

Run the state and assure NTP configuration consistency across your multi-vendor network:

$ sudo salt 'router*' state.sls router.ntp

Besides CLI, the state can be scheduled or executed when triggered by a certain event.
18.3 JUNOS

Juniper has developed a Junos specific proxy infrastructure which allows remote execution and configuration management of Junos devices without having to install SaltStack on the device. The infrastructure includes:

- Junos proxy
- Junos execution module
- Junos state module
- Junos syslog engine

The execution and state modules are implemented using junos-eznc (PyEZ). Junos PyEZ is a microframework for Python that enables you to remotely manage and automate devices running the Junos operating system.

18.3.1 Getting started

Install PyEZ on the system which will run the Junos proxy minion. It is required to run Junos specific modules.

```
pip install junos-eznc
```

Next, set the master of the proxy minions.

```
/etc/salt/proxy
master: <master_ip>
```

Add the details of the Junos device. Device details are usually stored in salt pillars. If the you do not wish to store credentials in the pillar, one can setup passwordless ssh.

```
/srv/pillar/vmx_details.sls
proxy:
  proxyp R: junos
  host: <host_ip>
  username: user
  passwd: secret123
```

Map the pillar file to the proxy minion. This is done in the top file.

```
/srv/pillar/top.sls
base:
  vmx:
    - vmx_details
```

Note: Before starting the Junos proxy make sure that netconf is enabled on the Junos device. This can be done by adding the following configuration on the Junos device.

```
set system services netconf ssh
```

Start the salt master.

```
salt-master -l debug
```

Then start the salt proxy.
Once the master and junos proxy minion have started, we can run execution and state modules on the proxy minion. Below are few examples.

### 18.3.2 CLI examples

For detailed documentation of all the junos execution modules refer: [Junos execution module](#)

Display device facts.

```
$ sudo salt 'vmx' junos.facts
```

Refresh the Junos facts. This function will also refresh the facts which are stored in salt grains. (Junos proxy stores Junos facts in the salt grains)

```
$ sudo salt 'vmx' junos.facts_refresh
```

Call an RPC.

```
$ sudo salt 'vmx' junos.rpc 'get-interface-information' '/var/log/interface-info.txt' terse=True
```

Install config on the device.

```
$ sudo salt 'vmx' junos.install_config 'salt://my_config.set'
```

Shutdown the junos device.

```
$ sudo salt 'vmx' junos.shutdown shutdown=True in_min=10
```

### 18.3.3 State file examples

For detailed documentation of all the junos state modules refer: [Junos state module](#)

Executing an RPC on Junos device and storing the output in a file.

```
/srv/salt/rpc.sls
```

```
get-interface-information:
  junos:
    - rpc
    - dest: /home/user/rpc.log
    - interface_name: lo0
```

Lock the junos device, load the configuration, commit it and unlock the device.

```
/srv/salt/load.sls
```

```
lock the config:
  junos.lock

salt://configs/my_config.set:
  junos:
    - install_config
```
According to the device personality install appropriate image on the device.

/srv/salt/image_install.sls

```python
{% if grains['junos_facts']['personality'] == 'MX' %}
salt://images/mx_junos_image.tgz:
    junos:
        - install_os
        - timeout: 100
        - reboot: True
{% elif grains['junos_facts']['personality'] == 'EX' %}
salt://images/ex_junos_image.tgz:
    junos:
        - install_os
        - timeout: 150
{% elif grains['junos_facts']['personality'] == 'SRX' %}
salt://images/srx_junos_image.tgz:
    junos:
        - install_os
        - timeout: 150
{% endif %}
```

**18.3.4 Junos Syslog Engine**

Junos Syslog Engine is a Salt engine which receives data from various Junos devices, extracts event information and forwards it on the master/minion event bus. To start the engine on the salt master, add the following configuration in the master config file. The engine can also run on the salt minion.

/etc/salt/master

```yaml
engines:
- junos_syslog:
    port: xxx
```

For junos_syslog engine to receive events, syslog must be set on the Junos device. This can be done via following configuration:

```bash
set system syslog host <ip-of-the-salt-device> port xxx any any
```
The Salt Virt cloud controller capability was initially added to Salt in version 0.14.0 as an alpha technology. The initial Salt Virt system supports core cloud operations:

- Virtual machine deployment
- Inspection of deployed VMs
- Virtual machine migration
- Network profiling
- Automatic VM integration with all aspects of Salt
- Image Pre-seeding

Many features are currently under development to enhance the capabilities of the Salt Virt systems.

**Note:** It is noteworthy that Salt was originally developed with the intent of using the Salt communication system as the backbone to a cloud controller. This means that the Salt Virt system is not an afterthought, simply a system that took the back seat to other development. The original attempt to develop the cloud control aspects of Salt was a project called butter. This project never took off, but was functional and proves the early viability of Salt to be a cloud controller.

**Warning:** Salt Virt does not work with KVM that is running in a VM. KVM must be running on the base hardware.

### 19.1 Salt Virt Tutorial

A tutorial about how to get Salt Virt up and running has been added to the tutorial section:

*Cloud Controller Tutorial*
19.2 The Salt Virt Runner

The point of interaction with the cloud controller is the virt runner. The virt runner comes with routines to execute specific virtual machine routines.

Reference documentation for the virt runner is available with the runner module documentation:
Virt Runner Reference

19.3 Based on Live State Data

The Salt Virt system is based on using Salt to query live data about hypervisors and then using the data gathered to make decisions about cloud operations. This means that no external resources are required to run Salt Virt, and that the information gathered about the cloud is live and accurate.

19.4 Deploy from Network or Disk

19.4.1 Virtual Machine Disk Profiles

Salt Virt allows for the disks created for deployed virtual machines to be finely configured. The configuration is a simple data structure which is read from the config.option function, meaning that the configuration can be stored in the minion config file, the master config file, or the minion's pillar.

This configuration option is called virt.disk. The default virt.disk data structure looks like this:

```
virt.disk:
    default:
        - system:
            size: 8192
            format: qcow2
            model: virtio
```

Note: The format and model does not need to be defined, Salt will default to the optimal format used by the underlying hypervisor, in the case of kvm this it is qcow2 and virtio.

This configuration sets up a disk profile called default. The default profile creates a single system disk on the virtual machine.

Define More Profiles

Many environments will require more complex disk profiles and may require more than one profile, this can be easily accomplished:

```
virt.disk:
    default:
        - system:
            size: 8192
    database:
        - system:
            size: 8192
```
This configuration allows for one of three profiles to be selected, allowing virtual machines to be created with different storage needs of the deployed vm.

### 19.4.2 Virtual Machine Network Profiles

Salt Virt allows for the network devices created for deployed virtual machines to be finely configured. The configuration is a simple data structure which is read from the `config.option` function, meaning that the configuration can be stored in the minion config file, the master config file, or the minion’s pillar.

This configuration option is called `virt:nic`. By default the `virt:nic` option is empty but defaults to a data structure which looks like this:

```yaml
virt:
  nic:
    default:
      eth0:
        bridge: br0
        model: virtio
```

**Note:** The model does not need to be defined, Salt will default to the optimal model used by the underlying hypervisor, in the case of kvm this model is `virtio`

This configuration sets up a network profile called default. The default profile creates a single Ethernet device on the virtual machine that is bridged to the hypervisor’s `br0` interface. This default setup does not require setting up the `virt:nic` configuration, and is the reason why a default install only requires setting up the `br0` bridge device on the hypervisor.

#### Define More Profiles

Many environments will require more complex network profiles and may require more than one profile, this can be easily accomplished:

```yaml
virt:
  nic:
    dual:
      eth0:
        bridge: service_br
      eth1:
        bridge: storage_br
    single:
      eth0:
        bridge: service_br
    triple:
      eth0:
```

(continues on next page)
This configuration allows for one of six profiles to be selected, allowing virtual machines to be created which attach to different network depending on the needs of the deployed vm.
20.1 salt-api

20.1.1 salt-api

Start interfaces used to remotely connect to the salt master

Synopsis

```
salt-api
```

Description

The Salt API system manages network api connectors for the Salt Master

Options

```
--version
  Print the version of Salt that is running.

--versions-report
  Show program's dependencies and version number, and then exit

-h, --help
  Show the help message and exit

-c CONFIG_DIR, --config-dir=CONFIG_dir
  The location of the Salt configuration directory. This directory contains the configuration files for Salt master and minions. The default location on most systems is /etc/salt.

-d, --daemon
  Run the salt-api as a daemon

--pid-file=PIDFILE
  Specify the location of the pidfile. Default: /var/run/salt-api.pid
```
Logging Options

Logging options which override any settings defined on the configuration files.

-\(-l\) LOG\_LEVEL, --log-level=LOG\_LEVEL
  Console logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

--log-file=LOG\_FILE

--log-file-level=LOG\_LEVEL\_LOGFILE
  Logfile logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

See also

salt-api(7) salt(7) salt-master(1)

20.2 salt-call

20.2.1 salt-call

Synopsis

salt-call [options]

Description

The salt-call command is used to run module functions locally on a minion instead of executing them from the master. Salt-call is used to run a Standalone Minion, and was originally created for troubleshooting.

The Salt Master is contacted to retrieve state files and other resources during execution unless the --local option is specified.

Note: salt-call commands execute from the current user's shell context, while salt commands execute from the system's default context.

Options

--version
  Print the version of Salt that is running.

--versions-report
  Show program's dependencies and version number, and then exit

-h, --help
  Show the help message and exit
-c CONFIG_DIR, --config-dir=CONFIG_dir
    The location of the Salt configuration directory. This directory contains the configuration files for Salt master and minions. The default location on most systems is /etc/salt.

--hard-crash
    Raise any original exception rather than exiting gracefully Default: False

g, --grains
    Return the information generated by the Salt grains

-m MODULE_DIRS, --module-dirs=MODULE_DIRS
    Specify an additional directory to pull modules from. Multiple directories can be provided by passing -m /--module-dirs multiple times.

-d, --doc, --documentation
    Return the documentation for the specified module or for all modules if none are specified

--master=MASTER
    Specify the master to use. The minion must be authenticated with the master. If this option is omitted, the master options from the minion config will be used. If multi masters are set up the first listed master that responds will be used.

--return RETURNER
    Set salt-call to pass the return data to one or many returner interfaces. To use many returner interfaces specify a comma delimited list of returners.

--local
    Run salt-call locally, as if there was no master running.

--file-root=FILE_ROOT
    Set this directory as the base file root.

--pillar-root=PILLAR_ROOT
    Set this directory as the base pillar root.

--retcode-passthrough
    Exit with the salt call retcode and not the salt binary retcode

--metadata
    Print out the execution metadata as well as the return. This will print out the outputter data, the return code, etc.

--id=ID
    Specify the minion id to use. If this option is omitted, the id option from the minion config will be used.

--skip-grains
    Do not load grains.

--refresh-grains-cache
    Force a refresh of the grains cache
Logging Options

Logging options which override any settings defined on the configuration files.

-l LOG_LEVEL, --log-level=LOG_LEVEL
  Console logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

--log-file=LOG_FILE
  Log file path. Default: /var/log/salt/minion.

--log-file-level=LOG_LEVEL_LOGFILE
  Logfile logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

Output Options

--out
  Pass in an alternative outputter to display the return of data. This outputter can be any of the available outputters:

  highstate, json, key, overstatestage, pprint, raw, txt, yaml, and many others.

  Some outputters are formatted only for data returned from specific functions. If an outputter is used that does not support the data passed into it, then Salt will fall back on the pprint outputter and display the return data using the Python pprint standard library module.

--out-indent OUTPUT_INDENT, --output-indent OUTPUT_INDENT
  Print the output indented by the provided value in spaces. Negative values disable indentation. Only applicable in outputters that support indentation.

--out-file=OUTPUT_FILE, --output-file=OUTPUT_FILE
  Write the output to the specified file.

--out-file-append, --output-file-append
  Append the output to the specified file.

--no-color
  Disable all colored output

--force-color
  Force colored output

Note: When using colored output the color codes are as follows:

green denotes success, red denotes failure, blue denotes changes and success and yellow denotes a expected future change in configuration.

--state-output=STATE_OUTPUT, --state_output=STATE_OUTPUT
  Override the configured state_output value for minion output. One of 'full', 'terse', 'mixed', 'changes' or 'filter'. Default: 'none'.

--state-verbose=STATEVerbose, --state_verbose=STATEVerbose
  Override the configured state_verbose value for minion output. Set to True or False. Default: none.
20.3.1 salt

Synopsis

salt '*' [ options ] sys.doc
salt -E '.*' [ options ] sys.doc cmd
salt -G 'os:Arch.*' [ options ] test.version
salt -C 'G@os:Arch.* and webserv*' or G@kernel:FreeBSD' [ options ] test.version

Description

Salt allows for commands to be executed across a swath of remote systems in parallel. This means that remote systems can be both controlled and queried with ease.

Options

--version
   Print the version of Salt that is running.

--versions-report
   Show program's dependencies and version number, and then exit

-h, --help
   Show the help message and exit

-c CONFIG_DIR, --config-dir=CONFIG_dir
   The location of the Salt configuration directory. This directory contains the configuration files for Salt master and minions. The default location on most systems is /etc/salt.

-t TIMEOUT, --timeout=TIMEOUT
   The timeout in seconds to wait for replies from the Salt minions. The timeout number specifies how long the command line client will wait to query the minions and check on running jobs. Default: 5

-s, --static
   By default as of version 0.9.8 the salt command returns data to the console as it is received from minions, but previous releases would return data only after all data was received. Use the static option to only return the data with a hard timeout and after all minions have returned. Without the static option, you will get a separate JSON string per minion which makes JSON output invalid as a whole.

--async
   Instead of waiting for the job to run on minions only print the job id of the started execution and complete.

--subset=SUBSET
   Execute the routine on a random subset of the targeted minions. The minions will be verified that they have the named function before executing. The SUBSET argument is the count of the minions to target.
-v VERBOSE, --verbose
Turn on verbosity for the salt call, this will cause the salt command to print out extra data like the job id.

--hide-timeout
Instead of showing the return data for all minions. This option prints only the online minions which could be reached.

-b BATCH, --batch-size=BATCH
Instead of executing on all targeted minions at once, execute on a progressive set of minions. This option takes an argument in the form of an explicit number of minions to execute at once, or a percentage of minions to execute on.

-a EAUTH, --auth=EAUTH
Pass in an external authentication medium to validate against. The credentials will be prompted for. The options are auto, keystone, ldap, and pam. Can be used with the -T option.

-T, --make-token
Used in conjunction with the -a option. This creates a token that allows for the authenticated user to send commands without needing to re-authenticate.

--return=RE Turnerer
Choose an alternative returner to call on the minion, if an alternative returner is used then the return will not come back to the command line but will be sent to the specified return system. The options are carbon, cassandra, couchbase, couchdb, elasticsearch, etcd, hipchat, local, local_cache, memcache, mongo, mysql, odbc, postgres, redis, sentry, slack, smtp, sentry, sms, sql, memcache, and xmpp.

-d, --doc, --documentation
Return the documentation for the module functions available on the minions

--args-separator=ARGS_SEPARATOR
Set the special argument used as a delimiter between command arguments of compound commands. This is useful when one wants to pass commas as arguments to some of the commands in a compound command.

Logging Options

Logging options which override any settings defined on the configuration files.

-l LOG_LEVEL, --log-level=LOG_LEVEL
Console logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

--log-file=LOG_FILE

--log-file-level=LOG_LEVEL_LOGFILE
Log file logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.
Target Selection

The default matching that Salt utilizes is shell-style globbing around the minion id. See https://docs.python.org/3/library/fnmatch.html#module-fnmatch.

- **-E, --pcre**  
  The target expression will be interpreted as a PCRE regular expression rather than a shell glob.

- **-L, --list**  
  The target expression will be interpreted as a comma-delimited list; example: server1.foo.bar,server2.foo.bar.example7.quo.qux

- **-G, --grain**  
  The target expression matches values returned by the Salt grains system on the minions. The target expression is in the format of `<grain value>:<glob expression>`; example: `os:Arch*`
  
  This was changed in version 0.9.8 to accept glob expressions instead of regular expression. To use regular expression matching with grains, use the --grain-pcre option.

- **--grain-pcre**  
  The target expression matches values returned by the Salt grains system on the minions. The target expression is in the format of `<grain value>:<regular expression>`; example: `os:Arch.*`

- **-N, --nodegroup**  
  Use a predefined compound target defined in the Salt master configuration file.

- **-R, --range**  
  Instead of using shell globs to evaluate the target, use a range expression to identify targets. Range expressions look like %cluster.
  
  Using the Range option requires that a range server is set up and the location of the range server is referenced in the master configuration file.

- **-C, --compound**  
  Utilize many target definitions to make the call very granular. This option takes a group of targets separated by and or or. The default matcher is a glob as usual. If something other than a glob is used, preface it with the letter denoting the type; example: `webserv* and G@os:Debian or E@db*` Make sure that the compound target is encapsulated in quotes.

- **-I, --pillar**  
  Instead of using shell globs to evaluate the target, use a pillar value to identify targets. The syntax for the target is the pillar key followed by a glob expression: "role:production*"

- **-S, --ipcidr**  
  Match based on Subnet (CIDR notation) or IPv4 address.

Output Options

- **--out**  
  Pass in an alternative outputer to display the return of data. This outputer can be any of the available outputters:

  highstate, json, key, overstatestage, pprint, raw, txt, yaml, and many others.

  Some outputters are formatted only for data returned from specific functions. If an outputter is used that does not support the data passed into it, then Salt will fall back on the pprint outputter and display the return data using the Python pprint standard library module.
**--out-indent** OUTPUT_INDENT, **--output-indent** OUTPUT_INDENT
Print the output indented by the provided value in spaces. Negative values disable indentation. Only applicable in outputters that support indentation.

**--out-file**=OUTPUT_FILE, **--output-file**=OUTPUT_FILE
Write the output to the specified file.

**--out-file-append**, **--output-file-append**
Append the output to the specified file.

**--no-color**
Disable all colored output

**--force-color**
Force colored output

---

*Note:* When using colored output the color codes are as follows:
green denotes success, red denotes failure, blue denotes changes and success and yellow denotes a expected future change in configuration.

**--state-output**=STATE_OUTPUT, **--state_output**=STATE_OUTPUT
Override the configured state_output value for minion output. One of 'full', 'terse', 'mixed', 'changes' or 'filter'. Default: 'none'.

**--state-verbose**=STATE_VERBOSE, **--state_verbose**=STATE_VERBOSE
Override the configured state_verbose value for minion output. Set to True or False. Default: none.

*Note:* If using **--out=json**, you will probably want **--static** as well. Without the static option, you will get a separate JSON string per minion which makes JSON output invalid as a whole. This is due to using an iterative outputter. So if you want to feed it to a JSON parser, use **--static** as well.

---

See also

salt(7) salt-master(1) salt-minion(1)

## 20.4 salt-cloud

### 20.5 salt-cp

### 20.5.1 salt-cp

Copy a file or files to one or more minions
Synopsis

```
salt-cp '*' [ options ] SOURCE [SOURCE2 SOURCE3 ...] DEST
salt-cp -E '.*' [ options ] SOURCE [SOURCE2 SOURCE3 ...] DEST
salt-cp -G 'os:Arch.*' [ options ] SOURCE [SOURCE2 SOURCE3 ...] DEST
```

Description

salt-cp copies files from the master to all of the Salt minions matched by the specified target expression.

**Note:** salt-cp uses Salt's publishing mechanism. This means the privacy of the contents of the file on the wire is completely dependent upon the transport in use. In addition, if the master or minion is running with debug logging, the contents of the file will be logged to disk.

In addition, this tool is less efficient than the Salt fileserver when copying larger files. It is recommended to instead use `cp.get_file` to copy larger files to minions. However, this requires the file to be located within one of the fileservers directories.

Changed in version 2016.3.7, 2016.11.6, 2017.7.0: Compression support added, disable with `-n`. Also, if the destination path ends in a path separator (i.e. `/`, or \ on Windows, the destination will be assumed to be a directory. Finally, recursion is now supported, allowing for entire directories to be copied.

Changed in version 2016.11.7, 2017.7.2: Reverted back to the old copy mode to preserve backward compatibility. The new functionality added in 2016.6.6 and 2017.7.0 is now available using the `-C` or `--chunked` CLI arguments. Note that compression, recursive copying, and support for copying large files is only available in chunked mode.

Options

--version

Print the version of Salt that is running.

--version-report

Show program's dependencies and version number, and then exit

-h, --help

Show the help message and exit

-c CONFIG_DIR, --config-dir=CONFIG_dir

The location of the Salt configuration directory. This directory contains the configuration files for Salt master and minions. The default location on most systems is `/etc/salt`.

-t TIMEOUT, --timeout=TIMEOUT

The timeout in seconds to wait for replies from the Salt minions. The timeout number specifies how long the command line client will wait to query the minions and check on running jobs. Default: 5
Logging Options

Logging options which override any settings defined on the configuration files.

-\l \ LOG\_LEVEL, --log-level=LOG\_LEVEL
  Console logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

--log-file=LOG\_FILE

--log-file-level=LOG\_LEVEL\_LOGFILE
  Logfile logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

Target Selection

The default matching that Salt utilizes is shell-style globbing around the minion id. See https://docs.python.org/3/library/fnmatch.html#module-fnmatch.

-E, --pcre
  The target expression will be interpreted as a PCRE regular expression rather than a shell glob.

-L, --list
  The target expression will be interpreted as a comma-delimited list; example: server1.foo.bar,server2.foo.bar,example7.quo.qux

-G, --grain
  The target expression matches values returned by the Salt grains system on the minions. The target expression is in the format of '<grain value>:<glob expression>'; example: 'os:Arch*'

  This was changed in version 0.9.8 to accept glob expressions instead of regular expression. To use regular expression matching with grains, use the --grain-pcre option.

--grain-pcre
  The target expression matches values returned by the Salt grains system on the minions. The target expression is in the format of '<grain value>:< regular expression>'; example: 'os:Arch.*'

-N, --nodegroup
  Use a predefined compound target defined in the Salt master configuration file.

-R, --range
  Instead of using shell globs to evaluate the target, use a range expression to identify targets. Range expressions look like %cluster.

  Using the Range option requires that a range server is set up and the location of the range server is referenced in the master configuration file.

-C, --chunked
  Use new chunked mode to copy files. This mode supports large files, recursive directories copying and compression.

  New in version 2016.11.7,2017.7.2.

-n, --no-compression
  Disable gzip compression in chunked mode.

  New in version 2016.3.7,2016.11.6,2017.7.0.
See also

`salt(1) salt-master(1) salt-minion(1)`

20.6 salt-extend

20.6.1 salt-extend

A utility to generate extensions to the Salt source-code. This is used for:

- Adding new execution modules, state modules
- Adding unit tests to existing modules
- Adding integration tests to existing modules

Synopsis

```
salt-extend --help
```

Description

`salt-extend` is a templating tool for extending SaltStack. If you’re looking to add a module to SaltStack, then the `salt-extend` utility can guide you through the process.

You can use Salt Extend to quickly create templated modules for adding new behaviours to some of the module subsystems within Salt.

Salt Extend takes a template directory and merges it into a SaltStack source code directory.

See also: Salt Extend.

Options

```
--extension, -e
  The extension type you want to develop, e.g. module, module_unit, state

--salt-directory, -o
  The path to the salt installation, defaults to .

--name, -n
  The module name for the new module

--description, -d
  A description of the new extension

--no-merge
  Don’t merge the new module into the Salt source directory specified by --salt-directory, save to a temporary directory and print the directory path

--debug
  Print debug messages to stdout
```
Salt Documentation, Release 3002.5

See also

salt-api(1) salt-call(1) salt-cloud(1) salt-cp(1) salt-key(1) salt-main(1)
salt-master(1) salt-minion(1) salt-run(1) salt-ssh(1) salt-syndic(1)

20.7 salt-key

20.7.1 salt-key

Synopsis

salt-key [ options ]

Description

Salt-key executes simple management of Salt server public keys used for authentication.

On initial connection, a Salt minion sends its public key to the Salt master. This key must be accepted using the salt-key command on the Salt master.

Salt minion keys can be in one of the following states:

- **unaccepted**: key is waiting to be accepted.
- **accepted**: key was accepted and the minion can communicate with the Salt master.
- **rejected**: key was rejected using the salt-key command. In this state the minion does not receive any communication from the Salt master.
- **denied**: key was rejected automatically by the Salt master. This occurs when a minion has a duplicate ID, or when a minion was rebuilt or had new keys generated and the previous key was not deleted from the Salt master. In this state the minion does not receive any communication from the Salt master.

To change the state of a minion key, use -d to delete the key and then accept or reject the key.

Options

--version
Print the version of Salt that is running.

--versions-report
Show program's dependencies and version number, and then exit

-h, --help
Show the help message and exit

-c CONFIG_DIR, --config-dir=CONFIG_dir
The location of the Salt configuration directory. This directory contains the configuration files for Salt master and minions. The default location on most systems is /etc/salt.

-u USER, --user=USER
Specify user to run salt-key

--hard-crash
Raise any original exception rather than exiting gracefully. Default is False.
-q, --quiet
Suppress output

-y, --yes
Answer 'Yes' to all questions presented, defaults to False

--rotate-aes-key=ROTATE_AES_KEY
Setting this to False prevents the master from refreshing the key session when keys are deleted or rejected, this lowers the security of the key deletion/rejection operation. Default is True.

Logging Options

Logging options which override any settings defined on the configuration files.

--log-file=LOG_FILE
Log file path. Default: /var/log/salt/minion.

--log-file-level=LOG_LEVEL_LOGFILE
Logfile logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

Output Options

--out
Pass in an alternative outputer to display the return of data. This outputer can be any of the available outputters:

    highstate, json, key, overstatestage, pprint, raw, txt, yaml, and many others.

Some outputters are formatted only for data returned from specific functions. If an outputer is used that does not support the data passed into it, then Salt will fall back on the pprint outputer and display the return data using the Python pprint standard library module.

--out-indent OUTPUT_INDENT, --output-indent OUTPUT_INDENT
Print the output indented by the provided value in spaces. Negative values disable indentation. Only applicable in outputters that support indentation.

--out-file=OUTPUT_FILE, --output-file=OUTPUT_FILE
Write the output to the specified file.

--out-file-append, --output-file-append
Append the output to the specified file.

--no-color
Disable all colored output

--force-color
Force colored output

Note: When using colored output the color codes are as follows:

green denotes success, red denotes failure, blue denotes changes and success and yellow denotes a expected future change in configuration.

--state-output=STATE_OUTPUT, --state_output=STATE_OUTPUT
Override the configured state_output value for minion output. One of 'full', 'terse', 'mixed', 'changes' or 'filter'. Default: 'none'.
--state-verbose=STATE_VERBOSE, --state_verbose=STATEVerbose
Override the configured state_verbose value for minion output. Set to True or False. Default: none.

Actions

-l ARG, --list=ARG
List the public keys. The args pre, un, and unaccepted will list unaccepted/unsigned keys. acc or accepted will list accepted/signed keys. rej or rejected will list rejected keys. Finally, all will list all keys.

-L, --list-all
List all public keys. (Deprecated: use --list all)

-a ACCEPT, --accept=ACCEPT
Accept the specified public key (use --include-all to match rejected keys in addition to pending keys). Globs are supported.

-A, --accept-all
Accepts all pending keys.

-r REJECT, --reject=REJECT
Reject the specified public key (use --include-all to match accepted keys in addition to pending keys). Globs are supported.

-R, --reject-all
Rejects all pending keys.

--include-all
Include non-pending keys when accepting/rejecting.

-p PRINT, --print=PRINT
Print the specified public key.

-P, --print-all
Print all public keys

-d DELETE, --delete=DELETE
Delete the specified key. Globs are supported.

-D, --delete-all
Delete all keys.

-f FINGER, --finger=FINGER
Print the specified key’s fingerprint.

-F, --finger-all
Print all keys’ fingerprints.

Key Generation Options

--gen-keys=GEN_KEYS
Set a name to generate a keypair for use with salt

--gen-keys-dir=GEN_KEYS_DIR
Set the directory to save the generated keypair. Only works with ‘gen_keys_dir’ option; default is the current directory.
--keysize=KEYSIZE
Set the keysize for the generated key, only works with the '--gen-keys' option, the key size must be 2048 or higher, otherwise it will be rounded up to 2048. The default is 2048.

--gen-signature
Create a signature file of the master's public-key named master_pubkey_signature. The signature can be sent to a minion in the master's auth-reply and enables the minion to verify the master's public-key cryptographically. This requires a new signing-key-pair which can be auto-created with the --auto-create parameter.

--priv=PRIV
The private-key file to create a signature with

--signature-path=SIGNATURE_PATH
The path where the signature file should be written

--pub=PUB
The public-key file to create a signature for

--auto-create
Auto-create a signing key-pair if it does not yet exist

See also

salt(7) salt-master(1) salt-minion(1)

20.8 salt-master

20.8.1 salt-master

The Salt master daemon, used to control the Salt minions

Synopsis

salt-master [ options ]

Description

The master daemon controls the Salt minions

Options

--version
Print the version of Salt that is running.

--versions-report
Show program’s dependencies and version number, and then exit

-h, --help
Show the help message and exit

-c CONFIG_DIR, --config-dir=CONFIG_dir
The location of the Salt configuration directory. This directory contains the configuration files for Salt master and minions. The default location on most systems is /etc/salt.
-u USER, --user=USER
   Specify user to run salt-master

-d, --daemon
   Run salt-master as a daemon

--pid-file PIDFILE
   Specify the location of the pidfile. Default: /var/run/salt-master.pid

Logging Options

Logging options which override any settings defined on the configuration files.

-\ l \ LOG\_LEVEL, --log-level=LOG\_LEVEL
   Console logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

--log-file=LOG\_FILE

--log-file-level=LOG\_LEVEL\_LOGFILE
   Logfile logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

See also

salt(1) salt(7) salt-minion(1)

20.9 salt-minion

20.9.1 salt-minion

The Salt minion daemon, receives commands from a remote Salt master.

Synopsis

salt-minion [ options ]

Description

The Salt minion receives commands from the central Salt master and replies with the results of said commands.
Options

--version
    Print the version of Salt that is running.

--versions-report
    Show program's dependencies and version number, and then exit

-h, --help
    Show the help message and exit

-c CONFIG_DIR, --config-dir=CONFIG_dir
    The location of the Salt configuration directory. This directory contains the configuration files for Salt master and minions. The default location on most systems is /etc/salt.

-u USER, --user=USER
    Specify user to run salt-minion

-d, --daemon
    Run salt-minion as a daemon

--pid-file PIDFILE
    Specify the location of the pidfile. Default: /var/run/salt-minion.pid

Logging Options

Logging options which override any settings defined on the configuration files.

-l LOG_LEVEL, --log-level=LOG_LEVEL
    Console logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

--log-file=LOG_FILE
    Log file path. Default: /var/log/salt/minion.

--log-file-level=LOG_LEVEL_LOGFILE
    Logfile logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

See also

salt(1) salt(7) salt-master(1)

20.10 salt-proxy

20.10.1 salt-proxy

Receives commands from a Salt master and proxies these commands to devices that are unable to run a full minion.
Synopsis

salt-proxy [ options ]

Description

The Salt proxy minion receives commands from a Salt master, transmits appropriate commands to devices that are unable to run a minion, and replies with the results of said commands.

Options

--proxyid
   The minion id that this proxy will assume. This is required.

--version
   Print the version of Salt that is running.

--versions-report
   Show program’s dependencies and version number, and then exit

-h, --help
   Show the help message and exit

-c CONFIG_DIR, --config-dir=CONFIG_dir
   The location of the Salt configuration directory. This directory contains the configuration files for Salt master and minions. The default location on most systems is /etc/salt.

-u USER, --user=USER
   Specify user to run salt-proxy

-d, --daemon
   Run salt-proxy as a daemon

--pid-file PIDFILE
   Specify the location of the pidfile. Default: /var/run/salt-proxy-<id>.pid

Logging Options

Logging options which override any settings defined on the configuration files.

-l LOG_LEVEL, --log-level=LOG_LEVEL
   Console logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

--log-file=LOG_FILE
   Log file path. Default: /var/log/salt/minion.

--log-file-level=LOG_LEVEL_LOGFILE
   Logfile logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.
See also

salt(1) salt(7) salt-master(1) salt-minion(1)

20.11 salt-run

20.11.1 salt-run

Execute a Salt runner

Synopsis

salt-run RUNNER

Description

salt-run is the frontend command for executing Salt Runners. Salt runners are simple modules used to execute
convenience functions on the master

Options

--version
    Print the version of Salt that is running.

--versions-report
    Show program's dependencies and version number, and then exit

-h, --help
    Show the help message and exit

-c CONFIG_DIR, --config-dir=CONFIG_dir
    The location of the Salt configuration directory. This directory contains the configuration files for Salt master
    and minions. The default location on most systems is /etc/salt.

-t TIMEOUT, --timeout=TIMEOUT
    The timeout in seconds to wait for replies from the Salt minions. The timeout number specifies how long the
    command line client will wait to query the minions and check on running jobs. Default: 1

--hard-crash
    Raise any original exception rather than exiting gracefully. Default is False.

-d, --doc, --documentation
    Display documentation for runners, pass a module or a runner to see documentation on only that mod-
    ule/runner.
Logging Options

Logging options which override any settings defined on the configuration files.

- **-l LOG_LEVEL, --log-level=LOG_LEVEL**  
  Console logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

- **--log-file=LOG_FILE**  

- **--log-file-level=LOG_LEVEL_LOGFILE**  
  Logfile logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

See also

salt(1) salt-master(1) salt-minion(1)

20.12 salt-ssh

20.12.1 salt-ssh

Synopsis

salt-ssh '*' [ options ] sys.doc
salt-ssh -E '*' [ options ] sys.doc cmd

Description

Salt SSH allows for salt routines to be executed using only SSH for transport

Options

- **--version**  
  Print the version of Salt that is running.

- **--versions-report**  
  Show program's dependencies and version number, and then exit

- **-h, --help**  
  Show the help message and exit

- **-c CONFIG_DIR, --config-dir=CONFIG_dir**  
  The location of the Salt configuration directory. This directory contains the configuration files for Salt master and minions. The default location on most systems is /etc/salt.

- **--hard-crash**  
  Raise any original exception rather than exiting gracefully. Default: False.

- **-r, --raw, --raw-shell**  
  Execute a raw shell command.
--roster
Define which roster system to use, this defines if a database backend, scanner, or custom roster system is used. Default is the flat file roster.

--roster-file
Define an alternative location for the default roster file location. The default roster file is called roster and is found in the same directory as the master config file.

New in version 2014.1.0.

--refresh, --refresh-cache
Force a refresh of the master side data cache of the target's data. This is needed if a target's grains have been changed and the auto refresh timeframe has not been reached.

--max-procs
Set the number of concurrent minions to communicate with. This value defines how many processes are opened up at a time to manage connections, the more running process the faster communication should be, default is 25.

--extra-filerefs=EXTRA_FILEREFS
Pass in extra files to include in the state tarball.

--min-extra-modules=MIN_EXTRA_MODS
One or comma-separated list of extra Python modules to be included into Minimal Salt.

--thin-extra-modules=THIN_EXTRA_MODS
One or comma-separated list of extra Python modules to be included into Thin Salt.

-v, --verbose
Turn on command verbosity, display jid.

-s, --static
Return the data from minions as a group after they all return.

-w, --wipe
Remove the deployment of the salt files when done executing.

-W, --rand-thin-dir
Select a random temp dir to deploy on the remote system. The dir will be cleaned after the execution.

-t, --regen-thin, --thin
Trigger a thin tarball regeneration. This is needed if custom grains/modules/states have been added or updated.

--python2-bin=PYTHON2_BIN
Path to a python2 binary which has salt installed.

--python3-bin=PYTHON3_BIN
Path to a python3 binary which has salt installed.

--jid=JID
Pass a JID to be used instead of generating one.

--pre-flight
Run the ssh_pre_flight script defined in the roster. By default this script will only run if the thin dir does not exist on the target minion. This option will force the script to run regardless of the thin dir existing or not.
Authentication Options

`--priv=SSH_PRIV`
Specify the SSH private key file to be used for authentication.

`--priv-passwd=SSH_PRIV_PASSWD`
Specify the SSH private key file's passphrase if need be.

`-i, --ignore-host-keys`
By default ssh host keys are honored and connections will ask for approval. Use this option to disable StrictHostKeyChecking.

`--no-host-keys`
Fully ignores ssh host keys which by default are honored and connections would ask for approval. Useful if the host key of a remote server has changed and would still error with --ignore-host-keys.

`--user=SSH_USER`
Set the default user to attempt to use when authenticating.

`--passwd`
Set the default password to attempt to use when authenticating.

`--askpass`
Interactively ask for the SSH password with no echo - avoids password in process args and stored in history.

`--key-deploy`
Set this flag to attempt to deploy the authorized ssh key with all minions. This combined with --passwd can make initial deployment of keys very fast and easy.

`--identities-only`
Use the only authentication identity files configured in the ssh_config files. See IdentitiesOnly flag in man ssh_config.

`--sudo`
Run command via sudo.

Scan Roster Options

`--scan-ports=SSH_SCAN_PORTS`
Comma-separated list of ports to scan in the scan roster.

`--scan-timeout=SSH_SCAN_TIMEOUT`
Scanning socket timeout for the scan roster.

Logging Options

Logging options which override any settings defined on the configuration files.

`-l LOG_LEVEL, --log-level=LOG_LEVEL`
Console logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

`--log-file=LOG_FILE`

`--log-file-level=LOG_LEVEL_LOGFILE`
Logfile logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.
Target Selection

The default matching that Salt utilizes is shell-style globbing around the minion id. See [https://docs.python.org/3/library/fnmatch.html#module-fnmatch](https://docs.python.org/3/library/fnmatch.html#module-fnmatch).

-E, --pcre
The target expression will be interpreted as a PCRE regular expression rather than a shell glob.

Output Options

--out
Pass in an alternative outputer to display the return of data. This outputer can be any of the available outputters:

```
highstate, json, key, overstatestage, pprint, raw, txt, yaml, and many others.
```

Some outputters are formatted only for data returned from specific functions. If an outputer is used that does not support the data passed into it, then Salt will fall back on the pprint outputer and display the return data using the Python pprint standard library module.

--out-indent OUTPUT_INDENT, --output-indent OUTPUT_INDENT
Print the output indented by the provided value in spaces. Negative values disable indentation. Only applicable in outputters that support indentation.

--out-file=OUTPUT_FILE, --output-file=OUTPUT_FILE
Write the output to the specified file.

--out-file-append, --output-file-append
Append the output to the specified file.

--no-color
Disable all colored output

--force-color
Force colored output

Note: When using colored output the color codes are as follows:

green denotes success, red denotes failure, blue denotes changes and success and yellow denotes a expected future change in configuration.

--state-output=STATE_OUTPUT, --state_output=STATE_OUTPUT
Override the configured state_output value for minion output. One of 'full', 'terse', 'mixed', 'changes' or 'filter'. Default: 'none'.

--state-verbose=STATE_VERBOSE, --state_verbose=STATE_VERBOSE
Override the configured state_verbose value for minion output. Set to True or False. Default: none.

Note: If using --out=json, you will probably want --static as well. Without the static option, you will get a separate JSON string per minion which makes JSON output invalid as a whole. This is due to using an iterative outputer. So if you want to feed it to a JSON parser, use --static as well.
20.13 salt-syndic

20.13.1 salt-syndic

The Salt syndic daemon, a special minion that passes through commands from a higher master

Synopsis

salt-syndic [ options ]

Description

The Salt syndic daemon, a special minion that passes through commands from a higher master.

Options

--version
Print the version of Salt that is running.

--versions-report
Show program's dependencies and version number, and then exit

-h, --help
Show the help message and exit

-c CONFIG_DIR, --config-dir=CONFIG_dir
The location of the Salt configuration directory. This directory contains the configuration files for Salt master and minions. The default location on most systems is /etc/salt.

-u USER, --user=USER
Specify user to run salt-syndic

-d, --daemon
Run salt-syndic as a daemon

--pid-file PIDFILE
Specify the location of the pidfile. Default: /var/run/salt-syndic.pid
Logging Options

Logging options which override any settings defined on the configuration files.

```
-l LOG_LEVEL, --log-level=LOG_LEVEL
  Console logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.
```

```
--log-file=LOG_FILE
```

```
--log-file-level=LOG_LEVEL_LOGFILE
  Logfile logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.
```

See also

```
salt(1) salt-master(1) salt-minion(1)
```

20.14 salt-unity

20.14.1 salt-unity

A unified invocation wrapper around other Salt CLI scripts.

Synopsis

```
salt-unity salt 'x' test.version
```

Description

This script takes an argument which is one of the other Salt CLI scripts and invokes that script.

Options

See also

```
salt-api(1) salt-call(1) salt-cloud(1) salt-cp(1) salt-key(1) salt-main(1)
salt-master(1) salt-minion(1) salt-run(1) salt-ssh(1) salt-syndic(1)
```
20.15 spm

20.15.1 spm

Salt Package Manager

Synopsis

spm <command> [argument]

Description

spm is the frontend command for managing Salt packages. Packages normally only include formulas, meaning a group of SLS files that install into the file_roots on the Salt Master, but Salt modules can also be installed.

Options

-y, --assume-yes
Assume yes instead of prompting the other whether or not to proceed with a particular command. Default is False.

-f, --force
When presented with a course of action that spm would normally refuse to perform, that action will be performed anyway. This is often destructive, and should be used with caution.

Logging Options

Logging options which override any settings defined on the configuration files.

-l LOG_LEVEL, --log-level=LOG_LEVEL
Console logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

--log-file=LOG_FILE

--log-file-level=LOG_LEVEL_LOGFILE
Logfile logging log level. One of all, garbage, trace, debug, info, warning, error, quiet. Default: warning.

Commands

update_repo
Connect to remote repositories locally configured on the system and download their metadata.

install
Install a package from a configured SPM repository. Requires a package name.

remove
Remove an installed package from the system. Requires a package name.
info
   List information about an installed package. Requires a package name.

files
   List files belonging to an installed package. Requires a package name.

local
   Perform one of the above options (except for remove) on a package file, instead of on a package in a repository, or an installed package. Requires a valid path to a local file on the system.

build
   Build a package from a directory containing a FORMULA file. Requires a valid path to a local directory on the system.

create_repo
   Scan a directory for valid SPM package files and build an SPM-METADATA file in that directory which describes them.

See also

salt(1) salt-master(1) salt-minion(1)
Salt includes a number of built-in external pillars, listed at pillar modules.

The below links contain documentation for the configuration options

- master-side configuration
- minion-side configuration

Note that some of the same configuration options from the master are present in the minion configuration file, these are used in masterless mode.

The source for the built-in Salt pillars can be found here: https://github.com/saltstack/salt/blob/master/salt/pillar
Salt includes a number of built-in subsystems to generate top file data, they are listed at `master tops modules`.

The source for the built-in Salt master tops can be found here: https://github.com/saltstack/salt/blob/master/salt/tops
SALT MODULE REFERENCE

This section contains a list of the Python modules that are used to extend the various subsystems within Salt.

23.1 auth modules

auto
django
file
keystone
ldap
mysql
pam
pki
rest
sharedsecret
yubico

23.2 beacon modules

adb
aix_account
avahi_announce
bonjour_announce
btmp
cert_info
diskusage
glxinfo
haproxy
inotify
journald
junos_rre_keys
load
log_beacon
memusage
napalm_beacon

continues on next page
Table 2 – continued from previous page

network_info
network_settings
pkg
proxy_example
ps
salt_monitor
salt_proxy
sensehat
service
sh
smartos_imgadm
smartos_vmadm
status
swapusage
telegram_bot_msg
twilio_txt_msg
watchdog
wtmp

23.3 cache modules

consul
etcd_cache
localfs
mysql_cache
redis_cache

23.4 cloud modules

aliyun
azurearm
clc
cloudstack
digitalocean
dimensiondata
ec2
gce
gogrid
hetzner
joyent
libvirt
linode
lxc
msazure
oneandone

continues on next page
Table 4 – continued from previous page

<table>
<thead>
<tr>
<th>Engine</th>
</tr>
</thead>
<tbody>
<tr>
<td>-----------------------------</td>
</tr>
<tr>
<td>opennebula</td>
</tr>
<tr>
<td>openstack</td>
</tr>
<tr>
<td>packet</td>
</tr>
<tr>
<td>parallels</td>
</tr>
<tr>
<td>profitbricks</td>
</tr>
<tr>
<td>proxmox</td>
</tr>
<tr>
<td>pyrax</td>
</tr>
<tr>
<td>qingcloud</td>
</tr>
<tr>
<td>saltify</td>
</tr>
<tr>
<td>scaleway</td>
</tr>
<tr>
<td>softlayer</td>
</tr>
<tr>
<td>softlayer_hw</td>
</tr>
<tr>
<td>tencentcloud</td>
</tr>
<tr>
<td>vagrant</td>
</tr>
<tr>
<td>virtualbox</td>
</tr>
<tr>
<td>vmware</td>
</tr>
<tr>
<td>vultrpy</td>
</tr>
<tr>
<td>xen</td>
</tr>
</tbody>
</table>

23.5 engine modules

<table>
<thead>
<tr>
<th>Engine</th>
</tr>
</thead>
<tbody>
<tr>
<td>docker_events</td>
</tr>
<tr>
<td>fluent</td>
</tr>
<tr>
<td>http_logstash</td>
</tr>
<tr>
<td>ircbot</td>
</tr>
<tr>
<td>junos_syslog</td>
</tr>
<tr>
<td>libvirt_events</td>
</tr>
<tr>
<td>logentries</td>
</tr>
<tr>
<td>logstash_engine</td>
</tr>
<tr>
<td>napalm_syslog</td>
</tr>
<tr>
<td>reactor</td>
</tr>
<tr>
<td>redis_sentinel</td>
</tr>
<tr>
<td>script</td>
</tr>
<tr>
<td>slack</td>
</tr>
<tr>
<td>sqs_events</td>
</tr>
<tr>
<td>stalekey</td>
</tr>
<tr>
<td>test</td>
</tr>
<tr>
<td>thorium</td>
</tr>
<tr>
<td>webhook</td>
</tr>
</tbody>
</table>
## 23.6 executors modules

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>direct_call</td>
<td>Direct call executor module</td>
</tr>
<tr>
<td>docker</td>
<td>Docker executor module</td>
</tr>
<tr>
<td>splay</td>
<td>Splay function calls across targeted minions</td>
</tr>
<tr>
<td>sudo</td>
<td></td>
</tr>
</tbody>
</table>

### 23.6.1 salt.executors.direct_call

Direct call executor module

```python
dsalt.executors.direct_call.execute(opts, data, func, args, kwargs)
```

Directly calls the given function with arguments

### 23.6.2 salt.executors.docker

Docker executor module

New in version 2019.2.0.

Used with the docker proxy minion.

```python
dsalt.executors.docker.allow_missing_func(function)
```

Allow all calls to be passed through to docker container.

The docker call will use direct_call, which will return back if the module was unable to be run.

```python
dsalt.executors.docker.execute(opts, data, func, args, kwargs)
```

Directly calls the given function with arguments

### 23.6.3 salt.executors.splay

Splay function calls across targeted minions

```python
dsalt.executors.splay.execute(opts, data, func, args, kwargs)
```

Splay a salt function call execution time across minions over a number of seconds (default: 300)

**Note:** You *probably* want to use `--async` here and look up the job results later. If you're dead set on getting the output from the CLI command, then make sure to set the timeout (with the `-t` flag) to something greater than the splaytime (max splaytime + time to execute job). Otherwise, it's very likely that the cli will time out before the job returns.

**CLI Example:**

```
# With default splaytime
salt --async --module-executors='[splay, direct_call]' '*' pkg.install cowsay
->version=3.03-8.el6
```

```
# With specified splaytime (5 minutes) and timeout with 10 second buffer
salt -t 310 --module-executors='[splay, direct_call]' --executor-opts='*{splaytime: 300}' '*' pkg.version cowsay
```
23.7 filesystem modules

- azurefs
- gitfs
- hgfs
- minionfs
- roots
- s3fs
- svnfs

23.8 grains modules

- chronos
- cimc
- core
- disks
- esxi
- extra
- fibre_channel
- fx2
- iscsi
- junos
- lvm
- marathon
- mdadm
- mdata
- metadata
- minion_process
- napalm
- nvme
- nxos
- `opts` Simple grain to merge the opts into the grains directly if the grain_opts configuration value is set.
- panos
- pending_reboot
- philips_hue Static grains for the Philips HUE lamps
- rest_sample
- smartos
- ssh_sample
- zfs
23.8.1 salt.grains.opts

Simple grain to merge the opts into the grains directly if the grain_opts configuration value is set.

```python
salt.grains.opts.Opts()
    Return the minion configuration settings
```

23.8.2 salt.grains.philips_hue

Static grains for the Philips HUE lamps

New in version 2015.8.3.

```python
salt.grains.philips_hue.kernel()
salt.grains.philips_hue.os()
salt.grains.philips_hue.os_family()
salt.grains.philips_hue.product()
salt.grains.philips_hue.vendor()
```

23.9 execution modules

Virtual modules

23.9.1 salt.modules.group

`group` is a virtual module that is fulfilled by one of the following modules:

<table>
<thead>
<tr>
<th>Execution Module</th>
<th>Used for</th>
</tr>
</thead>
<tbody>
<tr>
<td>groupadd</td>
<td>Linux, NetBSD, and OpenBSD systems using groupadd(8), groupdel(8), and groupmod(8)</td>
</tr>
<tr>
<td>pw_group</td>
<td>FreeBSD-based OSes using pw(8)</td>
</tr>
<tr>
<td>solaris_group</td>
<td>Solaris-based OSes using groupadd(1M), groupdel(1M), and groupmod(1M)</td>
</tr>
<tr>
<td>win_groupadd</td>
<td>Windows</td>
</tr>
</tbody>
</table>

23.9.2 salt.modules.kernelpkg

`kernelpkg` is a virtual module that is fulfilled by one of the following modules:

<table>
<thead>
<tr>
<th>Execution Module</th>
<th>Used for</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>kernelpkg_linux_apt</strong></td>
<td>Debian/Ubuntu-based distros which use apt-get for package management</td>
</tr>
<tr>
<td><strong>kernelpkg_linux_yum</strong></td>
<td>RedHat-based distros and derivatives using yum or dnf</td>
</tr>
</tbody>
</table>
23.9.3 salt.modules.pkg

pkg is a virtual module that is fulfilled by one of the following modules:

<table>
<thead>
<tr>
<th>Execution Module</th>
<th>Used for</th>
</tr>
</thead>
<tbody>
<tr>
<td>aixpkg</td>
<td>AIX OS using <code>installp</code> and <code>rpm</code></td>
</tr>
<tr>
<td>aiptpkg</td>
<td>Debian/Ubuntu-based distros which use <code>apt-get(8)</code> for package management</td>
</tr>
<tr>
<td>mac_brew_pkg</td>
<td>Mac OS software management using Homebrew</td>
</tr>
<tr>
<td>ebuildpkg</td>
<td>Gentoo-based systems (utilizes the <code>portage</code> python module as well as <code>merge(1)</code>)</td>
</tr>
<tr>
<td>freebsdpkg</td>
<td>FreeBSD-based OSes using <code>pkg_add(1)</code></td>
</tr>
<tr>
<td>openbsdpkg</td>
<td>OpenBSD-based OSes using <code>pkg_add(1)</code></td>
</tr>
<tr>
<td>pacmanpkg</td>
<td>Arch Linux-based distros using <code>pacman(8)</code></td>
</tr>
<tr>
<td>pkgin</td>
<td>NetBSD-based OSes using <code>pkgin(1)</code></td>
</tr>
<tr>
<td>pkgng</td>
<td>FreeBSD-based OSes using <code>pkg(8)</code></td>
</tr>
<tr>
<td>pkgrutil</td>
<td>Solaris-based OSes using OpenCSW's <code>pkgrutil(1)</code></td>
</tr>
<tr>
<td>solarispkg</td>
<td>Solaris-based OSes using <code>pkgrutil(1)</code></td>
</tr>
<tr>
<td>solarisipspkg</td>
<td>Solaris-based OSes using IPS <code>pkg(1)</code></td>
</tr>
<tr>
<td>win_pkg</td>
<td>Salt's Windows Package Manager</td>
</tr>
<tr>
<td>yumpkg</td>
<td>RedHat-based distros and derivatives using <code>yum(8)</code> or <code>dnf(8)</code></td>
</tr>
<tr>
<td>zypperpkg</td>
<td>SUSE-based distros using <code>zypper(8)</code></td>
</tr>
</tbody>
</table>

23.9.4 salt.modules.service

service is a virtual module that is fulfilled by one of the following modules:

<table>
<thead>
<tr>
<th>Execution Module</th>
<th>Used for</th>
</tr>
</thead>
<tbody>
<tr>
<td>debian_service</td>
<td>Debian Wheezy and earlier</td>
</tr>
<tr>
<td>freebsd_service</td>
<td>FreeBSD-based OSes using <code>service(8)</code></td>
</tr>
<tr>
<td>gentoo_service</td>
<td>Gentoo Linux using <code>sysvinit</code> and <code>rc-update(8)</code></td>
</tr>
<tr>
<td>mac_service</td>
<td>Mac OS hosts using <code>launchctl(1)</code></td>
</tr>
<tr>
<td>netbsd_service</td>
<td>NetBSD-based OSes</td>
</tr>
<tr>
<td>openbsd_service</td>
<td>OpenBSD-based OSes</td>
</tr>
<tr>
<td>rh_service</td>
<td>RedHat-based distros and derivatives using <code>service(8)</code> and <code>chkconfig(8)</code>. Supports both pure <code>sysvinit</code> and mixed <code>sysvinit/upstart</code> systems.</td>
</tr>
<tr>
<td>service</td>
<td>Fallback which simply wraps <code>sysvinit</code> scripts</td>
</tr>
<tr>
<td>smf_service</td>
<td>Solaris-based OSes which use SMF</td>
</tr>
<tr>
<td>systemd_service</td>
<td>Linux distros which use systemd</td>
</tr>
<tr>
<td>upstart_service</td>
<td>Ubuntu-based distros using <code>upstart</code></td>
</tr>
<tr>
<td>win_service</td>
<td>Windows</td>
</tr>
</tbody>
</table>
23.9.5 salt.modules.shadow

Shadow is a virtual module that is fulfilled by one of the following modules:

<table>
<thead>
<tr>
<th>Execution Module</th>
<th>Used for</th>
</tr>
</thead>
<tbody>
<tr>
<td>aix_shadow</td>
<td>AIX</td>
</tr>
<tr>
<td>linux_shadow</td>
<td>Linux</td>
</tr>
<tr>
<td>bsd_shadow</td>
<td>FreeBSD, OpenBSD, NetBSD</td>
</tr>
<tr>
<td>solaris_shadow</td>
<td>Solaris-based OSes</td>
</tr>
<tr>
<td>win_shadow</td>
<td>Windows</td>
</tr>
</tbody>
</table>

23.9.6 salt.modules.sysctl

Sysctl is a virtual module that is fulfilled by one of the following modules:

<table>
<thead>
<tr>
<th>Execution Module</th>
<th>Used for</th>
</tr>
</thead>
<tbody>
<tr>
<td>freebsd_sysctl</td>
<td>FreeBSD</td>
</tr>
<tr>
<td>linux_sysctl</td>
<td>Linux</td>
</tr>
<tr>
<td>mac_sysctl</td>
<td>macOS</td>
</tr>
<tr>
<td>netbsd_sysctl</td>
<td>NetBSD</td>
</tr>
<tr>
<td>openbsd_sysctl</td>
<td>OpenBSD</td>
</tr>
</tbody>
</table>

23.9.7 salt.modules.user

User is a virtual module that is fulfilled by one of the following modules:

<table>
<thead>
<tr>
<th>Execution Module</th>
<th>Used for</th>
</tr>
</thead>
<tbody>
<tr>
<td>useradd</td>
<td>Linux, NetBSD, and OpenBSD systems using useradd(8), userdel(8), and usermod(8)</td>
</tr>
<tr>
<td>pw_user</td>
<td>FreeBSD-based OSes using pw(8)</td>
</tr>
<tr>
<td>solaris_user</td>
<td>Solaris-based OSes using useradd(1M), userdel(1M), and usermod(1M)</td>
</tr>
<tr>
<td>mac_user</td>
<td>MacOS</td>
</tr>
<tr>
<td>win_useradd</td>
<td>Windows</td>
</tr>
</tbody>
</table>

Acme

- aix_group         Manage groups on Solaris
- aix_shadow        Manage account locks on AIX systems
- aixpkg
- aliases
- alternatives
- ansiblegate
- apache
- apcups
- af
- apkpkg
- aptly

Continues on next page
### Table 9 – continued from previous page

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>aptpkg</td>
<td></td>
</tr>
<tr>
<td>archive</td>
<td></td>
</tr>
<tr>
<td>arista_pyeapi</td>
<td></td>
</tr>
<tr>
<td>artifactory</td>
<td></td>
</tr>
<tr>
<td>at</td>
<td></td>
</tr>
<tr>
<td>at_solaris</td>
<td></td>
</tr>
<tr>
<td>augeas_cfg</td>
<td></td>
</tr>
<tr>
<td>aws_sqs</td>
<td></td>
</tr>
<tr>
<td>azurearm_compute</td>
<td>Azure (ARM) Compute Execution Module</td>
</tr>
<tr>
<td>azurearm_dns</td>
<td>Azure (ARM) DNS Execution Module</td>
</tr>
<tr>
<td>azurearm_network</td>
<td>Azure (ARM) Network Execution Module</td>
</tr>
<tr>
<td>azurearm_resource</td>
<td></td>
</tr>
<tr>
<td>bamboohr</td>
<td></td>
</tr>
<tr>
<td>baredoc</td>
<td></td>
</tr>
<tr>
<td>bcache</td>
<td></td>
</tr>
<tr>
<td>beacons</td>
<td></td>
</tr>
<tr>
<td>bigip</td>
<td></td>
</tr>
<tr>
<td>bluez_bluetooth</td>
<td></td>
</tr>
<tr>
<td>boto3_elasticache</td>
<td></td>
</tr>
<tr>
<td>boto3_elasticsearch</td>
<td></td>
</tr>
<tr>
<td>boto3_route53</td>
<td></td>
</tr>
<tr>
<td>boto3_sns</td>
<td>Connection module for Amazon SNS</td>
</tr>
<tr>
<td>boto_apigateway</td>
<td></td>
</tr>
<tr>
<td>boto_asg</td>
<td></td>
</tr>
<tr>
<td>boto_cfn</td>
<td>Connection module for Amazon Cloud Formation</td>
</tr>
<tr>
<td>boto_cloudfront</td>
<td>Connection module for Amazon CloudFront</td>
</tr>
<tr>
<td>boto_cloudtrail</td>
<td></td>
</tr>
<tr>
<td>boto_cloudwatch</td>
<td></td>
</tr>
<tr>
<td>boto_cloudwatch_event</td>
<td></td>
</tr>
<tr>
<td>boto_cognitoidentity</td>
<td></td>
</tr>
<tr>
<td>boto_datapipeline</td>
<td>Connection module for Amazon Data Pipeline</td>
</tr>
<tr>
<td>boto_dynamodb</td>
<td>Connection module for Amazon DynamoDB</td>
</tr>
<tr>
<td>boto_ec2</td>
<td></td>
</tr>
<tr>
<td>boto_efs</td>
<td>Connection module for Amazon EFS</td>
</tr>
<tr>
<td>boto_elasticache</td>
<td>Connection module for Amazon Elasticache</td>
</tr>
<tr>
<td>boto_elasticsearch_domain</td>
<td></td>
</tr>
<tr>
<td>boto_elb</td>
<td>Connection module for Amazon ALB</td>
</tr>
<tr>
<td>boto_iam</td>
<td></td>
</tr>
<tr>
<td>boto_iot</td>
<td></td>
</tr>
<tr>
<td>boto_kinesis</td>
<td>Connection module for Amazon Kinesis</td>
</tr>
<tr>
<td>boto_kms</td>
<td></td>
</tr>
<tr>
<td>boto_lambda</td>
<td></td>
</tr>
<tr>
<td>boto_rds</td>
<td></td>
</tr>
<tr>
<td>boto_route53</td>
<td></td>
</tr>
<tr>
<td>boto_s3</td>
<td>Connection module for Amazon S3 using boto3</td>
</tr>
<tr>
<td>boto_s3_bucket</td>
<td>Connection module for Amazon Security Groups</td>
</tr>
<tr>
<td>boto_sns</td>
<td>Connection module for Amazon SNS</td>
</tr>
<tr>
<td>boto_sqs</td>
<td></td>
</tr>
</tbody>
</table>

continues on next page
<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>boto_ssm</td>
<td></td>
</tr>
<tr>
<td>boto_vpc</td>
<td></td>
</tr>
<tr>
<td>bower</td>
<td></td>
</tr>
<tr>
<td>bridge</td>
<td></td>
</tr>
<tr>
<td>bsd_shadow</td>
<td></td>
</tr>
<tr>
<td>btrfs</td>
<td></td>
</tr>
<tr>
<td>cabal</td>
<td></td>
</tr>
<tr>
<td>capirca_acl</td>
<td></td>
</tr>
<tr>
<td>cassandra_cql</td>
<td></td>
</tr>
<tr>
<td>cassandra_mod</td>
<td></td>
</tr>
<tr>
<td>celery</td>
<td>Support for scheduling celery tasks.</td>
</tr>
<tr>
<td>ceph</td>
<td>Module to provide ceph control with salt.</td>
</tr>
<tr>
<td>chassis</td>
<td></td>
</tr>
<tr>
<td>chef</td>
<td></td>
</tr>
<tr>
<td>chocolatey</td>
<td></td>
</tr>
<tr>
<td>chronos</td>
<td></td>
</tr>
<tr>
<td>chroot</td>
<td></td>
</tr>
<tr>
<td>cimc</td>
<td></td>
</tr>
<tr>
<td>ciscoconfparse_mod</td>
<td>Execution module for ciscoconfparse</td>
</tr>
<tr>
<td>cisconso</td>
<td></td>
</tr>
<tr>
<td>cloud</td>
<td></td>
</tr>
<tr>
<td>cmdmod</td>
<td></td>
</tr>
<tr>
<td>composer</td>
<td></td>
</tr>
<tr>
<td>config</td>
<td></td>
</tr>
<tr>
<td>consul</td>
<td></td>
</tr>
<tr>
<td>container_resource</td>
<td></td>
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<td>datadog_api</td>
<td>An execution module that interacts with the Datadog API</td>
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<tr>
<td>debian_service</td>
<td>Service support for Debian systems (uses update-rc.d and /sbin/service)</td>
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<td>debuild_pkgbuilder</td>
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<td>defaults</td>
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<td>maintainer Alberto Planas</td>
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<td><a href="mailto:aplanas@suse.com">aplanas@suse.com</a></td>
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<td>devmap</td>
<td>Device-Mapper module</td>
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Table 9 – continued from previous page

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<td>DRBD administration module</td>
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<td>dummyproxy_service</td>
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<td>eix</td>
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<td>elasticsearch</td>
<td>Elasticsearch - A distributed RESTful search and analytics server</td>
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<td>esxvm</td>
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<td>etcd_mod</td>
<td>Execution module to work with etcd</td>
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<td>ethtool</td>
<td>Module for running ethtool command</td>
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<td>event</td>
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<td>freebsdpgk</td>
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<td>freebsdports</td>
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<td>freebsdservice</td>
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<td>freezer</td>
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<td>gcp_addon</td>
<td>A route is a rule that specifies how certain packets should be handled by the virtual network.</td>
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<td>gem</td>
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<td>genesis</td>
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<td>gentoo_service</td>
<td>Top level package command wrapper, used to translate the os detected by grains to the correct service manager</td>
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<td>gentoolkitmod</td>
<td>Support for Gentoolkit</td>
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<td>git</td>
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<td>github</td>
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<td>glance</td>
<td>Module for handling openstack glance calls.</td>
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<td>glanceng</td>
<td>Glance module for interacting with OpenStack Glance</td>
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<td>glassfish</td>
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Table 9 – continued from previous page

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<th>Module</th>
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<td>gnomedesktop</td>
<td>Module for sending messages to google chat.</td>
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<td>Module for sending messages to google chat.</td>
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<td>Module for working with the Grafana v4 API.</td>
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<td>Module for working with the Grafana v4 API.</td>
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<td>Module for working with the Grafana v4 API.</td>
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<td>hadoop</td>
<td>Module for working with the Grafana v4 API.</td>
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<td>Support for haproxy.</td>
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<td>Idem Support</td>
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<td>helm</td>
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<td>hg</td>
<td>Idem Support</td>
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<td>highstate_doc</td>
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<td>hosts</td>
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<td>Idem Support</td>
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<td>idem</td>
<td>Idem Support</td>
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<td>ifttt</td>
<td>Idem Support</td>
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<td>ilo</td>
<td>Idem Support</td>
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<td>incron</td>
<td>InfluxDB - A distributed time series database.</td>
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<td>influxdb8mod</td>
<td>InfluxDB - A distributed time series database.</td>
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<td>influxdbmod</td>
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<td>ini_manage</td>
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<td>inspectlib.kiwiproc</td>
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<td>inspectlib.query</td>
<td>InfluxDB - A distributed time series database.</td>
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<td>introspect</td>
<td>Function to perform introspection on a minion, and return data in a format usable by Salt States</td>
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<td>iosconfig</td>
<td>Cisco IOS configuration manipulation helpers</td>
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<td>ipmi</td>
<td>Support IPMI commands over LAN.</td>
</tr>
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<td>ipset</td>
<td>Support IPMI commands over LAN.</td>
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<td>iptables</td>
<td>Support IPMI commands over LAN.</td>
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<tr>
<td>iwtools</td>
<td>Support IPMI commands over LAN.</td>
</tr>
<tr>
<td>jboss7</td>
<td>Module for managing JBoss AS 7 through the CLI interface.</td>
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<tr>
<td>jboss7_cli</td>
<td>Module for low-level interaction with JBossAS7 through CLI.</td>
</tr>
<tr>
<td>jenkinsmod</td>
<td>Module for low-level interaction with JBossAS7 through CLI.</td>
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codeauthor Bo Maryniuk <bo@suse.de>

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### Table 9 – continued from previous page

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<td>jira_mod</td>
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<td>kerberos</td>
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<tr>
<td>kernelpkg_linux_opt</td>
<td>Manage Linux kernel packages on APT-based systems</td>
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<td>kernelpkg_linux_yum</td>
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<td>key</td>
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<td>keyboard</td>
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<td>keystore</td>
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<tr>
<td>keystoneng</td>
<td>Keystone module for interacting with OpenStack Keystone</td>
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<tr>
<td>keystore</td>
<td>Module to interact with keystores</td>
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<td>kmod</td>
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<td>kubernetesmod</td>
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<td>launchctl_service</td>
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<td>layman</td>
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<td>libcloud_dns</td>
<td>Apache Libcloud DNS Management</td>
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<td>libcloud_loadbalancer</td>
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<td>linux_lvm</td>
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<tr>
<td>linux_service</td>
<td>If Salt’s OS detection does not identify a different virtual service module, the minion will fall back to using this basic module, which simply wraps sysvinit scripts.</td>
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<td>linux_shadow</td>
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<td>logadm</td>
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<td>logmod</td>
<td>On-demand logging</td>
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<td>logrotate</td>
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<th>Module</th>
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<td>mac_shadow</td>
<td>Provides access to randomness generators.</td>
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<td>mac_softwareupdate</td>
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<td>mac_sysctl</td>
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<td>mac_system</td>
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<td>nagios</td>
<td>Run nagios plugins/checks from salt and get the return as data.</td>
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<td>namecheap_domains</td>
<td>Namecheap Domain Management</td>
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<tr>
<th>Module</th>
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<tbody>
<tr>
<td>napalm_yang_mod</td>
<td>Module for getting information about network addresses.</td>
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<td>netaddress</td>
<td>Module for getting network addresses.</td>
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<td>netbox</td>
<td>NetBox</td>
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<td>netbsd_sysctl</td>
<td>The service module for NetBSD.</td>
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<td>netmiko_mod</td>
<td>The module for interacting with NetBSD.</td>
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<td>netscaler</td>
<td>The module for interacting with NetBSD.</td>
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<td>network</td>
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<td>neutron</td>
<td>Module for handling OpenStack Neutron calls.</td>
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<td>neutronng</td>
<td>Neutron module for interacting with OpenStack Neutron</td>
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<td>nexus</td>
<td>OpenSCAP Management</td>
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<td>nxos_api</td>
<td>Execution module to manage Cisco Nexus Switches (NX-OS) over the NX-API</td>
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<td>nxos_upgrade</td>
<td>Execution module to upgrade Cisco NX-OS Switches.</td>
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<td>omapi</td>
<td>This module interacts with an ISC DHCP Server via OMAPI.</td>
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<td>Module for OpenSCAP Management</td>
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<td>openbsdrcctl_service</td>
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<td>parted_partition</td>
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<td>pf</td>
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<td>philips_hue</td>
<td>Philips HUE lamps module for proxy.</td>
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<td>pillar</td>
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<td>pip</td>
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<td>pkg_resource</td>
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<td>pkgutil</td>
<td>Utilities to support packages.</td>
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<td>portage_config</td>
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<td>postfix</td>
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<td>powerpath</td>
<td>powerpath support.</td>
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<td>proxy</td>
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<td>ps</td>
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<td>publish</td>
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<td>puppet</td>
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<td>purefa</td>
<td>Management of Pure Storage FlashArray</td>
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<td>purefb</td>
<td>Management of Pure Storage FlashBlade</td>
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<td>pushbullet</td>
<td>Module for sending messages to Pushbullet (<a href="https://www.pushbullet.com">https://www.pushbullet.com</a>)</td>
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<td>pushover_notify</td>
<td>Module for sending messages to Pushover (<a href="https://www.pushover.net">https://www.pushover.net</a>)</td>
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<td>pw_group</td>
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<td>pw_user</td>
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<td>pyenv</td>
<td>Manage python installations with pyenv.</td>
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<td>qemu_img</td>
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<td>qemu_nbd</td>
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<td>rabbitmq</td>
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<td>rpm_lowpkg</td>
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<td>rpmbuild_pkgbuild</td>
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<td>rsync</td>
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<td>runit</td>
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<td>rest_sample_utils</td>
<td>Utility functions for the rest_sample</td>
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<td>rest_service</td>
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<td>restartcheck</td>
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<td>rh_ip</td>
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<td>rsync</td>
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<td>runit</td>
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Table 9 – continued from previous page

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<th>Module</th>
<th>Description</th>
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<td>rvm</td>
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<tr>
<td>s3</td>
<td>Connection module for Amazon S3</td>
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<tr>
<td>s6</td>
<td>s6 service module</td>
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<tr>
<td>salt_proxy</td>
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<tr>
<td>salt_version</td>
<td>Access Salt’s elemental release code-names.</td>
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<tr>
<td>saltcheck</td>
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<td>saltcloudmod</td>
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<td>saltutil</td>
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<td>schedule</td>
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<td>scp_mod</td>
<td>SCP Module</td>
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<td>scsi</td>
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<td>sdb</td>
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<td>seed</td>
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<tr>
<td>selinux</td>
<td>Module for controlling the LED matrix or reading environment data on the SenseHat of a Raspberry Pi.</td>
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<td>sensehat</td>
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<td>sensors</td>
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<tr>
<td>serverdensity_device</td>
<td>Module for execution of ServiceNow CI (configuration items)</td>
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<td>servicenow</td>
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<tr>
<td>slack_notify</td>
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<tr>
<td>slackware_service</td>
<td>The service module for Slackware</td>
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<tr>
<td>slsutil</td>
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<td>smartos_imgadm</td>
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<td>smartos_nictagadm</td>
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<td>smartos_vmadm</td>
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<td>smbios</td>
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<td>smf_service</td>
<td>Service support for Solaris 10 and 11, should work with other systems that use SMF also.</td>
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<td>smtp</td>
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<td>snapper</td>
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<td>solaris_fmadm</td>
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<td>solaris_group</td>
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<td>solaris_shadow</td>
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<td>solarisipspkg</td>
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<td>solr</td>
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<td>solrcloud</td>
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<td>splunk</td>
<td>Module for interop with the Splunk API</td>
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<td>splunk_search</td>
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<td>sqlite3</td>
<td>Support for SQLite3</td>
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<td>ssh</td>
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<td>ssh_pkg</td>
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<td>ssh_service</td>
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<tr>
<th><strong>Module</strong></th>
<th>Description</th>
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<tbody>
<tr>
<td>supervisord</td>
<td>Provide the service module for system supervisord or supervisord in a virtualenv</td>
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<td>suse_apache</td>
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<td>svn</td>
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<td>swarm</td>
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<td>sysbench</td>
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<td>sysmod</td>
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<td>sysrc</td>
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<td>systemd</td>
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<td>system_profiler</td>
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<td>systemd_service</td>
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<td>telegram</td>
<td>Module for sending messages via Telegram.</td>
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<td>telemetry</td>
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<td>temp</td>
<td>Simple module for creating temporary directories and files</td>
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<td>test</td>
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<tr>
<td>test_virtual</td>
<td>Module for running arbitrary tests with a <strong>virtual</strong> function</td>
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<tr>
<td>testinframod</td>
<td>This module exposes the functionality of the TestInfra library for use with SaltStack in order to verify the state of your minions.</td>
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<td>textfsm_mod</td>
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<td>timezone</td>
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<td>tls</td>
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<td>tomcat</td>
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<td>trafficserver</td>
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<td>twilio_notify</td>
<td>Module for notifications via Twilio</td>
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<td>udev</td>
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<td>upstart_service</td>
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<td>uptime</td>
<td>Wrapper around uptime API</td>
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<td>useradd</td>
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<td>uwsgi</td>
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<td>vagrant</td>
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<td>varnish</td>
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<td>vault</td>
<td>Functions to interact with Hashicorp Vault.</td>
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<td>vbox_guest</td>
<td>VirtualBox Guest Additions installer</td>
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<td>vboxmanage</td>
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<td>vcenter</td>
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<td>victorops</td>
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<td>virt</td>
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<td>virtualenv_mod</td>
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<td>vmctl</td>
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<td>vsphere</td>
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<td>win_auditpol</td>
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Table 9 – continued from previous page

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<td>win_autoruns</td>
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<td>win_certutil</td>
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<td>win_path</td>
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<td>win_powercfg</td>
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<td>win_psget</td>
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<td>win_servermanager</td>
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<td>win_service</td>
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<td>win_shadow</td>
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<td>win_smtp_server</td>
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<td>win_snmp</td>
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<td>win_status</td>
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<td>win_task</td>
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<td>win_timezone</td>
<td>Module for managing timezone on Windows systems.</td>
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<td>win_useradd</td>
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<td>win_wua</td>
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<td>x509</td>
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<td>xapi_virt</td>
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<td>xbpspkg</td>
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<td>xfs</td>
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<td>xml</td>
<td>XML file manager</td>
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<td>xmpp</td>
<td>Module for Sending Messages via XMPP (a.k.a.</td>
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<td>yumpkg</td>
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<td>zabbix</td>
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<td>zcbuildout</td>
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<td>zenoss</td>
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<td>zfs</td>
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<td>zk_concurrency</td>
<td>Concurrency controls in zookeeper</td>
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<td>znc</td>
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<td>zoneadm</td>
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23.9.8 salt.modules.aix_group

Manage groups on Solaris

**Important:** If you feel that Salt should be using this module to manage groups on a minion, and it is using a different module (or gives an error similar to ‘group.info is not available’), see [here](#).

salt.modules.aix_group.add(name, gid=None, system=False, root=None)

Add the specified group

CLI Example:

```
salt '*' group.add foo 3456
```

salt.modules.aix_group.adduser(name, username, root=None)

Add a user in the group.

CLI Example:

```
salt '*' group.adduser foo bar
```

Verifies if a valid username 'bar' as a member of an existing group 'foo', if not then adds it.

salt.modules.aix_group.chgid(name, gid)

Change the gid for a named group

CLI Example:

```
salt '*' group.chgid foo 4376
```

salt.modules.aix_group.delete(name)

Remove the named group

CLI Example:

```
salt '*' group.delete foo
```

salt.modules.aix_group.deluser(name, username, root=None)

Remove a user from the group.

CLI Example:

```
salt '*' group.deluser foo bar
```

Removes a member user 'bar' from a group 'foo'. If group is not present then returns True.

salt.modules.aix_group.getent(refresh=False)

Return info on all groups

CLI Example:
salt '*' group.getent

salt.modules.aix_group.info(name)
    Return information about a group
    CLI Example:
    
    salt '*' group.info foo

salt.modules.aix_group.members(name, members_list, root=None)
    Replaces members of the group with a provided list.
    CLI Example:
    
    salt '*' group.members foo 'user1,user2,user3,...'

    Replaces a membership list for a local group 'foo'.  foo:x:1234:user1,user2,user3,...

23.9.9 salt.modules.aix_shadow

Manage account locks on AIX systems

New in version 2018.3.0.

    depends none

salt.modules.aix_shadow.locked(user)
    Query for all accounts which are flagged as locked.
    CLI Example:

    salt <minion_id> shadow.locked ALL

salt.modules.aix_shadow.login_failures(user)
    Query for all accounts which have 3 or more login failures.
    CLI Example:

    salt <minion_id> shadow.login_failures ALL

salt.modules.aix_shadow.unlock(user)
    Unlock user for locked account
    CLI Example:

    salt <minion_id> shadow.unlock user
23.9.10 salt.modules.azurearm_compute

Azure (ARM) Compute Execution Module
New in version 2019.2.0.

maintainer <devops@decisionlab.io>
maturity new
depends

- azure >= 2.0.0
- azure-common >= 1.1.8
- azure-mgmt >= 1.0.0
- azure-mgmt-compute >= 1.0.0
- azure-mgmt-network >= 1.7.1
- azure-mgmt-resource >= 1.1.0
- azure-mgmt-storage >= 1.0.0
- azure-mgmt-web >= 0.32.0
- azure-storage >= 0.34.3
- msrestazure >= 0.4.21

platform linux

countiguration This module requires Azure Resource Manager credentials to be passed as keyword arguments to every function in order to work properly.

Required provider parameters:

if using username and password:
  • subscription_id
  • username
  • password

if using a service principal:
  • subscription_id
  • tenant
  • client_id
  • secret

Optional provider parameters:

cloud_environment: Used to point the cloud driver to different API endpoints, such as Azure GovCloud.

Possible values:

- AZURE_PUBLIC_CLOUD (default)
- AZURE_CHINA_CLOUD
- AZURE_US_GOV_CLOUD
- AZURE GERMAN_CLOUD
salt.modules.azurearm_compute.availability_set_create_or_update(name, resource_group, **kwargs)

New in version 2019.2.0.
Create or update an availability set.

Parameters

- **name** -- The availability set to create.
- **resource_group** -- The resource group name assigned to the availability set.

CLI Example:
salt-call azurearm_compute.availability_set_create_or_update testset testgroup

salt.modules.azurearm_compute.availability_set_delete(name, resource_group, **kwargs)

New in version 2019.2.0.
Delete an availability set.

Parameters

- **name** -- The availability set to delete.
- **resource_group** -- The resource group name assigned to the availability set.

CLI Example:
salt-call azurearm_compute.availability_set_delete testset testgroup

salt.modules.azurearm_compute.availability_set_get(name, resource_group, **kwargs)

New in version 2019.2.0.
Get a dictionary representing an availability set's properties.

Parameters

- **name** -- The availability set to get.
- **resource_group** -- The resource group name assigned to the availability set.

CLI Example:
salt-call azurearm_compute.availability_set_get testset testgroup

salt.modules.azurearm_compute.availability_sets_list(resource_group, **kwargs)

New in version 2019.2.0.
List all availability sets within a resource group.

Parameters **resource_group** -- The resource group name to list availability sets within.

CLI Example:
salt-call azurearm_compute.availability_sets_list testgroup

salt.modules.azurearm_compute.availability_sets_list_available_sizes(name, resource_group, **kwargs)

New in version 2019.2.0.
List all available virtual machine sizes that can be used to create a new virtual machine in an existing availability set.

**Parameters**

- **name** -- The availability set name to list available virtual machine sizes within.
- **resource_group** -- The resource group name to list available availability set sizes within.

**CLI Example:**
```
salt-call azurearm_compute.availability_sets_list_available_sizes testset
```

salt.modules.azurearm_compute.virtual_machine_capture(name, destination_name, resource_group, prefix='capture-', overwrite=False, **kwargs)

New in version 2019.2.0.
Captures the VM by copying virtual hard disks of the VM and outputs a template that can be used to create similar VMs.

**Parameters**

- **name** -- The name of the virtual machine.
- **destination_name** -- The destination container name.
- **resource_group** -- The resource group name assigned to the virtual machine.
- **prefix** -- (Default: 'capture-') The captured virtual hard disk's name prefix.
- **overwrite** -- (Default: False) Overwrite the destination disk in case of conflict.

**CLI Example:**
```
salt-call azurearm_compute.virtual_machine_capture testvm testcontainer testgroup
```

salt.modules.azurearm_compute.virtual_machine_convert_to_managed_disks(name, resource_group, **kwargs)

New in version 2019.2.0.
Converts virtual machine disks from blob-based to managed disks. Virtual machine must be stop-deallocated before invoking this operation.

**Parameters**

- **name** -- The name of the virtual machine to convert.
- **resource_group** -- The resource group name assigned to the virtual machine.

**CLI Example:**
```
salt-call azurearm_compute.virtual_machine_convert_to_managed_disks testvm
```

salt.modules.azurearm_compute.virtual_machine_deallocate(name, resource_group, **kwargs)

New in version 2019.2.0.
Power off a virtual machine and deallocate compute resources.
Parameters

- **name** -- The name of the virtual machine to deallocate.

- **resource_group** -- The resource group name assigned to the virtual machine.

CLI Example:

```
salt-call azurearm_compute.virtual_machine_deallocate testvm testgroup
```

```python
salt.modules.azurearm_compute.virtual_machine_deallocate(name, resource_group, **kwargs)
```

New in version 2019.2.0.

Set the state of a virtual machine to 'generalized'.

Parameters

- **name** -- The name of the virtual machine.

- **resource_group** -- The resource group name assigned to the virtual machine.

CLI Example:

```
salt-call azurearm_compute.virtual_machine_deallocate testvm testgroup
```

```python
salt.modules.azurearm_compute.virtual_machine_generalize(name, resource_group, **kwargs)
```

New in version 2019.2.0.

Retrieves information about the model view or the instance view of a virtual machine.

Parameters

- **name** -- The name of the virtual machine.

- **resource_group** -- The resource group name assigned to the virtual machine.

CLI Example:

```
salt-call azurearm_compute.virtual_machine_get testvm testgroup
```

```python
salt.modules.azurearm_compute.virtual_machine_get(name, resource_group, **kwargs)
```

New in version 2019.2.0.

Power off (stop) a virtual machine.

Parameters

- **name** -- The name of the virtual machine to stop.

- **resource_group** -- The resource group name assigned to the virtual machine.

CLI Example:

```
salt-call azurearm_compute.virtual_machine_power_off testvm testgroup
```

```python
salt.modules.azurearm_compute.virtual_machine_power_off(name, resource_group, **kwargs)
```

New in version 2019.2.0.

Redeploy a virtual machine.

Parameters

- **name** -- The name of the virtual machine to redeploy.
• **resource_group** -- The resource group name assigned to the virtual machine.

CLI Example:

```bash
salt-call azurearm_compute.virtual_machine_redeploy testvm testgroup
```

salt.modules.azurearm_compute.virtual_machine_restart(name, resource_group, **kwargs)

New in version 2019.2.0.

Restart a virtual machine.

Parameters

• **name** -- The name of the virtual machine to restart.

• **resource_group** -- The resource group name assigned to the virtual machine.

CLI Example:

```bash
salt-call azurearm_compute.virtual_machine_restart testvm testgroup
```

salt.modules.azurearm_compute.virtual_machine_start(name, resource_group, **kwargs)

New in version 2019.2.0.

Power on (start) a virtual machine.

Parameters

• **name** -- The name of the virtual machine to start.

• **resource_group** -- The resource group name assigned to the virtual machine.

CLI Example:

```bash
salt-call azurearm_compute.virtual_machine_start testvm testgroup
```

salt.modules.azurearm_compute.virtual_machines_list(resource_group, **kwargs)

New in version 2019.2.0.

List all virtual machines within a resource group.

Parameters **resource_group** -- The resource group name to list virtual machines within.

CLI Example:

```bash
salt-call azurearm_compute.virtual_machines_list testgroup
```

salt.modules.azurearm_compute.virtual_machines_list_all(**kwargs)

New in version 2019.2.0.

List all virtual machines within a subscription.

CLI Example:

```bash
salt-call azurearm_compute.virtual_machines_list_all
```

salt.modules.azurearm_compute.virtual_machines_list_available_sizes(name, resource_group, **kwargs)

New in version 2019.2.0.

Lists all available virtual machine sizes to which the specified virtual machine can be resized.
Parameters

- **name** -- The name of the virtual machine.
- **resource_group** -- The resource group name assigned to the virtual machine.

CLI Example:

```
salt-call azurearm_compute.virtual_machines_list_available_sizes testvm testgroup
```

### 23.9.11 salt.modules.azurearm_dns

Azure (ARM) DNS Execution Module

New in version 3000.

**maintainer** `<devops@eitr.tech>`

**maturity** new

**depends**

- **azure** >= 2.0.0
- **azure-common** >= 1.1.8
- **azure-mgmt** >= 1.0.0
- **azure-mgmt-compute** >= 1.0.0
- **azure-mgmt-dns** >= 2.0.0rc1
- **azure-mgmt-network** >= 1.7.1
- **azure-mgmt-resource** >= 1.1.0
- **azure-mgmt-storage** >= 1.0.0
- **azure-mgmt-web** >= 0.32.0
- **azure-storage** >= 0.34.3
- **msrestazure** >= 0.4.21

**platform** linux

**configuration** This module requires Azure Resource Manager credentials to be passed as keyword arguments to every function in order to work properly.

Required provider parameters:

if using username and password:

- **subscription_id**
- **username**
- **password**

if using a service principal:

- **subscription_id**
- **tenant**
- **client_id**
- **secret**
Optional provider parameters:

**cloud_environment**: Used to point the cloud driver to different API endpoints, such as Azure GovCloud.

Possible values:
- `AZURE_PUBLIC_CLOUD` (default)
- `AZURE_CHINA_CLOUD`
- `AZURE_US_GOV_CLOUD`
- `AZURE_GERMAN_CLOUD`

`salt.modules.azurearm_dns.record_set_create_or_update(name, zone_name, resource_group, record_type, **kwargs)`

New in version 3000.

Creates or updates a record set within a DNS zone.

**Parameters**

- **name** -- The name of the record set, relative to the name of the zone.
- **zone_name** -- The name of the DNS zone (without a terminating dot).
- **resource_group** -- The name of the resource group.
- **record_type** -- The type of DNS record in this record set. Record sets of type SOA can be updated but not created (they are created when the DNS zone is created). Possible values include: 'A', 'AAAA', 'CAA', 'CNAME', 'MX', 'NS', 'PTR', 'SOA', 'SRV', 'TXT'

**CLI Example:**
```
salt-call azurearm_dns.record_set_create_or_update myhost myzone testgroup A arecords='[{'ipv4_address': 10.0.0.1}]' ttl=300
```

`salt.modules.azurearm_dns.record_set_delete(name, zone_name, resource_group, record_type, **kwargs)`

New in version 3000.

Deletes a record set from a DNS zone. This operation cannot be undone.

**Parameters**

- **name** -- The name of the record set, relative to the name of the zone.
- **zone_name** -- The name of the DNS zone (without a terminating dot).
- **resource_group** -- The name of the resource group.
- **record_type** -- The type of DNS record in this record set. Record sets of type SOA cannot be deleted (they are deleted when the DNS zone is deleted). Possible values include: 'A', 'AAAA', 'CAA', 'CNAME', 'MX', 'NS', 'PTR', 'SOA', 'SRV', 'TXT'

**CLI Example:**
```
salt-call azurearm_dns.record_set_delete myhost myzone testgroup A
```

`salt.modules.azurearm_dns.record_set_get(name, zone_name, resource_group, record_type, **kwargs)`

New in version 3000.

Get a dictionary representing a record set's properties.

**Parameters**
• **name** -- The name of the record set, relative to the name of the zone.
• **zone_name** -- The name of the DNS zone (without a terminating dot).
• **resource_group** -- The name of the resource group.
• **record_type** -- The type of DNS record in this record set. Possible values include: 'A', 'AAAA', 'CAA', 'CNAME', 'MX', 'NS', 'PTR', 'SOA', 'SRV', 'TXT'

CLI Example:
```
salt-call azurearm_dns.record_set_get '@' myzone testgroup SOA
```

salt.modules.azurearm_dns.record_sets_list_by_dns_zone(zone_name, resource_group, **kwargs)

New in version 3000.
Lists all record sets in a DNS zone.

Parameters
• **zone_name** -- The name of the DNS zone (without a terminating dot).
• **resource_group** -- The name of the resource group.
• **top** -- The maximum number of record sets to return. If not specified, returns up to 100 record sets.
• **recordsetnamesuffix** -- The suffix label of the record set name that has to be used to filter the record set enumerations.

CLI Example:
```
salt-call azurearm_dns.record_sets_list_by_dns_zone myzone testgroup
```

salt.modules.azurearm_dns.record_sets_list_by_type(zone_name, resource_group, record_type, **kwargs)

New in version 3000.
Lists the record sets of a specified type in a DNS zone.

Parameters
• **zone_name** -- The name of the DNS zone (without a terminating dot).
• **resource_group** -- The name of the resource group.
• **record_type** -- The type of record sets to enumerate. Possible values include: 'A', 'AAAA', 'CAA', 'CNAME', 'MX', 'NS', 'PTR', 'SOA', 'SRV', 'TXT'
• **top** -- The maximum number of record sets to return. If not specified, returns up to 100 record sets.
• **recordsetnamesuffix** -- The suffix label of the record set name that has to be used to filter the record set enumerations.

CLI Example:
```
salt-call azurearm_dns.record_sets_list_by_type myzone testgroup SOA
```

salt.modules.azurearm_dns.zone_create_or_update(name, resource_group, **kwargs)

New in version 3000.

23.9. execution modules
Creates or updates a DNS zone. Does not modify DNS records within the zone.

Parameters

- **name** -- The name of the DNS zone to create (without a terminating dot).
- **resource_group** -- The name of the resource group.

CLI Example:

```
salt-call azurearm_dns.zone_create_or_update myzone testgroup
```

salt.modules.azurearm_dns.zone_delete(name, resource_group, **kwargs)

New in version 3000.

Delete a DNS zone within a resource group.

Parameters

- **name** -- The name of the DNS zone to delete.
- **resource_group** -- The name of the resource group.

CLI Example:

```
salt-call azurearm_dns.zone_delete myzone testgroup
```

salt.modules.azurearm_dns.zone_get(name, resource_group, **kwargs)

New in version 3000.

Get a dictionary representing a DNS zone's properties, but not the record sets within the zone.

Parameters

- **name** -- The DNS zone to get.
- **resource_group** -- The name of the resource group.

CLI Example:

```
salt-call azurearm_dns.zone_get myzone testgroup
```

salt.modules.azurearm_dns.zones_list(top=None, **kwargs)

New in version 3000.

Lists the DNS zones in all resource groups in a subscription.

Parameters **top** -- The maximum number of DNS zones to return. If not specified, returns up to 100 zones.

CLI Example:

```
salt-call azurearm_dns.zones_list
```

salt.modules.azurearm_dns.zones_list_by_resource_group(resource_group, top=None, **kwargs)

New in version 3000.

Lists the DNS zones in a resource group.

Parameters

- **resource_group** -- The name of the resource group.
- **top** -- The maximum number of DNS zones to return. If not specified, returns up to 100 zones.
CLI Example:

```
salt-call azurearm_dns.zones_list_by_resource_group testgroup
```

23.9.12 salt.modules.azurearm_network

Azure (ARM) Network Execution Module

New in version 2019.2.0.

**maintainer**  
<devops@decisionlab.io>

**maturity**  
new

**depends**

- azure >= 2.0.0
- azure-common >= 1.1.8
- azure-mgmt >= 1.0.0
- azure-mgmt-compute >= 1.0.0
- azure-mgmt-network >= 1.7.1
- azure-mgmt-resource >= 1.1.0
- azure-mgmt-storage >= 1.0.0
- azure-mgmt-web >= 0.32.0
- azure-storage >= 0.34.3
- msrestazure >= 0.4.21

**platform**  
linux

**configuration**  
This module requires Azure Resource Manager credentials to be passed as keyword arguments to every function in order to work properly.

Required provider parameters:

- if using username and password:
  - subscription_id
  - username
  - password

- if using a service principal:
  - subscription_id
  - tenant
  - client_id
  - secret

Optional provider parameters:

**cloud_environment**: Used to point the cloud driver to different API endpoints, such as Azure GovCloud.

**Possible values**:

- AZURE_PUBLIC_CLOUD (default)
salt.modules.azurearm_network.check_dns_name_availability(name, region, **kwargs)

New in version 2019.2.0.

Check whether a domain name in the current zone is available for use.

Parameters

- `name` -- The DNS name to query.
- `region` -- The region to query for the DNS name in question.

CLI Example:

```bash
salt-call azurearm_network.check_dns_name_availability testdnsname westus
```

salt.modules.azurearm_network.check_ip_address_availability(ip_address, virtual_network, resource_group, **kwargs)

New in version 2019.2.0.

Check that a private ip address is available within the specified virtual network.

Parameters

- `ip_address` -- The ip_address to query.
- `virtual_network` -- The virtual network to query for the IP address in question.
- `resource_group` -- The resource group name assigned to the virtual network.

CLI Example:

```bash
salt-call azurearm_network.check_ip_address_availability 10.0.0.4 testnet testgroup
```

salt.modules.azurearm_network.default_security_rule_get(name, security_group, resource_group, **kwargs)

New in version 2019.2.0.

Get details about a default security rule within a security group.

Parameters

- `name` -- The name of the security rule to query.
- `security_group` -- The network security group containing the security rule.
- `resource_group` -- The resource group name assigned to the network security group.

CLI Example:

```bash
salt-call azurearm_network.default_security_rule_get DenyAllOutBound testnsg testgroup
```

salt.modules.azurearm_network.default_security_rules_list(resource_group, **kwargs)

New in version 2019.2.0.
List default security rules within a security group.

Parameters

- `security_group` -- The network security group to query.
- `resource_group` -- The resource group name assigned to the network security group.

CLI Example:

```
salt-call azurearm_network.default_security_rules_list testnsg testgroup
```

salt.modules.azurearm_network.get_virtual_machine_scale_set_network_interface

New in version 2019.2.0.

Get information about a specific network interface within a scale set.

Parameters

- `name` -- The name of the network interface to query.
- `scale_set` -- The name of the scale set containing the interface.
- `vm_index` -- The virtual machine index.
- `resource_group` -- The resource group name assigned to the scale set.

CLI Example:

```
salt-call azurearm_network.get_virtual_machine_scale_set_network_interface test-iface0 testset testvm testgroup
```

New in version 2019.2.0.

Get information about all network interfaces within a scale set.

Parameters

- `scale_set` -- The name of the scale set to query.
- `resource_group` -- The resource group name assigned to the scale set.

CLI Example:

```
salt-call azurearm_network.list_virtual_machine_scale_set_network_interfaces testset testgroup
```

New in version 2019.2.0.

Get information about all network interfaces in a specific virtual machine within a scale set.

Parameters

- `scale_set` -- The name of the scale set to query.
- `resource_group` -- The resource group name assigned to the scale set.

CLI Example:

```
salt-call azurearm_network.list_virtual_machine_scale_set_vm_network_interfaces testset testvm testgroup
```

New in version 2019.2.0.
Parameters

- **scale_set** -- The name of the scale set to query.
- **vm_index** -- The virtual machine index.
- **resource_group** -- The resource group name assigned to the scale set.

CLI Example:

```bash
salt-call azurearm_network.list_virtual_machine_scale_set_vm_network_interfaces --testset testvm testgroup
```

salt.modules.azurearm_network.load_balancer_create_or_update(name, resource_group, **kwargs)

New in version 2019.2.0.

Create or update a load balancer within a specified resource group.

Parameters

- **name** -- The name of the load balancer to create.
- **resource_group** -- The resource group name assigned to the load balancer.

CLI Example:

```bash
salt-call azurearm_network.load_balancer_create_or_update testlb testgroup
```

salt.modules.azurearm_network.load_balancer_delete(name, resource_group, **kwargs)

New in version 2019.2.0.

Delete a load balancer.

Parameters

- **name** -- The name of the load balancer to delete.
- **resource_group** -- The resource group name assigned to the load balancer.

CLI Example:

```bash
salt-call azurearm_network.load_balancer_delete testlb testgroup
```

salt.modules.azurearm_network.load_balancer_get(name, resource_group, **kwargs)

New in version 2019.2.0.

Get details about a specific load balancer.

Parameters

- **name** -- The name of the load balancer to query.
- **resource_group** -- The resource group name assigned to the load balancer.

CLI Example:

```bash
salt-call azurearm_network.load_balancer_get testlb testgroup
```

salt.modules.azurearm_network.load_balancers_list(resource_group, **kwargs)

New in version 2019.2.0.

List all load balancers within a resource group.

Parameters **resource_group** -- The resource group name to list load balancers within.
CLI Example:

```
salt-call azurearm_network.load_balancers_list testgroup
```

`salt.modules.azurearm_network.load_balancers_list_all(**kwargs)`  
New in version 2019.2.0.  
List all load balancers within a subscription.  
CLI Example:

```
salt-call azurearm_network.load_balancers_list_all
```

`salt.modules.azurearm_network.network_interface_create_or_update(name, ip_configurations, subnet, virtual_network, resource_group, **kwargs)`  
New in version 2019.2.0.  
Create or update a network interface within a specified resource group.  

Parameters  

- **name** -- The name of the network interface to create.  
- **ip_configurations** -- A list of dictionaries representing valid NetworkInterfaceIPConfiguration objects. The 'name' key is required at minimum. At least one IP Configuration must be present.  
- **subnet** -- The name of the subnet assigned to the network interface.  
- **virtual_network** -- The name of the virtual network assigned to the subnet.  
- **resource_group** -- The resource group name assigned to the virtual network.  

CLI Example:

```
salt-call azurearm_network.network_interface_create_or_update test-iface0 [{'name': 'testipconfig1}] testsubnet testnet testgroup
```

`salt.modules.azurearm_network.network_interface_delete(name, resource_group, **kwargs)`  
New in version 2019.2.0.  
Delete a network interface.  

Parameters  

- **name** -- The name of the network interface to delete.  
- **resource_group** -- The resource group name assigned to the network interface.  

CLI Example:

```
salt-call azurearm_network.network_interface_delete test-iface0 testgroup
```

`salt.modules.azurearm_network.network_interface_get(name, resource_group, **kwargs)`  
New in version 2019.2.0.  
Get details about a specific network interface.
Parameters

- **name** -- The name of the network interface to query.
- **resource_group** -- The resource group name assigned to the network interface.

CLI Example:

```
salt-call azurearm_network.network_interface_get test-iface0 testgroup
```

```
salt.modules.azurearm_network.network_interface_get_effective_route_table(name, resource_group, **kwargs)
```

New in version 2019.2.0.

Get all route tables for a specific network interface.

Parameters

- **name** -- The name of the network interface to query.
- **resource_group** -- The resource group name assigned to the network interface.

CLI Example:

```
salt-call azurearm_network.network_interface_get_effective_route_table test-iface0 testgroup
```

```
salt.modules.azurearm_network.network_interface_list_effective_network_security_groups(name, resource_group, **kwargs)
```

New in version 2019.2.0.

Get all network security groups applied to a specific network interface.

Parameters

- **name** -- The name of the network interface to query.
- **resource_group** -- The resource group name assigned to the network interface.

CLI Example:

```
salt-call azurearm_network.network_interface_list_effective_network_security_groups test-iface0 testgroup
```

```
salt.modules.azurearm_network.network_interfaces_list(resource_group, **kwargs)
```

New in version 2019.2.0.

List all network interfaces within a resource group.

Parameters **resource_group** -- The resource group name to list network interfaces within.

CLI Example:

```
salt-call azurearm_network.network_interfaces_list testgroup
```

```
salt.modules.azurearm_network.network_interfaces_list_all(**kwargs)
```

New in version 2019.2.0.

List all network interfaces within a subscription.

CLI Example:
salt-call azurearm_network.network_interfaces_list_all

salt.modules.azurearm_network.network_security_group_create_or_update(name, resource_group, **kwargs)

New in version 2019.2.0.
Create or update a network security group.

Parameters

• name -- The name of the network security group to create.
• resource_group -- The resource group name assigned to the network security group.

CLI Example:
salt-call azurearm_network.network_security_group_create_or_update testnsg testgroup

salt.modules.azurearm_network.network_security_group_delete(name, resource_group, **kwargs)

New in version 2019.2.0.
Delete a network security group within a resource group.

Parameters

• name -- The name of the network security group to delete.
• resource_group -- The resource group name assigned to the network security group.

CLI Example:
salt-call azurearm_network.network_security_group_delete testnsg testgroup

salt.modules.azurearm_network.network_security_group_get(name, resource_group, **kwargs)

New in version 2019.2.0.
Get details about a network security group within a resource group.

Parameters

• name -- The name of the network security group to query.
• resource_group -- The resource group name assigned to the network security group.

CLI Example:
salt-call azurearm_network.network_security_group_get testnsg testgroup

salt.modules.azurearm_network.network_security_groups_list(resource_group, **kwargs)

New in version 2019.2.0.
List all network security groups within a resource group.

Parameters resource_group -- The resource group name to list network security groups within.

CLI Example:
salt-call azurearm_network.network_security_groups_list testgroup

salt.modules.azurearm_network.network_security_groups_list_all(**kwargs)
New in version 2019.2.0.
List all network security groups within a subscription.
CLI Example:
salt-call azurearm_network.network_security_groups_list_all

salt.modules.azurearm_network.public_ip_address_create_or_update(name, resource_group, **kwargs)
New in version 2019.2.0.
Create or update a public IP address within a specified resource group.
Parameters
• name -- The name of the public IP address to create.
• resource_group -- The resource group name assigned to the public IP address.
CLI Example:
salt-call azurearm_network.public_ip_address_create_or_update test-ip-0 testgroup

salt.modules.azurearm_network.public_ip_address_delete(name, resource_group, **kwargs)
New in version 2019.2.0.
Delete a public IP address.
Parameters
• name -- The name of the public IP address to delete.
• resource_group -- The resource group name assigned to the public IP address.
CLI Example:
salt-call azurearm_network.public_ip_address_delete test-pub-ip testgroup

salt.modules.azurearm_network.public_ip_address_get(name, resource_group, **kwargs)
New in version 2019.2.0.
Get details about a specific public IP address.
Parameters
• name -- The name of the public IP address to query.
• resource_group -- The resource group name assigned to the public IP address.
CLI Example:
salt-call azurearm_network.public_ip_address_get test-pub-ip testgroup

salt.modules.azurearm_network.public_ip_addresses_list(resource_group, **kwargs)
New in version 2019.2.0.
List all public IP addresses within a resource group.
Parameters `resource_group` -- The resource group name to list public IP addresses within.

CLI Example:
```bash
salt-call azurearm_network.public_ip_addresses_list testgroup
```

```python
salt.modules.azurearm_network.public_ip_addresses_list_all(**kwargs)
```
New in version 2019.2.0.
List all public IP addresses within a subscription.

CLI Example:
```bash
salt-call azurearm_network.public_ip_addresses_list_all
```

```python
salt.modules.azurearm_network.route_create_or_update(name, address_prefix, next_hop_type, route_table, resource_group, next_hop_ip_address=None, **kwargs)
```
New in version 2019.2.0.
Create or update a route within a specified route table.

Parameters

- `name` -- The name of the route to create.
- `address_prefix` -- The destination CIDR to which the route applies.
- `next_hop_type` -- The type of Azure hop the packet should be sent to. Possible values are: 'VirtualNetworkGateway', 'VnetLocal', 'Internet', 'VirtualAppliance', and 'None'.
- `next_hop_ip_address` -- Optional IP address to which packets should be forwarded. Next hop values are only allowed in routes where the next_hop_type is 'VirtualAppliance'.
- `route_table` -- The name of the route table containing the route.
- `resource_group` -- The resource group name assigned to the route table.

CLI Example:
```bash
salt-call azurearm_network.route_create_or_update test-rt '10.0.0.0/8' test-rt-table testgroup
```

```python
salt.modules.azurearm_network.route_delete(name, route_table, resource_group, **kwargs)
```
New in version 2019.2.0.
Delete a route from a route table.

Parameters

- `name` -- The route to delete.
- `route_table` -- The route table containing the route.
- `resource_group` -- The resource group name assigned to the route table.

CLI Example:
```bash
salt-call azurearm_network.route_delete test-rt test-rt-table testgroup
```
salt.modules.azurearm_network.route_filter_create_or_update(\n    name, resource_group, **kwargs)\n
New in version 2019.2.0.
Create or update a route filter within a specified resource group.

Parameters

- **name** -- The name of the route filter to create.
- **resource_group** -- The resource group name assigned to the route filter.

CLI Example:
```
salt-call azurearm_network.route_filter_create_or_update test-filter testgroup
```

class azurearm_network:

    ...\n
salt.modules.azurearm_network.route_filter_delete(\n    name, resource_group, **kwargs)\n
New in version 2019.2.0.
Delete a route filter.

Parameters

- **name** -- The name of the route filter to delete.
- **resource_group** -- The resource group name assigned to the route filter.

CLI Example:
```
salt-call azurearm_network.route_filter_delete test-filter testgroup
```

class azurearm_network:

    ...\n
salt.modules.azurearm_network.route_filter_get(\n    name, resource_group, **kwargs)\n
New in version 2019.2.0.
Get details about a specific route filter.

Parameters

- **name** -- The name of the route table to query.
- **resource_group** -- The resource group name assigned to the route filter.

CLI Example:
```
salt-call azurearm_network.route_filter_get test-filter testgroup
```

class azurearm_network:

    ...\n
salt.modules.azurearm_network.route_filter_rule_create_or_update(\n    name, access, communities, route_filter, resource_group, **kwargs)\n
New in version 2019.2.0.
Create or update a rule within a specified route filter.

Parameters

- **name** -- The name of the rule to create.
- **access** -- The access type of the rule. Valid values are 'Allow' and 'Deny'.
- **communities** -- A list of BGP communities to filter on.
- **route_filter** -- The name of the route filter containing the rule.
• **resource_group** -- The resource group name assigned to the route filter.

CLI Example:

```bash
salt-call azurearm_network.route_filter_rule_create_or_update
  --test-rule allow "[12076:51006]" test-filter testgroup
```

```python
salt.modules.azurearm_network.route_filter_rule_delete(name, route_filter, resource_group, **kwargs)
```

New in version 2019.2.0.
Delete a route filter rule.

Parameters

- **name** -- The route filter rule to delete.
- **route_filter** -- The route filter containing the rule.
- **resource_group** -- The resource group name assigned to the route filter.

CLI Example:

```bash
salt-call azurearm_network.route_filter_rule_delete test-rule test-filter testgroup
```

```python
salt.modules.azurearm_network.route_filter_rule_get(name, route_filter, resource_group, **kwargs)
```

New in version 2019.2.0.
Get details about a specific route filter rule.

Parameters

- **name** -- The route filter rule to query.
- **route_filter** -- The route filter containing the rule.
- **resource_group** -- The resource group name assigned to the route filter.

CLI Example:

```bash
salt-call azurearm_network.route_filter_rule_get test-rule test-filter testgroup
```

```python
salt.modules.azurearm_network.route_filter_rules_list(route_filter, resource_group, **kwargs)
```

New in version 2019.2.0.
List all routes within a route filter.

Parameters

- **route_filter** -- The route filter to query.
- **resource_group** -- The resource group name assigned to the route filter.

CLI Example:

```bash
salt-call azurearm_network.route_filter_rules_list test-filter testgroup
```

```python
salt.modules.azurearm_network.route_filters_list(resource_group, **kwargs)
```

New in version 2019.2.0.
List all route filters within a resource group.

Parameters **resource_group** -- The resource group name to list route filters within.
CLI Example:

```bash
salt-call azurearm_network.route_filters_list testgroup
```

```python
salt.modules.azurearm_network.route_filters_list_all(**kwargs)
```

New in version 2019.2.0.
List all route filters within a subscription.

CLI Example:

```bash
salt-call azurearm_network.route_filters_list_all
```

```python
salt.modules.azurearm_network.route_get(name, route_table, resource_group, **kwargs)
```

New in version 2019.2.0.
Get details about a specific route.

**Parameters**

- **name** -- The route to query.
- **route_table** -- The route table containing the route.
- **resource_group** -- The resource group name assigned to the route table.

CLI Example:

```bash
call azurearm_network.route_get test-rt test-rt-table testgroup
```

```python
salt.modules.azurearm_network.route_table_create_or_update(name, resource_group, **kwargs)
```

New in version 2019.2.0.
Create or update a route table within a specified resource group.

**Parameters**

- **name** -- The name of the route table to create.
- **resource_group** -- The resource group name assigned to the route table.

CLI Example:

```bash
call azurearm_network.route_table_create_or_update test-rt-table testgroup
```

```python
salt.modules.azurearm_network.route_table_delete(name, resource_group, **kwargs)
```

New in version 2019.2.0.
Delete a route table.

**Parameters**

- **name** -- The name of the route table to delete.
- **resource_group** -- The resource group name assigned to the route table.

CLI Example:

```bash
call azurearm_network.route_table_delete test-rt-table testgroup
```

```python
salt.modules.azurearm_network.route_table_get(name, resource_group, **kwargs)
```

New in version 2019.2.0.
Get details about a specific route table.
Parameters

- **name** -- The name of the route table to query.
- **resource_group** -- The resource group name assigned to the route table.

CLI Example:

```bash
salt-call azurearm_network.route_table_get test-rt-table testgroup
```

salt.modules.azurearm_network.route_tables_list(resource_group, **kwargs)
New in version 2019.2.0.
List all route tables within a resource group.

Parameters **resource_group** -- The resource group name to list route tables within.

CLI Example:

```bash
salt-call azurearm_network.route_tables_list testgroup
```

salt.modules.azurearm_network.route_tables_list_all(**kwargs)
New in version 2019.2.0.
List all route tables within a subscription.

CLI Example:

```bash
salt-call azurearm_network.route_tables_list_all
```

salt.modules.azurearm_network.routes_list(route_table, resource_group, **kwargs)
New in version 2019.2.0.
List all routes within a route table.

Parameters

- **route_table** -- The route table to query.
- **resource_group** -- The resource group name assigned to the route table.

CLI Example:

```bash
salt-call azurearm_network.routes_list test-rt-table testgroup
```
salt.modules.azurearm_network.security_rule_create_or_update(name, access, direction, priority, protocol, security_group, resource_group, source_address_prefix=None, destination_address_prefix=None, source_port_range=None, destination_port_range=None, source_address_prefixes=None, destination_address_prefixes=None, source_port_ranges=None, destination_port_ranges=None, **kwargs)

New in version 2019.2.0.

Create or update a security rule within a specified network security group.

Parameters

- **name** -- The name of the security rule to create.
- **access** -- ‘allow’ or ‘deny’
- **direction** -- ‘inbound’ or ‘outbound’
- **priority** -- Integer between 100 and 4096 used for ordering rule application.
- **protocol** -- ‘tcp’, ‘udp’, or ‘*’
- **destination_address_prefix** -- The CIDR or destination IP range. Asterix ‘*’ can also be used to match all destination IPs. Default tags such as ‘VirtualNetwork’, ‘AzureLoadBalancer’ and ‘Internet’ can also be used. If this is an ingress rule, specifies where network traffic originates from.
- **destination_port_range** -- The destination port or range. Integer or range between 0 and 65535. Asterix ‘*’ can also be used to match all ports.
- **source_address_prefix** -- The CIDR or source IP range. Asterix ‘*’ can also be used to match all source IPs. Default tags such as ‘VirtualNetwork’, ‘AzureLoadBalancer’ and ‘Internet’ can also be used. If this is an ingress rule, specifies where network traffic originates from.
- **source_port_range** -- The source port or range. Integer or range between 0 and 65535. Asterix ‘*’ can also be used to match all ports.
- **destination_address_prefixes** -- A list of destination_address_prefix values. This parameter overrides destination_address_prefix and will cause any value entered there to be ignored.
- **destination_port_ranges** -- A list of destination_port_range values. This parameter overrides destination_port_range and will cause any value entered there to be ignored.
- **source_address_prefixes** -- A list of source_address_prefix values. This parameter overrides source_address_prefix and will cause any value entered there to be ignored.
- **source_port_ranges** -- A list of source_port_range values. This parameter overrides source_port_range and will cause any value entered there to be ignored.
• **security_group** -- The network security group containing the security rule.
• **resource_group** -- The resource group name assigned to the network security group.

CLI Example:

```
salt-call azurearm_network.security_rule_create_or_update testrule1 allow
  → outbound 101 tcp testnsg testgroup
  → destination_address_prefix=internet
  → source_address_prefix='*'\n  → source_port_range='*'
  → destination_port_range='1-1024'
```

salt.modules.azurearm_network.security_rule_delete(*security_rule*, *security_group*, *resource_group*, **kwargs)

New in version 2019.2.0.
Delete a security rule within a specified security group.

Parameters

• **name** -- The name of the security rule to delete.
• **security_group** -- The network security group containing the security rule.
• **resource_group** -- The resource group name assigned to the network security group.

CLI Example:

```
salt-call azurearm_network.security_rule_delete testrule1 testnsg testgroup
```

salt.modules.azurearm_network.security_rule_get(*security_rule*, *security_group*, *resource_group*, **kwargs)

New in version 2019.2.0.
Get a security rule within a specified network security group.

Parameters

• **name** -- The name of the security rule to query.
• **security_group** -- The network security group containing the security rule.
• **resource_group** -- The resource group name assigned to the network security group.

CLI Example:

```
salt-call azurearm_network.security_rule_get testrule1 testnsg testgroup
```

salt.modules.azurearm_network.security_rules_list(*security_group*, *resource_group*, **kwargs)

New in version 2019.2.0.
List security rules within a network security group.

Parameters

• **security_group** -- The network security group to query.
• **resource_group** -- The resource group name assigned to the network security group.

CLI Example:

```
salt-call azurearm_network.security_rules_list testnsg testgroup
```
salt.modules.azurearm_network.subnet_create_or_update(name, address_prefix, virtual_network, resource_group, **kwargs)

New in version 2019.2.0.
Create or update a subnet.

Parameters

- **name** -- The name assigned to the subnet being created or updated.
- **address_prefix** -- A valid CIDR block within the virtual network.
- **virtual_network** -- The virtual network name containing the subnet.
- **resource_group** -- The resource group name assigned to the virtual network.

CLI Example:

```
salt-call azurearm_network.subnet_create_or_update testsubnet 
    ->'10.0.0.0/24' testnet testgroup
```

salt.modules.azurearm_network.subnet_delete(name, virtual_network, resource_group, **kwargs)

New in version 2019.2.0.
Delete a subnet.

Parameters

- **name** -- The name of the subnet to delete.
- **virtual_network** -- The virtual network name containing the subnet.
- **resource_group** -- The resource group name assigned to the virtual network.

CLI Example:

```
salt-call azurearm_network.subnet_delete testsubnet testnet testgroup
```

salt.modules.azurearm_network.subnet_get(name, virtual_network, resource_group, **kwargs)

New in version 2019.2.0.
Get details about a specific subnet.

Parameters

- **name** -- The name of the subnet to query.
- **virtual_network** -- The virtual network name containing the subnet.
- **resource_group** -- The resource group name assigned to the virtual network.

CLI Example:

```
salt-call azurearm_network.subnet_get testsubnet testnet testgroup
```

salt.modules.azurearm_network.subnets_list(virtual_network, resource_group, **kwargs)

New in version 2019.2.0.
List all subnets within a virtual network.

Parameters

- **virtual_network** -- The virtual network name to list subnets within.
• **resource_group** -- The resource group name assigned to the virtual network.

CLI Example:

```bash
salt-call azurearm_network.subnets_list testnet testgroup
```

salt.modules.azurearm_network.usages_list(location, **kwargs)

New in version 2019.2.0.

List subscription network usage for a location.

**Parameters**

- **location** -- The Azure location to query for network usage.

CLI Example:

```bash
salt-call azurearm_network.usages_list westus
```

salt.modules.azurearm_network.virtual_network_create_or_update(name, address_prefixes, resource_group, **kwargs)

New in version 2019.2.0.

Create or update a virtual network.

**Parameters**

- **name** -- The name assigned to the virtual network being created or updated.
- **address_prefixes** -- A list of CIDR blocks which can be used by subnets within the virtual network.
- **resource_group** -- The resource group name assigned to the virtual network.

CLI Example:

```bash
salt-call azurearm_network.virtual_network_create_or_update --testnet ['10.0.0.0/16'] testgroup
```

salt.modules.azurearm_network.virtual_network_delete(name, resource_group, **kwargs)

New in version 2019.2.0.

Delete a virtual network.

**Parameters**

- **name** -- The name of the virtual network to delete.
- **resource_group** -- The resource group name assigned to the virtual network

CLI Example:

```bash
salt-call azurearm_network.virtual_network_delete testnet testgroup
```

salt.modules.azurearm_network.virtual_network_get(name, resource_group, **kwargs)

New in version 2019.2.0.

Get details about a specific virtual network.

**Parameters**

- **name** -- The name of the virtual network to query.
- **resource_group** -- The resource group name assigned to the virtual network.
CLI Example:
```
salt-call azurearm_network.virtual_network_get testnet testgroup
```

```
salt.modules.azurearm_network.virtual_networks_list(resource_group, **kwargs)
```
New in version 2019.2.0.
List all virtual networks within a resource group.

**Parameters** `resource_group` -- The resource group name to list virtual networks within.

CLI Example:
```
salt-call azurearm_network.virtual_networks_list testgroup
```

```
salt.modules.azurearm_network.virtual_networks_list_all(**kwargs)
```
New in version 2019.2.0.
List all virtual networks within a subscription.

CLI Example:
```
salt-call azurearm_network.virtual_networks_list_all
```

### 23.9.13 salt.modules.boto3_sns

Connection module for Amazon SNS

**configuration** This module accepts explicit sns credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More Information available at:


If IAM roles are not used you need to specify them either in a pillar or in the minion's config file:

```
sns.keyid: GKTADJGHEIQSXMKKRBJ08H
sns.key: askdjghsdfjkgWupUjasdlkdflkajgks
```

A region may also be specified in the configuration:

```
sns.region: us-east-1
```

If a region is not specified, the default is us-east-1.

It's also possible to specify key, keyid and region via a profile, either as a passed in dict, or as a string to pull from pillars or minion config:

```
myprofile:
    keyid: GKTADJGHEIQSXMKKRBJ08H
    key: askdjghsdfjkgWupUjasdlkdflkajgks
    region: us-east-1
```

**depends** boto3

```
salt.modules.boto3_sns.create_topic(Name, region=None, key=None, keyid=None, profile=None)
```
Create an SNS topic.
CLI Example:
```
salt myminion boto3_sns.create_topic mytopic region=us-east-1
```

```python
salt.modules.boto3_sns.delete_topic(TopicArn, region=None, key=None, keyid=None, profile=None)
```
Delete an SNS topic.

CLI Example:
```
salt myminion boto3_sns.delete_topic mytopic region=us-east-1
```

```python
salt.modules.boto3_sns.describe_topic(name, region=None, key=None, keyid=None, profile=None)
```
Returns details about a specific SNS topic, specified by name or ARN.

CLI Example:
```
salt my_favorite_client boto3_sns.describe_topic a_sns_topic_of_my_choice
```

```python
salt.modules.boto3_sns.get_subscription_attributes(SubscriptionArn, region=None, key=None, keyid=None, profile=None)
```
Returns all of the properties of a subscription.

CLI Example:
```
salt myminion boto3_sns.get_subscription_attributes somesubscription region=us-west-1
```

```python
salt.modules.boto3_sns.get_topic_attributes(TopicArn, region=None, key=None, keyid=None, profile=None)
```
Returns all of the properties of a topic. Topic properties returned might differ based on the authorization of the user.

CLI Example:
```
salt myminion boto3_sns.get_topic_attributes someTopic region=us-west-1
```

```python
salt.modules.boto3_sns.list_subscriptions(region=None, key=None, keyid=None, profile=None)
```
Returns a list of the requester's topics

CLI Example:
```
salt myminion boto3_sns.list_subscriptions region=us-east-1
```

```python
salt.modules.boto3_sns.list_subscriptions_by_topic(TopicArn, region=None, key=None, keyid=None, profile=None)
```
Returns a list of the subscriptions to a specific topic

CLI Example:
```
salt myminion boto3_sns.list_subscriptions_by_topic mytopic region=us-east-1
```

```python
salt.modules.boto3_sns.list_topics(region=None, key=None, keyid=None, profile=None)
```
Returns a list of the requester's topics

CLI Example:
salt myminion boto3_sns.list_topics

```
salt.modules.boto3_sns.set_subscription_attributes(SubscriptionArn, AttributeName, AttributeValue, region=None, key=None, keyid=None, profile=None)
```

Set an attribute of a subscription to a new value.

CLI Example:
```
salt myminion boto3_sns.set_subscription_attributes someSubscription RawMessageDelivery jsonStringValue
```

```
salt.modules.boto3_sns.set_topic_attributes(TopicArn, AttributeName, AttributeValue, region=None, key=None, keyid=None, profile=None)
```

Set an attribute of a topic to a new value.

CLI Example:
```
salt myminion boto3_sns.set_topic_attributes someTopic DisplayName myDisplayNameValue
```

```
salt.modules.boto3_sns.subscribe(TopicArn, Protocol, Endpoint, region=None, key=None, keyid=None, profile=None)
```

Subscribe to a Topic.

CLI Example:
```
salt myminion boto3_sns.subscribe mytopic https https://www.example.com/sns-endpoint
```

```
salt.modules.boto3_sns.topic_exists(name, region=None, key=None, keyid=None, profile=None)
```

Check to see if an SNS topic exists.

CLI Example:
```
salt myminion boto3_sns.topic_exists mytopic region=us-east-1
```

```
salt.modules.boto3_sns.unsubscribe(SubscriptionArn, region=None, key=None, keyid=None, profile=None)
```

Unsubscribe a specific SubscriptionArn of a topic.

CLI Example:
```
salt myminion boto3_sns.unsubscribe my_subscription_arn region=us-east-1
```
23.9.14 salt.modules.boto_cfn

Connection module for Amazon Cloud Formation

New in version 2015.5.0.

configuration This module accepts explicit AWS credentials but can also utilize IAM roles assigned to
the instance through Instance Profiles. Dynamic credentials are then automatically obtained from
AWS API and no further configuration is necessary. More Information available at:


If IAM roles are not used you need to specify them either in a pillar or in the minion's config file:

```
cfn.keyid: GKTADJGHEIQSXMKKRBJ08H
cfn.key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
```

A region may also be specified in the configuration:

```
cfn.region: us-east-1
```

depends boto

**salt.modules.boto_cfn.create**(name, template_body=None, template_url=None, parameters=None, notification_arns=None, disable_rollback=None, timeout_in_minutes=None, capabilities=None, tags=None, on_failure=None, stack_policy_body=None, stack_policy_url=None, region=None, key=None, keyid=None, profile=None)

Create a CFN stack.

CLI Example:

```
salt myminion boto_cfn.create mystack template_url='https://s3.amazonaws.com/bucket/template.cft' region=us-east-1
```

**salt.modules.boto_cfn.delete**(name, region=None, key=None, keyid=None, profile=None)

Delete a CFN stack.

CLI Example:

```
salt myminion boto_cfn.delete mystack region=us-east-1
```

**salt.modules.boto_cfn.describe**(name, region=None, key=None, keyid=None, profile=None)

Describe a stack.

New in version 2015.8.0.

CLI Example:

```
salt myminion boto_cfn.describe mystack region=us-east-1
```

**salt.modules.boto_cfn.exists**(name, region=None, key=None, keyid=None, profile=None)

Check to see if a stack exists.

CLI Example:

```
salt myminion boto_cfn.exists mystack region=us-east-1
```
salt.modules.boto_cfn.get_template(name, region=None, key=None, keyid=None, profile=None)

Check to see if attributes are set on a CFN stack.

CLI Example:

```
salt myminion boto_cfn.get_template mystack
```

salt.modules.boto_cfn.update_stack(name, template_body=None, template_url=None, parameters=None, notification_arns=None, disable_rollback=False, timeout_in_minutes=None, capabilities=None, tags=None, use_previous_template=None, stack_policy_during_update_body=None, stack_policy_during_update_url=None, stack_policy_body=None, stack_policy_url=None, region=None, key=None, keyid=None, profile=None)

Update a CFN stack.

New in version 2015.8.0.

CLI Example:

```
salt myminion boto_cfn.update_stack mystack template_url='https://s3.amazonaws.com/bucket/template.cft' region=us-east-1
```

salt.modules.boto_cfn.validate_template(template_body=None, template_url=None, region=None, key=None, keyid=None, profile=None)

Validate cloudformation template

New in version 2015.8.0.

CLI Example:

```
salt myminion boto_cfn.validate_template mystack-template
```

23.9.15 salt.modules.boto_cloudfront

Connection module for Amazon CloudFront

New in version 2018.3.0.

**depends** boto3

**configuration** This module accepts explicit AWS credentials but can also utilize IAM roles assigned to the instance through Instance Profiles or it can read them from the ~/.aws/credentials file or from these environment variables: AWS_ACCESS_KEY_ID, AWS_SECRET_ACCESS_KEY. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available at:


If IAM roles are not used you need to specify them either in a pillar or in the minion's config file:

```
cloudfront.keyid: GKTADJGHEIQSXMKKRBJ08H
cloudfront.key: askdjghsdfjkghWupUjasdflkjdflskjgjsdfjajkghs
```
A region may also be specified in the configuration:

```
cloudfront.region: us-east-1
```

If a region is not specified, the default is us-east-1.

It’s also possible to specify key, keyid and region via a profile, either as a passed in dict, or as a string to pull from pillars or minion config:

```
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfjkgWupUjasdfkldfklgjsdfjajkghs
  region: us-east-1
```

```
salt.modules.boto_cloudfront.create_distribution(name, config, tags=None, region=None, key=None, keyid=None, profile=None)
```

Create a CloudFront distribution with the given name, config, and (optionally) tags.

- **name** Name for the CloudFront distribution
- **config** Configuration for the distribution
- **tags** Tags to associate with the distribution
- **region** Region to connect to
- **key** Secret key to use
- **keyid** Access key to use
- **profile** A dict with region, key, and keyid, or a pillar key (string) that contains such a dict.

CLI Example:

```
salt myminion boto_cloudfront.create_distribution name=mydistribution region=us-east-1 keyid=GKTADJGHEIQSXMKKRBJ08H key=askdjghsdfjkgWupUjasdfkl
```

```
salt.modules.boto_cloudfront.export_distributions(region=None, key=None, keyid=None, profile=None)
```

Get details of all CloudFront distributions. Produces results that can be used to create an SLS file.

CLI Example:

```
salt-call boto_cloudfront.export_distributions --out=text | sed "s/\n/local://" > cloudfront_distributions.sls
```

```
salt.modules.boto_cloudfront.get_distribution(name, region=None, key=None, keyid=None, profile=None)
```

Get information about a CloudFront distribution (configuration, tags) with a given name.

- **name** Name of the CloudFront distribution
- **region** Region to connect to
- **key** Secret key to use
- **keyid** Access key to use
- **profile** A dict with region, key, and keyid, or a pillar key (string) that contains such a dict.

CLI Example:
salt.modules.boto_cloudfront.update_distribution(name, config, tags=None, region=None, key=None, keyid=None, profile=None)

Update the config (and optionally tags) for the CloudFront distribution with the given name.

- **name**: Name of the CloudFront distribution
- **config**: Configuration for the distribution
- **tags**: Tags to associate with the distribution
- **region**: Region to connect to
- **key**: Secret key to use
- **keyid**: Access key to use
- **profile**: A dict with region, key, and keyid, or a pillar key (string) that contains such a dict.

CLI Example:
```
salt myminion boto_cloudfront.update_distribution name=mydistribution
  → profile=awsprofile
  config={"Comment":"partial configuration","Enabled":true}
```

### 23.9.16 salt.modules.boto_datapipeline

Connection module for Amazon Data Pipeline

New in version 2016.3.0.

- **depends**: boto3

salt.modules.boto_datapipeline.activate_pipeline(pipeline_id, region=None, key=None, keyid=None, profile=None)

Start processing pipeline tasks. This function is idempotent.

CLI Example:
```
salt myminion boto_datapipeline.activate_pipeline my_pipeline_id
```

salt.modules.boto_datapipeline.create_pipeline(name, unique_id, description='', region=None, key=None, keyid=None, profile=None)

Create a new, empty pipeline. This function is idempotent.

CLI Example:
```
salt myminion boto_datapipeline.create_pipeline my_name my_unique_id
```

salt.modules.boto_datapipeline.delete_pipeline(pipeline_id, region=None, key=None, keyid=None, profile=None)

Delete a pipeline, its pipeline definition, and its run history. This function is idempotent.

CLI Example:
```
salt myminion boto_datapipeline.delete_pipeline my_pipeline_id
```
salt.modules.boto_datapipeline.describe_pipelines(*pipeline_ids*, *region=None*, *key=None*, *keyid=None*, *profile=None*)

Retrieve metadata about one or more pipelines.

CLI Example:
```
salt myminion boto_datapipeline.describe_pipelines ['my_pipeline_id']
```

salt.modules.boto_datapipeline.get_pipeline_definition(*pipeline_id*, *version='latest'*, *region=None*, *key=None*, *keyid=None*, *profile=None*)

Get the definition of the specified pipeline.

CLI Example:
```
salt myminion boto_datapipeline.get_pipeline_definition my_pipeline_id
```

salt.modules.boto_datapipeline.list_pipelines(*region=None*, *key=None*, *keyid=None*, *profile=None*)

Get a list of pipeline ids and names for all pipelines.

CLI Example:
```
salt myminion boto_datapipeline.list_pipelines profile=myprofile
```

salt.modules.boto_datapipeline.pipeline_id_from_name(*name*, *region=None*, *key=None*, *keyid=None*, *profile=None*)

Get the pipeline id, if it exists, for the given name.

CLI Example:
```
salt myminion boto_datapipeline.pipeline_id_from_name my_pipeline_name
```

salt.modules.boto_datapipeline.put_pipeline_definition(*pipeline_id*, *pipeline_objects*, *parameter_objects=None*, *parameter_values=None*, *region=None*, *key=None*, *keyid=None*, *profile=None*)

Add tasks, schedules, and preconditions to the specified pipeline. This function is idempotent and will replace an existing definition.

CLI Example:
```
salt myminion boto_datapipeline.put_pipeline_definition my_pipeline_id my_"pipeline_objects"
```

23.9.17 salt.modules.boto_dynamodb

Connection module for Amazon DynamoDB

New in version 2015.5.0.

configuration This module accepts explicit DynamoDB credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More Information available at:
If IAM roles are not used you need to specify them either in a pillar or in the minion's config file:

```
keyid: GKTADJGHEIQSXMKKRBJ08H
key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
```

A region may also be specified in the configuration:

```
region: us-east-1
```

If a region is not specified, the default is us-east-1.

It's also possible to specify key, keyid and region via a profile, either as a passed in dict, or as a string to pull from pillars or minion config:

```
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
  region: us-east-1
```

depends boto

```
salt.modules.boto_dynamodb.create_global_secondary_index(table_name, global_index, region=None, key=None, keyid=None, profile=None)
```

Creates a single global secondary index on a DynamoDB table.

CLI Example:

```
salt myminion boto_dynamodb.create_global_secondary_index table_name / index_name
```

```
salt.modules.boto_dynamodb.create_table(table_name, region=None, key=None, keyid=None, profile=None, read_capacity_units=None, write_capacity_units=None, hash_key=None, hash_key_data_type=None, range_key=None, range_key_data_type=None, local_indexes=None, global_indexes=None)
```

Creates a DynamoDB table.

CLI Example:

```
salt myminion boto_dynamodb.create_table table_name / region=us-east-1 / hash_key=id / hash_key_data_type=N / range_key=created_at / range_key_data_type=N / read_capacity_units=1 / write_capacity_units=1
```

```
salt.modules.boto_dynamodb.delete(table_name, region=None, key=None, keyid=None, profile=None)
```

Delete a DynamoDB table.
CLI Example:
```
salt myminion boto_dynamodb.delete table_name region=us-east-1
```

```
salt.modules.boto_dynamodb.describe(table_name, region=None, key=None, keyid=None, profile=None)
```

Describe a DynamoDB table.

CLI Example:
```
salt myminion boto_dynamodb.describe table_name region=us-east-1
```

```
salt.modules.boto_dynamodb.exists(table_name, region=None, key=None, keyid=None, profile=None)
```

Check to see if a table exists.

CLI Example:
```
salt myminion boto_dynamodb.exists table_name region=us-east-1
```

```
salt.modules.boto_dynamodb.extract_index(index_data, global_index=False)
```

Instantiates and returns an AllIndex object given a valid index configuration

CLI Example:
```
salt myminion boto_dynamodb.extract_index index
```

```
salt.modules.boto_dynamodb.update(table_name, throughput=None, global_indexes=None, region=None, key=None, keyid=None, profile=None)
```

Update a DynamoDB table.

CLI Example:
```
salt myminion boto_dynamodb.update table_name region=us-east-1
```

```
salt.modules.boto_dynamodb.update_global_secondary_index(table_name, global_indexes, region=None, key=None, keyid=None, profile=None)
```

Updates the throughput of the given global secondary indexes.

CLI Example:
```
salt myminion boto_dynamodb.update_global_secondary_index table_name / indexes
```

23.9.18 salt.modules.boto_efs

Connection module for Amazon EFS

New in version 2017.7.0.

**configuration** This module accepts explicit EFS credentials but can also utilize IAM roles assigned to the instance through Instance Profiles or it can read them from the `~/.aws/credentials` file or from these environment variables: `AWS_ACCESS_KEY_ID`, `AWS_SECRET_ACCESS_KEY`. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available at:
If IAM roles are not used you need to specify them either in a pillar or in the minion's config file:

```yaml
esfs.keyid: GKTADJGHEIQSXMKKRBJ08H
esfs.key: askd+ghsdfjkghWupU/asdflkdfklgjsdfjajkghs
```

A region may also be specified in the configuration:

```yaml
esfs.region: us-east-1
```

If a region is not specified, the default is us-east-1.

It's also possible to specify key, keyid, and region via a profile, either as a passed in dict, or as a string to pull from pillars or minion config:

```yaml
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askd+ghsdfjkghWupU/asdflkdfklgjsdfjajkghs
  region: us-east-1
```

### dependboto3

salt.modules.boto_efs.create_file_system

```python
name (string) - The name for the new file system
performance_mode (string) - The PerformanceMode of the file system. Can be either generalPurpose or maxIO
creation_token (string) - A unique name to be used as reference when creating an EFS. This will ensure idempotency. Set to name if not specified otherwise

returns (dict) - A dict of the data for the elastic file system
```

**CLI Example:**

```
salt 'my-minion' boto_efs.create_file_system efs-name generalPurpose
```

salt.modules.boto_efs.create_mount_target

```python
filesystemid (string) - ID of the file system for which to create the mount target.
subnetid (string) - ID of the subnet to add the mount target in.
```

Creates a mount target for a file system. You can then mount the file system on EC2 instances via the mount target.

You can create one mount target in each Availability Zone in your VPC. All EC2 instances in a VPC within a given Availability Zone share a single mount target for a given file system.

If you have multiple subnets in an Availability Zone, you create a mount target in one of the subnets. EC2 instances do not need to be in the same subnet as the mount target in order to access their file system.

**filesystemid** (string) - ID of the file system for which to create the mount target.

**subnetid** (string) - ID of the subnet to add the mount target in.
**ipaddress**

*(string)* - Valid IPv4 address within the address range of the specified subnet.

**securitygroups**

*(list[string])* - Up to five VPC security group IDs, of the form sg-xxxxxxx. These must be for the same VPC as subnet specified.

**returns** *(dict)* - A dict of the response data

CLI Example:

```python
salt 'my-minion' boto_efs.create_mount_target filesystemid subnetid
```

salt.modules.boto_efs.create_tags(*filesystemid*, *tags*, *keyid=None*, *key=None*, *profile=None*, *region=None*, **kwargs)

Creates or overwrites tags associated with a file system. Each tag is a key-value pair. If a tag key specified in the request already exists on the file system, this operation overwrites its value with the value provided in the request.

*filesystemid* *(string)* - ID of the file system for whose tags will be modified.

*tags* *(dict)* - The tags to add to the file system

CLI Example:

```python
salt 'my-minion' boto_efs.create_tags
```

salt.modules.boto_efs.delete_file_system(*filesystemid*, *keyid=None*, *key=None*, *profile=None*, *region=None*, **kwargs)

Deletes a file system, permanently severing access to its contents. Upon return, the file system no longer exists and you can’t access any contents of the deleted file system. You can’t delete a file system that is in use. That is, if the file system has any mount targets, you must first delete them.

*filesystemid* *(string)* - ID of the file system to delete.

CLI Example:

```python
salt 'my-minion' boto_efs.delete_file_system filesystemid
```

salt.modules.boto_efs.delete_mount_target(*mounttargetid*, *keyid=None*, *key=None*, *profile=None*, *region=None*, **kwargs)

Deletes the specified mount target.

This operation forcibly breaks any mounts of the file system via the mount target that is being deleted, which might disrupt instances or applications using those mounts. To avoid applications getting cut off abruptly, you might consider unmounting any mounts of the mount target, if feasible. The operation also deletes the associated network interface. Uncommitted writes may be lost, but breaking a mount target using this operation does not corrupt the file system itself. The file system you created remains. You can mount an EC2 instance in your VPC via another mount target.

*mounttargetid* *(string)* - ID of the mount target to delete

CLI Example:

```python
salt 'my-minion' boto_efs.delete_mount_target mounttargetid
```

salt.modules.boto_efs.delete_tags(*filesystemid*, *tags*, *keyid=None*, *key=None*, *profile=None*, *region=None*, **kwargs)

Deletes the specified tags from a file system.

*filesystemid* *(string)* - ID of the file system for whose tags will be removed.
tags (list[string]) - The tag keys to delete to the file system

CLI Example:
```
salt 'my-minion' boto_efs.delete_tags
```

salt.modules.boto_efs.get_file_systems (filesystemid=None, keyid=None, key=None, profile=None, region=None, creation_token=None, **kwargs)

Get all EFS properties or a specific instance property if filesystemid is specified

filesystemid (string) - ID of the file system to retrieve properties

documentation

creation_token (string) - A unique token that identifies an EFS. If filesystem created via create_file_system this would either be explicitly passed in or set to name. You can limit your search with this.

returns (list[dict]) - list of all elastic file system properties

CLI Example:
```
salt 'my-minion' boto_efs.get_file_systems efs-id
```

salt.modules.boto_efs.get_mount_targets (filesystemid=None, mounttargetid=None, keyid=None, key=None, profile=None, region=None, **kwargs)

Get all the EFS mount point properties for a specific filesystemid or the properties for a specific mounttargetid. One or the other must be specified

filesystemid

(string) - ID of the file system whose mount targets to list  Must be specified if mounttargetid is not

mounttargetid

(string) - ID of the mount target to have its properties returned  Must be specified if filesystemid is not

returns (list[dict]) - list of all mount point properties

CLI Example:
```
salt 'my-minion' boto_efs.get_mount_targets
```

salt.modules.boto_efs.get_tags (filesystemid, keyid=None, key=None, profile=None, region=None, **kwargs)

Return the tags associated with an EFS instance.

filesystemid (string) - ID of the file system whose tags to list

returns (list) - list of tags as key/value pairs

CLI Example:
```
salt 'my-minion' boto_efs.get_tags efs-id
```

salt.modules.boto_efs.set_security_groups (mounttargetid, securitygroup, keyid=None, key=None, profile=None, region=None, **kwargs)

Modifies the set of security groups in effect for a mount target

mounttargetid (string) - ID of the mount target whose security groups will be modified

securitygroups (list[string]) - list of no more than 5 VPC security group IDs.

CLI Example:
23.9.19 salt.modules.boto_elasticache

Connection module for Amazon Elasticache

New in version 2014.7.0.

configuration This module accepts explicit elasticache credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More Information available at:


If IAM roles are not used you need to specify them either in a pillar or in the minion's config file:

```
elasticache.keyid: GKTADJGHEIQSXMKKRBJ08H
elasticache.key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
```

A region may also be specified in the configuration:

```
elasticache.region: us-east-1
```

If a region is not specified, the default is us-east-1.

It's also possible to specify key, keyid and region via a profile, either as a passed in dict, or as a string to pull from pillars or minion config:

```
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
  region: us-east-1
```

depends boto

salt.modules.boto_elasticache.authorize_cache_security_group_ingress(name, ec2_security_group_name, ec2_security_group_owner_id, region=None, key=None, keyid=None, profile=None)

Authorize network ingress from an ec2 security group to a cache security group.

CLI Example:

```
salt myminion boto_elasticache.authorize_cache_security_group_ingress name=mysg, ec2_security_group_name=myec2sg, ec2_security_group_owner_id=879879
```
salt.modules.boto_elasticache.create(name, num_cache_nodes=None, engine=None, cache_node_type=None, replication_group_id=None, engine_version=None, cache_parameter_group_name=None, cache_subnet_group_name=None, cache_security_group_names=None, security_group_ids=None, preferred_availability_zone=None, preferred_maintenance_window=None, port=None, notification_topic_arn=None, auto_minor_version_upgrade=None, wait=None, region=None, key=None, keyid=None, profile=None)

Create a cache cluster.
CLI Example:

```bash
salt myminion boto_elasticache.create myelasticache redis cache.t1.micro cache_security_group_names=['"myelasticachesg"']
```

salt.modules.boto_elasticache.create_cache_security_group(name, description, region=None, key=None, keyid=None, profile=None)

Create a cache security group.
CLI Example:

```bash
salt myminion boto_elasticache.create_cache_security_group myelasticachesg 'My Cache Security Group'
```

salt.modules.boto_elasticache.create_replication_group(name, primary_cluster_id, replication_group_description, wait=None, region=None, key=None, keyid=None, profile=None)

Create replication group.
CLI Example:

```bash
salt myminion boto_elasticache.create_replication_group myelasticache myprimarycluster description
```

salt.modules.boto_elasticache.create_subnet_group(name, description, subnet_ids=None, subnet_names=None, tags=None, region=None, key=None, keyid=None, profile=None)

Create an ElastiCache subnet group
CLI example to create an ElastiCache subnet group:

```bash
salt myminion boto_elasticache.create_subnet_group my-subnet-group →"group description" subnet_ids='[subnet-12345678, subnet-87654321]' →region-us-east-1
```

salt.modules.boto_elasticache.delete(name, wait=False, region=None, key=None, keyid=None, profile=None)

Delete a cache cluster.
CLI Example:
```
salt myminion boto_elasticache.delete myelasticache
```

```python
salt.modules.boto_elasticache.delete_cache_security_group(name, region=None, key=None, keyid=None, profile=None)
```
Delete a cache security group.

CLI Example:
```
salt myminion boto_elasticache.delete_cache_security_group myelasticachesg 'My Cache Security Group'
```

```python
salt.modules.boto_elasticache.delete_replication_group(name, region=None, key=None, keyid=None, profile=None)
```
Delete an ElastiCache replication group.

CLI Example:
```
salt myminion boto_elasticache.delete_replication_group my-replication-group region=us-east-1
```

```python
salt.modules.boto_elasticache.delete_subnet_group(name, region=None, key=None, keyid=None, profile=None)
```
Delete an ElastiCache subnet group.

CLI Example:
```
salt myminion boto_elasticache.delete_subnet_group my-subnet-group region=us-east-1
```

```python
salt.modules.boto_elasticache.describe_replication_group(name, region=None, key=None, keyid=None, profile=None, parameter=None)
```
Get replication group information.

CLI Example:
```
salt myminion boto_elasticache.describe_replication_group mygroup
```

```python
salt.modules.boto_elasticache.exists(name, region=None, key=None, keyid=None, profile=None)
```
Check to see if a cache cluster exists.

CLI Example:
```
salt myminion boto_elasticache.exists myelasticache
```

```python
salt.modules.boto_elasticache.get_all_cache_subnet_groups(name=None, region=None, key=None, keyid=None, profile=None)
```
Return a list of all cache subnet groups with details

CLI Example:
salt myminion boto_elasticache.get_all_subnet_groups region=us-east-1

salt.modules.boto_elasticache.get_cache_subnet_group(name, region=None, key=None, keyid=None, profile=None)
Get information about a cache subnet group.
CLI Example:
salt myminion boto_elasticache.get_cache_subnet_group mycache_subnet_group

salt.modules.boto_elasticache.get_config(name, region=None, key=None, keyid=None, profile=None)
Get the configuration for a cache cluster.
CLI Example:
salt myminion boto_elasticache.get_config myelasticache

salt.modules.boto_elasticache.get_group_host(name, region=None, key=None, keyid=None, profile=None)
Get hostname from replication cache group
CLI Example:
salt myminion boto_elasticache.get_group_host myelasticachegroup

salt.modules.boto_elasticache.get_node_host(name, region=None, key=None, keyid=None, profile=None)
Get hostname from cache node
CLI Example:
salt myminion boto_elasticache.get_node_host myelasticache

salt.modules.boto_elasticache.group_exists(name, region=None, key=None, keyid=None, profile=None)
Check to see if a replication group exists.
CLI Example:
salt myminion boto_elasticache.group_exists myelasticache

salt.modules.boto_elasticache.list_cache_subnet_groups(name=None, region=None, key=None, keyid=None, profile=None)
Return a list of all cache subnet group names
CLI Example:
salt myminion boto_elasticache.list_subnet_groups region=us-east-1

salt.modules.boto_elasticache.revoke_cache_security_group_ingress(name, ec2_security_group_name, ec2_security_group_owner_id, region=None, key=None, keyid=None, profile=None)

Revoke network ingress from an ec2 security group to a cache security group.

CLI Example:
```
salt myminion boto_elasticache.revoke_cache_security_group_ingress
  → myelasticachesg myec2sg 879879
```

salt.modules.boto_elasticache.subnet_group_exists(name, tags=None, region=None, key=None, keyid=None, profile=None)

Check to see if an ElastiCache subnet group exists.

CLI Example:
```
salt myminion boto_elasticache.subnet_group_exists my-param-group
  → region=us-east-1
```

**23.9.20 salt.modules.boto_elbv2**

Connection module for Amazon ALB

New in version 2017.7.0.

**configuration**  
This module accepts explicit elb credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More Information available at:

```
```

If IAM roles are not used you need to specify them either in a pillar or in the minion's config file:

```
elbv2.keyid: GKTADJGHEIQSXMKKRBJ08H
elbv2.key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
elbv2.region: us-west-2
```

If a region is not specified, the default is us-east-1.

It's also possible to specify key, keyid and region via a profile, either as a passed in dict, or as a string to pull from pillars or minion config:

```
myprofile:
  keyid: GKTADJGHEIQXSXMRRBJ08H
  key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
  region: us-east-1
```

**depends** boto3

salt.modules.boto_elbv2.create_target_group(name, protocol, port, vpc_id, region=None, key=None, keyid=None, profile=None, health_check_protocol='HTTP', health_check_port='traffic-port', health_check_path='/', health_check_interval_seconds=30, health_check_timeout_seconds=5, healthy_threshold_count=5, unhealthy_threshold_count=2)

Create target group if not present.
name (string) - The name of the target group.
protocol (string) - The protocol to use for routing traffic to the targets
port (int) - The port on which the targets receive traffic. This port is used unless you specify a port override when registering the traffic.
vpc_id (string) - The identifier of the virtual private cloud (VPC).
health_check_protocol (string) - The protocol the load balancer uses when performing health check on targets. The default is the HTTP protocol.
health_check_port (string) - The port the load balancer uses when performing health checks on targets. The default is 'traffic-port', which indicates the port on which each target receives traffic from the load balancer.
health_check_path (string) - The ping path that is the destination on the targets for health checks. The default is '/.
health_check_interval_seconds (integer) - The approximate amount of time, in seconds, between health checks of an individual target. The default is 30 seconds.
health_check_timeout_seconds (integer) - The amount of time, in seconds, during which no response from a target means a failed health check. The default is 5 seconds.
healthy_threshold_count (integer) - The number of consecutive health checks successes required before considering an unhealthy target healthy. The default is 5.
unhealthy_threshold_count (integer) - The number of consecutive health check failures required before considering a target unhealthy. The default is 2.
returns (bool) - True on success, False on failure.

CLI Example:
```
salt myminion boto_elbv2.create_target_group learn1give1 protocol=HTTP port=54006
\vpc_id=vpc-deadbeef
```

salt.modules.boto_elbv2.delete_target_group(name, region=None, key=None, keyid=None, profile=None)
Delete target group.

name (string) - Target Group Name or Amazon Resource Name (ARN).
returns (bool) - True on success, False on failure.

CLI Example:
```
salt myminion boto_elbv2.delete_target_group arn:aws:elasticloadbalancing:us-west-2:644138682826:targetgroup/learn1give1-api/414788a16b5cf163
```
	salt.modules.boto_elbv2.deregister_targets(name, targets, region=None, key=None, keyid=None, profile=None)
Deregister targets to a target group of an ALB. targets is either a instance id string or a list of instance id’s.

Returns:
  • True: instance(s) deregistered successfully
  • False: instance(s) failed to be deregistered

CLI Example:
```bash
salt myminion boto_elbv2.deregister_targets myelb instance_id
salt myminion boto_elbv2.deregister_targets myelb "[instance_id,instance_id]"
```

```
salt.modules.boto_elbv2.describe_target_health(name, targets=None, region=None, key=None, keyid=None, profile=None)

Get the current health check status for targets in a target group.

CLI Example:
salt myminion boto_elbv2.describe_target_health arn:aws:elasticloadbalancing:us-west-2:644138682826:targetgroup/learn1give1-api/414788a16b5cf163 targets=["i-isdf23ifjf"]
```

```
salt.modules.boto_elbv2.register_targets(name, targets, region=None, key=None, keyid=None, profile=None)

Register targets to a target group of an ALB. targets is either a instance id string or a list of instance id's.

Returns:
- **True**: instance(s) registered successfully
- **False**: instance(s) failed to be registered

CLI Example:
salt myminion boto_elbv2.register_targets myelb instance_id
salt myminion boto_elbv2.register_targets myelb "[instance_id,instance_id]"
```

```
salt.modules.boto_elbv2.target_group_exists(name, region=None, key=None, keyid=None, profile=None)

Check to see if an target group exists.

CLI Example:
salt myminion boto_elbv2.target_group_exists arn:aws:elasticloadbalancing:us-west-2:644138682826:targetgroup/learn1give1-api/414788a16b5cf163
```

### 23.9.21 salt.modules.boto_kinesis

Connection module for Amazon Kinesis

New in version 2017.7.0.

**configuration**

This module accepts explicit Kinesis credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available at:


If IAM roles are not used you need to specify them either in a pillar or in the minion's config file:

```
kinesis.keyid: GKTADJGHEIQSXMKKRBJ08H
kinesis.key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
```

A region may also be specified in the configuration:

```
kinesis.region: us-east-1
```

23.9. execution modules  1073
If a region is not specified, the default is us-east-1.

It’s also possible to specify key, keyid and region via a profile, either as a passed in dict, or as a string to pull from pillars or minion config:

```
myprofile:
    keyid: GKTADJGHEIQSXMKKRBJ08H
    key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
    region: us-east-1
```

depends boto3

```
salt.modules.boto_kinesis.create_stream(stream_name, num_shards, region=None, key=None, keyid=None, profile=None)
```

Create a stream with name stream_name and initial number of shards num_shards.

CLI Example:

```
salt myminion boto_kinesis.create_stream my_stream N region=us-east-1
```

```
salt.modules.boto_kinesis.decrease_stream_retention_period(stream_name, retention_hours, region=None, key=None, keyid=None, profile=None)
```

Decrease stream retention period to retention_hours

CLI Example:

```
salt myminion boto_kinesis.decrease_stream_retention_period my_stream N region=us-east-1
```

```
salt.modules.boto_kinesis.delete_stream(stream_name, region=None, key=None, keyid=None, profile=None)
```

Delete the stream with name stream_name. This cannot be undone! All data will be lost!!

CLI Example:

```
salt myminion boto_kinesis.delete_stream my_stream region=us-east-1
```

```
salt.modules.boto_kinesis.disable_enhanced_monitoring(stream_name, metrics, region=None, key=None, keyid=None, profile=None)
```

Disable enhanced monitoring for the specified shard-level metrics on stream stream_name

CLI Example:

```
salt myminion boto_kinesis.disable_enhanced_monitoring my_stream ["metrics", "to", ~"disable"] region=us-east-1
```

```
salt.modules.boto_kinesis.enable_enhanced_monitoring(stream_name, metrics, region=None, key=None, keyid=None, profile=None)
```

Enable enhanced monitoring for the specified shard-level metrics on stream stream_name

CLI Example:

```
salt myminion boto_kinesis.enable_enhanced_monitoring my_stream ["metrics", "to", ~"enable"] region=us-east-1
```
salt.modules.boto_kinesis.exists(stream_name, region=None, key=None, keyid=None, profile=None)

Check if the stream exists. Returns False and the error if it does not.

CLI Example:

```
salt myminion boto_kinesis.exists my_stream region=us-east-1
```

salt.modules.boto_kinesis.get_info_for_reshard(stream_details)

Collect some data: number of open shards, key range, etc. Modifies stream_details to add a sorted list of OpenShards. Returns (min_hash_key, max_hash_key, stream_details)

CLI Example:

```
salt myminion boto_kinesis.get_info_for_reshard existing_stream_details
```

salt.modules.boto_kinesis.get_stream_when_active(stream_name, region=None, key=None, keyid=None, profile=None)

Get complete stream info from AWS, returning only when the stream is in the ACTIVE state. Continues to retry when stream is updating or creating. If the stream is deleted during retries, the loop will catch the error and break.

CLI Example:

```
salt myminion boto_kinesis.get_stream_when_active my_stream region=us-east-1
```

salt.modules.boto_kinesis.increase_stream_retention_period(stream_name, retention_hours, region=None, key=None, keyid=None, profile=None)

Increase stream retention period to retention_hours

CLI Example:

```
salt myminion boto_kinesis.increase_stream_retention_period my_stream N region=us-east-1
```

salt.modules.boto_kinesis.list_streams(region=None, key=None, keyid=None, profile=None)

Return a list of all streams visible to the current account

CLI Example:

```
salt myminion boto_kinesis.list_streams
```

salt.modules.boto_kinesis.long_int(hash_key)

The hash key is a 128-bit int, sent as a string. It's necessary to convert to int/long for comparison operations. This helper method handles python 2/3 incompatibility

CLI Example:

```
salt myminion boto_kinesis.long_int some_MD5_hash_as_string
```

Returns long object if python 2.X, int object if python 3.X

salt.modules.boto_kinesis.reshard(stream_name, desired_size, force=False, region=None, key=None, keyid=None, profile=None)

Reshard a kinesis stream. Each call to this function will wait until the stream is ACTIVE, then make a single
split or merge operation. This function decides where to split or merge with the assumption that the ultimate
goal is a balanced partition space.

For safety, user must pass in force=True; otherwise, the function will dry run.

CLI Example:

```
salt myminion boto_kinesis.reshard my_stream N True region=us-east-1
```

Returns True if a split or merge was found/performed, False if nothing is needed

## 23.9.22 salt.modules.boto_s3

Connection module for Amazon S3 using boto3

New in version 2018.3.0.

### configuration

This module accepts explicit AWS credentials but can also utilize IAM roles assigned to the instance through Instance Profiles or it can read them from the ~/.aws/credentials file or from these environment variables: AWS_ACCESS_KEY_ID, AWS_SECRET_ACCESS_KEY. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available at:


If IAM roles are not used you need to specify them either in a pillar or in the minion's config file:

```
s3.keyid: GKTADJGHEIQSXMKKRBJ08H
s3.key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
```

A region may also be specified in the configuration:

```
s3.region: us-east-1
```

If a region is not specified, the default is us-east-1.

It's also possible to specify key, keyid and region via a profile, either as a passed in dict, or as a string to pull from pillars or minion config:

```
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
  region: us-east-1
```

### depends

boto3

salt.modules.boto_s3.get_object_metadata

Get metadata about an S3 object. Returns None if the object does not exist.

You can pass AWS SSE-C related args and/or RequestPayer in extra_args.

CLI Example:
salt.myminion boto_s3.get_object_metadata
  my_bucket/path/to/object
  region=us-east-1
  key=key
  keyid=keyid
  profile=profile

salt.modules.boto_s3.upload_file(source, name, extra_args=None, region=None, key=None, keyid=None, profile=None)

Upload a local file as an S3 object.

CLI Example:

cat /path/to/local/file
  my_bucket/path/to/object
  region=us-east-1
  key=key
  keyid=keyid
  profile=profile

23.9.23 salt.modules.boto_secgroup

Connection module for Amazon Security Groups

New in version 2014.7.0.

configuration This module accepts explicit ec2 credentials but can also utilize IAM roles assigned to
the instance through Instance Profiles. Dynamic credentials are then automatically obtained from
AWS API and no further configuration is necessary. More Information available at:

http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/iam-roles-for-amazon-

If IAM roles are not used you need to specify them either in a pillar or in the minion's config file:

secgroup.keyid: GKTADJGHEIQSXMKKRBJ08H
secgroup.key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs

A region may also be specified in the configuration:

secgroup.region: us-east-1

If a region is not specified, the default is us-east-1.

It's also possible to specify key, keyid and region via a profile, either as a passed in dict, or as a
string to pull from pillars or minion config:

myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
  region: us-east-1

depends boto
salt.modules.boto_secgroup.authorize(name=None, source_group_name=None, source_group_owner_id=None, ip_protocol=None, from_port=None, to_port=None, cidr_ip=None, group_id=None, source_group_group_id=None, region=None, key=None, keyid=None, profile=None, vpc_id=None, vpc_name=None, egress=False)

Add a new rule to an existing security group.

CLI Example:

```bash
salt myminion boto_secgroup.authorize mysecgroup ip_protocol=tcp from_port=80 to_port=80 cidr_ip=['10.0.0.0/8', '192.168.0.0/24']
```

salt.modules.boto_secgroup.convert_to_group_ids(groups, vpc_id=None, vpc_name=None, region=None, key=None, keyid=None, profile=None)

Given a list of security groups and a vpc_id, convert_to_group_ids will convert all list items in the given list to security group ids.

CLI Example:

```bash
salt myminion boto_secgroup.convert_to_group_ids mysecgroup vpc-89yhh7h
```

salt.modules.boto_secgroup.create(name, description, vpc_id=None, vpc_name=None, region=None, key=None, keyid=None, profile=None)

Create a security group.

CLI Example:

```bash
salt myminion boto_secgroup.create mysecgroup 'My Security Group'
```

salt.modules.boto_secgroup.delete(name=None, group_id=None, region=None, key=None, keyid=None, profile=None, vpc_id=None, vpc_name=None)

Delete a security group.

CLI Example:

```bash
salt myminion boto_secgroup.delete mysecgroup
```

salt.modules.boto_secgroup.delete_tags(tags, name=None, group_id=None, vpc_name=None, vpc_id=None, region=None, key=None, keyid=None, profile=None)

Deletes tags from a security group.

New in version 2016.3.0.

tags a list of tags to remove
name the name of the security group
group_id the group id of the security group (in lieu of a name/vpc combo)
vpc_name the name of the vpc to search the named group for
vpc_id the id of the vpc, in lieu of the vpc_name
region the amazon region
key amazon key
keyid amazon keyid
profile amazon profile
CLI Example:

```python
salt myminion boto_secgroup.delete_tags ['TAG_TO_DELETE1','TAG_TO_DELETE2']
  security_group_name vpc_id=vpc-13435 profile=my_aws_profile
```

### `salt.modules.boto_secgroup.exists` (name=None, region=None, key=None, keyid=None, profile=None, vpc_id=None, vpc_name=None, group_id=None)

Check to see if a security group exists.

CLI Example:

```python
salt myminion boto_secgroup.exists mysecgroup
```

### `salt.modules.boto_secgroup.get_all_security_groups` (groupnames=None, group_ids=None, filters=None, region=None, key=None, keyid=None, profile=None)

Return a list of all Security Groups matching the given criteria and filters.

Note that the `groupnames` argument only functions correctly for EC2 Classic and default VPC Security Groups. To find groups by name in other VPCs you'll want to use the `group-name` filter instead.

The valid keys for the `filters` argument can be found in AWS's API documentation.

CLI Example:

```python
salt myminion boto_secgroup.get_all_security_groups filters='{"group-name: mygroup}"'
```

### `salt.modules.boto_secgroup.get_config` (name=None, group_id=None, region=None, key=None, keyid=None, profile=None, vpc_id=None, vpc_name=None)

Get the configuration for a security group.

CLI Example:

```python
salt myminion boto_secgroup.get_config mysecgroup
```

### `salt.modules.boto_secgroup.get_group_id` (name, vpc_id=None, vpc_name=None, region=None, key=None, keyid=None, profile=None)

Get a Group ID given a Group Name or Group Name and VPC ID

CLI Example given a Group Name or Group Name and VPC ID

```python
salt myminion boto_secgroup.get_group_id mysecgroup
```

### `salt.modules.boto_secgroup.revoke` (name=None, source_group_name=None, source_group_owner_id=None, ip_protocol=None, from_port=None, to_port=None, cidr_ip=None, group_id=None, source_group_group_id=None, region=None, key=None, keyid=None, profile=None, vpc_id=None, vpc_name=None, egress=False)

Remove a rule from an existing security group.

CLI Example:

```python
salt myminion boto_secgroup.revoke mysecgroup ip_protocol=tcp from_port=80 to_port=80 cidr_ip='10.0.0.0/8'
```
**salt.modules.boto_secgroup.set_tags**

Sets tags on a security group.

New in version 2016.3.0.

- **tags**: a dict of key:value pair of tags to set on the security group
- **name**: the name of the security group
- **group_id**: the group id of the security group (in lieu of a name/vpc combo)
- **vpc_name**: the name of the vpc to search the named group for
- **vpc_id**: the id of the vpc, in lieu of the vpc_name
- **region**: the amazon region
- **key**: amazon key
- **keyid**: amazon keyid
- **profile**: amazon profile

**CLI Example:**

```
salt myminion boto_secgroup.set_tags "{'TAG1': 'Value1', 'TAG2': 'Value2'}" security_group_name=vpc_id=vpc-13435 profile=my_aws_profile
```

### 23.9.24 **salt.modules.boto_sns**

Connection module for Amazon SNS

**configuration** This module accepts explicit sns credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More Information available at:


If IAM roles are not used you need to specify them either in a pillar or in the minion's config file:

```
sns.keyid: GKTADJGHEIQSXMKKRBJ08H
sns.key: askdjghsdfjkgWupUjasdfklkdfklgjsdfjajkgghs
```

A region may also be specified in the configuration:

```
sns.region: us-east-1
```

If a region is not specified, the default is us-east-1.

It’s also possible to specify key, keyid and region via a profile, either as a passed in dict, or as a string to pull from pillars or minion config:

```
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfjkgWupUjasdfklkdfklgjsdfjajkgghs
  region: us-east-1
```

**depends** boto
salt.modules.boto_sns.create(name, region=None, key=None, keyid=None, profile=None)
Create an SNS topic.

CLI example to create a topic:
```
salt myminion boto_sns.create mytopic region=us-east-1
```

salt.modules.boto_sns.delete(name, region=None, key=None, keyid=None, profile=None)
Delete an SNS topic.

CLI example to delete a topic:
```
salt myminion boto_sns.delete mytopic region=us-east-1
```

salt.modules.boto_sns.exists(name, region=None, key=None, keyid=None, profile=None)
Check to see if an SNS topic exists.

CLI Example:
```
salt myminion boto_sns.exists mytopic region=us-east-1
```

salt.modules.boto_sns.get_all_subscriptions_by_topic(name, region=None, key=None, keyid=None, profile=None)
Get list of all subscriptions to a specific topic.

CLI example to delete a topic:
```
salt myminion boto_sns.get_all_subscriptions_by_topic mytopic region=us-east-1
```

salt.modules.boto_sns.get_all_topics(region=None, key=None, keyid=None, profile=None)
Returns a list of the all topics.

CLI Example:
```
salt myminion boto_sns.get_all_topics
```

salt.modules.boto_sns.get_arn(name, region=None, key=None, keyid=None, profile=None)
Returns the full ARN for a given topic name.

CLI Example:
```
salt myminion boto_sns.get_arn mytopic
```

salt.modules.boto_sns.subscribe(topic, protocol, endpoint, region=None, key=None, keyid=None, profile=None)
Subscribe to a Topic.

CLI example to delete a topic:
```
salt myminion boto_sns.subscribe mytopic https https://www.example.com/sns-…-endpoint region=us-east-1
```

salt.modules.boto_sns.unsubscribe(topic, subscription_arn, region=None, key=None, keyid=None, profile=None)
Unsubscribe a specific SubscriptionArn of a topic.

CLI Example:
```
salt myminion boto_sns.unsubscribe my_topic my_subscription_arn region=us-east-1
```

New in version 2016.11.0.
23.9.25 salt.modules.celery

Support for scheduling celery tasks. The worker is independent of salt and thus can run in a different virtualenv or on a different python version, as long as broker, backend and serializer configurations match. Also note that celery and packages required by the celery broker, e.g. redis must be installed to load the salt celery execution module.

Note: A new app (and thus new connections) is created for each task execution

```python
salt.modules.celery.run_task(task_name, args=None, kwargs=None, broker=None, backend=None, wait_for_result=False, timeout=None, propagate=True, interval=0.5, no_ack=True, raise_timeout=True, config=None)
```

Execute celery tasks. For celery specific parameters see celery documentation.

CLI Example:

```
salt '*' celery.run_task tasks.sleep args=[4] broker=redis://localhost \ backend=redis://localhost wait_for_result=true
```

task_name  The task name, e.g. tasks.sleep
args  Task arguments as a list
kwargs  Task keyword arguments
broker  Broker for celeryapp, see celery documentation
backend  Result backend for celeryapp, see celery documentation
wait_for_result  Wait until task result is read from result backend and return result, Default: False
timeout  Timeout waiting for result from celery, see celery AsyncResult.get documentation
propagate  Propagate exceptions from celery task, see celery AsyncResult.get documentation, Default: True
interval  Interval to check for task result, see celery AsyncResult.get documentation, Default: 0.5
no_ack  see celery AsyncResult.get documentation. Default: True
raise_timeout  Raise timeout exception if waiting for task result times out. Default: False
config  Config dict for celery app, See celery documentation

23.9.26 salt.modules.ceph

Module to provide ceph control with salt.

depends

- ceph_cfg Python module

New in version 2016.11.0.

```python
salt.modules.ceph.ceph_version()
```

Get the version of ceph installed

CLI Example:

```
salt '*' ceph.ceph_version
```

salt.modules.ceph.cluster_quorum(**kwargs)
Get the cluster's quorum status

CLI Example:

```
salt '*' ceph.cluster_quorum \
    'cluster_name'='ceph' \
    'cluster_uuid'='cluster_uuid'
```

- **cluster_uuid** The cluster UUID. Defaults to value found in ceph config file.
- **cluster_name** The cluster name. Defaults to ceph.

salt.modules.ceph.cluster_status(**kwargs)
Get the cluster status, including health if in quorum

CLI Example:

```
salt '*' ceph.cluster_status \
    'cluster_name'='ceph' \
    'cluster_uuid'='cluster_uuid'
```

- **cluster_uuid** The cluster UUID. Defaults to value found in ceph config file.
- **cluster_name** The cluster name. Defaults to ceph.

salt.modules.ceph.keyring_auth_add(**kwargs)
Add keyring to authorized list

CLI Example:

```
salt '*' ceph.keyring_auth_add \
    'keyring_type'='admin' \
    'cluster_name'='ceph' \
    'cluster_uuid'='cluster_uuid'
```

- **keyring_type** (required) One of admin, mon, osd, rgw, mds
- **cluster_uuid** The cluster UUID. Defaults to value found in ceph config file.
- **cluster_name** The cluster name. Defaults to ceph.

salt.modules.ceph.keyring_auth_del(**kwargs)
Remove keyring from authorised list

CLI Example:

```
salt '*' ceph.keyring_osd_auth_del \
    'keyring_type'='admin' \
    'cluster_name'='ceph' \
    'cluster_uuid'='cluster_uuid'
```

- **keyring_type** (required) One of admin, mon, osd, rgw, mds
- **cluster_uuid** The cluster UUID. Defaults to value found in ceph config file.
- **cluster_name** The cluster name. Defaults to ceph.
salt.modules.ceph.keyring_auth_list(**kwargs)
List all cephx authorization keys

CLI Example:
```
salt '*' ceph.keyring_auth_list \
    'cluster_name'='ceph' \
    'cluster_uuid'='cluster_uuid'
```

- **cluster_name** The cluster name. Defaults to ceph.
- **cluster_uuid** The cluster UUID. Defaults to value found in ceph config file.

salt.modules.ceph.keyring_create(**kwargs)
Create keyring for cluster

CLI Example:
```
salt '*' ceph.keyring_create \
    'keyring_type'='admin' \
    'cluster_name'='ceph' \
    'cluster_uuid'='cluster_uuid'
```

- **keyring_type** (required) One of admin, mon, osd, rgw, mds
- **cluster_uuid** The cluster UUID. Defaults to value found in ceph config file.
- **cluster_name** The cluster name. Defaults to ceph.

salt.modules.ceph.keyring_present(**kwargs)
Returns True if the keyring is present on disk, otherwise False

CLI Example:
```
salt '*' ceph.keyring_present \
    'keyring_type'='admin' \
    'cluster_name'='ceph' \
    'cluster_uuid'='cluster_uuid'
```

- **keyring_type** (required) One of admin, mon, osd, rgw, mds
- **cluster_uuid** The cluster UUID. Defaults to value found in ceph config file.
- **cluster_name** The cluster name. Defaults to ceph.

salt.modules.ceph.keyring_purge(**kwargs)
Delete keyring for cluster

CLI Example:
```
salt '*' ceph.keyring_purge \
    'keyring_type'='admin' \
    'cluster_name'='ceph' \
    'cluster_uuid'='cluster_uuid'
```

- **keyring_type** (required) One of admin, mon, osd, rgw, mds
- **cluster_uuid** The cluster UUID. Defaults to value found in ceph config file.
**cluster_name**  The cluster name. Defaults to ceph.

If no ceph config file is found, this command will fail.

salt.modules.ceph.keyring_save(**kwargs)**

Create save keyring locally

CLI Example:

```
salt '*' ceph.keyring_save  \\
    'keyring_type'='admin'  \\
    'cluster_name'='ceph'  \\
    'cluster_uuid'='cluster_uuid'
```

**keyring_type (required)**  One of admin, mon, osd, rgw, mds

**cluster_uuid**  The cluster UUID. Defaults to value found in ceph config file.

**cluster_name**  The cluster name. Defaults to ceph.

salt.modules.ceph.mds_create(**kwargs)**

Create a mds

CLI Example:

```
salt '*' ceph.mds_create  \\
    'name' = 'mds.name'  \\
    'port' = 1000,  \\
    'addr' = 'fqdn.example.org'  \\
    'cluster_name'='ceph'  \\
    'cluster_uuid'='cluster_uuid'
```

**name (required)**  The MDS name (must start with mds.)

**port (required)**  Port to which the MDS will listen

**addr (required)**  Address or IP address for the MDS to listen

**cluster_uuid**  The cluster UUID. Defaults to value found in ceph config file.

**cluster_name**  The cluster name. Defaults to ceph.

salt.modules.ceph.mds_destroy(**kwargs)**

Remove a mds

CLI Example:

```
salt '*' ceph.mds_destroy  \\
    'name' = 'mds.name'  \\
    'cluster_name'='ceph'  \\
    'cluster_uuid'='cluster_uuid'
```

**name (required)**  The MDS name (must start with mds.)

**cluster_uuid**  The cluster UUID. Defaults to value found in ceph config file.

**cluster_name**  The cluster name. Defaults to ceph.
salt.modules.ceph.mon_active(**kwargs)
Returns True if the mon daemon is running, otherwise False

CLI Example:
```
salt '*' ceph.mon_active \
  --cluster_name='ceph' \
  --cluster_uuid='cluster_uuid'
```

cluster_uuid  The cluster UUID. Defaults to value found in ceph config file.
cluster_name  The cluster name. Defaults to ceph.

salt.modules.ceph.mon_create(**kwargs)
Create a mon node

CLI Example:
```
salt '*' ceph.mon_create \
  --cluster_name='ceph' \
  --cluster_uuid='cluster_uuid'
```

cluster_uuid  The cluster UUID. Defaults to value found in ceph config file.
cluster_name  The cluster name. Defaults to ceph.

salt.modules.ceph.mon_is(**kwargs)
Returns True if the target is a mon node, otherwise False

CLI Example:
```
salt '*' ceph.mon_is \
  --cluster_name='ceph' \
  --cluster_uuid='cluster_uuid'
```

cluster_name  The cluster name. Defaults to ceph.
cluster_uuid  The cluster UUID. Defaults to value found in ceph config file.

salt.modules.ceph.mon_quorum(**kwargs)
Returns True if the mon daemon is in the quorum, otherwise False

CLI Example:
```
salt '*' ceph.mon_quorum \
  --cluster_name='ceph' \
  --cluster_uuid='cluster_uuid'
```

cluster_uuid  The cluster UUID. Defaults to value found in ceph config file.
cluster_name  The cluster name. Defaults to ceph.

salt.modules.ceph.mon_status(**kwargs)
Get status from mon daemon

CLI Example:
**cluster_uuid**  The cluster UUID. Defaults to value found in ceph config file.

**cluster_name**  The cluster name. Defaults to ceph.

```
salt '*' ceph.mon_status \
    'cluster_name'='ceph' \ 
    'cluster_uuid'='cluster_uuid'
```

**salt.modules.ceph.osd_activate(**kwargs)**  
Activate an OSD

CLI Example:

```
salt '*' ceph.osd_activate 'osd_dev'='/dev/vdc'
```

**salt.modules.ceph.osd_discover()**  
List all OSD by cluster

CLI Example:

```
salt '*' ceph.osd_discover
```

**salt.modules.ceph.osd_prepare(**kwargs)**  
Prepare an OSD

CLI Example:

```
salt '*' ceph.osd_prepare 'osd_dev'='/dev/vdc' \ 
    'journal_dev'='device' \ 
    'cluster_name'='ceph' \ 
    'cluster_uuid'='cluster_uuid' \ 
    'osd_fs_type'='xfs' \ 
    'osd_uuid'='2a143b73-6d85-4389-a9e9-b8a78d9e1e07' \ 
    'journal_uuid'='4562a5db-ff6f-4268-811d-12fd4a09ae98'
```

**cluster_uuid**  The device to store the osd data on.

**journal_dev**  The journal device. defaults to osd_dev.

**cluster_name**  The cluster name. Defaults to ceph.

**cluster_uuid**  The cluster date will be added too. Defaults to the value found in local config.

**osd_fs_type**  set the file system to store OSD data with. Defaults to "xfs".

**osd_uuid**  set the OSD data UUID. If set will return if OSD with data UUID already exists.

**journal_uuid**  set the OSD journal UUID. If set will return if OSD with journal UUID already exists.

**salt.modules.ceph.partition_is(dev)**  
Check whether a given device path is a partition or a full disk.

CLI Example:

```
salt '*' ceph.partition_is /dev/sdc1
```

**salt.modules.ceph.partition_list()**  
List partitions by disk

CLI Example:
**salt.modules.ceph.partition_list_journal()**

List all OSD journal partitions by partition

CLI Example:

```
salt '*' ceph.partition_list_journal
```

**salt.modules.ceph.partition_list_osd()**

List all OSD data partitions by partition

CLI Example:

```
salt '*' ceph.partition_list_osd
```

**salt.modules.ceph.pool_add(pool_name, **kwargs)**

Create a pool

CLI Example:

```
salt '*' ceph.pool_add pool_name
  'cluster_name'='ceph' \n  'cluster_uuid'='cluster_uuid'
```

- `cluster_name` The cluster name. Defaults to ceph.
- `cluster_uuid` The cluster UUID. Defaults to value found in ceph config file.
- `pg_num` Default to 8
- `pgp_num` Default to pg_num
- `pool_type` can take values "replicated" or "erasure"
- `erasure_code_profile` The "erasure_code_profile"
- `crush_ruleset` The crush map rule set

**salt.modules.ceph.pool_del(pool_name, **kwargs)**

Delete a pool

CLI Example:

```
salt '*' ceph.pool_del pool_name
  'cluster_name'='ceph' \n  'cluster_uuid'='cluster_uuid'
```

- `cluster_name` The cluster name. Defaults to ceph.
- `cluster_uuid` The cluster UUID. Defaults to value found in ceph config file.

**salt.modules.ceph.pool_list(**kwargs)**

List all pools

CLI Example:

```
salt '*' ceph.pool_list
  'cluster_name'='ceph' \n  'cluster_uuid'='cluster_uuid'
```

Chapter 23. Salt Module Reference
**cluster_name**  The cluster name. Defaults to ceph.

**cluster_uuid**  The cluster UUID. Defaults to value found in ceph config file.

```python
salt.modules.ceph.purge(**kwargs)
```

Purge ceph configuration on the node

**CLI Example:**

```shell
salt '*' ceph.purge \\
    'cluster_name'='ceph' \\
    'cluster_uuid'='cluster_uuid'
```

**cluster_name**  The cluster name. Defaults to ceph.

**cluster_uuid**  The cluster UUID. Defaults to value found in ceph config file.

```python
salt.modules.ceph.rgw_create(**kwargs)
```

Create a rgw

**CLI Example:**

```shell
salt '*' ceph.rgw_create \\
    'name' = 'rgw.name' \\
    'cluster_name'='ceph' \\
    'cluster_uuid'='cluster_uuid'
```

**name (required)**  The RGW client name. Must start with rgw.

**cluster_uuid**  The cluster UUID. Defaults to value found in ceph config file.

**cluster_name**  The cluster name. Defaults to ceph.

```python
salt.modules.ceph.rgw_destroy(**kwargs)
```

Remove a rgw

**CLI Example:**

```shell
salt '*' ceph.rgw_destroy \\
    'name' = 'rgw.name' \\
    'cluster_name'='ceph' \\
    'cluster_uuid'='cluster_uuid'
```

**name (required)**  The RGW client name (must start with rgw.)

**cluster_uuid**  The cluster UUID. Defaults to value found in ceph config file.

**cluster_name**  The cluster name. Defaults to ceph.

```python
salt.modules.ceph.rgw_pools_create(**kwargs)
```

Create pools for rgw

**CLI Example:**

```shell
salt '*' ceph.rgw_pools_create
```

**cluster_uuid**  The cluster UUID. Defaults to value found in ceph config file.

**cluster_name**  The cluster name. Defaults to ceph.
salt.modules.ceph.rgw_pools_missing(**kwargs)
    Show pools missing for rgw

    CLI Example:
    salt '*' ceph.rgw_pools_missing

    cluster_uuid  The cluster UUID. Defaults to value found in ceph config file.
    cluster_name  The cluster name. Defaults to ceph.

salt.modules.ceph.zap(target=None, **kwargs)
    Destroy the partition table and content of a given disk.

    CLI Example:
    salt '*' ceph.osd_prepare 'dev=/dev/vdc' \ 
    'cluster_name=ceph' \ 
    'cluster_uuid=cluster_uuid'

    dev  The block device to format.
    cluster_name  The cluster name. Defaults to ceph.
    cluster_uuid  The cluster UUID. Defaults to value found in ceph config file.

23.9.27  salt.modules.ciscoconfparse_mod

    Execution module for ciscoconfparse

    New in version 2019.2.0.

    This module can be used for basic configuration parsing, audit or validation for a variety of network platforms having Cisco IOS style configuration (one space indentation), including: Cisco IOS, Cisco Nexus, Cisco IOS-XR, Cisco IOS-XR, Cisco ASA, Arista EOS, Brocade, HP Switches, Dell PowerConnect Switches, or Extreme Networks devices. In newer versions, ciscoconfparse provides support for brace-delimited configuration style as well, for platforms such as: Juniper Junos, Palo Alto, or F5 Networks.

    See http://www.pennington.net/py/ciscoconfparse/index.html for further details.

    depends  ciscoconfparse

    This module depends on the Python library with the same name, ciscoconfparse - to install execute: pip install ciscoconfparse.

salt.modules.ciscoconfparse_mod.filter_lines(config=None, config_path=None, parent_regex=None, child_regex=None, saltenv='base')

    Return a list of detailed matches, for the configuration blocks (parent-child relationship) whose parent respects the regular expressions configured via the parent_regex argument, and the child matches the child_regex regular expression. The result is a list of dictionaries with the following keys:

    • match: a boolean value that tells whether child_regex matched any children lines.
    • parent: the parent line (as text).
    • child: the child line (as text). If no child line matched, this field will be None.

    Note that the return list contains the elements that matched the parent condition, the parent_regex regular expression. Therefore, the parent field will always have a valid value, while match and child may default to False and None respectively when there is not child match.

    CLI Example:
Example output (for the example above):

```
[
  {
    'parent': 'interface GigabitEthernet1',
    'match': False,
    'child': None
  },
  {
    'parent': 'interface GigabitEthernet2',
    'match': True,
    'child': 'shutdown'
  },
  {
    'parent': 'interface GigabitEthernet3',
    'match': True,
    'child': 'shutdown'
  }
]
```

```
salt.modules.ciscoconfparse_mod.find_lines(config=None, config_path=None, regex=None, saltenv='base')
```

Return all the lines (as text) that match the expression in the `regex` argument.

**config** The configuration sent as text.

---

**Note:** This argument is ignored when `config_path` is specified.

---

**config_path** The absolute or remote path to the file with the configuration to be parsed. This argument supports the usual Salt filesystem URLs, e.g., `salt://, https://, ftp://, s3://`, etc.

**regex** The regular expression to match the lines against.

**saltenv:** `base` Salt fileserver environment from which to retrieve the file. This argument is ignored when `config_path` is not a `salt://` URL.

CLI Example:

```
salt '*' ciscoconfparse.find_lines config_path=https://bit.ly/2mAdq7z regex='ip[^\s]+address'
```

Output example:

```
cisco-ios-router:
  - ip address dhcp
  - ip address 172.20.0.1 255.255.255.0
  - no ip address
```

```
salt.modules.ciscoconfparse_mod.find_lines_w_child(config=None, config_path=None, parent_regex=None, child_regex=None, ignore_ws=False, saltenv='base')
```

Return a list of parent lines (as text) matching the regular expression `parent_regex` that have children lines matching `child_regex`.

---

### 23.9. execution modules

1091
config The configuration sent as text.

Note: This argument is ignored when config_path is specified.

config_path The absolute or remote path to the file with the configuration to be parsed. This argument supports the usual Salt filesystem URIs, e.g., salt://, https://, ftp://, s3://, etc.

parent_regex The regular expression to match the parent lines against.

child_regex The regular expression to match the child lines against.

ignore_ws: False Whether to ignore the white spaces.

saltenv: base Salt fileserver environment from which to retrieve the file. This argument is ignored when config_path is not a salt:// URL.

CLI Example:

```
salt '*' ciscoconfparse.find_lines_w_child config_path=https://bit.ly/2mAdq7z
  → parent_line='line con' child_line='stopbits'
salt '*' ciscoconfparse.find_lines_w_child config_path=https://bit.ly/2uIRxau
  → parent_regex='ge-(.*)' child_regex='unit \d+
```

```
salt.modules.ciscoconfparse_mod.find_lines_wo_child(config=none, config_path=None,
  parent_regex=None, child_regex=None,
  ignore_ws=False, saltenv='base')
```

Return a list of parent ciscoconfparse.IOSCfgLine lines as text, which matched the parent_regex and whose children did not match child_regex. Only the parent ciscoconfparse.IOSCfgLine text lines will be returned. For simplicity, this method only finds oldest ancestors without immediate children that match.

config The configuration sent as text.

Note: This argument is ignored when config_path is specified.

config_path The absolute or remote path to the file with the configuration to be parsed. This argument supports the usual Salt filesystem URIs, e.g., salt://, https://, ftp://, s3://, etc.

parent_regex The regular expression to match the parent lines against.

child_regex The regular expression to match the child lines against.

ignore_ws: False Whether to ignore the white spaces.

saltenv: base Salt fileserver environment from which to retrieve the file. This argument is ignored when config_path is not a salt:// URL.

CLI Example:

```
salt '*' ciscoconfparse.find_lines_w_child config_path=https://bit.ly/2mAdq7z
  → parent_line='line con' child_line='stopbits'
```

```
salt.modules.ciscoconfparse_mod.find_objects(config=None, config_path=None,
  regex=None, saltenv='base')
```

Return all the line objects that match the expression in the regex argument.
**Warning:** This function is mostly valuable when invoked from other Salt components (i.e., execution modules, states, templates etc.). For CLI usage, please consider using \texttt{ciscoconfparse.find_lines}.

**config** The configuration sent as text.

**Note:** This argument is ignored when \texttt{config_path} is specified.

**config_path** The absolute or remote path to the file with the configuration to be parsed. This argument supports the usual Salt filesystem URIs, e.g., \texttt{salt://}, \texttt{https://}, \texttt{ftp://}, \texttt{s3://}, etc.

**regex** The regular expression to match the lines against.

**saltenv:** \texttt{base} Salt fileserver environment from which to retrieve the file. This argument is ignored when \texttt{config_path} is not a \texttt{salt://} URL.

Usage example:

```
objects = __salt__['ciscoconfparse.find_objects'](config_path='salt://path/to/config.txt',
                                                  regex='Gigabit')
for obj in objects:
    print(obj.text)
```

\texttt{salt.modules.ciscoconfparse_mod.find_objects_w_child(config=None, config_path=None, parent_regex=None, child_regex=None, ignore_ws=False, saltenv='base')}

Parse through the children of all parent lines matching \texttt{parent_regex}, and return a list of child objects, which matched the \texttt{child_regex}.

**Warning:** This function is mostly valuable when invoked from other Salt components (i.e., execution modules, states, templates etc.). For CLI usage, please consider using \texttt{ciscoconfparse.find_lines}.

**config** The configuration sent as text.

**Note:** This argument is ignored when \texttt{config_path} is specified.

**config_path** The absolute or remote path to the file with the configuration to be parsed. This argument supports the usual Salt filesystem URIs, e.g., \texttt{salt://}, \texttt{https://}, \texttt{ftp://}, \texttt{s3://}, etc.

**parent_regex** The regular expression to match the parent lines against.

**child_regex** The regular expression to match the child lines against.

**ignore_ws:** \texttt{False} Whether to ignore the white spaces.

**saltenv:** \texttt{base} Salt fileserver environment from which to retrieve the file. This argument is ignored when \texttt{config_path} is not a \texttt{salt://} URL.

Usage example:
objects = __salt__['ciscoconfparse.find_objects_w_child'](config_path='https://bit.ly/2mAdq7z',
                                          parent_regex='line con',
                                          child_regex='stopbits')

for obj in objects:
    print(obj.text)

salt.modules.ciscoconfparse_mod.find_objects_wo_child(config=None, config_path=None,
                                                      parent_regex=None, child_regex=None,
                                                      ignore_ws=False, saltenv='base')

Return a list of parent ciscoconfparse.IOSCfgLine objects, which matched the parent_regex and whose children did not match child_regex. Only the parent ciscoconfparse.IOSCfgLine objects will be returned. For simplicity, this method only finds oldest ancestors without immediate children that match.

**Warning:** This function is mostly valuable when invoked from other Salt components (i.e., execution modules, states, templates etc.). For CLI usage, please consider using ciscoconfparse.find_lines_wo_child.

-config The configuration sent as text.

**Note:** This argument is ignored when config_path is specified.

-config_path The absolute or remote path to the file with the configuration to be parsed. This argument supports the usual Salt filesystem URLs, e.g., salt://, https://, ftp://, s3://, etc.

-parent_regex The regular expression to match the parent lines against.

-child_regex The regular expression to match the child lines against.

-ignore_ws: False Whether to ignore the white spaces.

-saltenv: base Salt filesystem environment from which to retrieve the file. This argument is ignored when config_path is not a salt:// URL.

Usage example:

```
objects = __salt__['ciscoconfparse.find_objects_w_child'](config_path='https://bit.ly/2mAdq7z',
                                          parent_regex='line con',
                                          child_regex='stopbits')

for obj in objects:
    print(obj.text)
```
23.9.28 salt.modules.datadog_api

An execution module that interacts with the Datadog API

The following parameters are required for all functions.

api_key - The datadog API key

app_key - The datadog application key

Full argument reference is available on the Datadog API reference page [https://docs.datadoghq.com/api/](https://docs.datadoghq.com/api/)

```python
salt.modules.datadog_api.cancel_downtime(api_key=None, app_key=None, scope=None, id=None)
```

Cancel a downtime by id or by scope.

CLI Example:

```bash
salt-call datadog.cancel_downtime scope='host:app01' \  api_key='0123456789' \  app_key='9876543210'`
```

Arguments - Either scope or id is required.

**Parameters**

- **id** -- The downtime ID
- **scope** -- The downtime scope

```python
salt.modules.datadog_api.post_event(api_key=None, app_key=None, title=None, text=None, date_happened=None, priority=None, host=None, tags=None, alert_type=None, aggregation_key=None, source_type_name=None)
```

Post an event to the Datadog stream.

CLI Example

```bash
salt-call datadog.post_event api_key='0123456789' \  app_key='9876543210' \  title='Salt Highstate' \  text="Salt highstate was run on $(salt-call grains.\→get id)" \  tags='["service:salt", "event:highstate"]'
```

Required arguments

**Parameters**

- **title** -- The event title. Limited to 100 characters.
- **text** -- The body of the event. Limited to 4000 characters. The text supports markdown.

Optional arguments

**Parameters**

- **date_happened** -- POSIX timestamp of the event.
- **priority** -- The priority of the event (‘normal’ or ‘low’).
- **host** -- Host name to associate with the event.
- **tags** -- A list of tags to apply to the event.
- **alert_type** -- "error", "warning", "info" or "success".
- **aggregation_key** -- An arbitrary string to use for aggregation, max length of 100 characters.
- **source_type_name** -- The type of event being posted.

```python
salt.modules.datadog_api.schedule_downtime(scope, api_key=None, app_key=None, monitor_id=None, start=None, end=None, message=None, recurrence=None, timezone=None, test=False)
```

Schedule downtime for a scope of monitors.

CLI Example:

```bash
salt-call datadog.schedule_downtime 'host:app2' \
   stop=$(date --date='30 minutes' +%s) \
   app_key='0123456789' \
   api_key='9876543210'
```

Optional arguments

**Parameters**

- **monitor_id** -- The ID of the monitor
- **start** -- Start time in seconds since the epoch
- **end** -- End time in seconds since the epoch
- **message** -- A message to send in a notification for this downtime
- **recurrence** -- Repeat this downtime periodically
- **timezone** -- Specify the timezone

### 23.9.29 salt.modules.debian_service

Service support for Debian systems (uses update-rc.d and /sbin/service)

**Important:** If you feel that Salt should be using this module to manage services on a minion, and it is using a different module (or gives an error similar to 'service.start' is not available), see here.

```python
salt.modules.debian_service.available(name)
```

Returns True if the specified service is available, otherwise returns False.

CLI Example:

```bash
salt '*' service.available sshd
```

```python
salt.modules.debian_service.disable(name, **kwargs)
```

Disable the named service to start at boot

CLI Example:

```bash
salt '*' service.disable <service name>
```

```python
salt.modules.debian_service.disabled(name)
```

Return True if the named service is disabled, false otherwise

CLI Example:
```
salt '*' service.disabled <service name>
```

```
salt.modules.debian_service.enable(name, **kwargs)
    Enable the named service to start at boot
    CLI Example:
    ```
salt '*' service.enable <service name>
```
```
salt.modules.debian_service.enabled(name, **kwargs)
    Return True if the named service is enabled, false otherwise
    CLI Example:
    ```
salt '*' service.enabled <service name>
```
```
salt.modules.debian_service.force_reload(name)
    Force-reload the named service
    CLI Example:
    ```
salt '*' service.force_reload <service name>
```
```
salt.modules.debian_service.get_all()
    Return all available boot services
    CLI Example:
    ```
salt '*' service.get_all
```
```
salt.modules.debian_service.get_disabled()
    Return a set of services that are installed but disabled
    CLI Example:
    ```
salt '*' service.get_disabled
```
```
salt.modules.debian_service.get_enabled()
    Return a list of service that are enabled on boot
    CLI Example:
    ```
salt '*' service.get_enabled
```
```
salt.modules.debian_service.missing(name)
    The inverse of service.available. Returns True if the specified service is not available, otherwise returns False.
    CLI Example:
    ```
salt '*' service.missing sshd
```
```
salt.modules.debian_service.reload_(name)
    Reload the named service
    CLI Example:
    ```
salt '*' service.reload <service name>
```
salt.modules.debian_service.restart(name)
Restart the named service

CLI Example:
```
salt '*' service.restart <service name>
```

salt.modules.debian_service.start(name)
Start the specified service

CLI Example:
```
salt '*' service.start <service name>
```

salt.modules.debian_service.status(name, sig=None)
Return the status for a service. If the name contains globbing, a dict mapping service name to True/False values is returned.

Changed in version 2018.3.0: The service name can now be a glob (e.g. salt*)

Parameters
- **name** *(str)* -- The name of the service to check
- **sig** *(str)* -- Signature to use to find the service via ps

Returns True if running, False otherwise dict: Maps service name to True if running, False otherwise

Return type *bool*

CLI Example:
```
salt '*' service.status <service name> [service signature]
```

salt.modules.debian_service.stop(name)
Stop the specified service

CLI Example:
```
salt '*' service.stop <service name>
```

23.9.30 salt.modules.devinfo

maintainer Alberto Planas <aplanas@suse.com>
maturity new
depends None
platform Linux

salt.modules.devinfo.filter_(udev_in=None, udev_ex=None)
Returns a list of devices, filtered under udev keys.

udev_in A dictionary of key:values that are expected in the device udev information
udev_ex A dictionary of key:values that are not expected in the device udev information (excluded)

The key is a lower case string, joined by dots, that represent a path in the udev information dictionary. For example, ‘e.id_bus’ will represent the udev entry udev['E']['ID_BUS']
If the udev entry is a list, the algorithm will check that at least one item match one item of the value of the parameters.

Returns list of devices that match `udev_in` and do not match `udev_ex`.

CLI Example:

```
salt '*' devinfo.filter udev_in='{"e.id_bus": "ata"}'
```

### `salt.modules.devinfo.hwinfo(items=None, short=True, listmd=False, devices=None)`

Probes for hardware.

- **items** List of hardware items to inspect. Default `['bios', 'cpu', 'disk', 'memory', 'network', 'partition']`
- **short** Show only a summary. Default True.
- **devices** List of devices to show information from. Default None.

CLI Example:

```
salt '*' devinfo.hwinfo
salt '*' devinfo.hwinfo items='["disk"]' short=no
salt '*' devinfo.hwinfo items='["disk"]' short=no devices='["/dev/sda"]'
salt '*' devinfo.hwinfo devices=/dev/sda
```

#### 23.9.31 `salt.modules.devmap`

Device-Mapper module

**salt.modules.devmap.multipath_flush(device)**

Device-Mapper Multipath flush

CLI Example:

```
salt '*' devmap.multipath_flush mpath1
```

**salt.modules.devmap.multipath_list()**

Device-Mapper Multipath list

CLI Example:

```
salt '*' devmap.multipath_list
```

#### 23.9.32 `salt.modules.drbd`

DRBD administration module

**salt.modules.drbd.overview()**

Show status of the DRBD devices, support two nodes only. drbd-overview is removed since drbd-utils-9.6.0, use status instead.

CLI Example:

```
salt '*' drbd.overview
```
salt.modules.drbd.\texttt{status}(\textit{name}=\textquotesingle all\textquotesingle)


\textbf{Parameters} \texttt{name} (\textit{str}) -- Resource name.

\textbf{Returns} drbd status of resource.

\textbf{Return type} \texttt{list(dict(res))}

CLI Example:

\begin{verbatim}
salt '*' drbd.status
salt '*' drbd.status name=<resource name>
\end{verbatim}

\section*{23.9.33 salt.modules.elasticsearch}

Elasticsearch - A distributed RESTful search and analytics server

Module to provide Elasticsearch compatibility to Salt (compatible with Elasticsearch version 1.5.2+)

New in version 2015.8.0.

\textbf{depends} elasticsearch-py

\textbf{configuration} This module accepts connection configuration details either as parameters or as configuration settings in /etc/salt/minion on the relevant minions:

\begin{verbatim}

\texttt{elasticsearch}:
  \texttt{host}: '10.10.10.100:9200'

\texttt{elasticsearch-cluster}:
  \texttt{hosts}:
    - '10.10.10.100:9200'
    - '10.10.10.101:9200'
    - '10.10.10.102:9200'

\texttt{elasticsearch-extra}:
  \texttt{hosts}:
    - '10.10.10.100:9200'
  \texttt{use_ssl}: True
  \texttt{verify_certs}: True
  \texttt{ca_certs}: /path/to/custom_ca_bundle.pem
  \texttt{number_of_shards}: 1
  \texttt{number_of_replicas}: 0
  \texttt{functions_blacklist}:
    - 'saltutil.find_job'
    - 'pillar.items'
    - 'grains.items'
  \texttt{proxies}:
    - \texttt{http}: http://proxy:3128
    - \texttt{https}: http://proxy:1080

\end{verbatim}

When specifying proxies the requests backend will be used and the 'proxies' data structure is passed as-is to that module.

This data can also be passed into pillar. Options passed into opts will overwrite options passed into pillar.

Some functionality might be limited by elasticsearch-py and Elasticsearch server versions.
Create an alias for a specific index/indices

- **indices**: Single or multiple indices separated by comma, use _all to perform the operation on all indices.
- **alias**: Alias name
- **body**: Optional definition such as routing or filter as defined in [https://www.elastic.co/guide/en/elasticsearch/reference/current/indices-aliases.html](https://www.elastic.co/guide/en/elasticsearch/reference/current/indices-aliases.html)
- **source**: URL of file specifying optional definition such as routing or filter. Cannot be used in combination with body.

CLI Example:
```
salt myminion elasticsearch.alias_create testindex_v1 testindex
```

Delete an alias of an index

- **indices**: Single or multiple indices separated by comma, use _all to perform the operation on all indices.
- **aliases**: Alias names separated by comma

CLI Example:
```
salt myminion elasticsearch.alias_delete testindex_v1 testindex
```

Return a boolean indicating whether given alias exists

- **indices**: Single or multiple indices separated by comma, use _all to perform the operation on all indices.
- **aliases**: Alias names separated by comma

CLI Example:
```
salt myminion elasticsearch.alias_exists None testindex
```

Check for the existence of an alias and if it exists, return it

- **indices**: Single or multiple indices separated by comma, use _all to perform the operation on all indices.
- **aliases**: Alias names separated by comma

CLI Example:
```
salt myminion elasticsearch.alias_get testindex
```

Return Elasticsearch cluster settings.

- **flat_settings**: Return settings in flat format.
- **include_defaults**: Whether to return all default clusters setting.

CLI Example:
salt myminion elasticsearch.cluster_get_settings

salt.modules.elasticsearch.cluster_health(index=None, level='cluster', local=False, hosts=None, profile=None)

New in version 2017.7.0.
Return Elasticsearch cluster health.

index  Limit the information returned to a specific index
level  Specify the level of detail for returned information, default 'cluster', valid choices are: 'cluster', 'indices', 'shards'
local  Return local information, do not retrieve the state from master node

CLI Example:
salt myminion elasticsearch.cluster_health

salt.modules.elasticsearch.cluster_put_settings(body=None, flat_settings=False, hosts=None, profile=None)

New in version 3000.
Set Elasticsearch cluster settings.

body  The settings to be updated. Can be either 'transient' or 'persistent' (survives cluster restart) http://www.elastic.co/guide/en/elasticsearch/reference/current/cluster-update-settings.html
flat_settings  Return settings in flat format.

CLI Example:
salt myminion elasticsearch.cluster_put_settings '{"persistent": {"indices.
|   recovery.max_bytes_per_sec": "50mb"}}'
salt myminion elasticsearch.cluster_put_settings '{"transient": {"indices.
|   recovery.max_bytes_per_sec": "50mb"}}'

salt.modules.elasticsearch.cluster_stats(nodes=None, hosts=None, profile=None)

New in version 2017.7.0.
Return Elasticsearch cluster stats.

nodes  List of cluster nodes (id or name) to display stats for. Use _local for connected node, empty for all

CLI Example:
salt myminion elasticsearch.cluster_stats

salt.modules.elasticsearch.document_create(index, doc_type, body=None, id=None, hosts=None, profile=None, source=None)

Create a document in a specified index

index  Index name where the document should reside
doc_type  Type of the document
body  Document to store
source  URL of file specifying document to store. Cannot be used in combination with body.

id  Optional unique document identifier for specified doc_type (empty for random)

CLI Example:
salt.myminion.elasticsearch.document_create testindex doctype1 '{}'

```
salt.modules.elasticsearch.document_delete(index, doc_type, id, hosts=None, profile=None)
   Delete a document from an index
   index  Index name where the document resides
   doc_type  Type of the document
   id  Document identifier
   CLI Example:
   salt.myminion.elasticsearch.document_delete testindex doctype1 AUx-384m0Bug_8U80wQZ
```

```
salt.modules.elasticsearch.document_exists(index, id, doc_type='_all', hosts=None, profile=None)
   Return a boolean indicating whether given document exists
   index  Index name where the document resides
   id  Document identifier
   doc_type  Type of the document, use _all to fetch the first document matching the ID across all types
   CLI Example:
   salt.myminion.elasticsearch.document_exists testindex AUx-384m0Bug_8U80wQZ
```

```
salt.modules.elasticsearch.document_get(index, id, doc_type='_all', hosts=None, profile=None)
   Check for the existence of a document and if it exists, return it
   index  Index name where the document resides
   id  Document identifier
   doc_type  Type of the document, use _all to fetch the first document matching the ID across all types
   CLI Example:
   salt.myminion.elasticsearch.document_get testindex AUx-384m0Bug_8U80wQZ
```

```
salt.modules.elasticsearch.flush_synced(hosts=None, profile=None, **kwargs)
   New in version 3000.
   index  (Optional, string) A comma-separated list of index names; use _all or empty string for all indices. Defaults to '_all'.
   ignore_unavailable  (Optional, boolean) If true, missing or closed indices are not included in the response. Defaults to false.
   allow_no_indices  (Optional, boolean) If true, the request does not return an error if a wildcard expression or _all value retrieves only missing or closed indices. This parameter also applies to index aliases that point to a missing or closed index.
   expand_wildcards  (Optional, string) Controls what kind of indices that wildcard expressions can expand to. Valid values are:
```
all - Expand to open and closed indices.
open - Expand only to open indices.
closed - Expand only to closed indices.
one - Wildcard expressions are not accepted.

The defaults settings for the above parameters depend on the API being used.

CLI Example:

```
salt myminion elasticsearch.flush_synced index='index1,index2' ignore_unavailable=True allow_no_indices=True expand_wildcards='all'
```

salt.modules.elasticsearch.index_close(index, allow_no_indices=True, expand_wildcards='open', ignore_unavailable=True, hosts=None, profile=None)

New in version 2017.7.0.
Close specified index.

index Index to be closed

allow_no_indices Whether to ignore if a wildcard indices expression resolves into no concrete indices. (This includes _all string or when no indices have been specified)

expand_wildcards Whether to expand wildcard expression to concrete indices that are open, closed or both., default ‘open’, valid choices are: ‘open’, ‘closed’, ‘none’, ‘all’

ignore_unavailable Whether specified concrete indices should be ignored when unavailable (missing or closed)

CLI Example:

```
salt myminion elasticsearch.index_close testindex
```

salt.modules.elasticsearch.index_create(index, body=None, hosts=None, profile=None, source=None)

Create an index

index Index name

body Index definition, such as settings and mappings as defined in https://www.elastic.co/guide/en/elasticsearch/reference/current/indices-create-index.html

source URL to file specifying index definition. Cannot be used in combination with body.

CLI Example:

```
salt myminion elasticsearch.index_create testindex
salt myminion elasticsearch.index_create testindex2 '{"settings": {"index": {"number_of_shards": 3, "number_of_replicas": 2}}}'
```

salt.modules.elasticsearch.index_delete(index, hosts=None, profile=None)

Delete an index

index Index name

CLI Example:

```
salt myminion elasticsearch.index_delete testindex
```

salt.modules.elasticsearch.index_exists(index, hosts=None, profile=None)

Return a boolean indicating whether given index exists
**index**  Index name

CLI Example:

```bash
salt myminion elasticsearch.index_exists testindex
```

```python
salt.modules.elasticsearch.index_get(index, hosts=None, profile=None)
```

Check for the existence of an index and if it exists, return it

- **index**  Index name
- CLI Example:
  ```bash
  salt myminion elasticsearch.index_get testindex
  ```

```python
salt.modules.elasticsearch.index_get_settings(hosts=None, profile=None, **kwargs)
```

New in version 3000.

Check for the existence of an index and if it exists, return its settings

- **index**  (Optional, string) A comma-separated list of index names; use _all or empty string for all indices. Defaults to '_all'.
- **name**  (Optional, string) The name of the settings that should be included
- **allow_no_indices**  (Optional, boolean) Whether to ignore if a wildcard indices expression resolves into no concrete indices. (This includes _all string or when no indices have been specified)
- **expand_wildcards**  (Optional, string) Whether to expand wildcard expression to concrete indices that are open, closed or both. Valid choices are: 'open', 'closed', 'none', 'all'
- **flat_settings**  (Optional, boolean) Return settings in flat format
- **ignore_unavailable**  (Optional, boolean) Whether specified concrete indices should be ignored when unavailable (missing or closed)
- **include_defaults**  (Optional, boolean) Whether to return all default setting for each of the indices.
- **local**  (Optional, boolean) Return local information, do not retrieve the state from master node

The defaults settings for the above parameters depend on the API version being used.

CLI Example:

```bash
salt myminion elasticsearch.index_get_settings index=testindex
```

```python
salt.modules.elasticsearch.index_open(index, allow_no_indices=True, expand_wildcards='closed', ignore_unavailable=True, hosts=None, profile=None)
```

New in version 2017.7.0.

Open specified index.

- **index**  Index to be opened
- **allow_no_indices**  Whether to ignore if a wildcard indices expression resolves into no concrete indices. (This includes _all string or when no indices have been specified)
- **expand_wildcards**  Whether to expand wildcard expression to concrete indices that are open, closed or both., default 'closed', valid choices are: 'open', 'closed', 'none', 'all'
- **ignore_unavailable**  Whether specified concrete indices should be ignored when unavailable (missing or closed)
CLI Example:

```bash
salt myminion elasticsearch.index_open testindex
```

```python
salt.modules.elasticsearch.index_put_settings(body=None, hosts=None, profile=None, source=None, **kwargs)
```

New in version 3000.


body The index settings to be updated.

source URL to file specifying index definition. Cannot be used in combination with body.

index (Optional, string) A comma-separated list of index names; use _all or empty string to perform the operation on all indices

allow_no_indices (Optional, boolean) Whether to ignore if a wildcard indices expression resolves into no concrete indices. (This includes _all string or when no indices have been specified)

expand wildcards (Optional, string) Whether to expand wildcard expression to concrete indices that are open, closed or both. Valid choices are: ‘open’, ‘closed’, ‘none’, ‘all’

flat_settings (Optional, boolean) Return settings in flat format (default: false)

ignore_unavailable (Optional, boolean) Whether specified concrete indices should be ignored when unavailable (missing or closed)

master_timeout (Optional, time units) Explicit operation timeout for connection to master node

preserve_existing (Optional, boolean) Whether to update existing settings. If set to true existing settings on an index remain unchanged, the default is false

The defaults settings for the above parameters depend on the API version being used.

---

Note: Elasticsearch time units can be found here: https://www.elastic.co/guide/en/elasticsearch/reference/current/common-options.html#time-units

CLI Example:

```bash
salt myminion elasticsearch.index_put_settings index=testindex body="{"settings": {"number_of_replicas": 2}}"
```

```python
salt.modules.elasticsearch.index_template_create(name, body=None, hosts=None, profile=None, source=None)
```

Create an index template

name Index template name


source URL to file specifying template definition. Cannot be used in combination with body.

CLI Example:

```bash
salt myminion elasticsearch.index_template_create testindex_temp testindex_templ '{ "template": "logstash-*", "order": 1, "settings": { "number_of_shards": 1 } }'
```

```python
salt.modules.elasticsearch.index_template_delete(name, hosts=None, profile=None)
```

Delete an index template (type) along with its data
name  Index template name

CLI Example:
```
salt myminion elasticsearch.index_template_delete testindex_templ user
```

```
salt.modules.elasticsearch.index_template_exists(name, hosts=None, profile=None)
```
Return a boolean indicating whether given index template exists

name  Index template name

CLI Example:
```
salt myminion elasticsearch.index_template_exists testindex_templ
```

```
salt.modules.elasticsearch.index_template_get(name, hosts=None, profile=None)
```
Retrieve template definition of index or index/type

name  Index template name

CLI Example:
```
salt myminion elasticsearch.index_template_get testindex_templ
```

```
salt.modules.elasticsearch.info(hosts=None, profile=None)
```
New in version 2017.7.0.
Return Elasticsearch information.

CLI Example:
```
salt myminion elasticsearch.info
salt myminion elasticsearch.info profile=elasticsearch-extra
```

```
salt.modules.elasticsearch.mapping_create(index, doc_type, body=None, hosts=None, profile=None, source=None)
```
Create a mapping in a given index

index  Index for the mapping
doc_type  Name of the document type


source  URL to file specifying mapping definition. Cannot be used in combination with body.

CLI Example:
```
salt myminion elasticsearch.mapping_create testindex user '{ "user" : { "properties" : { "message" : { "type" : "string", "store" : true } } } }'
```

```
salt.modules.elasticsearch.mapping_delete(index, doc_type, hosts=None, profile=None)
```
Delete a mapping (type) along with its data. As of Elasticsearch 5.0 this is no longer available.

index  Index for the mapping
doc_type  Name of the document type

CLI Example:
```
salt myminion elasticsearch.mapping_delete testindex user
```

23.9. execution modules
salt.modules.elasticsearch.mapping_get(index, doc_type, hosts=None, profile=None)
Retrieve mapping definition of index or index/type

index  Index for the mapping
doc_type  Name of the document type

CLI Example:
salt myminion elasticsearch.mapping_get testindex user

salt.modules.elasticsearch.node_info(nodes=None, flat_settings=False, hosts=None, profile=None)
New in version 2017.7.0.
Return Elasticsearch node information.
nodes  List of cluster nodes (id or name) to display stats for. Use _local for connected node, empty for all
flat_settings  Flatten settings keys

CLI Example:
salt myminion elasticsearch.node_info flat_settings=True

salt.modules.elasticsearch.ping(allow_failure=False, hosts=None, profile=None)
New in version 2017.7.0.
Test connection to Elasticsearch instance. This method does not fail if not explicitly specified.
allow_failure  Throw exception if ping fails

CLI Example:
salt myminion elasticsearch.ping allow_failure=True
salt myminion elasticsearch.ping profile=elasticsearch-extra

salt.modules.elasticsearch.pipeline_create(id, body, hosts=None, profile=None)
New in version 2017.7.0.
Create Ingest pipeline by supplied definition. Available since Elasticsearch 5.0.
id  Pipeline id

CLI Example:
salt myminion elasticsearch.pipeline_create mypipeline '{"description": "my\n→ custom pipeline", "processors": [{"set": {"field": "collector_timestamp_millis\n→ "}, "value": "{{_ingest.timestamp}}}']}'}

salt.modules.elasticsearch.pipeline_delete(id, hosts=None, profile=None)
New in version 2017.7.0.
Delete Ingest pipeline. Available since Elasticsearch 5.0.
id  Pipeline id

CLI Example:
salt myminion elasticsearch.pipeline_delete mypipeline
salt.modules.elasticsearch.pipeline_get(id, hosts=None, profile=None)
   New in version 2017.7.0.
   Retrieve Ingest pipeline definition. Available since Elasticsearch 5.0.
   id   Pipeline id
   CLI Example:
   ```
   salt myminion elasticsearch.pipeline_get mypipeline
   ```

salt.modules.elasticsearch.pipeline_simulate(id, body, verbose=False, hosts=None, profile=None)
   New in version 2017.7.0.
   Simulate existing Ingest pipeline on provided data. Available since Elasticsearch 5.0.
   id   Pipeline id
   verbose   Specify if the output should be more verbose
   CLI Example:
   ```
   salt myminion elasticsearch.pipeline_simulate mypipeline "{"docs": [{"_index": "index", _type": "type", _id": "id", _source": {"foo": "bar"}}, {"_index": "index", _type": "type", _id": "id", _source": {"foo": "rab"}}], verbose=True}
   ```

salt.modules.elasticsearch.repository_create(name, body, hosts=None, profile=None)
   New in version 2017.7.0.
   Create repository for storing snapshots. Note that shared repository paths have to be specified in path.repo Elasticsearch configuration option.
   name   Repository name
   CLI Example:
   ```
   salt myminion elasticsearch.repository_create testrepo "{"type": "fs", "settings": {"location": "/tmp/test", "compress": true}}"
   ```

salt.modules.elasticsearch.repository_delete(name, hosts=None, profile=None)
   New in version 2017.7.0.
   Delete existing repository.
   name   Repository name
   CLI Example:
   ```
   salt myminion elasticsearch.repository_delete testrepo
   ```

salt.modules.elasticsearch.repository_get(name, local=False, hosts=None, profile=None)
   New in version 2017.7.0.
   Get existing repository details.
   name   Repository name
local  Retrieve only local information, default is false

CLI Example:

```bash
salt myminion elasticsearch.repository_get testrepo
```

```bash
salt.modules.elasticsearch.repository_verify(name, hosts=None, profile=None)
```

New in version 2017.7.0.

Obtain list of cluster nodes which successfully verified this repository.

- **name**  Repository name

CLI Example:

```bash
salt myminion elasticsearch.repository_verify testrepo
```

```bash
salt.modules.elasticsearch.search_template_create(id, body, hosts=None, profile=None)
```

New in version 2017.7.0.

Create search template by supplied definition

- **id**  Template ID
- **body**  Search template definition

CLI Example:

```bash
salt myminion elasticsearch.search_template_create mytemplate '{"template":{"match":{"title":"{{query_string}}}"}}'
```

```bash
salt.modules.elasticsearch.search_template_delete(id, hosts=None, profile=None)
```

New in version 2017.7.0.

Delete existing search template definition.

- **id**  Template ID

CLI Example:

```bash
salt myminion elasticsearch.search_template_delete mytemplate
```

```bash
salt.modules.elasticsearch.search_template_get(id, hosts=None, profile=None)
```

New in version 2017.7.0.

Obtain existing search template definition.

- **id**  Template ID

CLI Example:

```bash
salt myminion elasticsearch.search_template_get mytemplate
```

```bash
salt.modules.elasticsearch.snapshot_create(repository, snapshot, body=None, hosts=None, profile=None)
```

New in version 2017.7.0.

Create snapshot in specified repository by supplied definition.

- **repository**  Repository name
- **snapshot**  Snapshot name
- **body**  Snapshot definition as in https://www.elastic.co/guide/en/elasticsearch/reference/current/modules-snapshots.html
CLI Example:
```
salt myminion elasticsearch.snapshot_create testrepo testsnapshot '{"indices": "index_1,index_2","ignore_unavailable":true,"include_global_state":false}'
```

salt.modules.elasticsearch.snapshot_delete(\n    repository, \n    snapshot, \n    hosts=None, \n    profile=None)

New in version 2017.7.0.
Delete snapshot from specified repository.
repository Repository name
snapshot Snapshot name

CLI Example:
```
salt myminion elasticsearch.snapshot_delete testrepo testsnapshot
```

salt.modules.elasticsearch.snapshot_get(\n    repository, \n    snapshot, \n    ignore_unavailable=False, \n    hosts=None, \n    profile=None)

New in version 2017.7.0.
Obtain snapshot residing in specified repository.
repository Repository name
snapshot Snapshot name, use _all to obtain all snapshots in specified repository
ignore_unavailable Ignore unavailable snapshots

CLI Example:
```
salt myminion elasticsearch.snapshot_get testrepo testsnapshot
```

salt.modules.elasticsearch.snapshot_restore(\n    repository, \n    snapshot, \n    body=None, \n    hosts=None, \n    profile=None)

New in version 2017.7.0.
Restore existing snapshot in specified repository by supplied definition.
repository Repository name
snapshot Snapshot name

CLI Example:
```
salt myminion elasticsearch.snapshot_restore testrepo testsnapshot '{"indices": "index_1,index_2","ignore_unavailable":true,"include_global_state":true}'
```

salt.modules.elasticsearch.snapshot_status(\n    repository=None, \n    snapshot=None, \n    ignore_unavailable=False, \n    hosts=None, \n    profile=None)

New in version 2017.7.0.
Obtain status of all currently running snapshots.
repository Particular repository to look for snapshots
snapshot Snapshot name
ignore_unavailable Ignore unavailable snapshots

23.9. execution modules

1111
CLI Example:

```bash
salt myminion elasticsearch.snapshot_status ignore_unavailable=True
```

### 23.9.34 salt.modules.etcd_mod

Execution module to work with etcd

**depends**

- python-etcd

### Configuration

To work with an etcd server you must configure an etcd profile. The etcd config can be set in either the Salt Minion configuration file or in pillar:

```
my_etd_config:
  etcd.host: 127.0.0.1
  etcd.port: 4001
```

It is technically possible to configure etcd without using a profile, but this is not considered to be a best practice, especially when multiple etcd servers or clusters are available.

```
etcd.host: 127.0.0.1
etcd.port: 4001
```

**Note:** The etcd configuration can also be set in the Salt Master config file, but in order to use any etcd configurations defined in the Salt Master config, the `pillar_opts` must be set to `True`.

Be aware that setting `pillar_opts` to `True` has security implications as this makes all master configuration settings available in all minion’s pillars.

**salt.modules.etcd_mod.get_** *(key, recurse=False, profile=None, **kwargs)*

New in version 2014.7.0.

Get a value from etcd, by direct path. Returns None on failure.

**CLI Examples:**

```
salt myminion etcd.get /path/to/key
salt myminion etcd.get /path/to/key profile=my_etcd_config
salt myminion etcd.get /path/to/key recurse=True profile=my_etcd_config
salt myminion etcd.get /path/to/key host=127.0.0.1 port=2379
```

**salt.modules.etcd_mod.ls_** *(path=’/’, profile=None, **kwargs)*

New in version 2014.7.0.

Return all keys and dirs inside a specific path. Returns an empty dict on failure.

**CLI Example:**

```
salt myminion etcd.ls /path/to/dir/
salt myminion etcd.ls /path/to/dir/ profile=my_etcd_config
salt myminion etcd.ls /path/to/dir/ host=127.0.0.1 port=2379
```
salt.modules.etcd_mod.rm_(key, recurse=False, profile=None, **kwargs)

New in version 2014.7.0.

Delete a key from etcd. Returns True if the key was deleted, False if it was not and None if there was a failure.

CLI Example:

```bash
salt myminion etcd.rm /path/to/key
salt myminion etcd.rm /path/to/key profile=my_etcd_config
salt myminion etcd.rm /path/to/key host=127.0.0.1 port=2379
salt myminion etcd.rm /path/to/dir recurse=True profile=my_etcd_config
```

salt.modules.etcd_mod.set_(key, value, profile=None, ttl=None, directory=False, **kwargs)

New in version 2014.7.0.

Set a key in etcd by direct path. Optionally, create a directory or set a TTL on the key. Returns None on failure.

CLI Example:

```bash
salt myminion etcd.set /path/to/key value
salt myminion etcd.set /path/to/key value profile=my_etcd_config
salt myminion etcd.set /path/to/key value host=127.0.0.1 port=2379
salt myminion etcd.set /path/to/dir '' directory=True
salt myminion etcd.set /path/to/key value ttl=5
```

salt.modules.etcd_mod.tree(path='/', profile=None, **kwargs)

New in version 2014.7.0.

Recursively through etcd and return all values. Returns None on failure.

CLI Example:

```bash
salt myminion etcd.tree
salt myminion etcd.tree profile=my_etcd_config
salt myminion etcd.tree host=127.0.0.1 port=2379
salt myminion etcd.tree /path/to/keys profile=my_etcd_config
```

salt.modules.etcd_mod.update(fields, path='', profile=None, **kwargs)

New in version 2016.3.0.

Sets a dictionary of values in one call. Useful for large updates in syndic environments. The dictionary can contain a mix of formats such as:

```python
{
    '/some/example/key': 'bar',
    '/another/example/key': 'baz'
}
```

Or it may be a straight dictionary, which will be flattened to look like the above format:

```python
{
    'some': {
        'example': {
            'key': 'bar'
        }
    },
    'another': {
        'example': {
            'key': 'baz'
        }
    }
}
```

(continues on next page)
You can even mix the two formats and it will be flattened to the first format. Leading and trailing '/' will be removed.

Empty directories can be created by setting the value of the key to an empty dictionary.

The 'path' parameter will optionally set the root of the path to use.

CLI Example:

```
salt myminion etcd.update "{'/path/to/key': 'baz', '/another/key': 'bar'}"
```

```
salt myminion etcd.update "{'/path/to/key': 'baz', '/another/key': 'bar'}" profile=my_etcd_config
```

```
salt myminion etcd.update "{'/path/to/key': 'baz', '/another/key': 'bar'}" host=127.0.0.1 port=2379
```

```
salt myminion etcd.update "{'/path/to/key': 'baz', '/another/key': 'bar'}" path='/' some/root'
```

salt.modules.etcd_mod.watch(key, recurse=False, profile=None, timeout=0, index=None, **kwargs)

New in version 2016.3.0.

Makes a best effort to watch for a key or tree change in etcd. Returns a dict containing the new key value (or None if the key was deleted), the modifiedIndex of the key, whether the key changed or not, the path to the key that changed and whether it is a directory or not.

If something catastrophic happens, returns {}

CLI Example:

```
salt myminion etcd.watch /path/to/key
```

```
salt myminion etcd.watch /path/to/key timeout=10
```

```
salt myminion etcd.watch /path/to/key profile=my_etcd_config index=10
```

```
salt myminion etcd.watch /path/to/key host=127.0.0.1 port=2379
```

23.9.35 salt.modules.ethtool

Module for running ethtool command

New in version 2016.3.0.

```python
codeauthor  Krzysztof Pawlowski <msciciel@msciciel.eu>
maturity new
depends python-ethtool
platform linux
```

salt.modules.ethtool.set_coalesce(devname, **kwargs)

Changes the coalescing settings of the specified network device

CLI Example:

```
salt '*' ethtool.set_coalesce <devname> [adaptive_rx=on|off] [adaptive_tx=on|off] [rx_usecs=N] [rx_frames=N] [rx_usecs_irq=N] [rx_frames_irq=N] [tx_usecs=N] [tx_frames=N] [tx_usecs_irq=N] [tx_frames_irq=N]
```

(continues on next page)
salt.modules.ethtool.set_offload(devname, **kwargs)
Changes the offload parameters and other features of the specified network device

CLI Example:
```bash
salt '*' ethtool.set_offload <devname> tcp_segmentation_offload=on
```

salt.modules.ethtool.set_ring(devname, **kwargs)
Changes the rx/tx ring parameters of the specified network device

CLI Example:
```bash
salt '*' ethtool.set_ring <devname> [rx=N] [rx_mini=N] [rx_jumbo=N] [tx=N]
```

salt.modules.ethtool.show_coalesce(devname)
Queries the specified network device for coalescing information

CLI Example:
```bash
salt '*' ethtool.show_coalesce <devname>
```

salt.modules.ethtool.show_driver(devname)
Queries the specified network device for associated driver information

CLI Example:
```bash
salt '*' ethtool.show_driver <devname>
```

salt.modules.ethtool.show_offload(devname)
Queries the specified network device for the state of protocol offload and other features

CLI Example:
```bash
salt '*' ethtool.show_offload <devname>
```

salt.modules.ethtool.show_ring(devname)
Queries the specified network device for rx/tx ring parameter information

CLI Example:
```bash
salt '*' ethtool.show_ring <devname>
```
23.9.36 salt.modules.gcp_addon

A route is a rule that specifies how certain packets should be handled by the virtual network. Routes are associated with virtual machine instances by tag, and the set of routes for a particular VM is called its routing table. For each packet leaving a virtual machine, the system searches that machine’s routing table for a single best matching route.

New in version 2018.3.0.

This module will create a route to send traffic destined to the Internet through your gateway instance.

**codeauthor** Pratik Bandarkar &lt;pratik.bandarkar@gmail.com&gt;

**maturity** new

**depends** google-api-python-client

**platform** Linux

```python
salt.modules.gcp_addon.route_create(credential_file=None, project_id=None, name=None, dest_range=None, next_hop_instance=None, instance_zone=None, tags=None, network=None, priority=None)
```

Create a route to send traffic destined to the Internet through your gateway instance

- **credential_file** [string] File location of application default credential. For more information, refer: https://developers.google.com/identity/protocols/application-default-credentials
- **project_id** [string] Project ID where instance and network resides.
- **name** [string] name of the route to create
- **next_hop_instance** [string] the name of an instance that should handle traffic matching this route.
- **instance_zone** [string] zone where instance("next_hop_instance") resides
- **network** [string] Specifies the network to which the route will be applied.
- **dest_range** [string] The destination range of outgoing packets that the route will apply to.
- **tags** [list] (optional) Identifies the set of instances that this route will apply to.
- **priority** [int] (optional) Specifies the priority of this route relative to other routes. default=1000

**CLI Example:**

```bash
salt 'salt-master.novalocal' gcp.route_create
credential_file=/root/secret_key.json
project_id=cp100-170315
name=derby-db-route1
next_hop_instance=instance-1
instance_zone=us-central1-a
network=default
dest_range=0.0.0.0/0
tags=['no-ip']
priority=700
```

In above example, the instances which are having tag "no-ip" will route the packet to instance "instance-1"(if packet is intended to other network)
23.9.37  `salt.modules.gentoo_service`

Top level package command wrapper, used to translate the os detected by grains to the correct service manager

**Important:** If you feel that Salt should be using this module to manage services on a minion, and it is using a different module (or gives an error similar to 'service.start is not available'), see here.

```python
salt.modules.gentoo_service.available(name)
```

Returns True if the specified service is available, otherwise returns False.

CLI Example:

```
salt '*' service.available sshd
```

```python
salt.modules.gentoo_service.disable(name, **kwargs)
```

Disable the named service to start at boot

CLI Example:

```
salt '*' service.disable <service name> <runlevels=single-runlevel>
salt '*' service.disable <service name> <runlevels=[runlevel1,runlevel2]>
```

```python
salt.modules.gentoo_service.disabled(name)
```

Return True if the named service is enabled, false otherwise

CLI Example:

```
salt '*' service.disabled <service name> <runlevels=[runlevel]>
```

```python
salt.modules.gentoo_service.enable(name, **kwargs)
```

Enable the named service to start at boot

CLI Example:

```
salt '*' service.enable <service name> <runlevels=single-runlevel>
salt '*' service.enable <service name> <runlevels=[runlevel1,runlevel2]>
```

```python
salt.modules.gentoo_service.enabled(name, **kwargs)
```

Return True if the named service is enabled, false otherwise

CLI Example:

```
salt '*' service.enabled <service name> <runlevels=single-runlevel>
salt '*' service.enabled <service name> <runlevels=[runlevel1,runlevel2]>
```

```python
salt.modules.gentoo_service.get_all()
```

Return all available boot services

CLI Example:

```
salt '*' service.get_all
```

```python
salt.modules.gentoo_service.get_disabled()
```

Return a set of services that are installed but disabled

CLI Example:
salt 'salt*' service.get_disabled

salt.modules.gentoo_service.get_enabled()

Return a list of service that are enabled on boot

CLI Example:

salt 'salt*' service.get_enabled

salt.modules.gentoo_service.missing(name)

The inverse of service.available. Returns True if the specified service is not available, otherwise returns False.

CLI Example:

salt 'salt*' service.missing sshd

salt.modules.gentoo_service.reload_(name)

Reload the named service

CLI Example:

salt 'salt*' service.reload <service name>

salt.modules.gentoo_service.restart(name)

Restart the named service

CLI Example:

salt 'salt*' service.restart <service name>

salt.modules.gentoo_service.start(name)

Start the specified service

CLI Example:

salt 'salt*' service.start <service name>

salt.modules.gentoo_service.status(name, sig=None)

Return the status for a service. If the name contains globbing, a dict mapping service name to True/False values is returned.

Changed in version 2018.3.0: The service name can now be a glob (e.g. salt*)

Parameters

- name (str) -- The name of the service to check
- sig (str) -- Signature to use to find the service via ps

Returns True if running, False otherwise dict: Maps service name to True if running, False otherwise

Return type bool

CLI Example:

salt 'salt*' service.status <service name> [service signature]

salt.modules.gentoo_service.stop(name)

Stop the specified service
CLI Example:

```bash
salt '*' service.stop <service name>
```

salt.modules.gentoo_service.zap(name)

Resets service state

CLI Example:

```bash
salt '*' service.zap <service name>
```

### 23.9.38 salt.modules.gentoolkitmod

Support for Gentoolkit

salt.modules.gentoolkitmod.eclean_dist(destructive=False, package_names=False, size_limit=0, time_limit=0, fetch_restricted=False, exclude_file='/etc/eclean/distfiles.exclude')

Clean obsolete portage sources

- **destructive** Only keep minimum for reinstallation
- **package_names** Protect all versions of installed packages. Only meaningful if used with destructive=True
- **size_limit <size>** Don't delete distfiles bigger than <size>. <size> is a size specification: "10M" is "ten megabytes", "200K" is "two hundreds kilobytes", etc. Units are: G, M, K and B.
- **time_limit <time>** Don't delete distfiles files modified since <time> <time> is an amount of time: "1y" is "one year", "2w" is "two weeks", etc. Units are: y (years), m (months), w (weeks), d (days) and h (hours).
- **fetch_restricted** Protect fetch-restricted files. Only meaningful if used with destructive=True
- **exclude_file** Path to exclusion file. Default is /etc/eclean/distfiles.exclude This is the same default eclean-dist uses. Use None if this file exists and you want to ignore.

Returns a dict containing the cleaned, saved, and deprecated dists:

```python
{'cleaned': {<dist file>: <size>},
'deprecated': {<package>: <dist file>},
'saved': {<package>: <dist file>},
'total_cleaned': <size>}
```

CLI Example:

```bash
salt '*' gentoolkit.eclean_dist destructive=True
```

salt.modules.gentoolkitmod.eclean_pkg(destructive=False, package_names=False, time_limit=0, exclude_file='/etc/eclean/packages.exclude')

Clean obsolete binary packages

- **destructive** Only keep minimum for reinstallation
- **package_names** Protect all versions of installed packages. Only meaningful if used with destructive=True
- **time_limit <time>** Don't delete distfiles files modified since <time> <time> is an amount of time: "1y" is "one year", "2w" is "two weeks", etc. Units are: y (years), m (months), w (weeks), d (days) and h (hours).
- **exclude_file** Path to exclusion file. Default is /etc/eclean/packages.exclude This is the same default eclean-pkg uses. Use None if this file exists and you want to ignore.

Returns a dict containing the cleaned binary packages:
{'cleaned': {{dist file}: <size>},
'total_cleaned': <size>}

CLI Example:
salt '*' gentoolkit.eclean_pkg destructive=True

salt.modules.gentoolkitmod.glsa_check_list(glslalist)
List the status of Gentoo Linux Security Advisories

glslalist can contain an arbitrary number of GLSA ids, filenames containing GLSAs or the special identifiers 'all' and 'affected'.

Returns a dict containing glsa ids with a description, status, and CVEs:

{'glsa_id': {'description': <glsa_description>,
'status': <glsa status>,
'CVEs': ['<list of CVEs>']}}

CLI Example:
salt '*' gentoolkit.glsa_check_list 'affected'

salt.modules.gentoolkitmod.revdep_rebuild(lib=None)
Fix up broken reverse dependencies

lib Search for reverse dependencies for a particular library rather than every library on the system. It can be a full path to a library or basic regular expression.

CLI Example:
salt '*' gentoolkit.revdep_rebuild

23.9.39 salt.modules.glance
Module for handling openstack glance calls.

optdepends
• glanceclient Python adapter

configuration This module is not usable until the following are specified either in a pillar or in the minion's config file:

```py
keystone.user: admin
keystone.password: verybadpass
keystone.tenant: admin
keystone.insecure: False  # (optional)
keystone.auth_url: 'http://127.0.0.1:5000/v2.0/
```

If configuration for multiple openstack accounts is required, they can be set up as different configuration profiles: For example:

```py
openstack1:
  keystone.user: admin
  keystone.password: verybadpass
  keystone.tenant: admin
```

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```
keystone.auth_url: 'http://127.0.0.1:5000/v2.0/

openstack2:
  keystone.user: admin
  keystone.password: verybadpass
  keystone.tenant: admin
  keystone.auth_url: 'http://127.0.0.2:5000/v2.0/
```

With this configuration in place, any of the glance functions can make use of a configuration profile by declaring it explicitly. For example:

```
salt '*' glance.image_list profile=openstack1
```

**salt.modules.glance.image_create** (*name, location=None, profile=None, visibility=None, container_format='bare', disk_format='raw', protected=None*)

Create an image (glance image-create)

CLI Example, old format:

```
salt '*' glance.image_create name=f16-jeos \disk_format=qcow2 container_format=ovf
```

CLI Example, new format resembling Glance API v2:

```
salt '*' glance.image_create name=f16-jeos visibility=public \disk_format=qcow2 container_format=ovf
```

The parameter 'visibility' defaults to 'public' if not specified.

**salt.modules.glance.image_delete** (*id=None, name=None, profile=None*)

Delete an image (glance image-delete)

CLI Examples:

```
salt '*' glance.image_delete c2eb2eb0-53e1-4a80-b990-8ec887eae7df
salt '*' glance.image_delete id=c2eb2eb0-53e1-4a80-b990-8ec887eae7df
salt '*' glance.image_delete name=f16-jeos
```

**salt.modules.glance.image_list** (*id=None, profile=None, name=None*)

Return a list of available images (glance image-list)

CLI Example:

```
salt '*' glance.image_list
```

**salt.modules.glance.image_schema** (*profile=None*)

Returns names and descriptions of the schema "image"'s properties for this profile's instance of glance

CLI Example:

```
salt '*' glance.image_schema
```

**salt.modules.glance.image_show** (*id=None, name=None, profile=None*)

Return details about a specific image (glance image-show)

CLI Example:
salt ' '*' glance.image_show

salt.modules.glance.image_update(id=None, name=None, profile=None, **kwargs)
Update properties of given image. Known to work for: - min_ram (in MB) - protected (bool) - visibility ('public' or 'private')

CLI Example:
salt ' '*' glance.image_update id=c2eb2eb0-53e1-4a80-b990-8ec887ea7df
salt ' '*' glance.image_update name=f16-jeos

salt.modules.glance.schema_get(name, profile=None)
Known valid names of schemas are:
• image
• images
• member
• members

CLI Example:
salt ' '*' glance.schema_get name=f16-jeos

23.9.40 salt.modules.glanceng
Glance module for interacting with OpenStack Glance
New in version 2018.3.0.
:depends: shade

Example configuration

```yaml
glance:
  cloud: default
```

```yaml
glance:
  auth:
    username: admin
    password: password123
    user_domain_name: mydomain
    project_name: myproject
    project_domain_name: myproject
    auth_url: https://example.org:5000/v3
    identity_api_version: 3
```

salt.modules.glanceng.compare_changes(obj, **kwargs)
Compare two dicts returning only keys that exist in the first dict and are different in the second one

salt.modules.glanceng.get_openstack_cloud(auth=None)
Return an openstack_cloud

salt.modules.glanceng.get_operator_cloud(auth=None)
Return an operator_cloud
salt.modules.glanceng.image_create(auth=None, **kwargs)
Create an image

CLI Example:

```python
salt '*' glanceng.image_create name=cirros file=cirros.raw disk_format=raw
salt '*' glanceng.image_create name=cirros file=cirros.raw disk_format=raw hw_
    ->scsi_model=virtio-scsi hw_disk_bus=scsi
```

salt.modules.glanceng.image_delete(auth=None, **kwargs)
Delete an image

CLI Example:

```python
salt '*' glanceng.image_delete name=image1
salt '*' glanceng.image_delete name=0e4febc2a5ab4f2c8f374b054162506d
```

salt.modules.glanceng.image_get(auth=None, **kwargs)
Get a single image

CLI Example:

```python
salt '*' glanceng.image_get name=image1
salt '*' glanceng.image_get name=0e4febc2a5ab4f2c8f374b054162506d
```

salt.modules.glanceng.image_list(auth=None, **kwargs)
List images

CLI Example:

```python
salt '*' glanceng.image_list
salt '*' glanceng.image_list
```

salt.modules.glanceng.image_search(auth=None, **kwargs)
Search for images

CLI Example:

```python
salt '*' glanceng.image_search name=image1
salt '*' glanceng.image_search
```

salt.modules.glanceng.setup_clouds(auth=None)
Call functions to create Shade cloud objects in __context__ to take advantage of Shade's in-memory caching across several states

salt.modules.glanceng.update_image_properties(auth=None, **kwargs)
Update properties for an image

CLI Example:

```python
salt '*' glanceng.update_image_properties name=image1 hw_scsi_model=virtio-scsi
    ->hw_disk_bus=scsi
salt '*' glanceng.update_image_properties name=0e4febc2a5ab4f2c8f374b054162506d
    ->min_ram=1024
```
23.9.41 salt.modules.google_chat

Module for sending messages to google chat.

New in version 2019.2.0.

To use this module you need to configure a webhook in the google chat room where you would like the message to be sent, see:

https://developers.google.com/hangouts/chat/how-tos/webhooks

salt.modules.google_chat.send_message(url, message)

Send a message to the google chat room specified in the webhook url.

```
salt '*' google_chat.send_message "https://chat.googleapis.com/v1/spaces/example_space/messages?key=example_key" "This is a test message"
```

23.9.42 salt.modules.grafana4

Module for working with the Grafana v4 API

New in version 2017.7.0.

depends requests

configuration This module requires a configuration profile to be configured in the minion config, minion pillar, or master config. The module will use the 'grafana' key by default, if defined.

For example:

```
grafana:
    grafana_url: http://grafana.localhost
    grafana_user: admin
    grafana_password: admin
    grafana_timeout: 3
```

salt.modules.grafana4.create_datasource(orgname=None, profile='grafana', **kwargs)

Create a new datasource in an organisation.

name Name of the data source.

type Type of the datasource ('graphite', 'influxdb' etc.).

access Use proxy or direct.

url The URL to the data source API.

user Optional - user to authenticate with the data source.

password Optional - password to authenticate with the data source.

database Optional - database to use with the data source.

basicAuth Optional - set to True to use HTTP basic auth to authenticate with the data source.

basicAuthUser Optional - HTTP basic auth username.

basicAuthPassword Optional - HTTP basic auth password.

jsonData Optional - additional json data to post (eg. "timeInterval").

isDefault Optional - set data source as default.
withCredentials  Optional - Whether credentials such as cookies or auth headers should be sent with cross-site requests.

typeLogoUrl  Optional - Logo to use for this datasource.
	normname  Name of the organization in which the data source should be created.

profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.create_datasource
```

salt.modules.grafana4.create_org(profile='grafana', **kwargs)
Create a new organization.

name  Name of the organization.

profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.create_org <name>
```

class modules.grafana4.create_org_user( orname=None, profile='grafana', **kwargs)
Add user to the organization.

loginOrEmail  Login or email of the user.

role  Role of the user for this organization. Should be one of:

  • Admin
  • Editor
  • Read Only Editor
  • Viewer

orname  Name of the organization in which users are added.

profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.create_org_user <orgname> loginOrEmail=<loginOrEmail> role=<role>
```

class modules.grafana4.create_update_dashboard( orgname=None, profile='grafana', **kwargs)
Create or update a dashboard.

dashboard  A dict that defines the dashboard to create/update.

overwrite  Whether the dashboard should be overwritten if already existing.

orname  Name of the organization.

profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.create_update_dashboard dashboard=<dashboard> overwrite=True
```

23.9. execution modules
salt.modules.grafana4.create_user

Create a new user.

- **login** Login of the new user.
- **password** Password of the new user.
- **email** Email of the new user.
- **name** Optional - Full name of the new user.
- **profile** Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.create_user login=<login> password=<password> email=<email>
```

salt.modules.grafana4.delete_dashboard

Delete a dashboard.

- **slug** Slug (name) of the dashboard.
- **orgname** Name of the organization.
- **profile** Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.delete_dashboard <slug>
```

salt.modules.grafana4.delete_datasource

Delete a datasource.

- **datasourceid** Id of the datasource.
- **profile** Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.delete_datasource <datasource_id>
```

salt.modules.grafana4.delete_org

Delete an organization.

- **orgid** Id of the organization.
- **profile** Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.delete_org <org_id>
```

salt.modules.grafana4.delete_org_user

Remove user from the organization.

- **userid** Id of the user.
- **orgname** Name of the organization in which users are updated.
- **profile** Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.delete_org_user <user_id> <orgname>
```
salt.modules.grafana4.delete_user(userid, profile='grafana')
    Delete a user.
    
    * userid: Id of the user.
    * profile: Configuration profile used to connect to the Grafana instance. Default is 'grafana'.
    
    CLI Example:
    
    ```
    salt '*' grafana4.delete_user <user_id>
    ```

salt.modules.grafana4.delete_user_org(userid, orgid, profile='grafana')
    Remove a user from an organization.
    
    * userid: Id of the user.
    * orgid: Id of the organization.
    * profile: Configuration profile used to connect to the Grafana instance. Default is 'grafana'.
    
    CLI Example:
    
    ```
    salt '*' grafana4.delete_user_org <user_id> <org_id>
    ```

salt.modules.grafana4.get_dashboard(slug, orgname=None, profile='grafana')
    Get a dashboard.
    
    * slug: Slug (name) of the dashboard.
    * orgname: Name of the organization.
    * profile: Configuration profile used to connect to the Grafana instance. Default is 'grafana'.
    
    CLI Example:
    
    ```
    salt '*' grafana4.get_dashboard <slug>
    ```

salt.modules.grafana4.get_datasource(name, orgname=None, profile='grafana')
    Show a single datasource in an organisation.
    
    * name: Name of the datasource.
    * orgname: Name of the organization.
    * profile: Configuration profile used to connect to the Grafana instance. Default is 'grafana'.
    
    CLI Example:
    
    ```
    salt '*' grafana4.get_datasource <name> <orgname>
    ```

salt.modules.grafana4.get_datasources(orgname=None, profile='grafana')
    List all datasources in an organisation.
    
    * orgname: Name of the organization.
    * profile: Configuration profile used to connect to the Grafana instance. Default is 'grafana'.
    
    CLI Example:
    
    ```
    salt '*' grafana4.get_datasources <orgname>
    ```

salt.modules.grafana4.get_org(name, profile='grafana')
    Show a single organization.
    
    * name: Name of the organization.
**profile**  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.get_org <name>
```

salt.modules.grafana4.**get_org_address**(orgname=None, profile='grafana')
Get the organization address.

orgname  Name of the organization in which users are updated.
profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.get_org_address <orgname>
```

salt.modules.grafana4.**get_org_prefs**(orgname=None, profile='grafana')
Get the organization preferences.

orgname  Name of the organization in which users are updated.
profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.get_org_prefs <orgname>
```

salt.modules.grafana4.**get_org_users**(orgname=None, profile='grafana')
Get the list of users that belong to the organization.

orgname  Name of the organization.
profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.get_org_users <orgname>
```

salt.modules.grafana4.**get_orgs**(profile='grafana')
List all organizations.

profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.get_orgs
```

salt.modules.grafana4.**get_user**(login, profile='grafana')
Show a single user.

login  Login of the user.
profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```
salt '*' grafana4.get_user <login>
```

salt.modules.grafana4.**get_user_data**(userid, profile='grafana')
Get user data.

userid  Id of the user.
profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:

```
salt '*' grafana4.get_user_data <user_id>
```

salt.modules.grafana4.get_user_orgs(<userid, profile='grafana'>)
Get the list of organisations a user belong to.

userid  Id of the user.

profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:

```
salt '*' grafana4.get_user_orgs <user_id>
```

salt.modules.grafana4.get_users(profile='grafana')
List all users.

profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:

```
salt '*' grafana4.get_users
```

salt.modules.grafana4.switch_org(<orgname, profile='grafana'>)
Switch the current organization.

name  Name of the organization to switch to.

profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:

```
salt '*' grafana4.switch_org <name>
```

salt.modules.grafana4.update_datasource(<datasourceid, orgname=None, profile='grafana', **kwargs>)
Update a datasource.

datasourceid  Id of the datasource.

name  Name of the data source.

type  Type of the datasource ('graphite', 'influxdb' etc.).

access  Use proxy or direct.

url  The URL to the data source API.

user  Optional - user to authenticate with the data source.

password  Optional - password to authenticate with the data source.

database  Optional - database to use with the data source.

basicAuth  Optional - set to True to use HTTP basic auth to authenticate with the data source.

basicAuthUser  Optional - HTTP basic auth username.

basicAuthPassword  Optional - HTTP basic auth password.

jsonData  Optional - additional json data to post (eg. "timeInterval").

isDefault  Optional - set data source as default.
withCredentials  Optional - Whether credentials such as cookies or auth headers should be sent with cross-site requests.

typeLogoUrl  Optional - Logo to use for this datasource.

profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```bash
salt '*' grafana4.update_datasource <datasourceid>
```

**salt.modules.grafana4.update_org**(*orgid*, *profile='grafana';**kwargs*)
Update an existing organization.

**orgid**  Id of the organization.

**name**  New name of the organization.

**profile**  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```bash
salt '*' grafana4.update_org <org_id> name=<name>
```

**salt.modules.grafana4.update_org_address**(*orgname=None*, *profile='grafana';**kwargs*)
Update the organization address.

**orgname**  Name of the organization in which users are updated.

**address1**  Optional - address1 of the org.

**address2**  Optional - address2 of the org.

**city**  Optional - city of the org.

**zip_code**  Optional - zip_code of the org.

**state**  Optional - state of the org.

**country**  Optional - country of the org.

**profile**  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```bash
salt '*' grafana4.update_org_address <orgname> country=<country>
```

**salt.modules.grafana4.update_org_prefs**(*orgname=None*, *profile='grafana';**kwargs*)
Update the organization preferences.

**orgname**  Name of the organization in which users are updated.

**theme**  Selected theme for the org.

**homeDashboardId**  Home dashboard for the org.

**timezone**  Timezone for the org (one of: "browser", "utc", or ").

**profile**  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
```bash
salt '*' grafana4.update_org_prefs <orgname> theme=<theme> timezone=<timezone>
```

**salt.modules.grafana4.update_org_user**(*userid, orgname=None*, *profile='grafana';**kwargs*)
Update user role in the organization.
userid  Id of the user.

loginOrEmail  Login or email of the user.

role  Role of the user for this organization. Should be one of:

- Admin
- Editor
- Read Only Editor
- Viewer

orgname  Name of the organization in which users are updated.

profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:

```bash
salt '*' grafana4.update_org_user <user_id> <orgname> loginOrEmail=<loginOrEmail> role=<role>
```

salt.modules.grafana4.update_user(userid, profile='grafana', **kwargs)
Update an existing user.

userid  Id of the user.

login  Optional - Login of the user.

email  Optional - Email of the user.

name  Optional - Full name of the user.

profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:

```bash
salt '*' grafana4.update_user <user_id> login=<login> email=<email>
```

salt.modules.grafana4.update_user_password(userid, profile='grafana', **kwargs)
Update a user password.

userid  Id of the user.

password  New password of the user.

profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:

```bash
salt '*' grafana4.update_user_password <user_id> password=<password>
```

salt.modules.grafana4.update_user_permissions(userid, profile='grafana', **kwargs)
Update a user password.

userid  Id of the user.

isGrafanaAdmin  Whether user is a Grafana admin.

profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

CLI Example:
23.9.43 salt.modules.haproxyconn

Support for haproxy

New in version 2014.7.0.

salt.modules.haproxyconn.disable_server(name, backend, socket='/var/run/haproxy.sock')

Disable server in haproxy.

**name** Server to disable

**backend** haproxy backend, or all backends if "*" is supplied

**socket** haproxy stats socket, default /var/run/haproxy.sock

CLI Example:

```
salt '*' haproxy.disable_server db1.example.com mysql
```

salt.modules.haproxyconn.enable_server(name, backend, socket='/var/run/haproxy.sock')

Enable Server in haproxy

**name** Server to enable

**backend** haproxy backend, or all backends if "*" is supplied

**socket** haproxy stats socket, default /var/run/haproxy.sock

CLI Example:

```
salt '*' haproxy.enable_server web1.example.com www
```

salt.modules.haproxyconn.get_backend(backend, socket='/var/run/haproxy.sock')

Receive information about a specific backend.

**backend** haproxy backend

**socket** haproxy stats socket, default /var/run/haproxy.sock

CLI Example:

```
salt '*' haproxy.get_backend mysql
```

salt.modules.haproxyconn.get_sessions(name, backend, socket='/var/run/haproxy.sock')

New in version 2016.11.0.

Get number of current sessions on server in backend (scur)

**name** Server name

**backend** haproxy backend

**socket** haproxy stats socket, default /var/run/haproxy.sock

CLI Example:

```
salt '*' haproxy.get_sessions web1.example.com www
```

salt.modules.haproxyconn.get_weight(name, backend, socket='/var/run/haproxy.sock')

Get server weight
name  Server name
backend  haproxy backend
socket  haproxy stats socket, default /var/run/haproxy.sock

CLI Example:
```
salt '*' haproxy.get_weight web1.example.com www
```
salt.modules.haproxyconn.list_backends(servers=True, socket='/var/run/haproxy.sock')
List HaProxy Backends

socket  haproxy stats socket, default /var/run/haproxy.sock
servers  list backends with servers

CLI Example:
```
salt '*' haproxy.list_backends
```
salt.modules.haproxyconn.list_frontends(socket='/var/run/haproxy.sock')
List HaProxy frontends

socket  haproxy stats socket, default /var/run/haproxy.sock

CLI Example:
```
salt '*' haproxy.list_frontends
```
salt.modules.haproxyconn.list_servers(backend, socket='/var/run/haproxy.sock', objectify=False)
List servers in haproxy backend.

backend  haproxy backend
socket  haproxy stats socket, default /var/run/haproxy.sock

CLI Example:
```
salt '*' haproxy.list_servers mysql
```
salt.modules.haproxyconn.set_state(name, backend, state='ready', socket='/var/run/haproxy.sock')
Force a server's administrative state to a new state. This can be useful to disable load balancing and/or any traffic to a server. Setting the state to "ready" puts the server in normal mode, and the command is the equivalent of the "enable server" command. Setting the state to "maint" disables any traffic to the server as well as any health checks. This is the equivalent of the "disable server" command. Setting the mode to "drain" only removes the server from load balancing but still allows it to be checked and to accept new persistent connections. Changes are propagated to tracking servers if any.

name  Server name
backend  haproxy backend
state  A string of the state to set. Must be 'ready', 'drain', or 'maint'
socket  haproxy stats socket, default /var/run/haproxy.sock

CLI Example:
```
salt '*' haproxy.set_state my_proxy_server my_backend ready
```
salt.modules.haproxyconn.set_weight(name, backend, weight=0, socket='/var/run/haproxy.sock')

Set server weight
- name  Server name
- backend haproxy backend
- weight Server Weight
- socket haproxy stats socket, default /var/run/haproxy.sock

CLI Example:
```
salt '*' haproxy.set_weight web1.example.com www 13
```

salt.modules.haproxyconn.show_backends(socket='/var/run/haproxy.sock')

Show HaProxy Backends
- socket haproxy stats socket, default /var/run/haproxy.sock

CLI Example:
```
salt '*' haproxy.show_backends
```

salt.modules.haproxyconn.show_frontends(socket='/var/run/haproxy.sock')

Show HaProxy frontends
- socket haproxy stats socket, default /var/run/haproxy.sock

CLI Example:
```
salt '*' haproxy.show_frontends
```

salt.modules.haproxyconn.wait_state(backend, server, value='up', timeout=300, socket='/var/run/haproxy.sock')

Wait for a specific server state
- backend haproxy backend
- server targeted server
- value state value
- timeout timeout before giving up state value, default 5 min
- socket haproxy stats socket, default /var/run/haproxy.sock

CLI Example:
```
salt '*' haproxy.wait_state mysql server01 up 60
```

### 23.9.44 salt.modules.idem

Idem Support

This module provides access to idem execution modules

New in version 3002.

salt.modules.idem.exec_(path, acct_file=None, acct_key=None, acct_profile=None, *args, **kwargs)

Call an idem execution module
path  The idem path of the idem execution module to run
acct_file  Path to the acct file used in generating idem ctx parameters. Defaults to the value in the ACCT_FILE environment variable.
acct_key  Key used to decrypt the acct file. Defaults to the value in the ACCT_KEY environment variable.
acct_profile  Name of the profile to add to idem’s ctx.acct parameter. Defaults to the value in the ACCT_PROFILE environment variable.
args  Any positional arguments to pass to the idem exec function
kwargs  Any keyword arguments to pass to the idem exec function

CLI Example:

```
salt '*:' idem.exec test.ping
```

Maturity  new
Depends  acct, pop, pop-config, idem
Platform  all

23.9.45  salt.modules.influxdb08mod

InfluxDB - A distributed time series database
Module to provide InfluxDB compatibility to Salt (compatible with InfluxDB version 0.5-0.8)
New in version 2014.7.0.

depends
  - influxdb Python module (>= 1.0.0)

configuration  This module accepts connection configuration details either as parameters or as configuration settings in /etc/salt/minion on the relevant minions:

```
influxdb08.host: 'localhost'
influxdb08.port: 8086
influxdb08.user: 'root'
influxdb08.password: 'root'
```

This data can also be passed into pillar. Options passed into opts will overwrite options passed into pillar.

```
salt.modules.influxdb08mod.db_create(name, user=None, password=None, host=None, port=None)
```
Create a database
name  Database name to create
user  The user to connect as
password  The password of the user
host  The host to connect to
port  The port to connect to

CLI Example:
salt 'salt' influxdb08.db_create <name>
salt 'salt' influxdb08.db_create <name> <user> <password> <host> <port>

salt.modules.influxdb08mod.db_exists(name, user=None, password=None, host=None, port=None)
Checks if a database exists in Influxdb
name  Database name to create
user  The user to connect as
password  The password of the user
host  The host to connect to
port  The port to connect to
CLI Example:
salt 'salt' influxdb08.db_exists <name>
salt 'salt' influxdb08.db_exists <name> <user> <password> <host> <port>

salt.modules.influxdb08mod.db_list(user=None, password=None, host=None, port=None)
List all InfluxDB databases
user  The user to connect as
password  The password of the user
host  The host to connect to
port  The port to connect to
CLI Example:
salt 'salt' influxdb08.db_list
salt 'salt' influxdb08.db_list <user> <password> <host> <port>

salt.modules.influxdb08mod.db_remove(name, user=None, password=None, host=None, port=None)
Remove a database
name  Database name to remove
user  The user to connect as
password  The password of the user
host  The host to connect to
port  The port to connect to
CLI Example:
salt 'salt' influxdb08.db_remove <name>
salt 'salt' influxdb08.db_remove <name> <user> <password> <host> <port>

salt.modules.influxdb08mod.login_test(name, password, database=None, host=None, port=None)
Checks if a credential pair can log in at all.
If a database is specified: it will check for database user existence. If a database is not specified: it will check for cluster admin existence.
name  The user to connect as
password  The password of the user

database The database to try to log in to
host The host to connect to
port The port to connect to

CLI Example:

```
salt '*' influxdb08.login_test <name>
salt '*' influxdb08.login_test <name> <database>
salt '*' influxdb08.login_test <name> <database> <user> <password> <host> <port>
```

salt.modules.influxdb08mod.query(database, query, time_precision='s', chunked=False, user=None, password=None, host=None, port=None)

Querying data

database The database to query
query Query to be executed
time_precision Time precision to use ('s', 'm', or 'u')
chunked Whether is chunked or not
user The user to connect as
password The password of the user
host The host to connect to
port The port to connect to

CLI Example:

```
salt '*' influxdb08.query <database> <query>
salt '*' influxdb08.query <database> <query> <time_precision> <chunked> <user>
  <password> <host> <port>
```

salt.modules.influxdb08mod.retention_policy_add(database, name, duration, replication, default=False, user=None, password=None, host=None, port=None)

Add a retention policy.

database The database to operate on.
name Name of the policy to modify.
duration How long InfluxDB keeps the data.
replication How many copies of the data are stored in the cluster.
default Whether this policy should be the default or not. Default is False.

CLI Example:

```
salt '*' influxdb.retention_policy_add metrics default 1d 1
```

salt.modules.influxdb08mod.retention_policy_alter(database, name, duration, replication, default=False, user=None, password=None, host=None, port=None)

Modify an existing retention policy.

database The database to operate on.
name  Name of the policy to modify.
duration  How long InfluxDB keeps the data.
replication  How many copies of the data are stored in the cluster.
default  Whether this policy should be the default or not. Default is False.

CLI Example:
salt '*' influxdb08.retention_policy_modify metrics default 1d

salt.modules.influxdb08mod.retainion_policy_exists(database, name, user=None, password=None, host=None, port=None)

Check if a retention policy exists.
database  The database to operate on.
name  Name of the policy to modify.

CLI Example:
salt '*' influxdb08.retention_policy_exists metrics default

salt.modules.influxdb08mod.retainion_policy_get(database, name, user=None, password=None, host=None, port=None)

Get an existing retention policy.
database  The database to operate on.
name  Name of the policy to modify.

CLI Example:
salt '*' influxdb08.retention_policy_get metrics default

salt.modules.influxdb08mod.user_chpass(name, passwd, database=None, user=None, password=None, host=None, port=None)

Change password for a cluster admin or a database user.
If a database is specified: it will update database user password. If a database is not specified: it will update cluster admin password.
name  User name for whom to change the password
passwd  New password
database  The database on which to operate
user  The user to connect as
password  The password of the user
host  The host to connect to
port  The port to connect to

CLI Example:
salt '*' influxdb08.user_chpass <name> <passwd>
salt '*' influxdb08.user_chpass <name> <passwd> <database>
salt '*' influxdb08.user_chpass <name> <passwd> <database> <user> <password>
←<host> <port>
salt.modules.influxdb08mod.user_create(name, passwd, database=None, user=None, password=None, host=None, port=None)

Create a cluster admin or a database user.

If a database is specified: it will create database user. If a database is not specified: it will create a cluster admin.

- **name** User name for the new user to create
- **passwd** Password for the new user to create
- **database** The database to create the user in
- **user** The user to connect as
- **password** The password of the user
- **host** The host to connect to
- **port** The port to connect to

CLI Example:
```
salt '*' influxdb08.user_create <name> <passwd>
salt '*' influxdb08.user_create <name> <passwd> <database>
salt '*' influxdb08.user_create <name> <passwd> <database> <user> <password> → <host> <port>
```

salt.modules.influxdb08mod.user_exists(name, database=None, user=None, password=None, host=None, port=None)

Checks if a cluster admin or database user exists.

If a database is specified: it will check for database user existence. If a database is not specified: it will check for cluster admin existence.

- **name** User name
- **database** The database to check for the user to exist
- **user** The user to connect as
- **password** The password of the user
- **host** The host to connect to
- **port** The port to connect to

CLI Example:
```
salt '*' influxdb08.user_exists <name>
salt '*' influxdb08.user_exists <name> <database>
salt '*' influxdb08.user_exists <name> <database> <user> <password> <host> <port>
```

salt.modules.influxdb08mod.user_list(database=None, user=None, password=None, host=None, port=None)

List cluster admins or database users.

If a database is specified: it will return database users list. If a database is not specified: it will return cluster admins list.

- **database** The database to list the users from
- **user** The user to connect as
- **password** The password of the user
host The host to connect to

port The port to connect to

CLI Example:

```
salt '*' influxdb08.user_list
salt '*' influxdb08.user_list <database>
salt '*' influxdb08.user_list <database> <user> <password> <host> <port>
```

salt.modules.influxdb08mod.user_remove(name, database=None, user=None, password=None, host=None, port=None)

Remove a cluster admin or a database user.

If a database is specified: it will remove the database user. If a database is not specified: it will remove the cluster admin.

name User name to remove
database The database to remove the user from
user User name for the new user to delete
user The user to connect as
password The password of the user
host The host to connect to
port The port to connect to

CLI Example:

```
salt '*' influxdb08.user_remove <name>
salt '*' influxdb08.user_remove <name> <database>
salt '*' influxdb08.user_remove <name> <database> <user> <password> <host> <port>
```

23.9.46 salt.modules.infoblox

This module have been tested on infoblox API v1.2.1, other versions of the API are likly workable.

depends libinfoblox, https://github.com/steverweber/libinfoblox

libinfoblox can be installed using pip install libinfoblox

API documents can be found on your infoblox server at:

https://INFOBLOX/wapidoc

configuration The following configuration defaults can be defined (pillar or config files '/etc/salt/master.d/infoblox.conf'):

```
infoblox.config:
  api_sslverify: True
  api_url: 'https://INFOBLOX/wapi/v1.2.1'
  api_user: 'username'
  api_key: 'password'
```

Many of the functions accept api_opts to override the API config.

```
salt-call infoblox.get_host name=my.host.com
  api_url: 'https://INFOBLOX/wapi/v1.2.1'
  api_user=admin
  api_key=pass
```

(continues on next page)
salt.modules.infoblox.create_a(data, **api_opts)
Create A record.

This is a helper function to create_object. See your infoblox API for full data format.

CLI Example:

```
salt-call infoblox.create_a
  data =
    name: 'fastlinux.math.example.ca'
    ipv4addr: '127.0.0.1'
    view: External
```

salt.modules.infoblox.create_cname(data, **api_opts)
Create a cname record.

CLI Example:

```
salt-call infoblox.create_cname
data={
  "comment": "cname to example server",
  "name": "example.example.com",
  "zone": "example.com",
  "view": "Internal",
  "canonical": "example-ha-0.example.com"
}
```

salt.modules.infoblox.create_host(data, **api_opts)
Add host record

Avoid race conditions, use func:nextavailableip for ipv[4,6]addrs:
- func:nextavailableip:network/ZG54dfgserDFEFEFsfLzA:10.0.0.0/8/default
- func:nextavailableip:10.0.0.0/8
- func:nextavailableip:10.0.0.0/8,external
- func:nextavailableip:10.0.0.3-10.0.0.10

See your infoblox API for full data format.

CLI Example:

```
salt-call infoblox.create_host
data =
  { 'name': 'hostname.example.ca',
    'aliases': [ 'hostname.math.example.ca' ],
    'extattrs': [{'Business Contact': {'value': 'example@example.ca'}},
                 {'Pol8 Classification': {'value': 'Restricted'}},
                 {'Primary OU': {'value': 'CS'}},
                 {'Technical Contact': {'value': 'example@example.ca'}}],
    'ipv4addr': [{'configure_for_dhcp': True,
                    'ipv4addr': 'func:nextavailableip:129.97.139.0/24',
                    'mac': '00:50:56:84:6e:ae'}],
    'ipv6addr': []},
```

salt.modules.infoblox.create_ipv4_range(data, **api_opts)
Create a ipv4 range

This is a helper function to create_object See your infoblox API for full data format.

CLI Example:
salt-call infoblox.create_ipv4_range data={
    start_addr: '129.97.150.160',
    end_addr: '129.97.150.170'}

salt.modules.infoblox.create_object(object_type, data, **api_opts)
Create raw infoblox object. This is a low level api call.

CLI Example:
salt-call infoblox.update_object object_type=record:host data={}

salt.modules.infoblox.delete_a(name=None, ipv4addr=None, allow_array=False, **api_opts)
Delete A record
If the A record is used as a round robin you can set allow_array=True to delete all records for the host-name.

CLI Examples:
salt-call infoblox.delete_a name=abc.example.com
salt-call infoblox.delete_a ipv4addr=192.168.3.5
salt-call infoblox.delete_a name=acname.example.com allow_array=True

salt.modules.infoblox.delete_cname(name=None, canonical=None, **api_opts)
Delete CNAME. This is a helper call to delete_object.
If record is not found, return True

CLI Examples:
salt-call infoblox.delete_cname name=example.example.com
salt-call infoblox.delete_cname canonical=example-ha-0.example.com

salt.modules.infoblox.delete_host(name=None, mac=None, ipv4addr=None, **api_opts)
Delete host

CLI Example:
salt-call infoblox.delete_host name=example.domain.com
salt-call infoblox.delete_host ipv4addr=123.123.122.12
salt-call infoblox.delete_host ipv4addr=123.123.122.12 mac=00:50:56:84:6e:ae

salt.modules.infoblox.delete_ipv4_range(start_addr=None, end_addr=None, **api_opts)
Delete ip range.

CLI Example:
salt-call infoblox.delete_ipv4_range start_addr=123.123.122.12

salt.modules.infoblox.delete_object(objref, **api_opts)
Delete infoblox object. This is a low level api call.

CLI Example:
salt-call infoblox.delete_object objref=[ref_of_object]

salt.modules.infoblox.diff_objects(obja, objb)
Diff two complex infoblox objects. This is used from salt states to detect changes in objects.

Using func:nextavailableip will not cause a diff if the ipaddress is in range
salt.modules.infoblox.get_a(name=None, ipv4addr=None, allow_array=True, **api_opts)
Get A record

CLI Examples:
```
salt-call infoblox.get_a name=abc.example.com
salt-call infoblox.get_a ipv4addr=192.168.3.5
```

salt.modules.infoblox.get_cname(name=None, canonical=None, return_fields=None, **api_opts)
Get CNAME information.

CLI Examples:
```
salt-call infoblox.get_cname name=example.example.com
salt-call infoblox.get_cname canonical=example-ha-0.example.com
```

salt.modules.infoblox.get_host(name=None, ipv4addr=None, mac=None, return_fields=None, **api_opts)
Get host information

CLI Examples:
```
salt-call infoblox.get_host hostname.domain.ca
salt-call infoblox.get_host ipv4addr=123.123.122.12
salt-call infoblox.get_host mac=00:50:56:84:6e:ae
```

salt.modules.infoblox.get_host_advanced(name=None, ipv4addr=None, mac=None, **api_opts)
Get all host information

CLI Example:
```
salt-call infoblox.get_host_advanced hostname.domain.ca
```

salt.modules.infoblox.get_host_domainname(name, domains=None, **api_opts)
Get host domain name
If no domains are passed, the hostname is checked for a zone in infoblox, if no zone split on first dot.
If domains are provided, the best match out of the list is returned.
If none are found the return is None
dots at end of names are ignored.

CLI Example:
```
salt-call uwl.get_host_domainname name=localhost.t.domain.com  # returns: t.domain.com
```

salt.modules.infoblox.get_host_hostname(name, domains=None, **api_opts)
Get hostname
If no domains are passed, the hostname is checked for a zone in infoblox, if no zone split on first dot.
If domains are provided, the best match out of the list is truncated from the fqdn leaving the hostname.
If no matching domains are found the fqdn is returned.

dots at end of names are ignored.
CLI Examples:

```python
class infoblox:
    def get_host_hostname(fqdn):
        #returns: localhost.xxx

class infoblox:
    def get_host_ipv4(**api_opts):
        #get ipv4 address from host record.
        Use allow_array to return possible multiple values.
        CLI Examples:

        salt-call infoblox.get_host_ipv4 host=localhost.domain.com

class infoblox:
    def get_host_ipv4addr_info(ipv4addr=None, **api_opts):
        #get host ipv4addr information
        CLI Examples:

        salt-call infoblox.get_host_ipv4addr_info ipv4addr=123.123.122.12

class infoblox:
    def get_host_ipv6addr_info(ipv6addr=None, **api_opts):
        #get host ipv6addr information
        CLI Example:

        salt-call infoblox.get_host_ipv6addr_info ipv6addr=2001:db8:85a3:8d3:1349:8a2e:370:7348

class infoblox:
    def get_host_mac(**api_opts):
        #get mac address from host record.
        Use allow_array to return possible multiple values.
        CLI Example:

        salt-call infoblox.get_host_mac host=localhost.domain.com

class infoblox:
    def get_ipv4_range(**api_opts):
        #get ip range
        CLI Example:

        salt-call infoblox.get_ipv4_range start_addr=123.123.122.12

class infoblox:
    def get_network(**api_opts):
        #get list of all networks. This is helpful when looking up subnets to use with func:nextavailableip
```
This call is often slow and not cached!

some return_fields comment, network, network_view, ddns_domainname, disable, enable_ddns

CLI Example:

```
salt-call infoblox.get_network
```

```
salt.modules.infoblox.get_object(objref, data=None, return_fields=None, max_results=None, ensure_none_or_one_result=False, **api_opts)
```

Get raw infoblox object. This is a low level api call.

CLI Example:

```
salt-call infoblox.get_object objref=[_ref of object]
```

```
salt.modules.infoblox.is_ipaddr_in_ipfunc_range(ipaddr, ipfunc)
```

Return true if the ipaddress is in the range of the nextavailableip function

CLI Example:

```
salt-call infoblox.is_ipaddr_in_ipfunc_range ipaddr="10.0.2.2" ipfunc="func:nextavailableip:10.0.0.0/8"
```

```
salt.modules.infoblox.update_cname(name, data, **api_opts)
```

Update CNAME. This is a helper call to update_object.

Find a CNAME _ref then call update_object with the record data.

CLI Example:

```
salt-call infoblox.update_cname name=example.example.com data="{
    'canonical': 'example-ha-0.example.com',
    'use_ttl': true,
    'ttl': 200,
    'comment': 'Salt managed CNAME'}"
```

```
salt.modules.infoblox.update_host(name, data, **api_opts)
```

Update host record. This is a helper call to update_object.

Find a hosts _ref then call update_object with the record data.

CLI Example:

```
salt-call infoblox.update_host name=fqdn data=
```

```
salt.modules.infoblox.update_object(objref, data, **api_opts)
```

Update raw infoblox object. This is a low level api call.

CLI Example:

```
salt-call infoblox.update_object objref=[ref_of_object] data=
```
23.9.47 salt.modules.inspectlib package

Submodules

salt.modules.inspectlib.collector

salt.modules.inspectlib.dbhandle

class salt.modules.inspectlib.dbhandle.DBHandle(path)

class salt.modules.inspectlib.dbhandle.DBHandleBase(path)

Handle for the volatile database, which serves the purpose of caching the inspected data. This database can be destroyed or corrupted, so it should be simply re-created from scratch.

    close()
    Close the database connection.

    flush(table)
    Flush the table.

    open(new=False)
    Init the database, if required.

    purge()
    Purge whole database.

salt.modules.inspectlib.exceptions

exception salt.modules.inspectlib.exceptionsInspectorKiwiProcessorException
    Kiwi builder/exporter exception.

exception salt.modules.inspectlib.exceptionsInspectorQueryException
    Exception that is only for the inspector query.

exception salt.modules.inspectlib.exceptionsInspectorSnapshotException
    Snapshot exception.

exception salt.modules.inspectlib.exceptions.SIException
    System information exception.

salt.modules.inspectlib.query

Module contents

class salt.modules.inspectlib.EnvLoader(cachedir=None, piddir=None, pidfilename=None)
    Load environment.

    DB_FILE = '_minion_collector.db'

    DEFAULT_CACHE_PATH = '/var/cache/salt'

    DEFAULT_PID_PATH = '/var/run'

    PID_FILE = '_minion_collector.pid'
23.9.48 salt.modules.inspectlib.entities

**class** salt.modules.inspectlib.entities.AllowedDir
Allowed directories

**class** salt.modules.inspectlib.entities.IgnoredDir
Ignored directories

**class** salt.modules.inspectlib.entities.Package
Package.

**class** salt.modules.inspectlib.entities.PackageCfgFile
Config file, belongs to the package

**class** salt.modules.inspectlib.entities.PayloadFile
Payload file.

23.9.49 salt.modules.inspectlib.fsdb

**codeauthor** Bo Maryniuk <bo@suse.de>

**class** salt.modules.inspectlib.fsdb.CsvDB(path)
File-based CSV database. This database is in-memory operating relatively small plain text csv files.

**close()**
Close the database.

Returns

**create_table_from_object(obj)**
Create a table from the object. NOTE: This method doesn't stores anything.

Parameters **obj** --

Returns

**delete(obj, matches=\_\_\_None, mt=\_\_\_None, lt=\_\_\_None, eq=\_\_\_None)**
Delete object from the database.

Parameters

- **obj** --
- **matches** --
- **mt** --
- **lt** --
- **eq** --

Returns

**flush(table)**
Flush table.

Parameters **table** --

Returns

**get(obj, matches=\_\_\_None, mt=\_\_\_None, lt=\_\_\_None, eq=\_\_\_None)**
Get objects from the table.

Parameters
- **table_name** --
- **matches** -- Regexp.
- **mt** -- More than.
- **lt** -- Less than.
- **eq** -- Equals.

Returns

**is_closed()**
Return if the database is closed.

Returns

**list()**
List all the databases on the given path.

Returns

**list_tables()**
Load existing tables and their descriptions.

Returns

**new()**
Create a new database and opens it.

Returns

**open(dbname=None)**
Open database from the path with the name or latest. If there are no yet databases, create a new implicitly.

Returns

**purge(dbid)**
Purge the database.

Parameters **dbid** --

Returns

**store(obj, distinct=False)**
Store an object in the table.

Parameters

- **obj** -- An object to store
- **distinct** -- Store object only if there is none identical of such. If at least one field is different, store it.

Returns

**update(obj, matches=None, mt=None, lt=None, eq=None)**
Update object(s) in the database.

Parameters

- **obj** --
- **matches** --
- **mt** --
- **lt** --
• eq --

Returns

```
class salt.modules.inspectlib.fsdb.CsvDBEntity
    Serializable object for the table.
```

23.9.50 salt.modules.introspect

Functions to perform introspection on a minion, and return data in a format usable by Salt States

```
salt.modules.introspect.enabled_service_owners()
    Return which packages own each of the services that are currently enabled.
    CLI Example:
    salt myminion introspect.enabled_service_owners
```

```
salt.modules.introspect.running_service_owners(exclude='/dev', '/home', '/media', '/proc',
                                                '/run', '/sys', '/tmp', '/var')
    Determine which packages own the currently running services. By default, excludes files whose full path starts
    with /dev, /home, /media, /proc, /run, /sys, /tmp and /var. This can be overridden by passing in a
    new list to exclude. 
    CLI Example:
    salt myminion introspect.running_service_owners
```

```
salt.modules.introspect.service_highstate(requires=True)
    Return running and enabled services in a highstate structure. By default also returns package dependencies
    for those services, which means that package definitions must be created outside this function. To drop the
    package dependencies, set requires to False.
    CLI Example:
    salt myminion introspect.service_highstate
    salt myminion introspect.service_highstate requires=False
```

23.9.51 salt.modules.iosconfig

Cisco IOS configuration manipulation helpers

New in version 2019.2.0.

This module provides a collection of helper functions for Cisco IOS style configuration manipulation. This module
does not have external dependencies and can be used from any Proxy or regular Minion.

```
salt.modules.iosconfig.clean(config=None, path=None, saltenv='base')
    Return a clean version of the config, without any special signs (such as ! as an individual line) or empty lines,
    but just lines with significant value in the configuration of the network device.
    config    The configuration sent as text. This argument is ignored when path is configured.
    path     Absolute or remote path from where to load the configuration text. This argument allows any URI
              supported by cp.get_url, e.g., salt://, https://, s3://, ftp://, etc.
    saltenv   base    Salt fileserver environment from which to retrieve the file. Ignored if path is not a salt:// URL.
```
salt.modules.iosconfig.diff_text(candidate_config=None, candidate_path=None, running_config=None, running_path=None, saltenv='base')

Return the diff, as text, between the candidate and the running config.

candidate_config  The candidate configuration sent as text. This argument is ignored when candidate_path is set.

candidate_path  Absolute or remote path from where to load the candidate configuration text. This argument allows any URI supported by cp.get_url), e.g., salt://, https://, s3://, ftp://, etc.

running_config  The running configuration sent as text. This argument is ignored when running_path is set.

running_path  Absolute or remote path from where to load the running configuration text. This argument allows any URI supported by cp.get_url), e.g., salt://, https://, s3://, ftp://, etc.

saltenv: base  Salt fileserver environment from which to retrieve the file. Ignored if candidate_path or running_path is not a salt:// URL.

CLI Example:

```
salt '*' iosconfig.diff_text candidate_path=salt://path/to/candidate.cfg running_path=salt://path/to/running.cfg
```

salt.modules.iosconfig.diff_tree(candidate_config=None, candidate_path=None, running_config=None, running_path=None, saltenv='base')

Return the diff, as Python dictionary, between the candidate and the running configuration.

candidate_config  The candidate configuration sent as text. This argument is ignored when candidate_path is set.

candidate_path  Absolute or remote path from where to load the candidate configuration text. This argument allows any URI supported by cp.get_url), e.g., salt://, https://, s3://, ftp://, etc.

running_config  The running configuration sent as text. This argument is ignored when running_path is set.

running_path  Absolute or remote path from where to load the running configuration text. This argument allows any URI supported by cp.get_url), e.g., salt://, https://, s3://, ftp://, etc.

saltenv: base  Salt fileserver environment from which to retrieve the file. Ignored if candidate_path or running_path is not a salt:// URL.

CLI Example:

```
salt '*' iosconfig.diff_tree candidate_path=salt://path/to/candidate.cfg running_path=salt://path/to/running.cfg
```

salt.modules.iosconfig.merge_diff(initial_config=None, initial_path=None, merge_config=None, merge_path=None, saltenv='base')

Return the merge diff, as text, after merging the merge config into the initial config.

initial_config  The initial configuration sent as text. This argument is ignored when initial_path is set.

initial_path  Absolute or remote path from where to load the initial configuration text. This argument allows any URI supported by cp.get_url), e.g., salt://, https://, s3://, ftp://, etc.
merge_config  The config to be merged into the initial config, sent as text. This argument is ignored when merge_path is set.

merge_path  Absolute or remote path from where to load the merge configuration text. This argument allows any URI supported by cp.get_url, e.g., salt://, https://, s3://, ftp:/, etc.

saltenv: base  Salt fileserver environment from which to retrieve the file. Ignored if initial_path or merge_path is not a salt:// URL.

CLI Example:

```
salt '*' iosconfig.merge_diff initial_path=salt://path/to/running.cfg merge_path=salt://path/to/merge.cfg
```

salt.modules.iosconfig.merge_text(initial_config=None, initial_path=None, merge_config=None, merge_path=None, saltenv='base')

Return the merge result of the initial_config with the merge_config, as plain text.

initial_config  The initial configuration sent as text. This argument is ignored when initial_path is set.

initial_path  Absolute or remote path from where to load the initial configuration text. This argument allows any URI supported by cp.get_url, e.g., salt://, https://, s3://, ftp:/, etc.

merge_config  The config to be merged into the initial config, sent as text. This argument is ignored when merge_path is set.

merge_path  Absolute or remote path from where to load the merge configuration text. This argument allows any URI supported by cp.get_url, e.g., salt://, https://, s3://, ftp:/, etc.

saltenv: base  Salt fileserver environment from which to retrieve the file. Ignored if initial_path or merge_path is not a salt:// URL.

CLI Example:

```
salt '*' iosconfig.merge_text initial_path=salt://path/to/running.cfg merge_path=salt://path/to/merge.cfg
```

salt.modules.iosconfig.merge_tree(initial_config=None, initial_path=None, merge_config=None, merge_path=None, saltenv='base')

Return the merge tree of the initial_config with the merge_config, as a Python dictionary.

initial_config  The initial configuration sent as text. This argument is ignored when initial_path is set.

initial_path  Absolute or remote path from where to load the initial configuration text. This argument allows any URI supported by cp.get_url, e.g., salt://, https://, s3://, ftp:/, etc.

merge_config  The config to be merged into the initial config, sent as text. This argument is ignored when merge_path is set.

merge_path  Absolute or remote path from where to load the merge configuration text. This argument allows any URI supported by cp.get_url, e.g., salt://, https://, s3://, ftp:/, etc.

saltenv: base  Salt fileserver environment from which to retrieve the file. Ignored if initial_path or merge_path is not a salt:// URL.

CLI Example:

```
salt '*' iosconfig.merge_tree initial_path=salt://path/to/running.cfg merge_path=salt://path/to/merge.cfg
```

salt.modules.iosconfig.tree(config=None, path=None, with_tags=False, saltenv='base')

Transform Cisco IOS style configuration to structured Python dictionary. Depending on the value of the with_tags argument, this function may provide different views, valuable in different situations.
config  The configuration sent as text. This argument is ignored when path is configured.

path  Absolute or remote path from where to load the configuration text. This argument allows any URI supported by cp.get_url(), e.g., salt://, https://, s3://, ftp://, etc.

with_tags: False  Whether this function should return a detailed view, with tags.

saltenv: base  Salt fileserver environment from which to retrieve the file. Ignored if path is not a salt:// URL.

CLI Example:

```
salt '*' iosconfig.tree path=salt://path/to/my/config.txt
salt '*' iosconfig.tree path=https://bit.ly/2mAdq7z
```

23.9.52  salt.modules.ipmi

Support IPMI commands over LAN. This module does not talk to the local systems hardware through IPMI drivers. It uses a python module pyghmi.

depends  Python module pyghmi. You can install pyghmi using pip:

```
pip install pyghmi
```

configuration  The following configuration defaults can be define (pillor or config files):

```
ipmi.config:
    api_host: 127.0.0.1
    api_user: admin
    api_pass: apassword
    api_port: 623
    api_kg: None
```

Usage can override the config defaults:

```
salt-call ipmi.get_user api_host=myipmienabled.system
    api_user=admin api_pass=pass
    uid=1
```

salt.modules.ipmi.create_user(uid, name, password, channel=14, callback=False, link_auth=True, ipmi_msg=True, privilege_level='administrator', **kwargs)

create/ensure a user is created with provided settings.

Parameters

- privilege_level  --  User Privilege Limit. (Determines the maximum privilege level that the user is allowed to switch to on the specified channel.) * callback * user * operator * administrator * proprietary * no_access
- kwargs  --
  - api_host=127.0.0.1
  - api_user=admin
  - api_pass=example
  - api_port=623
  - api_kg=None

CLI Examples:
```
salt-call ipmi.create_user uid=2 name=steverweber api_host=172.168.0.7 api_pass=nevertell
```

```python
salt.modules.ipmi.fast_connect_test(**kwargs)

Returns True if connection success. This uses an aggressive timeout value!

*Parameters* **kwargs --

- api_host=127.0.0.1
- api_user=admin
- api_pass=example
- api_port=623
- api_kg=None

*CLI Examples:*
```
salt-call ipmi.fast_connect_test api_host=172.168.0.9
```

```python
salt.modules.ipmi.get_bootdev(**kwargs)

Get current boot device override information.

Provides the current requested boot device. Be aware that not all IPMI devices support this. Even in BMCs that claim to, occasionally the BIOS or UEFI fail to honor it. This is usually only applicable to the next reboot.

*Parameters* **kwargs --

- api_host=127.0.0.1
- api_user=admin
- api_pass=example
- api_port=623
- api_kg=None

*CLI Example:*
```
salt-call ipmi.get_bootdev api_host=127.0.0.1 api_user=admin api_pass=pass
```

```python
salt.modules.ipmi.get_channel_access(channel=14, read_mode='non_volatile', **kwargs)
```

: param kwargs:
  api_host='127.0.0.1' api_user='admin' api_pass='example' api_port=623

*Parameters*

- **channel** -- number [1:7]
- **read_mode** --
  - non_volatile = get non-volatile Channel Access
  - volatile = get present volatile (active) setting of Channel Access
- **kwargs** --
  - api_host=127.0.0.1
  - api_user=admin
  - api_pass=example
  - api_port=623

23.9. execution modules
- api_kg=None

Return Data

A Python dict with the following keys/values:

```python
{
    'alerting':
    'per_msg_auth':
    'user_level_auth':
    'access_mode': {
        (ONE OF)
        0: 'disabled',
        1: 'pre_boot',
        2: 'always',
        3: 'shared'
    }
    'privilege_level': {
        (ONE OF)
        1: 'callback',
        2: 'user',
        3: 'operator',
        4: 'administrator',
        5: 'proprietary'
    }
}
```

CLI Examples:

```bash
salt-call ipmi.get_channel_access channel=1
```

salt.modules.ipmi.get_channel_info(channel=14, **kwargs)

Get channel info

Parameters

- **channel** -- number [1:7]
- **kwargs** --
  - api_host=127.0.0.1
  - api_user=admin
  - api_pass=example
  - api_port=623
  - api_kg=None

Return Data  channel session supports

- no_session: channel is session-less
- single: channel is single-session
- multi: channel is multi-session
- auto: channel is session-based (channel could alternate between
  single- and multi-session operation, as can occur with a
  serial/modem channel that supports connection mode auto-detect)

CLI Examples:

```bash
salt-call ipmi.get_channel_info
```
salt.modules.ipmi.get_channel_max_user_count(channel=14, **kwargs)
Get max users in channel

Parameters

- **channel** -- number [1:7]
- **kwargs**
  - api_host=127.0.0.1
  - api_user=admin
  - api_pass=example
  - api_port=623
  - api_kg=None

Returns int -- often 16

CLI Examples:

```
salt-call ipmi.get_channel_max_user_count
```

salt.modules.ipmi.get_health(**kwargs)
Get Summarize health

This provides a summary of the health of the managed system. It additionally provides an iterable list of reasons for warning, critical, or failed assessments.

good health: {'badreadings': [], 'health': 0}

Parameters **kwargs --

- api_host=127.0.0.1
- api_user=admin
- api_pass=example
- api_port=623
- api_kg=None

CLI Example:

```
salt-call ipmi.get_health api_host=127.0.0.1 api_user=admin api_pass=pass
```

salt.modules.ipmi.get_power(**kwargs)
Get current power state

The response, if successful, should contain 'powerstate' key and either 'on' or 'off' to indicate current state.

Parameters **kwargs --

- api_host=127.0.0.1
- api_user=admin
- api_pass=example
- api_port=623
- api_kg=None

CLI Example:
salt-call ipmi.get_power api_host=127.0.0.1 api_user=admin api_pass=pass

salt.modules.ipmi.get_sensor_data(**kwargs)
Get sensor readings
Iterates sensor reading objects

Parameters **kwargs --
• api_host=127.0.0.1
• api_user=admin
• api_pass=example
• api_port=623
• api_kg=None

CLI Example:
salt-call ipmi.get_sensor_data api_host=127.0.0.1 api_user=admin api_pass=pass

salt.modules.ipmi.get_user(uid, channel=14, **kwargs)
Get user from uid and access on channel

Parameters
• uid -- user number [1:16]
• channel -- number [1:7]
• **kwargs --
  • api_host=127.0.0.1
  • api_user=admin
  • api_pass=example
  • api_port=623
  • api_kg=None

Return Data
name: (str)
uid: (int)
channel: (int)
access:
  - callback (bool)
  - link_auth (bool)
  - ipmi_msg (bool)
  - privilege_level: (str)[callback, user, operator administrator, proprietary, no_access]

CLI Examples:
salt-call ipmi.get_user uid=2

salt.modules.ipmi.get_user_access(uid, channel=14, **kwargs)
Get user access

Parameters
- **uid** -- user number [1:16]
- **channel** -- number [1:7]
- **kwargs** --
  - api_host=127.0.0.1
  - api_user=admin
  - api_pass=example
  - api_port=623
  - api_kg=None

Return Data

channel_info:
  - max_user_count = maximum number of user IDs on this channel
  - enabled_users = count of User ID slots presently in use
  - users_with_fixed_names = count of user IDs with fixed names

access:
  - callback
  - link_auth
  - ipmi_msg
  - privilege_level: [reserved, callback, user, operator administrator, proprietary, no_access]

CLI Examples:

```
salt-call ipmi.get_user_access uid=2
```

```
salt.modules.ipmi.get_user_name(uid, return_none_on_error=True, **kwargs)
```

Get user name

Parameters

- **uid** -- user number [1:16]
- **return_none_on_error** -- return None on error
- **kwargs** --
  - api_host=127.0.0.1
  - api_user=admin
  - api_pass=example
  - api_port=623
  - api_kg=None

CLI Examples:

```
salt-call ipmi.get_user_name uid=2
```

```
salt.modules.ipmi.get_users(channel=14, **kwargs)
```

get list of users and access information

Parameters

- **channel** -- number [1:7]
- **kwargs** --
- api_host=127.0.0.1
- api_user=admin
- api_pass=example
- api_port=623
- api_kg=None

Returns

- name: (str)
- uid: (int)
- channel: (int)
- access:
  - callback (bool)
  - link_auth (bool)
  - ipmi_msg (bool)
  - privilege_level: (str)[callback, user, operator, administrator, proprietary, no_access]

CLI Examples:
salt-call ipmi.get_users api_host=172.168.0.7

salt.modules.ipmi.raw_command(netfn, command, bridge_request=None, data=(), retry=True, delay_xmit=None, **kwargs)

Send raw ipmi command
This allows arbitrary IPMI bytes to be issued. This is commonly used for certain vendor specific commands.

Parameters

- netfn -- Net function number
- command -- Command value
- bridge_request -- The target slave address and channel number for the bridge request.
- data -- Command data as a tuple or list
- kwargs --
  - api_host=127.0.0.1
  - api_user=admin
  - api_pass=example
  - api_port=623
  - api_kg=None

Returns dict -- The response from IPMI device

CLI Examples:
salt-call ipmi.raw_command netfn=0x06 command=0x46 data=[0x02]
    # this will return the name of the user with id 2 in bytes

salt.modules.ipmi.set_bootdev(bootdev='default', persist=False, uefboot=False, **kwargs)

Set boot device to use on next reboot
Parameters

- **bootdev** --
  - network: Request network boot
  - hd: Boot from hard drive
  - safe: Boot from hard drive, requesting 'safe mode'
  - optical: boot from CD/DVD/BD drive
  - setup: Boot into setup utility
  - default: remove any IPMI directed boot device request

- **persist** -- If true, ask that system firmware use this device beyond next boot. Be aware many systems do not honor this

- **uefiboot** -- If true, request UEFI boot explicitly. Strictly speaking, the spec suggests that if not set, the system should BIOS boot and offers no “don't care” option. In practice, this flag not being set does not preclude UEFI boot on any system I've encountered.

- **kwargs** --
  - api_host=127.0.0.1
  - api_user=admin
  - api_pass=example
  - api_port=623
  - api_kg=None

Returns dict or True -- If callback is not provided, the response

CLI Examples:
```
salt-call ipmi.set_bootdev bootdev=network persist=True
```

```python
salt.modules.ipmi.set_channel_access(channel=14, access_update_mode='non_volatile',
alerting=False, per_msg_auth=False,
user_level_auth=False, access_mode='always',
privilege_update_mode='non_volatile', privilege_level='administrator', **kwargs)
```

Set channel access

Parameters

- **channel** -- number [1:7]

- **access_update_mode** --
  - 'dont_change' = don't set or change Channel Access
  - 'non_volatile' = set non-volatile Channel Access
  - 'volatile' = set volatile (active) setting of Channel Access

- **alerting** -- PEF Alerting Enable/Disable
  - True = enable PEF Alerting
  - False = disable PEF Alerting on this channel (Alert Immediate command can still be used to generate alerts)

- **per_msg_auth** -- Per-message Authentication
- True = enable
- False = disable Per-message Authentication. [Authentication required to activate any session on this channel, but authentication not used on subsequent packets for the session.]

**user_level_auth** -- User Level Authentication Enable/Disable

- True = enable User Level Authentication. All User Level commands are to be authenticated per the Authentication Type that was negotiated when the session was activated.
- False = disable User Level Authentication. Allow User Level commands to be executed without being authenticated. If the option to disable User Level Command authentication is accepted, the BMC will accept packets with Authentication Type set to None if they contain user level commands. For outgoing packets, the BMC returns responses with the same Authentication Type that was used for the request.

**access_mode** -- Access Mode for IPMI messaging (PEF Alerting is enabled/disabled separately from IPMI messaging)

- disabled = disabled for IPMI messaging
- pre_boot = pre-boot only channel only available when system is in a powered down state or in BIOS prior to start of boot.
- always = channel always available regardless of system mode. BIOS typically dedicates the serial connection to the BMC.
- shared = same as always available, but BIOS typically leaves the serial port available for software use.

**privilege_update_mode** -- Channel Privilege Level Limit. This value sets the maximum privilege level that can be accepted on the specified channel.

- dont_change = don’t set or change channel Privilege Level Limit
- non_volatile = non-volatile Privilege Level Limit according
- volatile = volatile setting of Privilege Level Limit

**privilege_level** -- Channel Privilege Level Limit

- reserved = unused
- callback
- user
- operator
- administrator
- proprietary = used by OEM

**kwargs**

- api_host=127.0.0.1
- api_user=admin
- api_pass=example
- api_port=623
- api_kg=None

CLI Examples:
salt-call ipmi.set_channel_access privilege_level='administrator'

salt.modules.ipmi.set_identify(on=True, duration=600, **kwargs)
Request identify light

Request the identify light to turn off, on for a duration, or on indefinitely. Other than error exceptions,

Parameters

- on -- Set to True to force on or False to force off
- duration -- Set if wanting to request turn on for a duration in seconds, None = indefinitely.
- kwargs --
  - api_host=127.0.0.1
  - api_user=admin
  - api_pass=example
  - api_port=623
  - api_kg=None

CLI Examples:

salt-call ipmi.set_identify

salt.modules.ipmi.set_power(state='power_on', wait=True, **kwargs)
Request power state change

Parameters

- name --
  - power_on -- system turn on
  - power_off -- system turn off (without waiting for OS)
  - shutdown -- request OS proper shutdown
  - reset -- reset (without waiting for OS)
  - boot -- If system is off, then 'on', else 'reset'
- ensure -- If (bool True), do not return until system actually completes requested state change for 300 seconds. If a non-zero (int), adjust the wait time to the requested number of seconds
- kwargs --
  - api_host=127.0.0.1
  - api_user=admin
  - api_pass=example
  - api_port=623
  - api_kg=None

Returns dict -- A dict describing the response retrieved

CLI Examples:
salt-call ipmi.set_power state=shutdown wait=True

salt.modules.ipmi.set_user_access(uid, channel=14, callback=True, link_auth=True, ipmi_msg=True, privilege_level='administrator', **kwargs)

Set user access

Parameters

• **uid** -- user number [1:16]
• **channel** -- number [1:7]
• **callback** -- User Restricted to Callback
  – False = User Privilege Limit is determined by the User Privilege Limit parameter, below, for both callback and non-callback connections.
  – True = User Privilege Limit is determined by the User Privilege Limit parameter for callback connections, but is restricted to Callback level for non-callback connections. Thus, a user can only initiate a Callback when they ‘call in’ to the BMC, but once the callback connection has been made, the user could potentially establish a session as an Operator.
• **link_auth** -- User Link authentication enable/disable (used to enable whether this user’s name and password information will be used for link authentication, e.g. PPP CHAP) for the given channel. Link authentication itself is a global setting for the channel and is enabled/disabled via the serial/modem configuration parameters.
• **ipmi_msg** -- User IPMI Messaging: (used to enable/disable whether this user’s name and password information will be used for IPMI Messaging. In this case, ‘IPMI Messaging’ refers to the ability to execute generic IPMI commands that are not associated with a particular payload type. For example, if IPMI Messaging is disabled for a user, but that user is enabled for activating the SOL payload type, then IPMI commands associated with SOL and session management, such as Get SOL Configuration Parameters and Close Session are available, but generic IPMI commands such as Get SEL Time are unavailable.)
• **privilege_level** -- User Privilege Limit. (Determines the maximum privilege level that the user is allowed to switch to on the specified channel.)
  – callback
  – user
  – operator
  – administrator
  – proprietary
  – no_access
• **kwargs**
  – api_host=127.0.0.1
  – api_user=admin
  – api_pass=example
  – api_port=623
  – api_kg=None

CLI Examples:
salt-call ipmi.set_user_access uid=2 privilege_level='operator'

salt.modules.ipmi.set_user_name(uid, name, **kwargs)
Set user name

Parameters

- **uid** -- user number [1:16]
- **name** -- username (limit of 16bytes)
- **kwargs** --
  - api_host=127.0.0.1
  - api_user=admin
  - api_pass=example
  - api_port=623
  - api_kg=None

CLI Examples:
salt-call ipmi.set_user_name uid=2 name='steverweber'

salt.modules.ipmi.set_user_password(uid, mode='set_password', password=None, **kwargs)
Set user password and (modes)

Parameters

- **uid** -- id number of user. see: get_names_uid()['name']
- **mode** --
  - disable = disable user connections
  - enable = enable user connections
  - set_password = set or ensure password
  - test_password = test password is correct
- **password** -- max 16 char string (optional when mode is [disable or enable])
- **kwargs** --
  - api_host=127.0.0.1
  - api_user=admin
  - api_pass=example
  - api_port=623
  - api_kg=None

Returns  True on success when mode = test_password, return False on bad password

CLI Example:
salt-call ipmi.set_user_password api_host=127.0.0.1 api_user=admin api_pass=pass
uid=1 password=newPass
salt-call ipmi.set_user_password uid=1 mode=enable
salt.modules.ipmi.

**user_delete** (*uid*, *channel=14, **kwargs*)

Delete user (helper)

**Parameters**

- **uid** -- user number [1:16]
- **channel** -- number [1:7]
- **kwargs** --
  - api_host=127.0.0.1
  - api_user=admin
  - api_pass=example
  - api_port=623
  - api_kg=None

**CLI Examples:**

```
salt-call ipmi.user_delete uid=2
```

### 23.9.53 **salt.modules.jboss7**

Module for managing JBoss AS 7 through the CLI interface.

New in version 2015.5.0.

In order to run each function, **jboss_config** dictionary with the following properties must be passed:

- **cli_path**: the path to jboss-cli script, for example: `/opt/jboss/jboss-7.0/bin/jboss-cli.sh`
- **controller**: the IP address and port of controller, for example: 10.11.12.13:9999
- **cli_user**: username to connect to jboss administration console if necessary
- **cli_password**: password to connect to jboss administration console if necessary

**Example:**

```python
jboss_config:
    cli_path: '/opt/jboss/jboss-7.0/bin/jboss-cli.sh'
    controller: 10.11.12.13:9999
    cli_user: 'jbossadm'
    cli_password: 'jbossadm'
```

salt.modules.jboss7.

**create_datasource** (*jboss_config, name, datasource_properties, profile=None*)

Create datasource in running jboss instance

- **jboss_config**: Configuration dictionary with properties specified above.
- **name**: Datasource name
- **datasource_properties**: A dictionary of datasource properties to be created:
  - **driver-name**: mysql
  - **connection-url**: 'jdbc:mysql://localhost:3306/sampleDatabase'
  - **jndi-name**: 'java:jboss/datasources/sampleDS'
• user-name: sampleuser
• password: secret
• min-pool-size: 3
• use-java-context: True

**profile**  The profile name (JBoss domain mode only)

**CLI Example:**

```bash
```

**salt.modules.jboss7.create_simple_binding**(jboss_config, binding_name, value, profile=None)

Create a simple jndi binding in the running jboss instance

**jboss_config**  Configuration dictionary with properties specified above.

**binding_name**  Binding name to be created

**value**  Binding value

**profile**  The profile name (JBoss domain mode only)

**CLI Example:**

```bash
salt '*' jboss7.create_simple_binding '{"cli_path": "integration.modules.sysmod.SysModuleTest.test_valid_docs", "controller": "10.11.12.13:9999", "cli_user": "jbossadm", "cli_password": "jbossadm"}', my_binding_name my_binding_value
```

**salt.modules.jboss7.deploy**(jboss_config, source_file)

Deploy the application on the jboss instance from the local file system where minion is running.

**jboss_config**  Configuration dictionary with properties specified above.

**source_file**  Source file to deploy from

**CLI Example:**

```bash
```

**salt.modules.jboss7.list_deployments**(jboss_config)

List all deployments on the jboss instance

**jboss_config**  Configuration dictionary with properties specified above.

**CLI Example:**

```bash
```

(continues on next page)
salt.modules.jboss7.read_datasource(jboss_config, name, profile=None)
Read datasource properties in the running jboss instance.

jboss_config Configuration dictionary with properties specified above.
name Datasource name
profile Profile name (JBoss domain mode only)

CLI Example:
```bash
```

salt.modules.jboss7.read_simple_binding(jboss_config, binding_name, profile=None)
Read jndi binding in the running jboss instance

jboss_config Configuration dictionary with properties specified above.
binding_name Binding name to be created
profile The profile name (JBoss domain mode only)

CLI Example:
```bash
```

salt.modules.jboss7.reload_(jboss_config, host=None)
Reload running jboss instance

jboss_config Configuration dictionary with properties specified above.
host The name of the host. JBoss domain mode only - and required if running in domain mode. The host name is the "name" attribute of the "host" element in host.xml

CLI Example:
```bash
```

salt.modules.jboss7.remove_datasource(jboss_config, name, profile=None)
Remove an existing datasource from the running jboss instance.

jboss_config Configuration dictionary with properties specified above.
name Datasource name
profile The profile (JBoss domain mode only)

CLI Example:
```bash
```
salt.modules.jboss7.status(jboss_config, host=None, server_config=None)

Get status of running jboss instance.

**jboss_config**  Configuration dictionary with properties specified above.

**host**  The name of the host. JBoss domain mode only - and required if running in domain mode. The host name is the "name" attribute of the "host" element in host.xml

**server_config**  The name of the Server Configuration. JBoss Domain mode only - and required if running in domain mode.

CLI Example:

```sh
```

salt.modules.jboss7.stop_server(jboss_config, host=None)

Stop running jboss instance

**jboss_config**  Configuration dictionary with properties specified above.

**host**  The name of the host. JBoss domain mode only - and required if running in domain mode. The host name is the "name" attribute of the "host" element in host.xml

CLI Example:

```sh
```

salt.modules.jboss7.undeploy(jboss_config, deployment)

Undeploy the application from jboss instance

**jboss_config**  Configuration dictionary with properties specified above.

**deployment**  Deployment name to undeploy

CLI Example:

```sh
```

salt.modules.jboss7.update_datasource(jboss_config, name, new_properties, profile=None)

Update an existing datasource in running jboss instance. If the property doesn't exist if will be created, if it does, it will be updated with the new value

**jboss_config**  Configuration dictionary with properties specified above.

**name**  Datasource name

**new_properties**

A dictionary of datasource properties to be updated. For example:

- **driver-name**: mysql
- **connection-url**: 'jdbc:mysql://localhost:3306/sampleDatabase'
- **jndi-name**: 'java:jboss/datasources/sampleDS'
- **user-name**: sampleuser
- **password**: secret
- min-pool-size: 3
- use-java-context: True

**profile**  The profile name (JBoss domain mode only)

CLI Example:

```bash
```

**salt.modules.jboss7.update_simple_binding** *(jboss_config, binding_name, value, profile=None)*

Update the simple jndi binding in the running jboss instance

- **jboss_config**  Configuration dictionary with properties specified above.
- **binding_name**  Binding name to be updated
- **value**  New binding value
- **profile**  The profile name (JBoss domain mode only)

CLI Example:

```bash
clicksalt '*' jboss7.update_simple_binding '{"cli_path": "integration.modules.sysmod.SysModuleTest.test_valid_docs", "controller": "10.11.12.13:9999", "cli_user": "jbossadm", "cli_password": "jbossadm"} 'my_binding_name' 'my_binding_value'
```

### 23.9.54 salt.modules.jboss7_cli

Module for low-level interaction with JbossAS7 through CLI.

This module exposes two ways of interaction with the CLI, either through commands or operations.

**Note:** Following JBoss documentation (https://developer.jboss.org/wiki/CommandLineInterface): "Operations are considered a low level but comprehensive way to manage the AS controller, i.e. if it can't be done with operations it can't be done in any other way. Commands, on the other hand, are more user-friendly in syntax, although most of them still translate into operation requests and some of them even into a few composite operation requests, i.e. commands also simplify some management operations from the user's point of view."

The difference between calling a command or operation is in handling the result. Commands return a zero return code if operation is successful or return non-zero return code and print an error to standard output in plain text, in case of an error.

Operations return a json-like structure, that contain more information about the result. In case of a failure, they also return a specific return code. This module parses the output from the operations and returns it as a dictionary so that an execution of an operation can then be verified against specific errors.

In order to run each function, jboss_config dictionary with the following properties must be passed:

- **cli_path**: the path to jboss-cli script, for example: '/opt/jboss/jboss-7.0/bin/jboss-cli.sh'
- **controller**: the IP address and port of controller, for example: 10.11.12.13:9999
- **cli_user**: username to connect to jboss administration console if necessary
• cli_password: password to connect to jboss administration console if necessary

Example:

```
jboss_config:
  cli_path: '/opt/jboss/jboss-7.0/bin/jboss-cli.sh'
  controller: 10.11.12.13:9999
  cli_user: 'jbossadm'
  cli_password: 'jbossadm'
```

`salt.modules.jboss7_cli.run_command(jboss_config, command, fail_on_error=True)`

Execute a command against jboss instance through the CLI interface.

- **jboss_config**: Configuration dictionary with properties specified above.
- **command**: Command to execute against jboss instance
- **fail_on_error** (default=True) Is true, raise CommandExecutionError exception if execution fails. If false, 'success' property of the returned dictionary is set to False

CLI Example:

```
salt '*' jboss7_cli.run_command '{"cli_path": "integration.modules.sysmod.SysModuleTest.test_valid_docs", "controller": "10.11.12.13:9999", "cli_user": "jbossadm", "cli_password": "jbossadm"}' my_command
```

`salt.modules.jboss7_cli.run_operation(jboss_config, operation, fail_on_error=True, retries=1)`

Execute an operation against jboss instance through the CLI interface.

- **jboss_config**: Configuration dictionary with properties specified above.
- **operation**: An operation to execute against jboss instance
- **fail_on_error** (default=True) Is true, raise CommandExecutionError exception if execution fails. If false, 'success' property of the returned dictionary is set to False
- **retries**: Number of retries in case of "JBAS012144: Could not connect to remote" error

CLI Example:

```
salt '*' jboss7_cli.run_operation '{"cli_path": "integration.modules.sysmod.SysModuleTest.test_valid_docs", "controller": "10.11.12.13:9999", "cli_user": "jbossadm", "cli_password": "jbossadm"}' my_operation
```

**23.9.55 salt.modules.kernelpkg_linux_apt**

Manage Linux kernel packages on APT-based systems

`salt.modules.kernelpkg_linux_apt.active()`

Return the version of the running kernel.

CLI Example:

```
salt '*' kernelpkg.active
```

`salt.modules.kernelpkg_linux_apt.cleanup(keep_latest=True)`

Remove all unused kernel packages from the system.

- **keep_latest** [True] In the event that the active kernel is not the latest one installed, setting this to True will retain the latest kernel package, in addition to the active one. If False, all kernel packages other than the active one will be removed.
Salt Documentation, Release 3002.5

CLI Example:

```
salt '*' kernelpkg.cleanup
```

salt.modules.kernelpkg_linux_apt.latest_available()
Return the version of the latest kernel from the package repositories.

CLI Example:

```
salt '*' kernelpkg.latest_available
```

salt.modules.kernelpkg_linux_apt.latest_installed()
Return the version of the latest installed kernel.

CLI Example:

```
salt '*' kernelpkg.latest_installed
```

Note: This function may not return the same value as `active()` if a new kernel has been installed and the system has not yet been rebooted. The `needs_reboot()` function exists to detect this condition.

salt.modules.kernelpkg_linux_apt.list_installed()
Return a list of all installed kernels.

CLI Example:

```
salt '*' kernelpkg.list_installed
```

salt.modules.kernelpkg_linux_apt.needs_reboot()
Detect if a new kernel version has been installed but is not running. Returns True if a new kernel is installed, False otherwise.

CLI Example:

```
salt '*' kernelpkg.needs_reboot
```

salt.modules.kernelpkg_linux_apt.remove(release)
Remove a specific version of the kernel.

release The release number of an installed kernel. This must be the entire release number as returned by `list_installed()`, not the package name.

CLI Example:

```
salt '*' kernelpkg.remove 4.4.0-70-generic
```

salt.modules.kernelpkg_linux_apt.upgrade(reboot=False, at_time=None)
Upgrade the kernel and optionally reboot the system.

reboot [False] Request a reboot if a new kernel is available.
at_time [immediate] Schedule the reboot at some point in the future. This argument is ignored if `reboot=False`. See `reboot()` for more details on this argument.

CLI Example:

```
salt '*' kernelpkg.upgrade
salt '*' kernelpkg.upgrade reboot=True at_time=1
```
**Note:** An immediate reboot often shuts down the system before the minion has a chance to return, resulting in errors. A minimal delay (1 minute) is useful to ensure the result is delivered to the master.

salt.modules.kernelpkg_linux_apt.upgrade_available()
Detect if a new kernel version is available in the repositories. Returns True if a new kernel is available, False otherwise.

CLI Example:
```
salt '*' kernelpkg.upgrade_available
```

23.9.56 salt.modules.keystoneng

Keystone module for interacting with OpenStack Keystone

New in version 2018.3.0.

:depends: shade

Example configuration

```
keystone:
  cloud: default
```

salt.modules.keystoneng.compare_changes(obj, **kwargs)
Compare two dicts returning only keys that exist in the first dict and are different in the second one

salt.modules.keystoneng.domain_create(auth=None, **kwargs)
Create a domain

CLI Example:
```
salt '*' keystoneng.domain_create name=domain1
```

salt.modules.keystoneng.domain_delete(auth=None, **kwargs)
Delete a domain

CLI Example:
```
salt '*' keystoneng.domain_delete name=domain1
salt '*' keystoneng.domain_delete name=b62e76fbee4fe8f77073f591cf211e
```

salt.modules.keystoneng.domain_get(auth=None, **kwargs)
Get a single domain

CLI Example:
salt.modules.keystoneng.domain_list(auth=None, **kwargs)
List domains
CLI Example:
salt '*' keystoneng.domain_list

salt.modules.keystoneng.domain_search(auth=None, **kwargs)
Search domains
CLI Example:
salt '*' keystoneng.domain_search
salt '*' keystoneng.domain_search name=domain1

salt.modules.keystoneng.domain_update(auth=None, **kwargs)
Update a domain
CLI Example:
salt '*' keystoneng.domain_update name=domain1 new_name=newdomain
salt '*' keystoneng.domain_update name=domain1 enabled=True description='new'

salt.modules.keystoneng.endpoint_create(auth=None, **kwargs)
Create an endpoint
CLI Example:
salt '*' keystoneng.endpoint_create interface=admin service=glance url=https://example.org:9292
salt '*' keystoneng.endpoint_create interface=public service=glance region=RegionOne url=https://example.org:9292
salt '*' keystoneng.endpoint_create interface=admin service=glance url=https://example.org:9292 enabled=True

salt.modules.keystoneng.endpoint_delete(auth=None, **kwargs)
Delete an endpoint
CLI Example:
salt '*' keystoneng.endpoint_delete id=3bee4bd8c2b040ee966adfda1f0bfca9

salt.modules.keystoneng.endpoint_get(auth=None, **kwargs)
Get a single endpoint
CLI Example:
salt '*' keystoneng.endpoint_get id=02cffa173b2460f98e40eda3748dae5

salt.modules.keystoneng.endpoint_list(auth=None, **kwargs)
List endpoints
CLI Example:
salt 'salt' keystoneeng.endpoint_list

salt.modules.keystoneng.endpoint_search(auth=None, **kwargs)
Search endpoints

CLI Example:

    salt 'salt' keystoneeng.endpoint_search
    salt 'salt' keystoneeng.endpoint_search id=02cffa173b2460f98e40eda3748dae5

salt.modules.keystoneng.endpoint_update(auth=None, **kwargs)
Update an endpoint

CLI Example:

    salt 'salt' keystoneeng.endpoint_update endpoint_id=4f961ad09d2d48948896bbe7c6a79717
    →interface=public enabled=False
    salt 'salt' keystoneeng.endpoint_update endpoint_id=4f961ad09d2d48948896bbe7c6a79717
    →region=newregion
    salt 'salt' keystoneeng.endpoint_update endpoint_id=4f961ad09d2d48948896bbe7c6a79717
    →service_name_or_id=glance url=https://example.org:9292

salt.modules.keystoneng.get_entity(ent_type, **kwargs)
Attempt to query Keystone for more information about an entity

salt.modules.keystoneng.get_openstack_cloud(auth=None)
Return an openstack_cloud

salt.modules.keystoneng.get_operator_cloud(auth=None)
Return an operator_cloud

salt.modules.keystoneng.group_create(auth=None, **kwargs)
Create a group

CLI Example:

    salt 'salt' keystoneeng.group_create name=group1
    salt 'salt' keystoneeng.group_create name=group2 domain=domain1 description='my group2
    →'

salt.modules.keystoneng.group_delete(auth=None, **kwargs)
Delete a group

CLI Example:

    salt 'salt' keystoneeng.group_delete name=group1
    salt 'salt' keystoneeng.group_delete name=group2 domain_
    →id=b62e76fbee4f8f77b735f91cf211e
    salt 'salt' keystoneeng.group_delete name=0e4febc2a5ab4f2c8f374b054162506d

salt.modules.keystoneng.group_get(auth=None, **kwargs)
Get a single group

CLI Example:

    salt 'salt' keystoneeng.group_get name=group1
    salt 'salt' keystoneeng.group_get name=group2 domain_
    →id=b62e76fbee4f8f77b735f91cf211e
    salt 'salt' keystoneeng.group_get name=0e4febc2a5ab4f2c8f374b054162506d
salt.modules.keystoneng.group_list(auth=None, **kwargs)
List groups
CLI Example:

```python
salt '*' keystoneng.group_list
salt '*' keystoneng.group_list domain_id=b62e76fbee48fb77073f591cf211e
```

salt.modules.keystoneng.group_search(auth=None, **kwargs)
Search for groups
CLI Example:

```python
salt '*' keystoneng.group_search name=group1
salt '*' keystoneng.group_search domain_id=b62e76fbee48fb77073f591cf211e
```

salt.modules.keystoneng.group_update(auth=None, **kwargs)
Update a group
CLI Example:

```python
salt '*' keystoneng.group_update name=group1 description='new description'
salt '*' keystoneng.group_create name=group2 domain_
  →id=b62e76fbee48fb77073f591cf211e new_name=newgroupname
salt '*' keystoneng.group_create name=0e4febc2a5af4f2c8f374b054162506d new_
  →name=newgroupname
```

salt.modules.keystoneng.project_create(auth=None, **kwargs)
Create a project
CLI Example:

```python
salt '*' keystoneng.project_create name=project1
salt '*' keystoneng.project_create name=project2 domain_
  →id=b62e76fbee48fb77073f591cf211e
salt '*' keystoneng.project_create name=project3 enabled=False description='my'
  →project3'
```

salt.modules.keystoneng.project_delete(auth=None, **kwargs)
Delete a project
CLI Example:

```python
salt '*' keystoneng.project_delete name=project1
salt '*' keystoneng.project_delete name=project2 domain_
  →id=b62e76fbee48fb77073f591cf211e
salt '*' keystoneng.project_delete name=f315afcf12f24ad88c92b936c38f2d5a
```

salt.modules.keystoneng.project_get(auth=None, **kwargs)
Get a single project
CLI Example:

```python
salt '*' keystoneng.project_get name=project1
salt '*' keystoneng.project_get name=project2 domain_
  →id=b62e76fbee48fb77073f591cf211e
salt '*' keystoneng.project_get name=f315afcf12f24ad88c92b936c38f2d5a
```

salt.modules.keystoneng.project_list(auth=None, **kwargs)
List projects
## 23.9. execution modules

Salt Documentation, Release 3002.5

**CLI Example:**

```
salt '*' keystoneng.project_list
salt '*' keystoneng.project_list domain_id=b62e76fbeeff4e8fb77073f591cf211e
```

Salt modules for the keystoneng Python library:

- `project_list` - Get a list of projects
  - CLI Example:
    ```
salt '*' keystoneng.project_list
salt '*' keystoneng.project_list domain_id=b62e76fbeeff4e8fb77073f591cf211e
```

- `project_search` - Search projects
  - CLI Example:
    ```
salt '*' keystoneng.project_search
salt '*' keystoneng.project_search name=project1
salt '*' keystoneng.project_search domain_id=b62e76fbeeff4e8fb77073f591cf211e
```

- `project_update` - Update a project
  - CLI Example:
    ```
salt '*' keystoneng.project_update name=project1 new_name=newproject
salt '*' keystoneng.project_update name=project2 enabled=False description='new → description'
```

- `role_assignment_list` - List role assignments
  - CLI Example:
    ```
salt '*' keystoneng.role_assignment_list
```

- `role_create` - Create a role
  - CLI Example:
    ```
salt '*' keystoneng.role_create name=role1
salt '*' keystoneng.role_create name=role1 domain_id=b62e76fbeeff4e8fb77073f591cf211e
```

- `role_delete` - Delete a role
  - CLI Example:
    ```
salt '*' keystoneng.role_delete name=role1 domain_id=b62e76fbeeff4e8fb77073f591cf211e
salt '*' keystoneng.role_delete name=1eb6edd5525e4ac39af571adee673559
```

- `role_get` - Get a single role
  - CLI Example:
    ```
salt '*' keystoneng.role_get name=role1
salt '*' keystoneng.role_get name=role1 domain_id=b62e76fbeeff4e8fb77073f591cf211e
salt '*' keystoneng.role_get name=1eb6edd5525e4ac39af571adee673559
```

- `role_grant` - Grant a role in a project/domain to a user/group
  - CLI Example:
salt.modules.keystoneng.role_list(auth=None, **kwargs)
List roles

CLI Example:

salt '*' keystoneng.role_list
salt '*' keystoneng.role_list domain_id=b62e76fbee4e8fb77073f591cf211e

salt.modules.keystoneng.role_revoke(auth=None, **kwargs)
Grant a role in a project/domain to a user/group

CLI Example:

salt '*' keystoneng.role_revoke name=role1 user=user1 project=project1
salt '*' keystoneng.role_revoke name=ddbe3e0ed74e4c7f8027bad4af03339d group=user1
  →project=project1 domain=domain1
salt '*' keystoneng.role_revoke name=ddbe3e0ed74e4c7f8027bad4af03339d
  →group=19573afde2421d08654c2215b9e9704 project=1dcac318a83b4610b7a7f7ba01465548

salt.modules.keystoneng.role_search(auth=None, **kwargs)
Search roles

CLI Example:

salt '*' keystoneng.role_search
salt '*' keystoneng.role_search name=role1
salt '*' keystoneng.role_search domain_id=b62e76fbee4e8fb77073f591cf211e

salt.modules.keystoneng.role_update(auth=None, **kwargs)
Update a role

CLI Example:

salt '*' keystoneng.role_update name=role1 new_name=newrole
salt '*' keystoneng.role_update name=1eb6edd5525e4ac39af571adee673559 new_
  →name=newrole

salt.modules.keystoneng.service_create(auth=None, **kwargs)
Create a service

CLI Example:

salt '*' keystoneng.service_create name=glance type=image
salt '*' keystoneng.service_create name=glance type=image description="Image"

salt.modules.keystoneng.service_delete(auth=None, **kwargs)
Delete a service

CLI Example:

salt '*' keystoneng.service_delete name=glance
salt '*' keystoneng.service_delete name=39cc1327cdf744ab815331554430e8ec
salt.modules.keystoneng.service_get(auth=None, **kwargs)
Get a single service

CLI Example:
```
salt '*' keystoneng.service_get name=glance
salt '*' keystoneng.service_get name=75a5804638944b3ab54f7fbc2305a
```

salt.modules.keystoneng.service_list(auth=None, **kwargs)
List services

CLI Example:
```
salt '*' keystoneng.service_list
```

salt.modules.keystoneng.service_search(auth=None, **kwargs)
Search services

CLI Example:
```
salt '*' keystoneng.service_search
salt '*' keystoneng.service_search name=glance
salt '*' keystoneng.service_search name=135f803f8e5444c9b79e6cfec2305a
```

salt.modules.keystoneng.service_update(auth=None, **kwargs)
Update a service

CLI Example:
```
salt '*' keystoneng.service_update name=cinder type=volumev2
salt '*' keystoneng.service_update name=cinder description='new description'
salt '*' keystoneng.service_update name=ab4d35e269f147b3ae2d849f77f5c88fa enabled=False
```

salt.modules.keystoneng.setup_clouds(auth=None)
Call functions to create Shade cloud objects in __context__ to take advantage of Shade's in-memory caching across several states

salt.modules.keystoneng.user_create(auth=None, **kwargs)
Create a user

CLI Example:
```
salt '*' keystoneng.user_create name=user1
salt '*' keystoneng.user_create name=user2 password=1234 enabled=False
salt '*' keystoneng.user_create name=user3 domain_
  → id=b62e76fb9eff4e8fbb77073f591cf21e
```

salt.modules.keystoneng.user_delete(auth=None, **kwargs)
Delete a user

CLI Example:
```
salt '*' keystoneng.user_delete name=user1
salt '*' keystoneng.user_delete name=user2 domain_
  → id=b62e76fb9eff4e8fbb77073f591cf21e
salt '*' keystoneng.user_delete name=a42cbbfa1e894839fd0f584d22e321f
```

salt.modules.keystoneng.user_get(auth=None, **kwargs)
Get a single user
CLI Example:

```
salt '*' keystoneng.user_get name=user1
salt '*' keystoneng.user_get name=user1 domain_id=b62e76fbeeфф4e8fb77073f591cf211e
salt '*' keystoneng.user_get name=02cffaa173b2460f98e40eda3748daе5
```

```
salt '*' keystoneng.user_list
salt '*' keystoneng.user_list domain_id=b62e76fbeeфф4e8fb77073f591cf211e
```

```
salt '*' keystoneng.user_search(auth=None, **kwargs)
```

List users

```
salt '*' keystoneng.user_list
salt '*' keystoneng.user_list domain_id=b62e76fbeeфф4e8fb77073f591cf211e
```

```
salt '*' keystoneng.user_update(auth=None, **kwargs)
```

Update a user

```
salt '*' keystoneng.user_update name=user1 enabled=False description='new

description'
salt '*' keystoneng.user_update name=user1 new_name=newuser
```

23.9.57 salt.modules.keystore

Module to interact with keystores

```
salt.modules.keystore.add(name, keystore, passphrase, certificate, private_key=None)
```

Adds certificates to an existing keystore or creates a new one if necessary.

Parameters

- **name** -- alias for the certificate
- **keystore** -- The path to the keystore file to query
- **passphrase** -- The passphrase to use to decode the keystore
- **certificate** -- The PEM public certificate to add to keystore. Can be a string for file.
- **private_key** -- (Optional for TrustedCert) The PEM private key to add to the keystore

CLI Example:

```
salt '*' keystore.add aliasname /tmp/test.store changeit /tmp/testcert.crt
salt '*' keystore.add aliasname /tmp/test.store changeit certificate="-----BEGIN

CERTIFICATE=====Sib...BM=====END CERTIFICATE-----"
salt '*' keystore.add keyname /tmp/test.store changeit /tmp/512.cert private_key=/

//--tmp/512.key
```

```
salt.modules.keystore.list(keystore, passphrase, alias=None, return_cert=False)
```

Lists certificates in a keytool managed keystore.
Parameters

- **keystore** -- The path to the keystore file to query
- **passphrase** -- The passphrase to use to decode the keystore
- **alias** -- (Optional) If found, displays details on only this key
- **return_certs** -- (Optional) Also return certificate PEM.

**Warning:** There are security implications for using return_cert to return decrypted certificates.

CLI Example:

```
salt '*' keystore.list /usr/lib/jvm/java-8/jre/lib/security/cacerts changeit
salt '*' keystore.list /usr/lib/jvm/java-8/jre/lib/security/cacerts changeit
salt '*' keystore.remove aliasname /tmp/test.store changeit
```

### salt.modules.keystore.remove(name, keystore, passphrase)

Removes a certificate from an existing keystore. Returns True if remove was successful, otherwise False

**Parameters**

- **name** -- alias for the certificate
- **keystore** -- The path to the keystore file to query
- **passphrase** -- The passphrase to use to decode the keystore

CLI Example:

```
salt '*' keystore.remove aliasname /tmp/test.store changeit
```

### 23.9.58 salt.modules.libcloud_dns

**Apache Libcloud DNS Management**

Connection module for Apache Libcloud DNS management

New in version 2016.11.0.

**configuration**

This module uses a configuration profile for one or multiple DNS providers

```
libcloud_dns:
  profile_test1:
    driver: cloudflare
    key: 12345
    secret: mysecret
  profile_test2:
    driver: godaddy
    key: 12345
    secret: mysecret
    shopper_id: 12345
```

**depends** apache-libcloud

```
salt.modules.libcloud_dns.create_record(name, zone_id, type, data, profile)
```

Create a new record.
Parameters

- **name** (str) -- Record name without the domain name (e.g. www). Note: If you want to create a record for a base domain name, you should specify empty string ("") for this argument.
- **zone_id** (str) -- Zone where the requested record is created.
- **type** (str) -- DNS record type (A, AAAA, ...).
- **data** (str) -- Data for the record (depends on the record type).
- **profile** (str) -- The profile key

CLI Example:
```
salt myminion libcloud_dns.create_record www google.com A 12.32.12.2 profile1
```

salt.modules.libcloud_dns.create_zone(domain, profile, type='master', ttl=None)
Create a new zone.

Parameters

- **domain** (str) -- Zone domain name (e.g. example.com)
- **profile** (str) -- The profile key
- **type** (str) -- Zone type (master / slave).
- **ttl** (int) -- TTL for new records. (optional)

CLI Example:
```
salt myminion libcloud_dns.create_zone google.com profile1
```

salt.modules.libcloud_dns.delete_record(zone_id, record_id, profile)
Delete a record.

Parameters

- **zone_id** (str) -- Zone to delete.
- **record_id** (str) -- Record to delete.
- **profile** (str) -- The profile key

Return type bool

CLI Example:
```
salt myminion libcloud_dns.delete_record google.com www profile1
```

salt.modules.libcloud_dns.delete_zone(zone_id, profile)
Delete a zone.

Parameters

- **zone_id** (str) -- Zone to delete.
- **profile** (str) -- The profile key

Return type bool

CLI Example:
salt myminion libcloud_dns.delete_zone google.com profile1

salt.modules.libcloud_dns.extra(method, profile, **libcloud_kwargs)
    Call an extended method on the driver

    Parameters
    • method (str) -- Driver's method name
    • profile (str) -- The profile key
    • libcloud_kwargs (dict) -- Extra arguments for the driver's delete_container method

    CLI Example:
salt myminion libcloud_dns.extra ex_get_permissions google container_name=my_
    → container object_name=me.jpg --out=yaml

salt.modules.libcloud_dns.get_bind_data(zone_id, profile)
    Export Zone to the BIND compatible format.

    Parameters
    • zone_id (str) -- Zone to export.
    • profile (str) -- The profile key

    Returns  Zone data in BIND compatible format.

    Return type  str

    CLI Example:
salt myminion libcloud_dns.get_bind_data google.com profile1

salt.modules.libcloud_dns.get_record(zone_id, record_id, profile)
    Get record information for the given zone_id on the given profile

    Parameters
    • zone_id (str) -- Zone to export.
    • record_id (str) -- Record to delete.
    • profile (str) -- The profile key

    CLI Example:
salt myminion libcloud_dns.get_record google.com www profile1

salt.modules.libcloud_dns.get_zone(zone_id, profile)
    Get zone information for the given zone_id on the given profile

    Parameters
    • zone_id (str) -- Zone to export.
    • profile (str) -- The profile key

    CLI Example:
salt myminion libcloud_dns.get_zone google.com profile1

salt.modules.libcloud_dns.list_record_types(profile)
    List available record types for the given profile, e.g. A, AAAA
Parameters **profile** *(str)* -- The profile key

CLI Example:
```
salt myminion libcloud_dns.list_record_types profile1
```

salt.modules.libcloud_dns.list_records *(zone_id, profile, type=None)*
List records for the given zone_id on the given profile

Parameters

- **zone_id** *(str)* -- Zone to export.
- **profile** *(str)* -- The profile key
- **type** *(str)* -- The record type, e.g. A, NS

CLI Example:
```
salt myminion libcloud_dns.list_records google.com profile1
```

salt.modules.libcloud_dns.list_zones *(profile)*
List zones for the given profile

Parameters **profile** *(str)* -- The profile key

CLI Example:
```
salt myminion libcloud_dns.list_zones profile1
```

salt.modules.libcloud_dns.update_zone *(zone_id, domain, profile, type='master', ttl=None)*
Update an existing zone.

Parameters

- **zone_id** *(str)* -- Zone ID to update.
- **domain** *(str)* -- Zone domain name (e.g. example.com)
- **profile** *(str)* -- The profile key
- **type** *(str)* -- Zone type (master / slave).
- **ttl** *(int)* -- TTL for new records. (optional)

CLI Example:
```
salt myminion libcloud_dns.update_zone google.com google.com profile1 type=slave
```

### 23.9.59 salt.modules.linux_service

If Salt's OS detection does not identify a different virtual service module, the minion will fall back to using this basic module, which simply wraps sysvinit scripts.

salt.modules.linux_service.available *(name)*
Returns True if the specified service is available, otherwise returns False.

CLI Example:
```
salt '*' service.available ssdh
```
salt.modules.linux_service.get_all()
    Return a list of all available services
    
    CLI Example:
    
    ```
    salt '*' service.get_all
    ```

salt.modules.linux_service.missing(name)
    The inverse of service.available. Returns True if the specified service is not available, otherwise returns False.
    
    CLI Example:
    
    ```
    salt '*' service.missing sshd
    ```

salt.modules.linux_service.reload_(name)
    Refreshes config files by calling service reload. Does not perform a full restart.
    
    CLI Example:
    
    ```
    salt '*' service.reload <service name>
    ```

salt.modules.linux_service.restart(name)
    Restart the specified service
    
    CLI Example:
    
    ```
    salt '*' service.restart <service name>
    ```

salt.modules.linux_service.run(name, action)
    Run the specified service with an action.
    
    
    name   Service name.
    action Action name (like start, stop, reload, restart).
    
    CLI Example:
    
    ```
    salt '*' service.run apache2 reload
    salt '*' service.run postgresql initdb
    ```

salt.modules.linux_service.start(name)
    Start the specified service
    
    CLI Example:
    
    ```
    salt '*' service.start <service name>
    ```

salt.modules.linux_service.status(name, sig=None)
    Return the status for a service. If the name contains globbing, a dict mapping service name to PID or empty string is returned.
    
    Changed in version 2018.3.0: The service name can now be a glob (e.g. salt*)
    
    Parameters
    
    - name (str) -- The name of the service to check
    - sig (str) -- Signature to use to find the service via ps
Returns  PID if running, empty otherwise
dict: Maps service name to PID if running, empty string otherwise

Return type  string

CLI Example:

```
salt '*' service.status <service name> [service signature]
```

```python
salt.modules.linux_service.stop(name)
```
Stop the specified service

CLI Example:

```
salt '*' service.stop <service name>
```

### 23.9.60 salt.modules.logmod

**On-demand logging**

New in version 2017.7.0.

The sole purpose of this module is logging messages in the (proxy) minion. It comes very handy when debugging complex Jinja templates, for example:

```jinja
{% for var in range(10) %}
    {% do salt.log.info(var) -%}
{% endfor %}
```

CLI Example:

```
salt '*' log.error "Please don't do that, this module is not for CLI use!"
```

```python
salt.modules.logmod.critical(message)
```
Log message at level CRITICAL.

```python
salt.modules.logmod.debug(message)
```
Log message at level DEBUG.

```python
salt.modules.logmod.error(message)
```
Log message at level ERROR.

```python
salt.modules.logmod.exception(message)
```
Log message at level EXCEPTION.

```python
salt.modules.logmod.info(message)
```
Log message at level INFO.

```python
salt.modules.logmod.warning(message)
```
Log message at level WARNING.
23.9.61 `salt.modules.mod_random`

Provides access to randomness generators.

New in version 2014.7.0.

```python
salt.modules.mod_random.get_str(length=20)
```

New in version 2014.7.0.

Returns a random string of the specified length.

- **length**: [20] Any valid number of bytes.

```bash
salt '*' random.get_str 128
```

```python
salt.modules.mod_random.hash(value, algorithm='sha512')
```

New in version 2014.7.0.

Encodes a value with the specified encoder.

- **value**: The value to be hashed.
- **algorithm**: [sha512] The algorithm to use. May be any valid algorithm supported by hashlib.

```bash
salt '*' random.hash 'I am a string' md5
```

```python
salt.modules.mod_random.rand_int(start=1, end=10, seed=None)
```

Returns a random integer number between the start and end number.

New in version 2015.5.3.

- **start**: [1] Any valid integer number.
- **end**: [10] Any valid integer number.
- **seed**: Optional hashable object

Changed in version 2019.2.0: Added seed argument. Will return the same result when run with the same seed.

```bash
salt '*' random.rand_int 1 10
```

```python
salt.modules.mod_random.seed(range=10, hash=None)
```

Returns a random number within a range. Optional hash argument can be any hashable object. If hash is omitted or None, the id of the minion is used.

New in version 2015.8.0.

- **hash**: None Any hashable object.
- **range**: 10 Any valid integer number.

```bash
salt '*' random.seed 10 hash=None
```

```python
salt.modules.mod_random.shadow_hash(crypt_salt=None, password=None, algorithm='sha512')
```

Generates a salted hash suitable for /etc/shadow.
crypt_salt [None] Salt to be used in the generation of the hash. If one is not provided, a random salt will be generated.

password [None] Value to be salted and hashed. If one is not provided, a random password will be generated.

algorithm [sha512] Hash algorithm to use.

CLI Example:
```
salt '*' random.shadow_hash 'MySalt' 'MyPasswd' md5
```

salt.modules.mod_random.str_encode(value, encoder='base64')
New in version 2014.7.0.

value The value to be encoded.

encoder [base64] The encoder to use on the subsequent string.

CLI Example:
```
salt '*' random.str_encode 'I am a new string' base64
```

23.9.62 salt.modules.modjk


Below is an example of the configuration needed for this module. This configuration data can be placed either in grains or pillar.

If using grains, this can be accomplished statically or via a grain module.

If using pillar, the yaml configuration can be placed directly into a pillar SLS file, making this both the easier and more dynamic method of configuring this module.

```
modjk:
  default:
    url: http://localhost/jkstatus
    user: modjk
    pass: secret
    realm: authentication realm for digest passwords
    timeout: 5
  otherVhost:
    url: http://otherVhost/jkstatus
    user: modjk
    pass: secret2
    realm: authentication realm2 for digest passwords
    timeout: 600
```

salt.modules.modjk.bulk_activate(workers, lbn, profile='default')
Activate all the given workers in the specific load balancer

CLI Examples:
```
salt '*' modjk.bulk_activate node1,node2,node3 loadbalancer1
salt '*' modjk.bulk_activate node1,node2,node3 loadbalancer1 other-profile
salt '*' modjk.bulk_activate ['node1','node2','node3'] loadbalancer1
salt '*' modjk.bulk_activate ['node1','node2','node3'] loadbalancer1 other-profile
```
**salt.modules.modjk.bulk_disable** *(workers, lbn, profile='default')*
Disable all the given workers in the specific load balancer

CLI Examples:
```
salt '*' modjk.bulk_disable node1,node2,node3 loadbalancer1
salt '*' modjk.bulk_disable node1,node2,node3 loadbalancer1 other-profile
salt '*' modjk.bulk_disable ["node1","node2","node3"] loadbalancer1
salt '*' modjk.bulk_disable ["node1","node2","node3"] loadbalancer1 other-profile
```

**salt.modules.modjk.bulk_recover** *(workers, lbn, profile='default')*
Recover all the given workers in the specific load balancer

CLI Examples:
```
salt '*' modjk.bulk_recover node1,node2,node3 loadbalancer1
salt '*' modjk.bulk_recover node1,node2,node3 loadbalancer1 other-profile
salt '*' modjk.bulk_recover ["node1","node2","node3"] loadbalancer1
salt '*' modjk.bulk_recover ["node1","node2","node3"] loadbalancer1 other-profile
```

**salt.modules.modjk.bulk_stop** *(workers, lbn, profile='default')*
Stop all the given workers in the specific load balancer

CLI Examples:
```
salt '*' modjk.bulk_stop node1,node2,node3 loadbalancer1
salt '*' modjk.bulk_stop node1,node2,node3 loadbalancer1 other-profile
salt '*' modjk.bulk_stop ["node1","node2","node3"] loadbalancer1
salt '*' modjk.bulk_stop ["node1","node2","node3"] loadbalancer1 other-profile
```

**salt.modules.modjk.dump_config** *(profile='default')*
Dump the original configuration that was loaded from disk

CLI Examples:
```
salt '*' modjk.dump_config
salt '*' modjk.dump_config other-profile
```

**salt.modules.modjk.get_running** *(profile='default')*
Get the current running config (not from disk)

CLI Examples:
```
salt '*' modjk.get_running
salt '*' modjk.get_running other-profile
```

**salt.modules.modjk.lb_edit** *(lbn, settings, profile='default')*
Edit the loadbalancer settings


CLI Examples:
```
salt '*' modjk.lb_edit loadbalancer1 "{"vlr": 1, "vlt": 60}"
salt '*' modjk.lb_edit loadbalancer1 "{"vlr": 1, "vlt": 60}" other-profile
```
Salt Documentation, Release 3002.5

salt.modules.modjk.list_configured_members(lbn, profile='default')
Return a list of member workers from the configuration files

CLI Examples:
```
salt '*' modjk.list_configured_members loadbalancer1
salt '*' modjk.list_configured_members loadbalancer1 other-profile
```

salt.modules.modjk.recover_all(lbn, profile='default')
Set the all the workers in lbn to recover and activate them if they are not

CLI Examples:
```
salt '*' modjk.recover_all loadbalancer1
salt '*' modjk.recover_all loadbalancer1 other-profile
```

salt.modules.modjk.reset_stats(lbn, profile='default')
Reset all runtime statistics for the load balancer

CLI Examples:
```
salt '*' modjk.reset_stats loadbalancer1
salt '*' modjk.reset_stats loadbalancer1 other-profile
```

salt.modules.modjk.version(profile='default')
Return the modjk version

CLI Examples:
```
salt '*' modjk.version
salt '*' modjk.version other-profile
```

salt.modules.modjk.worker_activate(worker, lbn, profile='default')
Set the worker to activate state in the lbn load balancer

CLI Examples:
```
salt '*' modjk.worker_activate node1 loadbalancer1
salt '*' modjk.worker_activate node1 loadbalancer1 other-profile
```

salt.modules.modjk.worker_disable(worker, lbn, profile='default')
Set the worker to disable state in the lbn load balancer

CLI Examples:
```
salt '*' modjk.worker_disable node1 loadbalancer1
salt '*' modjk.worker_disable node1 loadbalancer1 other-profile
```

salt.modules.modjk.worker_edit(worker, lbn, settings, profile='default')
Edit the worker settings


CLI Examples:
```
salt '*' modjk.worker_edit node1 loadbalancer1 "{"vwf": 500, 'vwd': 60}"
salt '*' modjk.worker_edit node1 loadbalancer1 "{"vwf": 500, 'vwd': 60}" other-profile
```
salt.modules.modjk.worker_recover(\texttt{worker, lbn, profile='default'})

Set the worker to recover this module will fail if it is in OK state

CLI Examples:

\begin{verbatim}
salt '*' modjk.worker_recover node1 loadbalancer1
salt '*' modjk.worker_recover node1 loadbalancer1 other-profile
\end{verbatim}

salt.modules.modjk.worker_status(\texttt{worker, profile='default'})

Return the state of the worker

CLI Examples:

\begin{verbatim}
salt '*' modjk.worker_status node1
salt '*' modjk.worker_status node1 other-profile
\end{verbatim}

salt.modules.modjk.worker_stop(\texttt{worker, lbn, profile='default'})

Set the worker to stopped state in the Lbn load balancer

CLI Examples:

\begin{verbatim}
salt '*' modjk.worker_activate node1 loadbalancer1
salt '*' modjk.worker_activate node1 loadbalancer1 other-profile
\end{verbatim}

salt.modules.modjk.workers(\texttt{profile='default'})

Return a list of member workers and their status

CLI Examples:

\begin{verbatim}
salt '*' modjk.workers
salt '*' modjk.workers other-profile
\end{verbatim}

23.9.63 salt.modules.nagios

Run nagios plugins/checks from salt and get the return as data.

salt.modules.nagios.list_plugins()

List all the nagios plugins

CLI Example:

\begin{verbatim}
salt '*' nagios.list_plugins
\end{verbatim}

salt.modules.nagios.recode(plugin, args='', key_name=None)

Run one nagios plugin and return retcode of the execution

salt.modules.nagios.recode_pillar(pillar_name)

Run one or more nagios plugins from pillar data and get the result of cmd.recode The pillar have to be in this format:

\begin{verbatim}
webserver:
   Ping_google:
      - check_icmp: 8.8.8.8
      - check_icmp: google.com
   Load:
      - check_load: -w 0.8 -c 1
   APT:
\end{verbatim}

(continues on next page)
webserver is the role to check, the next keys are the group and the items the check with the arguments if needed

You must to group different checks(one or more) and always it will return the highest value of all the checks

CLI Example:

```
salt '*' nagios.retcode webserver
```

```
salt.modules.nagios.run(plugin, args='')
```

Run nagios plugin and return all the data execution with cmd.run

CLI Example:

```
salt '*' nagios.run check_apt
salt '*' nagios.run check_icmp '8.8.8.8'
```

```
salt.modules.nagios.run_all(plugin, args='')
```

Run nagios plugin and return all the data execution with cmd.run_all

```
salt.modules.nagios.run_all_pillar(pillar_name)
```

Run one or more nagios plugins from pillar data and get the result of cmd.run_all The pillar have to be in this format:

```
webserver:
  Ping_google:
    - check_icmp: 8.8.8.8
    - check_icmp: google.com
  Load:
    - check_load: -w 0.8 -c 1
  APT:
    - check_apt
```

webserver is the role to check, the next keys are the group and the items the check with the arguments if needed

You have to group different checks in a group

CLI Example:

```
salt '*' nagios.run webserver
```

```
salt.modules.nagios.run_pillar(pillar_name)
```

Run one or more nagios plugins from pillar data and get the result of cmd.run The pillar have to be in this format:

```
webserver:
  Ping_google:
    - check_icmp: 8.8.8.8
    - check_icmp: google.com
  Load:
    - check_load: -w 0.8 -c 1
```

(continues on next page)
webserver is the role to check, the next keys are the group and the items the check with the arguments if needed

You have to group different checks in a group

CLI Example:

```bash
salt '*' nagios.run webserver
```

## 23.9.64 salt.modules.namecheap_domains

### Namecheap Domain Management

New in version 2017.7.0.

#### Prerequisites

This module uses the `requests` Python module to communicate to the namecheap API.

#### Configuration

The Namecheap username, API key and URL should be set in the minion configuration file, or in the Pillar data.

```yaml
namecheap.name: companyname
namecheap.key: a1b2c3d4e5f67a8b9c0d1e2f3
namecheap.client_ip: 162.155.30.172
#Real url
namecheap.url: https://api.namecheap.com/xml.response
#Sandbox url
#namecheap.url: https://api.sandbox.namecheap.com/xml.response
```

- **salt.modules.namecheap_domains.check**( `domains_to_check` )
  
  Checks the availability of domains

  - **domains_to_check** array of strings List of domains to check

  Returns a dictionary mapping the each domain name to a boolean denoting whether or not it is available.

  CLI Example:

  ```bash
  salt 'my-minion' namecheap_domains.check domain-to-check
  ```

- **salt.modules.namecheap_domains.create**( `domain_name`, `years`, **kwargs** )

  Try to register the specified domain name

  - **domain_name** The domain name to be registered

  - **years** Number of years to register

  Returns the following information:

  - Whether or not the domain was renewed successfully
- Whether or not WhoisGuard is enabled
- Whether or not registration is instant
- The amount charged for registration
- The domain ID
- The order ID
- The transaction ID

CLI Example:

```bash
salt 'my-minion' namecheap_domains.create my-domain-name 2
```

```python
salt.modules.namecheap_domains.get_info(domain_name)
```

Returns information about the requested domain.

doctor namecheap_domains.get_info

domain_name: string Domain name to get information about

CLI Example:

```bash
salt 'my-minion' namecheap_domains.get_info my-domain-name
```

```python
salt.modules.namecheap_domains.get_list(list_type=None, search_term=None, page=None, page_size=None, sort_by=None)
```

Returns a list of domains for the particular user as a list of objects offset by page length of page_size.

- list_type: [ALL] One of ALL, EXPIRING, EXPIRED
- search_term: Keyword to look for on the domain list
- page: [1] Number of result page to return
- page_size: [20] Number of domains to be listed per page (minimum: 10, maximum: 100)
- sort_by: One of NAME, NAME_DESC, EXPIREDATE, EXPIREDATE_DESC, CREATEDATE, or CREATEDATE_DESC

CLI Example:

```bash
salt 'my-minion' namecheap_domains.get_list
```

```python
salt.modules.namecheap_domains.get_tld_list()
```

Returns a list of TLDs as objects

CLI Example:

```bash
salt 'my-minion' namecheap_domains.get_tld_list
```

```python
salt.modules.namecheap_domains/reactivate(domain_name)
```

Try to reactivate the expired domain name

Returns the following information:

- Whether or not the domain was reactivated successfully
- The amount charged for reactivation
- The order ID
- The transaction ID
**CLI Example:**
```
salt 'my-minion' namecheap_domains.reactivate my-domain-name
```

`salt.modules.namecheap_domains.renew(domain_name, years, promotion_code=None)`
Try to renew the specified expiring domain name for a specified number of years

- **domain_name** The domain name to be renewed
- **years** Number of years to renew

Returns the following information:
- Whether or not the domain was renewed successfully
- The domain ID
- The order ID
- The transaction ID
- The amount charged for renewal

**CLI Example:**
```
salt 'my-minion' namecheap_domains.renew my-domain-name 5
```

---

**23.9.65 salt.modules.namecheap_domains_dns**

Namecheap DNS Management

New in version 2017.7.0.

**Prerequisites**

This module uses the requests Python module to communicate to the namecheap API.

**Configuration**

The Namecheap username, API key and URL should be set in the minion configuration file, or in the Pillar data.

```
namecheap.name: companyname
namecheap.key: a1b2c3d4e5f67a8b9c0d1e2f3
namecheap.client_ip: 162.155.30.172
# Real url
namecheap.url: https://api.namecheap.com/xml.response
# Sandbox url
# namecheap.url: https://api.sandbox.namecheap.xml.response
```

`salt.modules.namecheap_domains_dns.get_hosts(sld, tld)`
Retrieves DNS host record settings for the requested domain.

- returns a dictionary of information about the requested domain
- **sld** SLD of the domain name
- **tld** TLD of the domain name

**CLI Example:**
```
salt 'my-minion' namecheap_domains_dns.get_list sld tld

salt.modules.namecheap_domains_dns.get_list(sld, tld)
Gets a list of DNS servers associated with the requested domain.
returns a dictionary of information about requested domain
sld  SLD of the domain name
  tld  TLD of the domain name
  CLI Example:
salt 'my-minion' namecheap_domains_dns.get_list sld tld

salt.modules.namecheap_domains_dns.set_custom(sld, tld, nameservers)
Sets domain to use custom DNS servers.
returns True if the custom nameservers were set successfully
sld  SLD of the domain name
  tld  TLD of the domain name
  nameservers  array of strings List of nameservers to be associated with this domain
  CLI Example:
salt 'my-minion' namecheap_domains_dns.set_custom sld tld nameserver

salt.modules.namecheap_domains_dns.set_default(sld, tld)
Sets domain to use namecheap default DNS servers. Required for free services like Host record management,
   URL forwarding, email forwarding, dynamic DNS and other value added services.
  sld  SLD of the domain name
  tld  TLD of the domain name
  Returns True if the domain was successfully pointed at the default DNS servers.
  CLI Example:
salt 'my-minion' namecheap_domains_dns.set_default sld tld

salt.modules.namecheap_domains_dns.set_hosts(sld, tld, hosts)
Sets DNS host records settings for the requested domain.
returns True if the host records were set successfully
sld  SLD of the domain name
  tld  TLD of the domain name
  hosts  Must be passed as a list of Python dictionaries, with each dictionary containing the following keys:
     • hostname
     • recordtype - One of A, AAAA, CNAME, MX, MXE, TXT, URL, URL301, or FRAME
     • address - URL or IP address
     • ttl - An integer between 60 and 60000 (default: 1800)
  Additionally, the mxpref key can be present, but must be accompanied by an emailtype key.
  CLI Example:
23.9.66 salt.modules.namecheap_domains_ns

Namecheap Nameserver Management
New in version 2017.7.0.

Prerequisites

This module uses the requests Python module to communicate to the namecheap API.

Configuration

The Namecheap username, API key and URL should be set in the minion configuration file, or in the Pillar data.

```
namecheap.name: companyname
namecheap.key: a1b2c3d4e5f67a8b9c0d1e2f3
namecheap.client_ip: 162.155.30.172
#Real url
namecheap.url: https://api.namecheap.com/xml.response
#Sandbox url
#namecheap.url: https://api.sandbox.namecheap.xml.response
```

```
salt.modules.namecheap_domains_ns.create(sld, tld, nameserver, ip)
    Creates a new nameserver. Returns True if the nameserver was created successfully.
    sld    SLD of the domain name
    tld    TLD of the domain name
    nameserver    Nameserver to create
    ip    Nameserver IP address
    CLI Example:
    salt '*' namecheap_domains_ns.create sld tld nameserver ip
```

```
salt.modules.namecheap_domains_ns.delete(sld, tld, nameserver)
    Deletes a nameserver. Returns True if the nameserver was deleted successfully
    sld    SLD of the domain name
    tld    TLD of the domain name
    nameserver    Nameserver to delete
    CLI Example:
    salt '*' namecheap_domains_ns.delete sld tld nameserver
```

```
salt.modules.namecheap_domains_ns.get_info(sld, tld, nameserver)
    Retrieves information about a registered nameserver. Returns the following information:
    - IP Address set for the nameserver
    - Domain name which was queried
```
• A list of nameservers and their statuses

sld  SLD of the domain name

tld  TLD of the domain name

nameserver  Nameserver to retrieve

CLI Example:

```
salt '*' namecheap_domains_ns.get_info sld tld nameserver
```

salt.modules.namecheap_domains_ns.update(sld, tld, nameserver, old_ip, new_ip)

Deletes a nameserver. Returns True if the nameserver was updated successfully.

- sld  SLD of the domain name
- tld  TLD of the domain name
- nameserver  Nameserver to create
- old_ip  Current ip address
- new_ip  New ip address

CLI Example:

```
salt '*' namecheap_domains_ns.update sld tld nameserver old_ip new_ip
```

### 23.9.67 salt.modules.namecheap_users

Namecheap User Management

New in version 2017.7.0.

**Prerequisites**

This module uses the requests Python module to communicate to the namecheap API.

**Configuration**

The Namecheap username, API key and URL should be set in the minion configuration file, or in the Pillar data.

```
namecheap.name: companyname
namecheap.key: a1b2c3d4e5f67a8b9c0d1e2f3
namecheap.client_ip: 162.155.30.172
#Real url
namecheap.url: https://api.namecheap.com/xml.response
#Sandbox url
#namecheap.url: https://api.sandbox.namecheap.xml.response
```

salt.modules.namecheap_users.check_balances(minimum=100)

Checks if the provided minimum value is present in the user’s account.

- minimum  [100] The value to check

Returns a boolean. Returns False if the user’s account balance is less than the provided minimum or True if greater than the minimum.
CLI Example:

```
salt 'my-minion' namecheap_users.check_balances
salt 'my-minion' namecheap_users.check_balances minimum=150
```

Salt modules.namecheap_users.get_balances()

Gets information about fund in the user’s account. This method returns the following information: Available Balance, Account Balance, Earned Amount, Withdrawable Amount and Funds Required for AutoRenew.

Note: If a domain setup with automatic renewal is expiring within the next 90 days, the FundsRequired-ForAutoRenew attribute shows the amount needed in your Namecheap account to complete auto renewal.

CLI Example:

```
salt 'my-minion' namecheap_users.get_balances
```

23.9.68 salt.modules.netaddress

Module for getting information about network addresses.

New in version 2016.3.0.

depends netaddr

salt.modules.netaddress.cidr_broadcast(cidr)

Get the broadcast address associated with a CIDR address.

CLI Example:

```
salt myminion netaddress.cidr_netmask 192.168.0.0/20
```

salt.modules.netaddress.cidr_netmask(cidr)

Get the netmask address associated with a CIDR address.

CLI Example:

```
salt myminion netaddress.cidr_netmask 192.168.0.0/20
```

salt.modules.netaddress.list_cidr_ips(cidr)

Get a list of IP addresses from a CIDR.

CLI Example:

```
salt myminion netaddress.list_cidr_ips 192.168.0.0/20
```

salt.modules.netaddress.list_cidr_ips_ipv6(cidr)

Get a list of IPv6 addresses from a CIDR.

CLI Example:

```
salt myminion netaddress.list_cidr_ips_ipv6 192.168.0.0/20
```
23.9.69 salt.modules.netbox

NetBox

Module to query NetBox

   codeauthor  Zach Moody <zmoody@do.co>
   maturity    new
   depends     pynetbox

The following config should be in the minion config file. In order to work with secrets you should provide a token and path to your private key file:

```
netbox:
  url: <NETBOX_URL>
  token: <NETBOX_USERNAME_API_TOKEN (OPTIONAL)>
  keyfile: </PATH/TO/NETBOX/KEY (OPTIONAL)>
```

New in version 2018.3.0.

salt.modules.netbox.create_circuit(name, provider_id, circuit_type, description=None)

New in version 2019.2.0.

Create a new Netbox circuit

   name  Name of the circuit
   provider_id  The netbox id of the circuit provider
   circuit_type  The name of the circuit type
   asn  The ASN of the circuit provider
   description  The description of the circuit

CLI Example:

```
salt myminion netbox.create_circuit NEW_CIRCUIT_01 Telia Transit 1299 "New Telia\→circuit"
```

salt.modules.netbox.create_circuit_provider(name, asn=None)

New in version 2019.2.0.

Create a new Netbox circuit provider

   name  The name of the circuit provider
   asn  The ASN of the circuit provider

CLI Example:

```
salt myminion netbox.create_circuit_provider Telia 1299
```

salt.modules.netbox.create_circuit_termination(circuit, interface, device, speed, xconnect_id=None, term_side='A')

New in version 2019.2.0.

Terminate a circuit on an interface

   circuit  The name of the circuit
   interface  The name of the interface to terminate on
device  The name of the device the interface belongs to
speed  The speed of the circuit, in Kbps
xconnect_id  The cross-connect identifier
term_side  The side of the circuit termination

CLI Example:

```
salt myminion netbox.create_circuit_termination NEW_CIRCUIT_01 xe-0/0/1 myminion
--10000 xconnect_id=XCON01
```

salt.modules.netbox.create_circuit_type(name)

New in version 2019.2.0.
Create a new Netbox circuit type.

name  The name of the circuit type

CLI Example:

```
salt myminion netbox.create_circuit_type Transit
```

salt.modules.netbox.create_device(name, role, model, manufacturer, site)

New in version 2019.2.0.
Create a new device with a name, role, model, manufacturer and site. All these components need to be already
in Netbox.

name  The name of the device, e.g., edge_router
role  String of device role, e.g., router
model  String of device model, e.g., MX480
manufacturer  String of device manufacturer, e.g., Juniper
site  String of device site, e.g., BRU

CLI Example:

```
salt myminion netbox.create_device edge_router router MX480 Juniper BRU
```

salt.modules.netbox.create_device_role(role, color)

New in version 2019.2.0.
Create a device role

role  String of device role, e.g., router

CLI Example:

```
salt myminion netbox.create_device_role router
```

salt.modules.netbox.create_device_type(model, manufacturer)

New in version 2019.2.0.
Create a device type. If the manufacturer doesn't exist, create a new manufacturer.

model  String of device model, e.g., MX480
manufacturer  String of device manufacturer, e.g., Juniper

CLI Example:
**salt myminion netbox.create_device_type MX480 Juniper**

```python
salt.modules.netbox.create_interface(device_name, interface_name, mac_address=None, description=None, enabled=None, lag=None, lag_parent=None, form_factor=None)
```

New in version 2019.2.0.

Attach an interface to a device. If not all arguments are provided, they will default to Netbox defaults.

- **device_name** The name of the device, e.g., `edge_router`
- **interface_name** The name of the interface, e.g., `TenGigE0/0/0/0`
- **mac_address** String of mac address, e.g., `50:87:89:73:92:C8`
- **description** String of interface description, e.g., `NTT`
- **enabled** String of boolean interface status, e.g., `True`
- **lag** Boolean of interface lag status, e.g., `True`
- **lag_parent** String of interface lag parent name, e.g., `ae13`
- **form_factor** Integer of form factor id, obtained through _choices API endpoint, e.g., `200`

CLI Example:
```
salt myminion netbox.create_interface edge_router ae13 description="Core uplink"
```

**salt.modules.netbox.create_interface_connection(interface_a, interface_b)**

New in version 2019.2.0.

Create an interface connection between 2 interfaces

- **interface_a** Interface id for Side A
- **interface_b** Interface id for Side B

CLI Example:
```
salt myminion netbox.create_interface_connection 123 456
```

**salt.modules.netbox.create_inventory_item(device_name, item_name, manufacturer_name=None, serial='', part_id='', description='')**

New in version 2019.2.0.

Add an inventory item to an existing device.

- **device_name** The name of the device, e.g., `edge_router`
- **item_name** String of inventory item name, e.g., `Transceiver`
- **manufacturer_name** String of inventory item manufacturer, e.g., `Fiberstore`
- **serial** String of inventory item serial, e.g., `FS1238931`
- **part_id** String of inventory item part id, e.g., `740-01234`
- **description** String of inventory item description, e.g., `SFP+-10G-LR`

CLI Example:
```
salt myminion netbox.create_inventory_item edge_router Transceiver part_id=740-01234
```
salt.modules.netbox.create_ipaddress(ip_address, family, device=None, interface=None)

New in version 2019.2.0.

Add an IP address, and optionally attach it to an interface.

ip_address The IP address and CIDR, e.g., 192.168.1.1/24
family Integer of IP family, e.g., 4
device The name of the device to attach IP to, e.g., edge_router
interface The name of the interface to attach IP to, e.g., ae13

CLI Example:

```bash
salt myminion netbox.create_ipaddress 192.168.1.1/24 4 device=edge_router
←interface=ae13
```

salt.modules.netbox.create_manufacturer(name)

New in version 2019.2.0.

Create a device manufacturer.

name The name of the manufacturer, e.g., Juniper

CLI Example:

```bash
salt myminion netbox.create_manufacturer Juniper
```

salt.modules.netbox.create_platform(platform)

New in version 2019.2.0.

Create a new device platform

platform String of device platform, e.g., junos

CLI Example:

```bash
salt myminion netbox.create_platform junos
```

salt.modules.netbox.create_site(site)

New in version 2019.2.0.

Create a new device site

site String of device site, e.g., BRU

CLI Example:

```bash
salt myminion netbox.create_site BRU
```

salt.modules.netbox.delete_interface(device_name, interface_name)

New in version 2019.2.0.

Delete an interface from a device.

device_name The name of the device, e.g., edge_router.
interface_name The name of the interface, e.g., ae13

CLI Example:

```bash
salt myminion netbox.delete_interface edge_router ae13
```
salt.modules.netbox.delete_inventory_item(item_id)
New in version 2019.2.0.
Remove an item from a devices inventory. Identified by the netbox id
item_id Integer of item to be deleted
CLI Example:
```
salt myminion netbox.delete_inventory_item 1354
```

salt.modules.netbox.delete_ipaddress(ipaddr_id)
New in version 2019.2.0.
Delete an IP address. IP addresses in Netbox are a combination of address and the interface it is assigned to.
id The Netbox id for the IP address.
CLI Example:
```
salt myminion netbox.delete_ipaddress 9002
```

salt.modules.netbox.filter_(app, endpoint, **kwargs)
Get a list of items from NetBox.
app String of netbox app, e.g., dcim, circuits, ipam
endpoint String of app endpoint, e.g., sites, regions, devices
kwargs Optional arguments that can be used to filter. All filter keywords are available in Netbox, which can be found by surfing to the corresponding API endpoint, and clicking Filters. e.g., role=router
Returns a list of dictionaries
```
salt myminion netbox.filter dcim devices status=1 role=router
```

salt.modules.netbox.get_(app, endpoint, id=None, **kwargs)
Get a single item from NetBox.
app String of netbox app, e.g., dcim, circuits, ipam
endpoint String of app endpoint, e.g., sites, regions, devices
Returns a single dictionary
To get an item based on ID.
```
salt myminion netbox.get dcim devices id=123
```
Or using named arguments that correspond with accepted filters on the NetBox endpoint.
```
salt myminion netbox.get dcim devices name=my-router
```

salt.modules.netbox.get_circuit_provider(name, asn=None)
New in version 2019.2.0.
Get a circuit provider with a given name and optional ASN.
name The name of the circuit provider
asn The ASN of the circuit provider
CLI Example:
```
salt myminion netbox.get_circuit_provider Telia 1299
```

```
salt.modules.netbox.get_interfaces
    (device_name=None, **kwargs)

New in version 2019.2.0.

Returns interfaces for a specific device using arbitrary netbox filters

device_name  The name of the device, e.g., edge_router

kwargs  Optional arguments to be used for filtering

CLI Example:
```
salt myminion netbox.get_interfaces edge_router name="et-0/0/5"
```

```
salt.modules.netbox.get_ipaddresses
    (device_name=None, **kwargs)

New in version 2019.2.0.

Filters for an IP address using specified filters

device_name  The name of the device to check for the IP address

kwargs  Optional arguments that can be used to filter, e.g., family=4

CLI Example:
```
salt myminion netbox.get_ipaddresses device_name family=4
```

```
salt.modules.netbox.make_interface_child
    (device_name, interface_name, parent_name)

New in version 2019.2.0.

Set an interface as part of a LAG.

device_name  The name of the device, e.g., edge_router.

interface_name  The name of the interface to be attached to LAG, e.g., xe-1/0/2.

parent_name  The name of the LAG interface, e.g., ae13.

CLI Example:
```
salt myminion netbox.make_interface_child xe-1/0/2 ae13
```

```
salt.modules.netbox.make_interface_lag
    (device_name, interface_name)

New in version 2019.2.0.

Update an interface to be a LAG.

device_name  The name of the device, e.g., edge_router.

interface_name  The name of the interface, e.g., ae13.

CLI Example:
```
salt myminion netbox.make_interface_lag edge_router ae13
```

```
salt.modules.netbox.openconfig_interfaces
    (device_name=None)

New in version 2019.2.0.

Return a dictionary structured as standardised in the openconfig-interfaces YANG model, containing physical and configuration data available in Netbox, e.g., IP addresses, MTU, enabled / disabled, etc.

device_name: None  The name of the device to query the interface data for. If not provided, will use the Minion ID.
```
CLI Example:

```
salt '*' netbox.openconfig_interfaces
salt '!' netbox.openconfig_interfaces device_name=cr1.thn.lon
```

```
salt.modules.netbox.openconfig_lacp(device_name=None)
```

New in version 2019.2.0.

Return a dictionary structured as standardised in the openconfig-lacp YANG model, with configuration data for Link Aggregation Control Protocol (LACP) for aggregate interfaces.

**Note:** The `interval` and `lacp_mode` keys have the values set as SLOW and ACTIVE respectively, as this data is not currently available in Netbox, therefore defaulting to the values defined in the standard. See `interval` and `lacp-mode` for further details.

```
device_name: None  The name of the device to query the LACP information for. If not provided, will use the Minion ID.
```

CLI Example:

```
salt '!' netbox.openconfig_lacp
salt '!' netbox.openconfig_lacp device_name=cr1.thn.lon
```

```
salt.modules.netbox.slugify(value)
```

' Slugify given value. Credit to Djangoproject https://docs.djangoproject.com/en/2.0/_modules/django/utils/text/#slugify

```
salt.modules.netbox.update_device(name, **kwargs)
```

New in version 2019.2.0.

Add attributes to an existing device, identified by name.

```
name The name of the device, e.g., edge_router
```

```
kwargs Arguments to change in device, e.g., serial=JN2932930
```

CLI Example:

```
salt myminion netbox.update_device edge_router serial=JN2932920
```

```
salt.modules.netbox.update_interface(device_name, interface_name, **kwargs)
```

New in version 2019.2.0.

Update an existing interface with new attributes.

```
device_name The name of the device, e.g., edge_router
```

```
interface_name The name of the interface, e.g., ae13
```

```
kwargs Arguments to change in interface, e.g., mac_address=50:87:69:53:32:D0
```

CLI Example:

```
salt myminion netbox.update_interface edge_router ae13 mac_address=50:87:69:53:32:D0
```
23.9.70 salt.modules.netbsdservice

The service module for NetBSD

Important: If you feel that Salt should be using this module to manage services on a minion, and it is using a different module (or gives an error similar to 'service.start' is not available), see here.

salt.modules.netbsdservice.available(name)
Returns True if the specified service is available, otherwise returns False.

CLI Example:
salt '*' service.available sshd

salt.modules.netbsdservice.disable(name, **kwargs)
Disable the named service to start at boot

CLI Example:
salt '*' service.disable <service name>

salt.modules.netbsdservice.disabled(name)
Return True if the named service is enabled, false otherwise

CLI Example:
salt '*' service.disabled <service name>

salt.modules.netbsdservice.enable(name, **kwargs)
Enable the named service to start at boot

CLI Example:
salt '*' service.enable <service name>

salt.modules.netbsdservice.enabled(name, **kwargs)
Return True if the named service is enabled, false otherwise

CLI Example:
salt '*' service.enabled <service name>

salt.modules.netbsdservice.force_reload(name)
Force-reload the named service

CLI Example:
salt '*' service.force_reload <service name>

salt.modules.netbsdservice.get_all()
Return all available boot services

CLI Example:
salt '*' service.get_all

salt.modules.netbsdservice.get_disabled()
Return a set of services that are installed but disabled
Salt Documentation, Release 3002.5

CLI Example:

```python
salt '*' service.get_disabled
```

**salt.modules.netbsdservice.get_enabled()**

Return a list of service that are enabled on boot

CLI Example:

```python
salt '*' service.get_enabled
```

**salt.modules.netbsdservice.missing(name)**

The inverse of service.available. Returns True if the specified service is not available, otherwise returns False.

CLI Example:

```python
salt '*' service.missing sshd
```

**salt.modules.netbsdservice.reload_(name)**

Reload the named service

CLI Example:

```python
salt '*' service.reload <service name>
```

**salt.modules.netbsdservice.restart(name)**

Restart the named service

CLI Example:

```python
salt '*' service.restart <service name>
```

**salt.modules.netbsdservice.start(name)**

Start the specified service

CLI Example:

```python
salt '*' service.start <service name>
```

**salt.modules.netbsdservice.status(name, sig=None)**

Return the status for a service. If the name contains globbing, a dict mapping service name to True/False values is returned.

Changed in version 2018.3.0: The service name can now be a glob (e.g. salt*)

Parameters

- **name (str)** -- The name of the service to check
- **sig (str)** -- Signature to use to find the service via ps

Returns  True if running, False otherwise dict: Maps service name to True/False otherwise

Return type  bool

CLI Example:

```python
salt '*' service.status <service name> [service signature]
```
**salt.minions.netbsdservice.stop**

Stop the specified service

CLI Example:

```
salt '*' service.stop <service name>
```

---

## 23.9.71 salt.minions.neutron

Module for handling OpenStack Neutron calls

**depends**

- neutronclient Python module

**configuration** This module is not usable until the user, password, tenant, and auth URL are specified either in a pillar or in the minion’s config file. For example:

```python
keystone.user: 'admin'
keystone.password: 'password'
keystone.tenant: 'admin'
keystone.auth_url: 'http://127.0.0.1:5000/v2.0/
keystone.region_name: 'RegionOne'
keystone.service_type: 'network'
```

If configuration for multiple OpenStack accounts is required, they can be set up as different configuration profiles: For example:

```python
openstack1:
  keystone.user: 'admin'
  keystone.password: 'password'
  keystone.tenant: 'admin'
  keystone.auth_url: 'http://127.0.0.1:5000/v2.0/'
  keystone.region_name: 'RegionOne'
  keystone.service_type: 'network'

openstack2:
  keystone.user: 'admin'
  keystone.password: 'password'
  keystone.tenant: 'admin'
  keystone.auth_url: 'http://127.0.0.2:5000/v2.0/'
  keystone.region_name: 'RegionOne'
  keystone.service_type: 'network'
```

With this configuration in place, any of the neutron functions can make use of a configuration profile by declaring it explicitly. For example:

```
salt '*' neutron.network_list profile=openstack1
```

To use keystoneauth1 instead of keystoneclient, include the `use_keystoneauth` option in the pillar or minion config.

**Note:** this is required to use keystone v3 as for authentication.
salt.modules.neutron.add_gateway_router (router, ext_network, profile=None)

Adds an external network gateway to the specified router

CLI Example:

```
salt '*' neutron.add_gateway_router router-name ext-network-name
```

Parameters

- **router** -- ID or name of the router
- **ext_network** -- ID or name of the external network the gateway
- **profile** -- Profile to build on (Optional)

Returns

Added Gateway router information

salt.modules.neutron.add_interface_router (router, subnet, profile=None)

Adds an internal network interface to the specified router

CLI Example:

```
salt '*' neutron.add_interface_router router-name subnet-name
```

Parameters

- **router** -- ID or name of the router
- **subnet** -- ID or name of the subnet
- **profile** -- Profile to build on (Optional)

Returns

Added interface information

salt.modules.neutron.create_firewall_rule (protocol, action, profile=None, **kwargs)

Creates a new firewall rule

CLI Example:

```
salt '*' neutron.create_firewall_rule protocol action
  tenant_id=tenant_id name=name description=description ip_version=ip_version
  source_ip_address=source_ip_address destination_ip_address=destination_ip_address
  source_port=source_port
  destination_port=destination_port shared=shared enabled=enabled
```

Note: by default the neutron module will attempt to verify its connection utilizing the system certificates. If you need to verify against another bundle of CA certificates or want to skip verification altogether you will need to specify the verify option. You can specify True or False to verify (or not) against system certificates, a path to a bundle or CA certs to check against, or None to allow keystoneauth to search for the certificates on its own. (defaults to True)
Parameters

- **protocol** -- Protocol for the firewall rule, choose "tcp","udp","icmp" or "None".
- **action** -- Action for the firewall rule, choose "allow" or "deny".
- **tenant_id** -- The owner tenant ID. (Optional)
- **name** -- Name for the firewall rule. (Optional)
- **description** -- Description for the firewall rule. (Optional)
- **ip_version** -- IP protocol version, default: 4. (Optional)
- **source_ip_address** -- Source IP address or subnet. (Optional)
- **destination_ip_address** -- Destination IP address or subnet. (Optional)
- **source_port** -- Source port (integer in [1, 65535] or range in a:b). (Optional)
- **destination_port** -- Destination port (integer in [1, 65535] or range in a:b). (Optional)
- **shared** -- Set shared to True, default: False. (Optional)
- **enabled** -- To enable this rule, default: True. (Optional)

```
salt.modules.neutron.create_floatingip(floating_network, port=None, profile=None)
```

Creates a new floatingIP

CLI Example:

```
salt '*' neutron.create_floatingip network-name port-name
```

Parameters

- **floating_network** -- Network name or ID to allocate floatingIP from
- **port** -- Of the port to be associated with the floatingIP (Optional)
- **profile** -- Profile to build on (Optional)

Returns Created floatingIP information

```
salt.modules.neutron.create_ikepolicy(name, profile=None, **kwargs)
```

Creates a new IKEPolicy

CLI Example:

```
salt '*' neutron.create_ikepolicy ikepolicy-name
    phase1_negotiation_mode=main auth_algorithm=sha1
    encryption_algorithm=aes-128 pfs=group5
```

Parameters

- **name** -- Name of the IKE policy
- **phase1_negotiation_mode** -- IKE Phase1 negotiation mode in lowercase, default: main (Optional)
- **auth_algorithm** -- Authentication algorithm in lowercase, default: sha1 (Optional)
- **encryption_algorithm** -- Encryption algorithm in lowercase. default:aes-128 (Optional)
- **pfs** -- Prefect Forward Security in lowercase, default: group5 (Optional)
- **units** -- IKE lifetime attribute. default: seconds (Optional)
- **value** -- IKE lifetime attribute. default: 3600 (Optional)
- **ike_version** -- IKE version in lowercase, default: v1 (Optional)
- **profile** -- Profile to build on (Optional)
- **kwargs** --

Returns  Created IKE policy information

```
salt.modules.neutron.create_ipsec_site_connection(name, ipsecpolicy, ikepolicy, vpnservice, peer_cidrs, peer_address, peer_id, psk, admin_state_up=True, profile=None, **kwargs)
```

Creates a new IPsecSiteConnection

CLI Example:
```
salt '*' neutron.show_ipsec_site_connection connection-name ipsecpolicy-name ikepolicy-name vpnservice-name 192.168.XXX.XXX/24 192.168.XXX.XXX 192.168.XXX.XXX secret
```

Parameters

- **name** -- Set friendly name for the connection
- **ipsecpolicy** -- IPSec policy ID or name associated with this connection
- **ikepolicy** -- IKE policy ID or name associated with this connection
- **vpnservice** -- VPN service instance ID or name associated with this connection
- **peer_cidrs** -- Remote subnet(s) in CIDR format
- **peer_address** -- Peer gateway public IPv4/IPv6 address or FQDN
- **peer_id** -- Peer router identity for authentication Can be IPv4/IPv6 address, e-mail address, key id, or FQDN
- **psk** -- Pre-shared key string
- **initiator** -- Initiator state in lowercase, default:bi-directional
- **admin_state_up** -- Set admin state up to true or false, default: True (Optional)
- **mtu** -- size for the connection, default:1500 (Optional)
- **dpd_action** -- Dead Peer Detection attribute: hold/clear/disabled/ restart/restart-by-peer (Optional)
- **dpd_interval** -- Dead Peer Detection attribute (Optional)
- **dpd_timeout** -- Dead Peer Detection attribute (Optional)
- **profile** -- Profile to build on (Optional)

Returns  Created IPSec site connection information

```
salt.modules.neutron.create_ipsecpolicy(name, profile=None, **kwargs)
```

Creates a new IPsecPolicy

CLI Example:
salt '*' neutron.create_ipsecpolicy ipsecpolicy-name
  transform_protocol=esp auth_algorithm=sha1
  encapsulation_mode=tunnel encryption_algorithm=aes-128

Parameters

- name -- Name of the IPSec policy
- transform_protocol -- Transform protocol in lowercase, default: esp (Optional)
- auth_algorithm -- Authentication algorithm in lowercase, default: sha1 (Optional)
- encapsulation_mode -- Encapsulation mode in lowercase, default: tunnel (Optional)
- encryption_algorithm -- Encryption algorithm in lowercase, default: aes-128 (Optional)
- pfs -- Prefect Forward Security in lowercase, default: group5 (Optional)
- units -- IPSec lifetime attribute. default: seconds (Optional)
- value -- IPSec lifetime attribute. default: 3600 (Optional)
- profile -- Profile to build on (Optional)

Returns
Created IPSec policy information

```
salt.modules.neutron.create_network(name, router_ext=None, admin_state_up=True, network_type=None, physical_network=None, segmentation_id=None, shared=None, profile=None)
```

Creates a new network

CLI Example:

```
salt '*' neutron.create_network network-name
salt '*' neutron.create_network network-name profile=openstack1
```

Parameters

- name -- Name of network to create
- admin_state_up -- should the state of the network be up? default: True (Optional)
- router_ext -- True then if create the external network (Optional)
- network_type -- the Type of network that the provider is such as GRE, VXLAN, VLAN, FLAT, or LOCAL (Optional)
- physical_network -- the name of the physical network as neutron knows it (Optional)
- segmentation_id -- the vlan id or GRE id (Optional)
- shared -- is the network shared or not (Optional)
- profile -- Profile to build on (Optional)

Returns
Created network information

```
salt.modules.neutron.create_port(name, network, device_id=None, admin_state_up=True, profile=None)
```

Creates a new port

CLI Example:
salt '*' neutron.create_port network-name port-name

Parameters

- **name** -- Name of port to create
- **network** -- Network name or ID
- **device_id** -- ID of device (Optional)
- **admin_state_up** -- Set admin state up to true or false, default: true (Optional)
- **profile** -- Profile to build on (Optional)

Returns  Created port information

salt.modules.neutron.create_router(name, ext_network=None, admin_state_up=True, profile=None)

Creates a new router

CLI Example: 

salt '*' neutron.create_router new-router-name

Parameters

- **name** -- Name of router to create (must be first)
- **ext_network** -- ID or name of the external for the gateway (Optional)
- **admin_state_up** -- Set admin state up to true or false, default:true (Optional)
- **profile** -- Profile to build on (Optional)

Returns  Created router information

salt.modules.neutron.create_security_group(name=None, description=None, profile=None)

Creates a new security group

CLI Example: 

salt '*' neutron.create_security_group security-group-name

Parameters

- **name** -- Name of security group (Optional)
- **description** -- Description of security group (Optional)
- **profile** -- Profile to build on (Optional)

Returns  Created security group information

salt.modules.neutron.create_security_group_rule

Creates a new security group rule

salt '*' neutron.create_security_group_rule security-group-rule

Parameters

- **security_group**
- **remote_group_id**
- **direction**
- **protocol**
- **port_range_min**
- **port_range_max**
- **ether-type**
- **profile**

Returns  Created security group information
CLI Example:

```
salt '*' neutron.show_security_group_rule security-group-rule-id
```

Parameters

- `security_group` -- Security group name or ID to add rule
- `remote_group_id` -- Remote security group name or ID to apply rule (Optional)
- `direction` -- Direction of traffic: ingress/egress, default: ingress (Optional)
- `protocol` -- Protocol of packet: null/icmp/tcp/udp, default: null (Optional)
- `port_range_min` -- Starting port range (Optional)
- `port_range_max` -- Ending port range (Optional)
- `ethertype` -- IPv4/IPv6, default: IPv4 (Optional)
- `profile` -- Profile to build on (Optional)

Returns Created security group rule information

```
salt.modules.neutron.create_subnet(network, cidr, name=None, ip_version=4, profile=None)
```

Creates a new subnet

CLI Example:

```
salt '*' neutron.create_subnet network-name 192.168.1.0/24
```

Parameters

- `network` -- Network ID or name this subnet belongs to
- `cidr` -- CIDR of subnet to create (Ex. '192.168.1.0/24')
- `name` -- Name of the subnet to create (Optional)
- `ip_version` -- Version to use, default is 4(IPv4) (Optional)
- `profile` -- Profile to build on (Optional)

Returns Created subnet information

```
salt.modules.neutron.create_vpnservice(subnet, router, name, admin_state_up=True, profile=None)
```

Creates a new VPN service

CLI Example:

```
salt '*' neutron.create_vpnservice router-name name
```

Parameters

- `subnet` -- Subnet unique identifier for the VPN service deployment
- `router` -- Router unique identifier for the VPN service
- `name` -- Set a name for the VPN service
- `admin_state_up` -- Set admin state up to true or false, default:True (Optional)
- `profile` -- Profile to build on (Optional)
Returns Created VPN service information

salt.modules.neutron.delete_firewall_rule(firewall_rule, profile=None)
Deletes the specified firewall_rule

CLI Example:
```bash
salt '*' neutron.delete_firewall_rule firewall-rule
```

Parameters
- firewall_rule -- ID or name of firewall rule to delete
- profile -- Profile to build on (Optional)

Returns True(Succeed) or False

salt.modules.neutron.deleteFloatingip(floatingip_id, profile=None)
Deletes the specified floating IP

CLI Example:
```bash
salt '*' neutron.delete_floatingip floatingip-id
```

Parameters
- floatingip_id -- ID of floatingIP to delete
- profile -- Profile to build on (Optional)

Returns True(Succeed) or False

salt.modules.neutron.delete_ikepolicy(ikepolicy, profile=None)
Deletes the specified IKEPolicy

CLI Example:
```bash
salt '*' neutron.delete_ikepolicy ikepolicy-name
```

Parameters
- ikepolicy -- ID or name of IKE policy to delete
- profile -- Profile to build on (Optional)

Returns True(Succeed) or False

salt.modules.neutron.delete_ipsec_site_connection(ipsec_site_connection, profile=None)
Deletes the specified IPsecSiteConnection

CLI Example:
```bash
salt '*' neutron.delete_ipsec_site_connection connection-name
```

Parameters
- ipsec_site_connection -- ID or name of ipsec site connection to delete
- profile -- Profile to build on (Optional)
Returns  True(Succeed) or False

```
salt.modules.neutron.delete_ipsecpolicy(ipsecpolicy, profile=None)
```
Deletes the specified IPsecPolicy

CLI Example:
```
salt '*' neutron.delete_ipsecpolicy ipsecpolicy-name
```

Parameters
- **ipsecpolicy** -- ID or name of IPsec policy to delete
- **profile** -- Profile to build on (Optional)

Returns  True(Succeed) or False

```
salt.modules.neutron.delete_network(network, profile=None)
```
Deletes the specified network

CLI Example:
```
salt '*' neutron.delete_network network-name
salt '*' neutron.delete_network network-name profile=openstack1
```

Parameters
- **network** -- ID or name of network to delete
- **profile** -- Profile to build on (Optional)

Returns  True(Succeed) or False

```
salt.modules.neutron.delete_port(port, profile=None)
```
Deletes the specified port

CLI Example:
```
salt '*' neutron.delete_network port-name
salt '*' neutron.delete_network port-name profile=openstack1
```

Parameters
- **port** -- port name or ID
- **profile** -- Profile to build on (Optional)

Returns  True(Succeed) or False

```
salt.modules.neutron.delete_quota(tenant_id, profile=None)
```
Delete the specified tenant's quota value

CLI Example:
```
salt '*' neutron.update_quota tenant-id
salt '*' neutron.update_quota tenant-id profile=openstack1
```

Parameters
- **tenant_id** -- ID of tenant to quota delete

23.9. execution modules
• **profile** -- Profile to build on (Optional)

**Returns**  True(Delete succeed) or False(Delete failed)

`salt.modules.neutron.delete_router` *(router, profile=None)*
Delete the specified router

CLI Example:
```
salt '*' neutron.delete_router router-name
```

**Parameters**

• **router** -- ID or name of router to delete
• **profile** -- Profile to build on (Optional)

**Returns**  True(Succeed) or False

`salt.modules.neutron.delete_security_group` *(security_group, profile=None)*
Deletes the specified security group

CLI Example:
```
salt '*' neutron.delete_security_group security-group-name
```

**Parameters**

• **security_group** -- ID or name of security group to delete
• **profile** -- Profile to build on (Optional)

**Returns**  True(Succeed) or False

`salt.modules.neutron.delete_security_group_rule` *(security_group_rule_id, profile=None)*
Deletes the specified security group rule

CLI Example:
```
salt '*' neutron.delete_security_group_rule security-group-rule-id
```

**Parameters**

• **security_group_rule_id** -- ID of security group rule to delete
• **profile** -- Profile to build on (Optional)

**Returns**  True(Succeed) or False

`salt.modules.neutron.delete_subnet` *(subnet, profile=None)*
Deletes the specified subnet

CLI Example:
```
salt '*' neutron.delete_subnet subnet-name
salt '*' neutron.delete_subnet subnet-name profile=openstack1
```

**Parameters**

• **subnet** -- ID or name of subnet to delete
salt.modules.neutron.delete_vpnservice(vpnservice, profile=None)
Deletes the specified VPN service

CLI Example:
```
salt '*' neutron.delete_vpnservice vpnservice-name
```

Parameters

• **vpnservice** -- ID or name of vpn service to delete

• **profile** -- Profile to build on (Optional)

Returns True(Succeed) or False

salt.modules.neutron.get_quotas_tenant(profile=None)
Fetches tenant info in server's context for following quota operation

CLI Example:
```
salt '*' neutron.get_quotas_tenant
salt '*' neutron.get_quotas_tenant profile=openstack1
```

Parameters **profile** -- Profile to build on (Optional)

Returns Quotas information

salt.modules.neutron.list_agents(profile=None)
List agents.

CLI Example:
```
salt '*' neutron.list_agents
```

Parameters **profile** -- Profile to build on (Optional)

Returns agents message.

salt.modules.neutron.list_extensions(profile=None)
Fetches a list of all extensions on server side

CLI Example:
```
salt '*' neutron.list_extensions
salt '*' neutron.list_extensions profile=openstack1
```

Parameters **profile** -- Profile to build on (Optional)

Returns List of extensions

salt.modules.neutron.list_firewall_rules(profile=None)
Fetches a list of all firewall rules for a tenant

CLI Example:
salt '*' neutron.list_firewall_rules

Parameters profile -- Profile to build on (Optional)
Returns List of firewall rules

salt.modules.neutron.list_firewalls(profile=None)
Fetched a list of all firewalls for a tenant

CLI Example:
salt '*' neutron.list_firewalls

Parameters profile -- Profile to build on (Optional)
Returns List of firewalls

salt.modules.neutron.list_floatingips(profile=None)
Fetch a list of all floatingIPs for a tenant

CLI Example:
salt '*' neutron.list_floatingips
salt '*' neutron.list_floatingips profile=openstack1

Parameters profile -- Profile to build on (Optional)
Returns List of floatingIP

salt.modules.neutron.list_ikepolicies(profile=None)
Fetche a list of all configured IKEPolicies for a tenant

CLI Example:
salt '*' neutron.list_ikepolicies
salt '*' neutron.list_ikepolicies profile=openstack1

Parameters profile -- Profile to build on (Optional)
Returns List of IKE policy

salt.modules.neutron.list_ipsec_site_connections(profile=None)
Fetches all configured IPsec Site Connections for a tenant

CLI Example:
salt '*' neutron.list_ipsec_site_connections
salt '*' neutron.list_ipsec_site_connections profile=openstack1

Parameters profile -- Profile to build on (Optional)
Returns List of IPSec site connection

salt.modules.neutron.list_ipsecpolicies(profile=None)
Fetche a list of all configured IPsecPolicies for a tenant

CLI Example:
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>salt '*' neutron.list_ipsecpolicies ipsecpolicy-name</code></td>
<td>List IPSec policies</td>
</tr>
<tr>
<td><code>salt '*' neutron.list_ipsecpolicies ipsecpolicy-name profile=openstack1</code></td>
<td>List IPSec policies, filter by profile</td>
</tr>
</tbody>
</table>

**Parameters**

*profile* -- Profile to build on (Optional)

**Returns**

List of IPSec policy

---

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>salt.modules.neutron.list_l3_agent_hosting_routers</code></td>
<td>List L3 agents hosting a router.</td>
</tr>
<tr>
<td><code>salt '*' neutron.list_l3_agent_hosting_routers router</code></td>
<td>Example</td>
</tr>
</tbody>
</table>

:param router: router name or ID to query. 
:param profile: Profile to build on (Optional) 
:return: L3 agents message.

**Parameters**

*profile* -- Profile to build on (Optional)

**Returns**

List of L3 agents

---

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>salt.modules.neutron.list_networks</code></td>
<td>Fetches a list of all networks for a tenant</td>
</tr>
<tr>
<td><code>salt '*' neutron.list_networks</code></td>
<td>Example</td>
</tr>
</tbody>
</table>

:param profile: Profile to build on (Optional) 
:return: List of network

**Parameters**

*profile* -- Profile to build on (Optional)

**Returns**

List of network

---

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>salt.modules.neutron.list_ports</code></td>
<td>Fetches a list of all networks for a tenant</td>
</tr>
<tr>
<td><code>salt '*' neutron.list_ports</code></td>
<td>Example</td>
</tr>
</tbody>
</table>

:param profile: Profile to build on (Optional) 
:return: List of port

**Parameters**

*profile* -- Profile to build on (Optional)

**Returns**

List of port

---

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>salt.modules.neutron.list_quotas</code></td>
<td>Fetches all tenants quotas</td>
</tr>
<tr>
<td><code>salt '*' neutron.list_quotas</code></td>
<td>Example</td>
</tr>
</tbody>
</table>

:param profile: Profile to build on (Optional) 
:return: List of quotas

**Parameters**

*profile* -- Profile to build on (Optional)

**Returns**

List of quotas

---

<table>
<thead>
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</tr>
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<td><code>salt.modules.neutron.list_routers</code></td>
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</tr>
<tr>
<td><code>salt '*' neutron.list_routers</code></td>
<td>Example</td>
</tr>
</tbody>
</table>

:param profile: Profile to build on (Optional) 
:return: List of routers

**Parameters**

*profile* -- Profile to build on (Optional)

**Returns**

List of routers

---
salt '*' neutron.list_routers
salt '*' neutron.list_routers profile=openstack1

Parameters profile -- Profile to build on (Optional)
Returns List of router

salt.modules.neutron.list_security_group_rules(profile=None)
Fetches a list of all security group rules for a tenant

CLI Example:

salt '*' neutron.list_security_group_rules
salt '*' neutron.list_security_group_rules profile=openstack1

Parameters profile -- Profile to build on (Optional)
Returns List of security group rule

salt.modules.neutron.list_security_groups(profile=None)
Fetches a list of all security groups for a tenant

CLI Example:

salt '*' neutron.list_security_groups
salt '*' neutron.list_security_groups profile=openstack1

Parameters profile -- Profile to build on (Optional)
Returns List of security group

salt.modules.neutron.list_subnets(profile=None)
Fetches a list of all networks for a tenant

CLI Example:

salt '*' neutron.list_subnets
salt '*' neutron.list_subnets profile=openstack1

Parameters profile -- Profile to build on (Optional)
Returns List of subnet

salt.modules.neutron.list_vpnservices(retrieve_all=True, profile=None, **kwargs)
Fetches a list of all configured VPN services for a tenant

CLI Example:

salt '*' neutron.list_vpnservices

Parameters
  - retrieve_all -- True or False, default: True (Optional)
  - profile -- Profile to build on (Optional)

Returns List of VPN service
salt.modules.neutron.remove_gateway_router(router, profile=None)
Removes an external network gateway from the specified router

CLI Example:
```
salt '*' neutron.remove_gateway_router router-name
```

Parameters
- `router` -- ID or name of router
- `profile` -- Profile to build on (Optional)

Returns True(Succeed) or False

salt.modules.neutron.remove_interface_router(router, subnet, profile=None)
Removes an internal network interface from the specified router

CLI Example:
```
salt '*' neutron.remove_interface_router router-name subnet-name
```

Parameters
- `router` -- ID or name of the router
- `subnet` -- ID or name of the subnet
- `profile` -- Profile to build on (Optional)

Returns True(Succeed) or False

salt.modules.neutron.show_firewall(firewall, profile=None)
Fetches information of a specific firewall rule

CLI Example:
```
salt '*' neutron.show_firewall firewall
```

Parameters
- `firewall` -- ID or name of firewall to look up
- `profile` -- Profile to build on (Optional)

Returns firewall information

salt.modules.neutron.show_firewall_rule(firewall_rule, profile=None)
Fetches information of a specific firewall rule

CLI Example:
```
salt '*' neutron.show_firewall_rule firewall-rule-name
```

Parameters
- `ipsecpolicy` -- ID or name of firewall rule to look up
- `profile` -- Profile to build on (Optional)

Returns firewall rule information
salt.modules.neutron.show floatingip(floatingip_id, profile=None)
Fetches information of a certain floatingIP

CLI Example:

```
salt '*' neutron.show Floatingip floatingip-id
```

Parameters

- **floatingip_id** -- ID of floatingIP to look up
- **profile** -- Profile to build on (Optional)

Returns Floating IP information

salt.modules.neutron.show ikepolicy(ikepolicy, profile=None)
Fetches information of a specific IKEPolicy

CLI Example:

```
salt '*' neutron.show ikepolicy ikepolicy-name
```

Parameters

- **ikepolicy** -- ID or name of ikepolicy to look up
- **profile** -- Profile to build on (Optional)

Returns IKE policy information

salt.modules.neutron.show ipsec site connection(ipsec_site_connection, profile=None)
Fetches information of a specific IPsecSiteConnection

CLI Example:

```
salt '*' neutron.show Ipsec Site Connection connection-name
```

Parameters

- **ipsec_site_connection** -- ID or name of ipsec site connection to look up
- **profile** -- Profile to build on (Optional)

Returns IPSec site connection information

salt.modules.neutron.show ipsec policy(ipsecpolicy, profile=None)
Fetches information of a specific IPsecPolicy

CLI Example:

```
salt '*' neutron.show Ipsec Policy ipsecpolicy-name
```

Parameters

- **ipsecpolicy** -- ID or name of IPSec policy to look up
- **profile** -- Profile to build on (Optional)

Returns IPSec policy information
salt.modules.neutron.show_network(network, profile=None)
Fetches information of a certain network

CLI Example:

```
salt '*' neutron.show_network network-name
salt '*' neutron.show_network network-name profile=openstack1
```

Parameters

- **network** -- ID or name of network to look up
- **profile** -- Profile to build on (Optional)

Returns  Network information

salt.modules.neutron.show_port(port, profile=None)
Fetches information of a certain port

CLI Example:

```
salt '*' neutron.show_port port-id
salt '*' neutron.show_port port-id profile=openstack1
```

Parameters

- **port** -- ID or name of port to look up
- **profile** -- Profile to build on (Optional)

Returns  Port information

salt.modules.neutron.show_quota(tenant_id, profile=None)
Fetches information of a certain tenant's quotas

CLI Example:

```
salt '*' neutron.show_quota tenant-id
salt '*' neutron.show_quota tenant-id profile=openstack1
```

Parameters

- **tenant_id** -- ID of tenant
- **profile** -- Profile to build on (Optional)

Returns  Quota information

salt.modules.neutron.show_router(router, profile=None)
Fetches information of a certain router

CLI Example:

```
salt '*' neutron.show_router router-name
```

Parameters

- **router** -- ID or name of router to look up
- **profile** -- Profile to build on (Optional)
Returns  Router information

```python
salt.modules.neutron.show_security_group(security_group, profile=None)
```
Fetches information of a certain security group

CLI Example:

```
salt '*' neutron.show_security_group security-group-name
```

Parameters

- **security_group** -- ID or name of security group to look up
- **profile** -- Profile to build on (Optional)

Returns  Security group information

```python
salt.modules.neutron.show_security_group_rule(security_group_rule_id, profile=None)
```
Fetches information of a certain security group rule

CLI Example:

```
salt '*' neutron.show_security_group_rule security-group-rule-id
```

Parameters

- **security_group_rule_id** -- ID of security group rule to look up
- **profile** -- Profile to build on (Optional)

Returns  Security group rule information

```python
salt.modules.neutron.show_subnet(subnet, profile=None)
```
Fetches information of a certain subnet

CLI Example:

```
salt '*' neutron.show_subnet subnet-name
```

Parameters

- **subnet** -- ID or name of subnet to look up
- **profile** -- Profile to build on (Optional)

Returns  Subnet information

```python
salt.modules.neutron.show_vpnservice(vpnservice, profile=None, **kwargs)
```
Fetches information of a specific VPN service

CLI Example:

```
salt '*' neutron.show_vpnservice vpnservice-name
```

Parameters

- **vpnservice** -- ID or name of vpn service to look up
- **profile** -- Profile to build on (Optional)

Returns  VPN service information
salt Documentation, Release 3002.5

salt.modules.neutron.update_firewall_rule(firewall_rule, protocol=None, action=None, name=None, description=None, ip_version=None, source_ip_address=None, destination_ip_address=None, source_port=None, destination_port=None, shared=None, enabled=None, profile=None)

Update a firewall rule

CLI Example:

salt '*' neutron.update_firewall_rule firewall_rule protocol=PROTOCOL action=ACTION
name=NAME description=DESCRIPTION ip_version=IP_VERSION
source_ip_address=SOURCE_IP_ADDRESS destination_ip_address=DESTINATION_IP_ADDRESS
source_port=SOURCE_PORT destination_port=DESTINATION_PORT shared=SHARED enabled=ENABLED

Parameters

- **firewall_rule** -- ID or name of firewall rule to update.
- **protocol** -- Protocol for the firewall rule, choose "tcp", "udp", "icmp" or "None". (Optional)
- **action** -- Action for the firewall rule, choose "allow" or "deny". (Optional)
- **name** -- Name for the firewall rule. (Optional)
- **description** -- Description for the firewall rule. (Optional)
- **ip_version** -- IP protocol version, default: 4. (Optional)
- **source_ip_address** -- Source IP address or subnet. (Optional)
- **destination_ip_address** -- Destination IP address or subnet. (Optional)
- **source_port** -- Source port (integer in [1, 65535] or range in a:b). (Optional)
- **destination_port** -- Destination port (integer in [1, 65535] or range in a:b). (Optional)
- **shared** -- Set shared to True, default: False. (Optional)
- **enabled** -- To enable this rule, default: True. (Optional)
- **profile** -- Profile to build on (Optional)

salt.modules.neutron.update_floatingip(floatingip_id, port=None, profile=None)

Updates a floatingIP

CLI Example:

salt '*' neutron.update_floatingip network-name port-name

Parameters

- **floatingip_id** -- ID of floatingIP
- **port** -- ID or name of port, to associate floatingip to None or do not specify to disassociate the floatingip (Optional)
- **profile** -- Profile to build on (Optional)

Returns Value of updated floating IP information
salt.modules.neutron.update_network(network, name, profile=None)

Updates a network

CLI Example:
```
salt '*' neutron.update_network network-name new-network-name
```

Parameters

- **network** -- ID or name of network to update
- **name** -- Name of this network
- **profile** -- Profile to build on (Optional)

Returns Value of updated network information

salt.modules.neutron.update_port(port, name, admin_state_up=True, profile=None)

Updates a port

CLI Example:
```
salt '*' neutron.update_port port-name network-name new-port-name
```

Parameters

- **port** -- Port name or ID
- **name** -- Name of this port
- **admin_state_up** -- Set admin state up to true or false, default: true (Optional)
- **profile** -- Profile to build on (Optional)

Returns Value of updated port information

salt.modules.neutron.update_quota(tenant_id, subnet=None, router=None, network=None, floatingip=None, port=None, security_group=None, security_group_rule=None, profile=None)

Update a tenant's quota

CLI Example:
```
salt '*' neutron.update_quota tenant-id subnet=40 router=50
    network=10 floatingip=30 port=30
```

Parameters

- **tenant_id** -- ID of tenant
- **subnet** -- Value of subnet quota (Optional)
- **router** -- Value of router quota (Optional)
- **network** -- Value of network quota (Optional)
- **floatingip** -- Value of floatingip quota (Optional)
- **port** -- Value of port quota (Optional)
- **security_group** -- Value of security group (Optional)
- **security_group_rule** -- Value of security group rule (Optional)
salt.modules.neutron.update_router(router, name=None, admin_state_up=None, profile=None, **kwargs)

Updates a router

CLI Example:
```
salt '*' neutron.update_router router_id name=new-router-name
  admin_state_up=True
```

Parameters
  - **router** -- ID or name of router to update
  - **name** -- Name of this router
  - **ext_network** -- ID or name of the external for the gateway (Optional)
  - **admin_state_up** -- Set admin state up to true or false, default: true (Optional)
  - **profile** -- Profile to build on (Optional)
  - **kwargs** --

Returns Value of updated router information

salt.modules.neutron.update_security_group(security_group, name=None, description=None, profile=None)

Updates a security group

CLI Example:
```
salt '*' neutron.update_security_group security-group-name new-
  security-group-name
```

Parameters
  - **security_group** -- ID or name of security group to update
  - **name** -- Name of this security group (Optional)
  - **description** -- Description of security group (Optional)
  - **profile** -- Profile to build on (Optional)

Returns Value of updated security group information

salt.modules.neutron.update_subnet(subnet, name, profile=None)

Updates a subnet

CLI Example:
```
salt '*' neutron.update_subnet subnet-name new-subnet-name
```

Parameters
  - **subnet** -- ID or name of subnet to update
  - **name** -- Name of this subnet
- **profile** -- Profile to build on (Optional)

**Returns** Value of updated subnet information

```python
salt.modules.neutron.update_vpnservice(vpn_service, desc, profile=None)
```

Updates a VPN service

**CLI Example:**

```
salt '*' neutron.update_vpnservice vpnservice-name desc='VPN Service1'
```

**Parameters**

- **vpnservice** -- ID or name of vpn service to update
- **desc** -- Set a description for the VPN service
- **profile** -- Profile to build on (Optional)

**Returns** Value of updated VPN service information

### 23.9.72 salt.modules.neutron.ng

Neutron module for interacting with OpenStack Neutron

New in version 2018.3.0.

:depends:shade

Example configuration

```python
neutron:
  cloud: default
```

```python
neutron:
  auth:
    username: admin
    password: password123
    user_domain_name: mydomain
    project_name: myproject
    project_domain_name: myproject
    auth_url: https://example.org:5000/v3
    identity_api_version: 3
```

```python
salt.modules.neutron.ng.compare_changes(obj, **kwargs)
```

Compare two dicts returning only keys that exist in the first dict and are different in the second one

```python
salt.modules.neutron.ng.get_openstack_cloud(auth=None)
```

Return an openstack_cloud

```python
salt.modules.neutron.ng.get_operator_cloud(auth=None)
```

Return an operator_cloud

```python
salt.modules.neutron.ng.list_networks(auth=None, **kwargs)
```

List networks

**filters** A Python dictionary of filter conditions to push down

**CLI Example:**
salt.modules.neutronng.list_networks(auth=None, **kwargs)
List networks

salt.modules.neutronng.list_subnets(auth=None, **kwargs)
List subnets

salt.modules.neutronng.network_create(auth=None, **kwargs)
Create a network

salt.modules.neutronng.network_delete(auth=None, **kwargs)
Delete a network

salt.modules.neutronng.network_get(auth=None, **kwargs)
Get a single network

salt.modules.neutronng.security_group_create(auth=None, **kwargs)
Create a security group.
CLI Example:

```python
salt '*' neutronng.security_group_create name=secgroup1 description="Very secure security group"
```

salt.modules.neutronng.security_group_delete(auth=None, **kwargs)
Delete a security group

   name_or_id  The name or unique ID of the security group

CLI Example:

```python
salt '*' neutronng.security_group_delete name_or_id=secgroup1
```

salt.modules.neutronng.security_group_get(auth=None, **kwargs)
Get a single security group. This will create a default security group if one does not exist yet for a particular project id.

   filters  A Python dictionary of filter conditions to push down

CLI Example:

```python
salt '*' neutronng.security_group_get name=1dcac318a83b4610b7a7f7ba01465548
salt '*' neutronng.security_group_get name=default filters='{"tenant_id":"2e778bb64ca64a199eb526b5958d8710"}'
```

salt.modules.neutronng.security_group_rule_create(auth=None, **kwargs)
Create a rule in a security group

   secgroup_name_or_id  The security group name or ID to associate with this security group rule. If a non-unique group name is given, an exception is raised.

   port_range_min  The minimum port number in the range that is matched by the security group rule. If the protocol is TCP or UDP, this value must be less than or equal to the port_range_max attribute value. If nova is used by the cloud provider for security groups, then a value of None will be transformed to -1.

   port_range_max  The maximum port number in the range that is matched by the security group rule. The port_range_min attribute constrains the port_range_max attribute. If nova is used by the cloud provider for security groups, then a value of None will be transformed to -1.

   protocol  The protocol that is matched by the security group rule. Valid values are None, tcp, udp, and icmp.

   remote_ip_prefix  The remote IP prefix to be associated with this security group rule. This attribute matches the specified IP prefix as the source IP address of the IP packet.

   remote_group_id  The remote group ID to be associated with this security group rule

   direction  Either ingress or egress; the direction in which the security group rule is applied. For a compute instance, an ingress security group rule is applied to incoming (ingress) traffic for that instance. An egress rule is applied to traffic leaving the instance

   ethertype  Must be IPv4 or IPv6, and addresses represented in CIDR must match the ingress or egress rules

   project_id  Specify the project ID this security group will be created on (admin-only)

CLI Example:
salt modules.neutronng.security_group_rule_delete(auth=None, **kwargs)
Delete a security group

name_or_id  The unique ID of the security group rule

CLI Example:

```
salt '*' neutronng.security_group_rule_delete name_or_id
  → id=1dcac318a83b4610b7a7f7ba01465548
```

salt modules.neutronng.security_group_update(secgroup=None, auth=None, **kwargs)
Update a security group

secgroup  Name, ID or Raw Object of the security group to update

name  New name for the security group

description  New description for the security group

CLI Example:

```
salt '*' neutronng.security_group_update secgroup=secgroup1
  → "Very secure security group"
salt '*' neutronng.security_group_update secgroup=secgroup1
  → "Very secure security group"
  → project_id=1dcac318a83b4610b7a7f7ba01465548
```

salt modules.neutronng.setup_clouds(auth=None)
Call functions to create Shade cloud objects in __context__ to take advantage of Shade's in-memory caching across several states

salt modules.neutronng.subnet_create(auth=None, **kwargs)
Create a subnet

network_name_or_id  The unique name or ID of the attached network. If a non-unique name is supplied, an exception is raised.

cidr  The CIDR

ip_version  The IP version, which is 4 or 6.

enable_dhcp  [False] Set to True if DHCP is enabled and False if disabled

subnet_name  The name of the subnet

tenant_id  The ID of the tenant who owns the network. Only administrative users can specify a tenant ID other than their own.

allocation_pools  A list of dictionaries of the start and end addresses for the allocation pools.

gateway_ip  The gateway IP address. When you specify both allocation_pools and gateway_ip, you must ensure that the gateway IP does not overlap with the specified allocation pools.
Salt Documentation, Release 3002.5

disable_gateway_ip [False] Set to True if gateway IP address is disabled and False if enabled. It is not
allowed with gateway_ip.
dns_nameservers A list of DNS name servers for the subnet
host_routes A list of host route dictionaries for the subnet
ipv6_ra_mode IPv6 Router Advertisement
dhcpv6-stateless, or slaac.

mode.

Valid

values

are

dhcpv6-stateful,

ipv6_address_mode IPv6 address mode. Valid values are dhcpv6-stateful, dhcpv6-stateless, or
slaac.
use_default_subnetpool If True, use the default subnetpool for ip_version to obtain a CIDR. It is required
to pass None to the cidr argument when enabling this option.
CLI Example:
salt '*' neutronng.subnet_create network_name_or_id=network1
subnet_name=subnet1
salt '*' neutronng.subnet_create subnet_name=subnet2
network_name_or_
,→id=network2 enable_dhcp=True
allocation_pools='[{"start": "192.168.
,→199.2",
"end": "192.168.199.254"}]'
,→gateway_ip='192.168.199.1' cidr=192.168.199.0/24
salt '*' neutronng.subnet_create network_name_or_id=network1
,→name=subnet1 dns_nameservers='["8.8.8.8", "8.8.8.7"]'

subnet_

salt.modules.neutronng.subnet_delete(auth=None, **kwargs)
Delete a subnet
name Name or ID of the subnet to update
CLI Example:
salt '*' neutronng.subnet_delete name=subnet1
salt '*' neutronng.subnet_delete
name=1dcac318a83b4610b7a7f7ba01465548

salt.modules.neutronng.subnet_get(auth=None, **kwargs)
Get a single subnet
filters A Python dictionary of filter conditions to push down
CLI Example:
salt '*' neutronng.subnet_get name=subnet1

salt.modules.neutronng.subnet_update(auth=None, **kwargs)
Update a subnet
name_or_id Name or ID of the subnet to update
subnet_name The new name of the subnet
enable_dhcp Set to True if DHCP is enabled and False if disabled
gateway_ip The gateway IP address. When you specify both allocation_pools and gateway_ip, you must
ensure that the gateway IP does not overlap with the specified allocation pools.
disable_gateway_ip [False] Set to True if gateway IP address is disabled and False if enabled. It is not allowed
with gateway_ip.
allocation_pools A list of dictionaries of the start and end addresses for the allocation pools.
1232

Chapter 23. Salt Module Reference


**dns_nameservers**  A list of DNS name servers for the subnet

**host_routes**  A list of host route dictionaries for the subnet

```python
salt '*' neutronng.subnet_update name=subnet1 subnet_name=subnet2
salt '*' neutronng.subnet_update name=subnet1 dns_nameservers='["8.8.8.8", "8.8.8.7"]',
```

### 23.9.73 salt.modules.nxos_api

Execution module to manage Cisco Nexus Switches (NX-OS) over the NX-API

New in version 2019.2.0.

Execution module used to interface the interaction with a remote or local Nexus switch whether we're running in a Proxy Minion or regular Minion (or regular Minion running directly on the Nexus switch).

**codeauthor**  Mircea Ulinic <ping@mirceaulinic.net>

**maturity**  new

**platform**  any

Note: To be able to use this module you need to enable to NX-API on your switch, by executing `feature nxapi` in configuration mode.

Configuration example:

```bash
switch# conf t
switch(config)# feature nxapi
```

To check that NX-API is properly enabled, execute `show nxapi`.

Output example:

```bash
switch# show nxapi
nxapi enabled
HTTPS Listen on port 443
```

Note: NX-API requires modern NXOS distributions, typically at least 7.0 depending on the hardware. Due to reliability reasons it is recommended to run the most recent version.

Usage

This module can equally be used via the `nxos_api` Proxy module or directly from an arbitrary (Proxy) Minion that is running on a machine having access to the network device API. Given that there are no external dependencies, this module can very well used when using the regular Salt Minion directly installed on the switch.

When running outside of the `nxos_api` Proxy (i.e., from another Proxy Minion type, or regular Minion), the NX-API connection arguments can be either specified from the CLI when executing the command, or in a configuration block under the `nxos_api` key in the configuration opts (i.e., (Proxy) Minion configuration file), or Pillar. The module supports these simultaneously. These fields are the exact same supported by the `nxos_api` Proxy Module:

- **transport**: `https` Specifies the type of connection transport to use. Valid values for the connection are `http`, and `https`.
- **host**: `localhost` The IP address or DNS host name of the connection device.
- **username**: `admin` The username to pass to the device to authenticate the NX-API connection.
- **password**: The password to pass to the device to authenticate the NX-API connection.
- **port**: The TCP port of the endpoint for the NX-API connection. If this keyword is not specified, the default value is automatically determined by the transport type (80 for `http`, or 443 for `https`).
- **timeout**: 60 Time in seconds to wait for the device to respond. Default: 60 seconds.
- **verify**: `True` Either a boolean, in which case it controls whether we verify the NX-API TLS certificate, or a string, in which case it must be a path to a CA bundle to use. Defaults to `True`.

When there is no certificate configuration on the device and this option is set as `True` (default), the commands will fail with the following error: `SSLError: [SSL: CERTIFICATE_VERIFY_FAILED] certificate verify failed (_ssl.c:581)`. In this case, you either need to configure a proper certificate on the device (recommended), or bypass the checks setting this argument as `False` with all the security risks considered.


Example (when not running in a `nxos_api` Proxy Minion):

```yaml
nxos_api:
  username: test
  password: test
```

In case the `username` and `password` are the same on any device you are targeting, the block above (besides other parameters specific to your environment you might need) should suffice to be able to execute commands from outside a `nxos_api` Proxy, e.g.:

```bash
salt-call --local nxos_api.show 'show lldp neighbors' raw_text
# The command above is available when running in a regular Minion where Salt is installed

salt '*' nxos_api.show 'show version' raw_text=False
```

**Note**: Remember that the above applies only when not running in a `nxos_api` Proxy Minion. If you want to use the `nxos_api Proxy`, please follow the documentation notes for a proper setup.
salt.modules.nxos_api.config(commands=None, config_file=None, template_engine='jinja', context=None, defaults=None, saltenv='base', **kwargs)

Configures the Nexus switch with the specified commands.

This method is used to send configuration commands to the switch. It will take either a string or a list and prepend the necessary commands to put the session into config mode.

**Warning:** All the commands will be applied directly into the running-config.

**config_file** The source file with the configuration commands to be sent to the device.

The file can also be a template that can be rendered using the template engine of choice.

This can be specified using the absolute path to the file, or using one of the following URL schemes:

- `salt://`, to fetch the file from the Salt fileserver.
- `http://` or `https://`
- `ftp://`
- `s3://`
- `swift://`

**commands** The commands to send to the switch in config mode. If the commands argument is a string it will be cast to a list. The list of commands will also be prepended with the necessary commands to put the session in config mode.

**Note:** This argument is ignored when `config_file` is specified.

**template_engine:** `jinja` The template engine to use when rendering the source file. Default: `jinja`. To simply fetch the file without attempting to render, set this argument to `None`.

**context** Variables to add to the template context.

**defaults** Default values of the context_dict.

**transport:** `https` Specifies the type of connection transport to use. Valid values for the connection are `http`, and `https`.

**host:** `localhost` The IP address or DNS host name of the connection device.

**username:** `admin` The username to pass to the device to authenticate the NX-API connection.

**password** The password to pass to the device to authenticate the NX-API connection.

**port** The TCP port of the endpoint for the NX-API connection. If this keyword is not specified, the default value is automatically determined by the transport type (80 for `http`, or 443 for `https`).

**timeout:** 60 Time in seconds to wait for the device to respond. Default: 60 seconds.

**verify:** `True` Either a boolean, in which case it controls whether we verify the NX-API TLS certificate, or a string, in which case it must be a path to a CA bundle to use. Defaults to `True`.

**CLI Example:**

```bash
salt '*' nxos_api.config commands="['spanning-tree mode mstp']"
salt '*' nxos_api.config config_file=salt://config.txt
salt '*' nxos_api.config config_file=https://bit.ly/2LGLcDy context="{'servers': [1.2.3.4]}"
```
salt.modules.nxos_api.rpc(commands, method='cli', **kwargs)
Execute an arbitrary RPC request via the Nexus API.

- **commands**: The commands to be executed.
- **method**: cli The type of the response, i.e., raw text (cli_ascii) or structured document (cli). Defaults to cli (structured data).
- **transport**: https Specifies the type of connection transport to use. Valid values for the connection are http, and https.
- **host**: localhost The IP address or DNS host name of the connection device.
- **username**: admin The username to pass to the device to authenticate the NX-API connection.
- **password**: The password to pass to the device to authenticate the NX-API connection.
- **port**: The TCP port of the endpoint for the NX-API connection. If this keyword is not specified, the default value is automatically determined by the transport type (80 for http, or 443 for https).
- **timeout**: 60 Time in seconds to wait for the device to respond. Default: 60 seconds.
- **verify**: True Either a boolean, in which case it controls whether we verify the NX-API TLS certificate, or a string, in which case it must be a path to a CA bundle to use. Defaults to True.

CLI Example:

```
salt-call --local nxps_api.rpc 'show version'
```

salt.modules.nxos_api.show(commands, raw_text=True, **kwargs)
Execute one or more show (non-configuration) commands.

- **commands**: The commands to be executed.
- **raw_text**: True Whether to return raw text or structured data.
- **transport**: https Specifies the type of connection transport to use. Valid values for the connection are http, and https.
- **host**: localhost The IP address or DNS host name of the connection device.
- **username**: admin The username to pass to the device to authenticate the NX-API connection.
- **password**: The password to pass to the device to authenticate the NX-API connection.
- **port**: The TCP port of the endpoint for the NX-API connection. If this keyword is not specified, the default value is automatically determined by the transport type (80 for http, or 443 for https).
- **timeout**: 60 Time in seconds to wait for the device to respond. Default: 60 seconds.
- **verify**: True Either a boolean, in which case it controls whether we verify the NX-API TLS certificate, or a string, in which case it must be a path to a CA bundle to use. Defaults to True.

CLI Example:

```
salt-call --local nxos_api.show 'show version'
salt '*' nxos_api.show 'show bgp sessions' 'show processes' raw_text=False
salt 'regular-minion' nxos_api.show 'show interfaces' host=sw01.example.com
  --username=test password=test
```
23.9.74 salt.modules.nxos_upgrade

Execution module to upgrade Cisco NX-OS Switches.
New in version 3001.

This module supports execution using a Proxy Minion or Native Minion:

1) Proxy Minion: Connect over SSH or NX-API HTTP(S). See salt.proxy.nxos for proxy minion setup details.

2) Native Minion: Connect over NX-API Unix Domain Socket (UDS). Install the minion inside the GuestShell running on the NX-OS device.

maturity  new
platform  nxos
codeauthor  Michael G Wiebe

Note: To use this module over remote NX-API the feature must be enabled on the NX-OS device by executing feature nxapi in configuration mode.
This is not required for NX-API over UDS.

Configuration example:

switch# conf t
switch(config)# feature nxapi

To check that NX-API is properly enabled, execute show nxapi.

Output example:

switch# show nxapi
nxapi enabled
HTTPS Listen on port 443

salt.modules.nxos_upgrade.check_upgrade_impact(system_image, kickstart_image=None, issu=True, **kwargs)

Display upgrade impact information without actually upgrading the device.

system_image (Mandatory Option)  Path on bootflash: to system image upgrade file.
kickstart_image Path on bootflash: to kickstart image upgrade file. (Not required if using combined system/kickstart image file) Default: None
issu  In Service Software Upgrade (non-disruptive). When True, the upgrade will abort if issu is not possible. When False: Force (disruptive) Upgrade/Downgrade. Default: True
timeout  Timeout in seconds for long running 'install all' impact command. Default: 900
error_pattern  Use the option to pass in a regular expression to search for in the output of the 'install all impact' command that indicates an error has occurred. This option is only used when proxy minion connection type is ssh and otherwise ignored.

salt 'n9k' nxos.check_upgrade_impact system_image=nxos.9.2.1.bin
salt 'n7k' nxos.check_upgrade_impact system_image=n7000-s2-dk9.8.1.1.bin \ kickstart_image=n7000-s2-kickstart.8.1.1.bin issu=False
salt.modules.nxos_upgrade.upgrade(system_image, kickstart_image=None, issu=True, **kwargs)

Upgrade NX-OS switch.

system_image (Mandatory Option) Path on bootflash: to system image upgrade file.

kickstart_image Path on bootflash: to kickstart image upgrade file. (Not required if using combined system/kickstart image file) Default: None

issu Set this option to True when an In Service Software Upgrade or non-disruptive upgrade is required. The upgrade will abort if issu is not possible. Default: True

timeout Timeout in seconds for long running 'install all' upgrade command. Default: 900

error_pattern Use the option to pass in a regular expression to search for in the output of the 'install all upgrade command that indicates an error has occurred. This option is only used when proxy minion connection type is ssh and otherwise ignored.

```
salt 'n9k' nxos.upgrade system_image=nxos.9.2.1.bin
salt 'n7k' nxos.upgrade system_image=n7000-s2-dk9.8.1.1.bin \ kickstart_image=n7000-s2-kickstart.8.1.1.bin issu=False
```

23.9.75 salt.modules.omapi

This module interacts with an ISC DHCP Server via OMAPI. server_ip and server_port params may be set in the minion config or pillar:

```
omapi.server_ip: 127.0.0.1
omapi.server_port: 7991
```

depends pypureomapi Python module

salt.modules.omapi.add_host(mac, name=None, ip=None, ddns=False, group=None, supersede_host=False)

Add a host object for the given mac.

CLI Example:

```
salt dhcp-server omapi.add_host ab:ab:ab:ab:ab:ab name=host1
```

Add ddns-hostname and a fixed-ip statements:

```
salt dhcp-server omapi.add_host ab:ab:ab:ab:ab:ab name=host1 ip=10.1.1.1 ddns=true
```

salt.modules.omapi.delete_host(mac=None, name=None)

Delete the host with the given mac or name.

CLI Examples:

```
salt dhcp-server omapi.delete_host name=host1
salt dhcp-server omapi.delete_host mac=ab:ab:ab:ab:ab:ab
```
23.9.76 `salt.modules.openscap`

Module for OpenSCAP Management

```python
salt.modules.openscap.xccdf(params)
```

Run `oscap xccdf` commands on minions. It uses `cp.push_dir` to upload the generated files to the salt master in the master's minion files cachedir (defaults to `/var/cache/salt/master/minions/minion-id/files`)

It needs `file_recv` set to `True` in the master configuration file.

CLI Example:

```
salt '*' openscap.xccdf "eval --profile Default /usr/share/openscap/scap-yast2sec-xccdf.xml"
```

23.9.77 `salt.modules.philips_hue`

Philips HUE lamps module for proxy.

New in version 2015.8.3.

23.9.78 `salt.modules.powerpath`

powerpath support.

Assumes RedHat

```python
salt.modules.powerpath.add_license(key)
```

Add a license

```python
salt.modules.powerpath.has_powerpath()
```

```python
salt.modules.powerpath.list_licenses()
```

returns a list of applied powerpath license keys

```python
salt.modules.powerpath.remove_license(key)
```

Remove a license

23.9.79 `salt.modules.purefa`

Management of Pure Storage FlashArray

**Installation Prerequisites**

- You will need the `purestorage` python package in your python installation path that is running salt.

```
pip install purestorage
```

- Configure Pure Storage FlashArray authentication. Use one of the following three methods.
  1. From the minion config
pure_tags:
    fa:
        san_ip: management vip or hostname for the FlashArray
        api_token: A valid api token for the FlashArray being managed

2) From environment (PUREFA_IP and PUREFA_API)
3) From the pillar (PUREFA_IP and PUREFA_API)

maintainer Simon Dodsley (simon@purestorage.com)
maturity new
requires purestorage
platform all

New in version 2018.3.0.

salt.modules.purefa.hg_create(name, host=None, volume=None)
Create a hostgroup on a Pure Storage FlashArray.
Will return False if hostgroup already exists, or if named host or volume do not exist.
New in version 2018.3.0.
name [string] name of hostgroup (truncated to 63 characters)
host [string] name of host to add to hostgroup
volume [string] name of volume to add to hostgroup

CLI Example:
salt '*' purefa.hg_create foo host=bar volume=vol

salt.modules.purefa.hg_delete(name)
Delete a hostgroup on a Pure Storage FlashArray (removes all volumes and hosts).
Will return False if hostgroup is already in a deleted state.
New in version 2018.3.0.
name [string] name of hostgroup

CLI Example:
salt '*' purefa.hg_delete foo

salt.modules.purefa.hg_remove(name, volume=None, host=None)
Remove a host and/or volume from a hostgroup on a Pure Storage FlashArray.
Will return False if hostgroup does not exist, or named host or volume are not in the hostgroup.
New in version 2018.3.0.
name [string] name of hostgroup
volume [string] name of volume to remove from hostgroup
host [string] name of host to remove from hostgroup

CLI Example:
salt '*' purefa.hg_remove foo volume=test host=bar
salt.modules.purefa.hg_update(name, host=None, volume=None)
Adds entries to a hostgroup on a Pure Storage FlashArray.
Will return False if hostgroup doesn't exist, or host or volume do not exist.
New in version 2018.3.0.
name [string] name of hostgroup
host [string] name of host to add to hostgroup
volume [string] name of volume to add to hostgroup
CLI Example:
salt '*' purefa.hg_update foo host=bar volume=vol

salt.modules.purefa.host_create(name, iqn=None, wwn=None)
Add a host on a Pure Storage FlashArray.
Will return False if host already exists, or the iSCSI or Fibre Channel parameters are not in a valid format. See Pure Storage FlashArray documentation.
New in version 2018.3.0.
name [string] name of host (truncated to 63 characters)
iqn [string] iSCSI IQN of host
wwn [string] Fibre Channel WWN of host
CLI Example:
salt '*' purefa.host_create foo iqn='<Valid iSCSI IQN>' wwn='<Valid WWN>'

salt.modules.purefa.host_delete(name)
Delete a host on a Pure Storage FlashArray (detaches all volumes).
Will return False if the host doesn't exist.
New in version 2018.3.0.
name [string] name of host
CLI Example:
salt '*' purefa.host_delete foo

salt.modules.purefa.host_update(name, iqn=None, wwn=None)
Update a host's port definitions on a Pure Storage FlashArray.
Will return False if new port definitions are already in use by another host, or are not in a valid format. See Pure Storage FlashArray documentation.
New in version 2018.3.0.
name [string] name of host
iqn [string] Additional iSCSI IQN of host
wwn [string] Additional Fibre Channel WWN of host
CLI Example:
salt '*' purefa.host_update foo iqn='<Valid iSCSI IQN>' wwn='<Valid WWN>'
salt.modules.purefa.pg_create(name, hostgroup=None, host=None, volume=None, enabled=True)

Create a protection group on a Pure Storage FlashArray.

Will return False is the following cases:
- Protection Group already exists
- Protection Group in a deleted state
- More than one type is specified - protection groups are for only hostgroups, hosts or volumes
- Named type for protection group does not exist

New in version 2018.3.0.

name [string] name of protection group
hostgroup [string] name of hostgroup to add to protection group
host [string] name of host to add to protection group
volume [string] name of volume to add to protection group

CLI Example:
```
salt '*' purefa.pg_create foo [hostgroup=foo | host=bar | volume=vol] &<br>enabled=[true | false]
```

salt.modules.purefa.pg_delete(name, eradicate=False)

Delete a protection group on a Pure Storage FlashArray.

Will return False if protection group is already in a deleted state.

New in version 2018.3.0.

name [string] name of protection group

CLI Example:
```
salt '*' purefa.pg_delete foo
```

salt.modules.purefa.pg_eradicate(name)

Eradicate a deleted protection group on a Pure Storage FlashArray.

Will return False if protection group is not in a deleted state.

New in version 2018.3.0.

name [string] name of protection group

CLI Example:
```
salt '*' purefa.pg_eradicate foo
```

salt.modules.purefa.pg_remove(name, hostgroup=None, host=None, volume=None)

Remove a hostgroup, host or volume from a protection group on a Pure Storage FlashArray.

Will return False in the following cases:
- Protection group does not exist
- Specified type is not currently associated with the protection group

New in version 2018.3.0.

name [string] name of hostgroup
**hostgroup** [string] name of hostgroup to remove from protection group

**host** [string] name of host to remove from hostgroup

**volume** [string] name of volume to remove from hostgroup

CLI Example:

```bash
salt '*' purefa.pg_remove foo [hostgroup=bar | host=test | volume=bar]
```

salt.modules.purefa.

**pg_update** *(name, hostgroup=None, host=None, volume=None)*

Update a protection group on a Pure Storage FlashArray.

**Will return False in the following cases:**

- Protection group does not exist
- Incorrect type selected for current protection group type
- Specified type does not exist

New in version 2018.3.0.

**name** [string] name of protection group

**hostgroup** [string] name of hostgroup to add to protection group

**host** [string] name of host to add to protection group

**volume** [string] name of volume to add to protection group

CLI Example:

```bash
salt '*' purefa.pg_update foo [hostgroup=foo | host=bar | volume=vol]
```

salt.modules.purefa.

**snap_create** *(name, suffix=None)*

Create a volume snapshot on a Pure Storage FlashArray.

**Will return False if volume selected to snap does not exist.**

New in version 2018.3.0.

**name** [string] name of volume to snapshot

**suffix** [string] if specified forces snapshot name suffix. If not specified defaults to timestamp.

CLI Example:

```bash
salt '*' purefa.snap_create foo
salt '*' purefa.snap_create foo suffix=bar
```

salt.modules.purefa.

**snap_delete** *(name, suffix=None, eradicate=False)*

Delete a volume snapshot on a Pure Storage FlashArray.

**Will return False if selected snapshot does not exist.**

New in version 2018.3.0.

**name** [string] name of volume

**suffix** [string] name of snapshot

**eradicate** [boolean] Eradicate snapshot after deletion if True. Default is False

CLI Example:
salt '...' purefa.snap_delete foo suffix=snap eradicate=True

salt.modules.purefa.snap_eradicate(name, suffix=None)
    Eradicate a deleted volume snapshot on a Pure Storage FlashArray.
    Will return False if snapshot is not in a deleted state.
    New in version 2018.3.0.
    name  [string] name of volume
    suffix [string] name of snapshot
    CLI Example:
    salt '...' purefa.snap_eradicate foo suffix=snap

salt.modules.purefa.snap_volume_create(name, target, overwrite=False)
    Create R/W volume from snapshot on a Pure Storage FlashArray.
    Will return False if target volume already exists and overwrite is not specified, or selected snapshot doesn't exist.
    New in version 2018.3.0.
    name  [string] name of volume snapshot
    target [string] name of clone volume
    overwrite [boolean] overwrite clone if already exists (default: False)
    CLI Example:
    salt '...' purefa.snap_volume_create foo.bar clone overwrite=True

salt.modules.purefa.volume_attach(name, host)
    Attach a volume to a host on a Pure Storage FlashArray.
    Host and volume must exist or else will return False.
    New in version 2018.3.0.
    name  [string] name of volume
    host  [string] name of host
    CLI Example:
    salt '...' purefa.volume_attach foo bar

salt.modules.purefa.volume_clone(name, target, overwrite=False)
    Clone an existing volume on a Pure Storage FlashArray.
    Will return False if source volume doesn't exist, or target volume already exists and overwrite not specified.
    New in version 2018.3.0.
    name  [string] name of volume
    target [string] name of clone volume
    overwrite [boolean] overwrite clone if already exists (default: False)
    CLI Example:
salt '_salt Documentation, Release 3002.5'

salt 'purefa.volume_clone foo bar overwrite=True

```
salt.modules.purefa.volume_create(name, size=None)
Create a volume on a Pure Storage FlashArray.
Will return False if volume already exists.
New in version 2018.3.0.
```

name [string] name of volume (truncated to 63 characters)
size [string] if specified capacity of volume. If not specified default to 1G. Refer to Pure Storage documenta-
tion for formatting rules.

CLl Example:
```
salt '*' purefa.volume_create foo
salt '*' purefa.volume_create foo size=10T
```

salt.modules.purefa.volume_delete(name, eradicate=False)
Delete a volume on a Pure Storage FlashArray.
Will return False if volume doesn't exist is already in a deleted state.
New in version 2018.3.0.

name [string] name of volume
eradicate [boolean] Eradicate volume after deletion if True. Default is False

CLl Example:
```
salt '*' purefa.volume_delete foo eradicate=True
```

salt.modules.purefa.volume_detach(name, host)
Detach a volume from a host on a Pure Storage FlashArray.
Will return False if either host or volume do not exist, or if selected volume isn’t already connected to the host.
New in version 2018.3.0.

name [string] name of volume
host [string] name of host

CLl Example:
```
salt '*' purefa.volume_detach foo bar
```

salt.modules.purefa.volume_eradicate(name)
Eradicate a deleted volume on a Pure Storage FlashArray.
Will return False is volume is not in a deleted state.
New in version 2018.3.0.

name [string] name of volume

CLl Example:
```
salt '*' purefa.volume_eradicate foo
```

23.9. execution modules

1245
salt.modules.purefa.volume_extend(name, size)
    Extend an existing volume on a Pure Storage FlashArray.
    Will return False if new size is less than or equal to existing size.
    New in version 2018.3.0.
    name  [string] name of volume
    size  [string] New capacity of volume. Refer to Pure Storage documentation for formatting rules.
    CLI Example:
    salt '*' purefa.volume_extend foo 10T

23.9.80  salt.modules.purefb
Management of Pure Storage FlashBlade

Installation Prerequisites

- You will need the purity_fb python package in your python installation path that is running salt.
  
  pip install purity_fb

- Configure Pure Storage FlashBlade authentication. Use one of the following three methods.
  1) From the minion config
     
     pure_tags:
     fb:
       san_ip: management vip or hostname for the FlashBlade
       api_token: A valid api token for the FlashBlade being managed

   2) From environment (PUREFB_IP and PUREFB_API)
   3) From the pillar (PUREFB_IP and PUREFB_API)

 maintainer  Simon Dodsley (simon@purestorage.com)
maturity  new
requires  purity_fb
platform  all
New in version 2019.2.0.

salt.modules.purefb.fs_create(name, size=None, proto='NFS', nfs_rules='*(rw,no_root_squash)', snapshot=False)
    Create a filesystem on a Pure Storage FlashBlade.
    Will return False if filesystem already exists.
    New in version 2019.2.0.
    name  [string] name of filesystem (truncated to 63 characters)
    proto  [string] (Optional) Sharing protocol (NFS, CIFS or HTTP). If not specified default is NFS
    snapshot: boolean  (Optional) Are snapshots enabled on the filesystem. Default is False
nfs_rules [string] (Optional) export rules for NFS. If not specified default is *(rw,no_root_squash).
Refer to Pure Storage documentation for formatting rules.

size [string] if specified capacity of filesystem. If not specified default to 32G. Refer to Pure Storage documentation for formatting rules.

CLI Example:

```
salt '*' purefb.fs_create foo proto=CIFS
salt '*' purefb.fs_create foo size=10T
```

salt.modules.purefb.fs_delete(name, eradicate=False)
Delete a share on a Pure Storage FlashBlade.
Will return False if filesystem doesn't exist or is already in a deleted state.
New in version 2019.2.0.

name [string] name of filesystem

eradicate [boolean] (Optional) Eradicate filesystem after deletion if True. Default is False

CLI Example:

```
salt '*' purefb.fs_delete foo eradicate=True
```

salt.modules.purefb.fs_eradicate(name)
Eradicate a deleted filesystem on a Pure Storage FlashBlade.
Will return False is filesystem is not in a deleted state.
New in version 2019.2.0.

name [string] name of filesystem

CLI Example:

```
salt '*' purefb.fs_eradicate foo
```

salt.modules.purefb.fs_extend(name, size)
Resize an existing filesystem on a Pure Storage FlashBlade.
Will return False if new size is less than or equal to existing size.
New in version 2019.2.0.

name [string] name of filesystem

size [string] New capacity of filesystem. Refer to Pure Storage documentation for formatting rules.

CLI Example:

```
salt '*' purefb.fs_extend foo 10T
```

salt.modules.purefb.fs_update(name, rules, snapshot=False)
Update filesystem on a Pure Storage FlashBlade.
Allows for change of NFS export rules and enabling/disabled of snapshotting capability.
New in version 2019.2.0.

name [string] name of filesystem

rules [string] NFS export rules for filesystem Refer to Pure Storage documentation for formatting rules.

snapshot: boolean (Optional) Enable/Disable snapshots on the filesystem. Default is False
CLI Example:

```
salt '*' purefb.fs_nfs_update foo rules='10.234.112.23(ro), 10.234.112.24(rw)' snapshot=True
```

salt.modules.purefb.\texttt{snap\_create}(name, suffix=None)

Create a filesystem snapshot on a Pure Storage FlashBlade.

Will return False if filesystem selected to snap does not exist.

New in version 2019.2.0.

\begin{itemize}
\item \texttt{name} [string] name of filesystem to snapshot
\item \texttt{suffix} [string] if specified forces snapshot name suffix. If not specified defaults to timestamp.
\end{itemize}

CLI Example:

```
salt '*' purefb.snap_create foo
salt '*' purefb.snap_create foo suffix=\texttt{bar}
```

salt.modules.purefb.\texttt{snap\_delete}(name, suffix=None, eradicate=False)

Delete a filesystem snapshot on a Pure Storage FlashBlade.

Will return False if selected snapshot does not exist.

New in version 2019.2.0.

\begin{itemize}
\item \texttt{name} [string] name of filesystem
\item \texttt{suffix} [string] name of snapshot
\item \texttt{eradicate} [boolean] Eradicate snapshot after deletion if True. Default is False
\end{itemize}

CLI Example:

```
salt '*' purefb.snap_delete foo suffix=\texttt{snap} eradicate=True
```

salt.modules.purefb.\texttt{snap\_eradicate}(name, suffix=None)

Eradicate a deleted filesystem snapshot on a Pure Storage FlashBlade.

Will return False if snapshot is not in a deleted state.

New in version 2019.2.0.

\begin{itemize}
\item \texttt{name} [string] name of filesystem
\item \texttt{suffix} [string] name of snapshot
\end{itemize}

CLI Example:

```
salt '*' purefb.snap_eradicate foo suffix=\texttt{snap}
```
23.9.81 salt.modules.pushbullet

Module for sending messages to Pushbullet (https://www.pushbullet.com)
New in version 2015.8.0.
Requires an `api_key` in `/etc/salt/minion`:

```
pushbullet:
  api_key: 'ABC123abc123ABC123abc123ABC123abc'
```

For example:

```
pushbullet:
  device: "Chrome"
  title: "Example push message"
  body: "Example push message."
```

salt.modules.pushbullet.push_note(`device=None, title=None, body=None`) Pushing a text note.

Parameters

- `device` -- Pushbullet target device
- `title` -- Note title
- `body` -- Note body

Returns Boolean if message was sent successfully.

CLI Example:

```
salt "+" pushbullet.push_note device="Chrome" title="Example title" body="Example push message."
```

23.9.82 salt.modules.pushover_notify

Module for sending messages to Pushover (https://www.pushover.net)
New in version 2016.3.0.

`configuration` This module can be used by either passing an `api key` and version directly or by specifying both in a configuration profile in the salt master/minion config.

For example:

```
pushover:
  token: abAHuZyCLtdH8P4zhmFZmgUHUsv1ei8
```

salt.modules.pushover_notify.post_message(`user=None, device=None, message=None, title=None, priority=None, expire=None, retry=None, sound=None, api_version=1, token=None`) Send a message to a Pushover user or group.

Parameters

- `user` -- The user or group to send to, must be key of user or group not email address.
- `message` -- The message to send to the PushOver user or group.
- **title** -- Specify who the message is from.
- **priority** -- The priority of the message, defaults to 0.
- **expire** -- The message should expire after N number of seconds.
- **retry** -- The number of times the message should be retried.
- **sound** -- The sound to associate with the message.
- **api_version** -- The PushOver API version, if not specified in the configuration.
- **token** -- The PushOver token, if not specified in the configuration.

**Returns** Boolean if message was sent successfully.

CLI Example:

```bash
salt '*' pushover.post_message user='xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx' title='Message from Salt' message='Build is done'
```

```
salt '*' pushover.post_message user='xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx' title='Message from Salt' message='Build is done' priority='2' expire='720' retry='5'
```

## 23.9.83 salt.modules.pyenv

Manage python installations with pyenv.

**Note:** Git needs to be installed and available via PATH if pyenv is to be installed automatically by the module.

New in version 2014.4.0.

**salt.modules.pyenv.default** *(python=None, runas=None)*

Returns or sets the currently defined default python.

- **python=None** The version to set as the default. Should match one of the versions listed by pyenv. versions. Leave blank to return the current default.

CLI Example:

```bash
salt '*' pyenv.default
```

```bash
salt '*' pyenv.default 2.0.0-p0
```

**salt.modules.pyenv.do** *(cmdline=None, runas=None)*

Execute a python command with pyenv's shims from the user or the system.

CLI Example:

```bash
salt '*' pyenv.do 'gem list bundler'
```

```bash
salt '*' pyenv.do 'gem list bundler' deploy
```

**salt.modules.pyenv.do_with_python** *(python, cmdline, runas=None)*

Execute a python command with pyenv's shims using a specific python version.

CLI Example:

```bash
salt '*' pyenv.do_with_python 2.0.0-p0 'gem list bundler'
```

```bash
salt '*' pyenv.do_with_python 2.0.0-p0 'gem list bundler' deploy
```
salt.modules.pyenv.install(runas=None, path=None)
Install pyenv systemwide

CLI Example:
salt '*' pyenv.install

salt.modules.pyenv.install_python(python, runas=None)
Install a python implementation.

python The version of python to install, should match one of the versions listed by pyenv.list

CLI Example:
salt '*' pyenv.install_python 2.0.0-p0

salt.modules.pyenv.is_installed(runas=None)
Check if pyenv is installed.

CLI Example:
salt '*' pyenv.is_installed

salt.modules.pyenv.list_(runas=None)
List the installable versions of python.

CLI Example:
salt '*' pyenv.list

salt.modules.pyenv.rehash(runas=None)
Run pyenv rehash to update the installed shims.

CLI Example:
salt '*' pyenv.rehash

salt.modules.pyenv.uninstall_python(python, runas=None)
Uninstall a python implementation.

python The version of python to uninstall. Should match one of the versions listed by pyenv.versions

CLI Example:
salt '*' pyenv.uninstall_python 2.0.0-p0

salt.modules.pyenv.update(runas=None, path=None)
Updates the current versions of pyenv and python-Build

CLI Example:
salt '*' pyenv.update

salt.modules.pyenv.versions(runas=None)
List the installed versions of python.

CLI Example:
salt '*' pyenv.versions

23.9. execution modules
23.9.84 salt.modules.rest_sample_utils

Utility functions for the rest_sample

salt.modules.rest_sample_utils.fix_outage()

"Fix" the outage

CLI Example:

```
salt 'rest-sample-proxy' rest_sample.fix_outage
```

salt.modules.rest_sample_utils.get_test_string()

Helper function to test cross-calling to the __proxy__ dunder.

CLI Example:

```
salt 'rest-sample-proxy' rest_sample.get_test_string
```

23.9.85 salt.modules.s3

Connection module for Amazon S3

**configuration** This module accepts explicit s3 credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More Information available at:


If IAM roles are not used you need to specify them either in a pillar or in the minion's config file:

```
s3.keyid: GKTADJGHEIQSXMKKRBJ08H
s3.key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
```

**Warning:** This is literally the pillar key s3.keyid or the config option s3.keyid, not:

```
s3:
  keyid: blah
```

A **service_url** may also be specified in the configuration:

```
s3.service_url: s3.amazonaws.com
```

A **role_arn** may also be specified in the configuration:

```
s3.role_arn: arn:aws:iam::111111111111:role/my-role-to-assume
```

If a **service_url** is not specified, the default is s3.amazonaws.com. This may appear in various documentation as an "endpoint". A comprehensive list for Amazon S3 may be found at:

http://docs.aws.amazon.com/general/latest/gr/rande.html#s3_region

The **service_url** will form the basis for the final endpoint that is used to query the service.

Path style can be enabled:

```
s3.path_style: True
```
This can be useful if you need to use Salt with a proxy for a S3 compatible storage.

You can use either HTTPS protocol or HTTP protocol:

```
s3.https_enable: True
```

SSL verification may also be turned off in the configuration:

```
s3.verify_ssl: False
```

This is required if using S3 bucket names that contain a period, as these will not match Amazon's S3 wildcard certificates. Certificate verification is enabled by default.

AWS region may be specified in the configuration:

```
s3.location: eu-central-1
```

Default is `us-east-1`.

This module should be usable to query other S3-like services, such as Eucalyptus.

**depends** requests

```
salt.modules.s3.delete(bucket, path=None, action=None, key=None, keyid=None, service_url=None, verify_ssl=None, kms_keyid=None, location=None, role_arn=None, path_style=None, https_enable=None)
```

Delete a bucket, or delete an object from a bucket.

CLI Example to delete a bucket:

```
salt myminion s3.delete mybucket
```

CLI Example to delete an object from a bucket:

```
salt myminion s3.delete mybucket remoteobject
```

```
salt.modules.s3.get(bucket='', path='', return_bin=False, action=None, local_file=None, key=None, keyid=None, service_url=None, verify_ssl=None, kms_keyid=None, location=None, role_arn=None, path_style=None, https_enable=None)
```

List the contents of a bucket, or return an object from a bucket. Set return_bin to True in order to retrieve an object wholesale. Otherwise, Salt will attempt to parse an XML response.

CLI Example to list buckets:

```
salt myminion s3.get
```

CLI Example to list the contents of a bucket:

```
salt myminion s3.get mybucket
```

CLI Example to return the binary contents of an object:

```
salt myminion s3.get mybucket myfile.png return_bin=True
```

CLI Example to save the binary contents of an object to a local file:

```
salt myminion s3.get mybucket myfile.png local_file=/tmp/myfile.png
```

It is also possible to perform an action on a bucket. Currently, S3 supports the following actions:
To perform an action on a bucket:

```
salt myminion s3.get mybucket myfile.png action=acl
```

```
salt.modules.s3.head(bucket, path='', key=None, keyid=None, service_url=None, verify_ssl=None, kms_keyid=None, location=None, role_arn=None, path_style=None, https_enable=None)
```

Return the metadata for a bucket, or an object in a bucket.

CLI Examples:

```
salt myminion s3.head mybucket
salt myminion s3.head mybucket myfile.png
```

```
salt.modules.s3.put(bucket, path=None, return_bin=False, action=None, local_file=None, key=None, keyid=None, service_url=None, verify_ssl=None, kms_keyid=None, location=None, role_arn=None, path_style=None, https_enable=None)
```

Create a new bucket, or upload an object to a bucket.

CLI Example to create a bucket:

```
salt myminion s3.put mybucket
```

CLI Example to upload an object to a bucket:

```
salt myminion s3.put mybucket remotepath local_file=/path/to/file
```

### 23.9.86 salt.modules.s6

`s6` service module

This module is compatible with the `service` states, so it can be used to maintain services using the `provider` argument:

```
myservice:
  service:
    - running
    - provider: s6
```

Note that the `enabled` argument is not available with this provider.

```
codeauthor Marek Skrobacki <skrobul@skrobul.com>
```

```
salt.modules.s6.available(name)
```

Returns `True` if the specified service is available, otherwise returns `False`.

CLI Example:
<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
<th>CLI Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>salt '*' s6.available foo</code></td>
<td>Calls s6.restart() function</td>
<td><code>salt '*' s6.available foo</code></td>
</tr>
<tr>
<td><code>salt.modules.s6.full_restart(name)</code></td>
<td>Calls s6.restart() function</td>
<td><code>salt '*' s6.full_restart &lt;service name&gt;</code></td>
</tr>
<tr>
<td><code>salt.modules.s6.get_all()</code></td>
<td>Return a list of all available services</td>
<td><code>salt '*' s6.get_all</code></td>
</tr>
<tr>
<td><code>salt.modules.s6.missing(name)</code></td>
<td>The inverse of s6.available. Returns True if the specified service is not available, otherwise returns False.</td>
<td><code>salt '*' s6.missing foo</code></td>
</tr>
<tr>
<td><code>salt.modules.s6.reload_(name)</code></td>
<td>Send a HUP to service via s6</td>
<td><code>salt '*' s6.reload &lt;service name&gt;</code></td>
</tr>
<tr>
<td><code>salt.modules.s6.restart(name)</code></td>
<td>Restart service via s6. This will stop/start service</td>
<td><code>salt '*' s6.restart &lt;service name&gt;</code></td>
</tr>
<tr>
<td><code>salt.modules.s6.start(name)</code></td>
<td>Starts service via s6</td>
<td><code>salt '*' s6.start &lt;service name&gt;</code></td>
</tr>
<tr>
<td><code>salt.modules.s6.status(name, sig=None)</code></td>
<td>Return the status for a service via s6, return pid if running</td>
<td><code>salt '*' s6.status &lt;service name&gt;</code></td>
</tr>
<tr>
<td><code>salt.modules.s6.stop(name)</code></td>
<td>Stops service via s6</td>
<td><code>salt '*' s6.stop &lt;service name&gt;</code></td>
</tr>
</tbody>
</table>
Salt Documentation, Release 3002.5

salt.modules.s6.term(name)
    Send a TERM to service via s6

    CLI Example:
    
    salt '*' s6.term <service name>

23.9.87 salt.modules.salt_version

Access Salt's elemental release code-names.

New in version 3000.

Salt's feature release schedule is based on the Periodic Table, as described in the Version Numbers documentation.

When a feature was added (or removed) in a specific release, it can be difficult to build out future-proof functionality that is dependent on a naming scheme that moves.

For example, a state syntax needs to change to support an option that will be removed in the future, but there are many Minion versions in use across an infrastructure. It would be handy to use some Jinja syntax to check for these instances to perform one state syntax over another.

A simple example might be something like the following:

```#
# a boolean check #
{% set option_deprecated = salt['salt_version.less_than']('3001') %}
{% if option_deprecated %}
    <use old syntax>
{% else %}
    <use new syntax>
{% endif %}
```

salt.modules.salt_version.equal(name)
    Returns a boolean (True) if the minion's current version code name matches the named version.

    name  The release code name to check the version against.

    CLI Example:
    
    salt '*' salt_version.equal 'Oxygen'

salt.modules.salt_version.get_release_number(name)
    Returns the release number of a given release code name in a MAJOR.PATCH format.

    If the release name has not been given an assigned release number, the function returns a string. If the release cannot be found, it returns None.

    name  The release code name for which to find a release number.

    CLI Example:
    
    salt '*' salt_version.get_release_number 'Oxygen'

salt.modules.salt_version.greater_than(name)
    Returns a boolean (True) if the minion's current version code name is greater than the named version.

    name  The release code name to check the version against.

    CLI Example:
salt 'salt_version.greater_than 'Oxygen'

salt.modules.salt_version.

Salt Documentation, Release 3002.5

23.9.88 salt.modules.scp

SCP Module

New in version 2019.2.0.
Module to copy files via SCP
salt.modules.scp_mod.get(remote_path, local_path='', recursive=False, preserve_times=False, **kwargs)

Transfer files and directories from remote host to the localhost of the Minion.

remote_path Path to retrieve from remote host. Since this is evaluated by scp on the remote host, shell
wildcards and environment variables may be used.

recursive: False Transfer files and directories recursively.

preserve_times: False Preserve mtime and atime of transferred files and directories.

hostname The hostname of the remote device.

port: 22 The port of the remote device.

username The username required for SSH authentication on the device.

password Used for password authentication. It is also used for private key decryption if passphrase is not
given.

passphrase Used for decrypting private keys.

pkey An optional private key to use for authentication.

key_filename The filename, or list of filenames, of optional private key(s) and/or certificates to try for authen-
tication.

timeout An optional timeout (in seconds) for the TCP connect.

socket_timeout: 10 The channel socket timeout in seconds.

buff_size: 16384 The size of the SCP send buffer.

allow_agent: True Set to False to disable connecting to the SSH agent.

look_for_keys: True Set to False to disable searching for discoverable private key files in ~/.ssh/
banner_timeout An optional timeout (in seconds) to wait for the SSH banner to be presented.

auth_timeout An optional timeout (in seconds) to wait for an authentication response.

auto_add_policy: False Automatically add the host to the known_hosts.

CLI Example:
salt 'salt '*' scp.get /var/tmp/file /tmp/file hostname=10.10.10.1 auto_add_policy=True

salt.modules.scp_mod.put(files, remote_path=None, recursive=False, preserve_times=False, saltenv='base', **kwargs)
Transfer files and directories to remote host.
files  A single path or a list of paths to be transferred.
remote_path  The path on the remote device where to store the files.
recursive: True  Transfer files and directories recursively.
preserve_times: False  Preserve mtime and atime of transferred files and directories.
hostname  The hostname of the remote device.
port: 22  The port of the remote device.
username  The username required for SSH authentication on the device.
password  Used for password authentication. It is also used for private key decryption if passphrase is not given.
passphrase  Used for decrypting private keys.
pkey  An optional private key to use for authentication.
key_filename  The filename, or list of filenames, of optional private key(s) and/or certificates to try for authentication.
timeout  An optional timeout (in seconds) for the TCP connect.
socket_timeout: 10  The channel socket timeout in seconds.
buff_size: 16384  The size of the SCP send buffer.
allow_agent: True  Set to False to disable connecting to the SSH agent.
look_for_keys: True  Set to False to disable searching for discoverable private key files in ~/.ssh/
banner_timeout  An optional timeout (in seconds) to wait for the SSH banner to be presented.
auth_timeout  An optional timeout (in seconds) to wait for an authentication response.
auto_add_policy: False  Automatically add the host to the known_hosts.

CLI Example:
salt 'salt '*' scp.put /path/to/file /var/tmp/file hostname=server1 auto_add_policy=True

23.9.89  salt.modules.sensehat

Module for controlling the LED matrix or reading environment data on the SenseHat of a Raspberry Pi.
New in version 2017.7.0.

maintainer  Benedikt Werner <1benediktwerner@gmail.com>, Joachim Werner <joe@suse.com>
maturity  new
depends  sense_hat Python module

The rotation of the Pi can be specified in a pillar. This is useful if the Pi is used upside down or sideways to correct the orientation of the image being shown.

Example:
**sensehat:**
   *rotation*: 90

salt.modules.sensehat.clear(`color=None`)

Sets the LED matrix to a single color or turns all LEDs off.

CLI Example:

```python
salt 'raspberry' sensehat.clear
salt 'raspberry' sensehat.clear ['255, 0, 0']
```

salt.modules.sensehat.get_humidity()

Get the percentage of relative humidity from the humidity sensor.

salt.modules.sensehat.get_pixel(x, y)

Returns the color of a single pixel on the LED matrix.

- x  The x coordinate of the pixel. Ranges from 0 on the left to 7 on the right.
- y  The y coordinate of the pixel. Ranges from 0 at the top to 7 at the bottom.

*Note: Please read the note for get_pixels*

salt.modules.sensehat.get_pixels()

Returns a list of 64 smaller lists of [R, G, B] pixels representing the the currently displayed image on the LED matrix.

*Note: When using set_pixels the pixel values can sometimes change when you read them again using get_pixels. This is because we specify each pixel element as 8 bit numbers (0 to 255) but when they’re passed into the Linux frame buffer for the LED matrix the numbers are bit shifted down to fit into RGB 565. 5 bits for red, 6 bits for green and 5 bits for blue. The loss of binary precision when performing this conversion (3 bits lost for red, 2 for green and 3 for blue) accounts for the discrepancies you see.

The get_pixels method provides an accurate representation of how the pixels end up in frame buffer memory after you have called set_pixels.*

salt.modules.sensehat.get_pressure()

Gets the current pressure in Millibars from the pressure sensor.

salt.modules.sensehat.get_temperature()

Gets the temperature in degrees Celsius from the humidity sensor. Equivalent to calling get_temperature_from_humidity.

If you get strange results try using get_temperature_from_pressure.

salt.modules.sensehat.get_temperature_from_humidity()

Gets the temperature in degrees Celsius from the humidity sensor.

salt.modules.sensehat.get_temperature_from_pressure()

Gets the temperature in degrees Celsius from the pressure sensor.

salt.modules.sensehat.low_light(`low_light=True`)

Sets the LED matrix to low light mode. Useful in a dark environment.

CLI Example:
salt 'raspberry' sensehat.low_light
salt 'raspberry' sensehat.low_light False

salt.modules.sensehat.set_pixel(x, y, color)
Sets a single pixel on the LED matrix to a specified color.

x The x coordinate of the pixel. Ranges from 0 on the left to 7 on the right.
y The y coordinate of the pixel. Ranges from 0 at the top to 7 at the bottom.
color The new color of the pixel as a list of [R, G, B] values.

CLI Example:
salt 'raspberry' sensehat.set_pixel 0 0 '[255, 0, 0]'

salt.modules.sensehat.set_pixels(pixels)
Sets the entire LED matrix based on a list of 64 pixel values.

pixels A list of 64 [R, G, B] color values.

salt.modules.sensehat.show_image(image)
Displays an 8 x 8 image on the LED matrix.

image The path to the image to display. The image must be 8 x 8 pixels in size.

CLI Example:
salt 'raspberry' sensehat.show_image /tmp/my_image.png

salt.modules.sensehat.show_letter(letter, text_color=None, back_color=None)
Displays a single letter on the LED matrix.

letter The letter to display

text_color The color in which the letter is shown. Defaults to '[255, 255, 255]' (white).
back_color The background color of the display. Defaults to '[0, 0, 0]' (black).

CLI Example:
salt 'raspberry' sensehat.show_letter O
salt 'raspberry' sensehat.show_letter X '[255, 0, 0]'
salt 'raspberry' sensehat.show_letter B '[0, 0, 255]' '[255, 255, 0]'

salt.modules.sensehat.show_message(message, msg_type=None, text_color=None, back_color=None, scroll_speed=0.1)
Displays a message on the LED matrix.

message The message to display

msg_type The type of the message. Changes the appearance of the message.

Available types are:

| error | red text |
| warning | orange text |
| success | green text |
| info | blue text |

scroll_speed The speed at which the message moves over the LED matrix. This value represents the time paused for between shifting the text to the left by one column of pixels. Defaults to '0.1'.

1260 Chapter 23. Salt Module Reference
text_color  The color in which the message is shown. Defaults to '255, 255, 255' (white).

back_color  The background color of the display. Defaults to '0, 0, 0' (black).

CLI Example:

```
salt 'raspberry' sensehat.show_message 'Status ok'
salt 'raspberry' sensehat.show_message 'Something went wrong' error
salt 'raspberry' sensehat.show_message 'Red' text_color=[255, 0, 0]
salt 'raspberry' sensehat.show_message 'Hello world' None '[0, 0, 255]' '[255, 0]'
```

### 23.9.90  salt.modules.servicenow

Module for execution of ServiceNow CI (configuration items)

New in version 2016.11.0.

**depends**  servicenow_rest python module

**configuration**  Configure this module by specifying the name of a configuration profile in the minion config, minion pillar, or master config. The module will use the 'servicenow' key by default, if defined.

For example:

```
servicenow:
  instance_name: ''
  username: ''
  password: ''
```

salt.modules.servicenow.delete_record(table, sys_id)

Delete an existing record

**Parameters**

- **table** (str) -- The table name, e.g. sys_user
- **sys_id** (str) -- The unique ID of the record

CLI Example:

```
salt myminion servicenow.delete_record sys_computer 2134566
```

salt.modules.servicenow.non_structured_query(table, query=None, **kwargs)

Run a non-structured (not a dict) query on a servicenow table. See http://wiki.servicenow.com/index.php?title=Encoded_Query_Strings#gsc.tab=0 for help on constructing a non-structured query string.

**Parameters**

- **table** (str) -- The table name, e.g. sys_user
- **query** (str) -- The query to run (or use keyword arguments to filter data)

CLI Example:

```
salt myminion servicenow.non_structured_query sys_computer 'role=web'
salt myminion servicenow.non_structured_query sys_computer role=web type=computer
```

salt.modules.servicenow.set_change_request_state(change_id, state='approved')

Set the approval state of a change request/record

---

23.9.  execution modules  1261
Parameters

- **change_id** *(str)* -- The ID of the change request, e.g. CHG123545
- **state** *(str)* -- The target state, e.g. approved

CLI Example:

```
salt myminion servicenow.set_change_request_state CHG000123 declined
salt myminion servicenow.set_change_request_state CHG000123 approved
```

```
salt.modules.servicenow.update_record_field (table, sys_id, field, value)
```

Update the value of a record's field in a servicenow table

Parameters

- **table** *(str)* -- The table name, e.g. sys_user
- **sys_id** *(str)* -- The unique ID of the record
- **field** *(str)* -- The new value
- **value** *(str)* -- The new value

CLI Example:

```
salt myminion servicenow.update_record_field sys_user 2348234 first_name jimmy
```

23.9.91 **salt.modules.slackware_service**

The service module for Slackware

**Important:** If you feel that Salt should be using this module to manage services on a minion, and it is using a different module (or gives an error similar to 'service.start' is not available), see [here](#).

```
salt.modules.slackware_service.available (name)
```

Returns True if the specified service is available, otherwise returns False.

New in version 3002.

CLI Example:

```
salt '*' service.available sshd
```

```
salt.modules.slackware_service.disable (name, **kwargs)
```

Disable the named service to start at boot

New in version 3002.

CLI Example:

```
salt '*' service.disable <service name>
```

```
salt.modules.slackware_service.disabled (name)
```

Return True if the named service is enabled, false otherwise

New in version 3002.

CLI Example:
salt '*' service.disabled <service name>

salt.modules.slackware_service.enable(name, **kwargs)
    Enable the named service to start at boot
    New in version 3002.
    CLI Example:
        salt '*' service.enable <service name>

salt.modules.slackware_service.enabled(name, **kwargs)
    Return True if the named service is enabled, false otherwise
    New in version 3002.
    CLI Example:
        salt '*' service.enabled <service name>

salt.modules.slackware_service.force_reload(name)
    Force-reload the named service
    New in version 3002.
    CLI Example:
        salt '*' service.force_reload <service name>

salt.modules.slackware_service.get_all()
    Return all available boot services
    New in version 3002.
    CLI Example:
        salt '*' service.get_all

salt.modules.slackware_service.get_disabled()
    Return a set of services that are installed but disabled
    New in version 3002.
    CLI Example:
        salt '*' service.get_disabled

salt.modules.slackware_service.get_enabled()
    Return a list of service that are enabled on boot
    New in version 3002.
    CLI Example:
        salt '*' service.get_enabled

salt.modules.slackware_service.missing(name)
    The inverse of service.available. Returns True if the specified service is not available, otherwise returns False.
    New in version 3002.
CLI Example:

```
salt '*' service.missing sshd
```

**salt.modules.slackware_service.reload(name)**

Reload the named service

- New in version 3002.

CLI Example:

```
salt '*' service.reload <service name>
```

**salt.modules.slackware_service.restart(name)**

Restart the named service

- New in version 3002.

CLI Example:

```
salt '*' service.restart <service name>
```

**salt.modules.slackware_service.start(name)**

Start the specified service

- New in version 3002.

CLI Example:

```
salt '*' service.start <service name>
```

**salt.modules.slackware_service.status(name, sig=None)**

Return the status for a service. If the name contains globbing, a dict mapping service name to True/False values is returned.

- New in version 3002.

**Parameters**

- **name (str)** -- The name of the service to check
- **sig (str)** -- Signature to use to find the service via ps

**Returns**

- True if running, False otherwise
- dict: Maps service name to True if running, False otherwise

**Return type**

**bool**

CLI Example:

```
salt '*' service.status <service name> [service signature]
```

**salt.modules.slackware_service.stop(name)**

Stop the specified service

- New in version 3002.

CLI Example:

```
salt '*' service.stop <service name>
```
23.9.92 salt.modules.smf_service

Service support for Solaris 10 and 11, should work with other systems that use SMF also. (e.g. SmartOS)

**Important:** If you feel that Salt should be using this module to manage services on a minion, and it is using a different module (or gives an error similar to 'service.start' is not available), see [here](#).

salt.modules.smf_service.available(name)

Returns **True** if the specified service is available, otherwise returns **False**.

We look up the name with the svcs command to get back the FMRI This allows users to use simpler service names

CLI Example:

```bash
salt '*' service.available net-snmp
```

salt.modules.smf_service.disable(name, **kwargs)

Disable the named service to start at boot

CLI Example:

```bash
salt '*' service.disable <service name>
```

salt.modules.smf_service.disabled(name)

Check to see if the named service is disabled to start on boot

CLI Example:

```bash
salt '*' service.disabled <service name>
```

salt.modules.smf_service.enable(name, **kwargs)

Enable the named service to start at boot

CLI Example:

```bash
salt '*' service.enable <service name>
```

salt.modules.smf_service.enabled(name, **kwargs)

Check to see if the named service is enabled to start on boot

CLI Example:

```bash
salt '*' service.enabled <service name>
```

salt.modules.smf_service.get_all()

Return all installed services

CLI Example:

```bash
salt '*' service.get_all
```

salt.modules.smf_service.get_disabled()

Return the disabled services

CLI Example:

```bash
salt '*' service.get_disabled
```
salt.modules.smf_service.get_enabled()
Return the enabled services

CLI Example:
salt '*' service.get_enabled

salt.modules.smf_service.get_running()
Return the running services

CLI Example:
salt '*' service.get_running

salt.modules.smf_service.get_stopped()
Return the stopped services

CLI Example:
salt '*' service.get_stopped

salt.modules.smf_service.missing(name)
The inverse of service.available. Returns True if the specified service is not available, otherwise returns False.

CLI Example:
salt '*' service.missing net-snmp

salt.modules.smf_service.reload_(name)
Reload the named service

CLI Example:
salt '*' service.reload <service name>

salt.modules.smf_service.restart(name)
Restart the named service

CLI Example:
salt '*' service.restart <service name>

salt.modules.smf_service.start(name)
Start the specified service

CLI Example:
salt '*' service.start <service name>

salt.modules.smf_service.status(name, sig=None)
Return the status for a service. If the name contains globbing, a dict mapping service name to True/False values is returned.

Changed in version 2018.3.0: The service name can now be a glob (e.g. salt*)

Parameters

- name (str) -- The name of the service to check
- sig (str) -- Not implemented
Returns True if running, False otherwise
dict: Maps service name to True if running, False otherwise

Return type bool

CLI Example:
```
salt '*' service.status <service name>
```

```
salt.modules.smf_service.stop(name)
Stop the specified service

CLI Example:
```
salt '*' service.stop <service name>
```

23.9.93 salt.modules.splunk

Module for interop with the Splunk API

New in version 2016.3.0.

depends

- splunk-sdk python module

configuration Configure this module by specifying the name of a configuration profile in the minion config, minion pillar, or master config. The module will use the 'splunk' key by default, if defined.

For example:
```
splunk:
  username: alice
  password: abc123
  host: example.splunkcloud.com
  port: 8080
```

```
salt.modules.splunk.create_user(email, profile='splunk', **kwargs)
create a splunk user by name/email

CLI Example:
```
salt myminion splunk.create_user user@example.com roles=['user'] realname="Test User" name=testuser
```

```
salt.modules.splunk.delete_user(email, profile='splunk')
Delete a splunk user by email

CLI Example:
```
salt myminion splunk_user.delete 'user@example.com'
```

```
salt.modules.splunk.get_user(email, profile='splunk', **kwargs)
Get a splunk user by name/email

CLI Example:
```
salt myminion splunk.get_user 'user@example.com' user_details=false
salt myminion splunk.get_user 'user@example.com' user_details=true
```
23.9.4  salt.modules.sqlite3

Support for SQLite3

salt.modules.sqlite3.fetch(db=None, sql=None)
Retrieve data from an sqlite3 db (returns all rows, be careful!)

CLI Example:
```
salt '*' sqlite3.fetch /root/test.db 'SELECT * FROM test;'
```

salt.modules.sqlite3.indexes(db=None)
Show all indices in the database, for people with poor spelling skills

CLI Example:
```
salt '*' sqlite3.indexes /root/test.db
```

salt.modules.sqlite3.indices(db=None)
Show all indices in the database

CLI Example:
```
salt '*' sqlite3.indices /root/test.db
```

salt.modules.sqlite3.modify(db=None, sql=None)
Issue an SQL query to sqlite3 (with no return data), usually used to modify the database in some way (insert, delete, create, etc)

CLI Example:
```
salt '*' sqlite3.modify /root/test.db 'CREATE TABLE test(id INT, testdata TEXT);'
```

salt.modules.sqlite3.sqlite_version()
Return version of sqlite

CLI Example:
```
salt '*' sqlite3.sqlite_version
```

salt.modules.sqlite3.tables(db=None)
Show all tables in the database

CLI Example:
salt '*' sqlite3.tables /root/test.db

salt.modules.sqlite3.version()
Return version of pysqlite
CLI Example:
salt '*' sqlite3.version

23.9.95 salt.modules.statuspage
StatusPage
Handle requests for the StatusPage API.
In the minion configuration file, the following block is required:

```yaml
statuspage:
    api_key: <API_KEY>
    page_id: <PAGE_ID>
```

New in version 2017.7.0.
salt.modules.statuspage.create(endpoint='incidents', api_url=None, page_id=None, api_key=None, api_version=None, **kwargs)
Insert a new entry under a specific endpoint.
endpoint: incidents Insert under this specific endpoint.
page_id Page ID. Can also be specified in the config file.
api_key API key. Can also be specified in the config file.
api_version: 1 API version. Can also be specified in the config file.
api_url Custom API URL in case the user has a StatusPage service running in a custom environment.
CLI Example:
salt 'minion' statuspage.create endpoint='components' name='my component' group_id='993vgplshj12'

Example output:

```
minion:  
    comment:  
    out:  
        created_at:  
            2017-01-05T19:35:27.135Z  
        description:  
            None  
        group_id:  
            993vgplshj12  
        id:  
            mjkmzt5lhdgc  
        name:
```

(continues on next page)
my component
page_id: ksdhgfyiuhaa
position: 7
status: operational
updated_at: 2017-01-05T19:35:27.135Z
result: True

**salt.modules.statuspage.delete** *(endpoint='incidents', id=None, api_url=None, page_id=None, api_key=None, api_version=None)*

Remove an entry from an endpoint.

- **endpoint**: incidents  Request a specific endpoint.
- **page_id**: Page ID. Can also be specified in the config file.
- **api_key**: API key. Can also be specified in the config file.
- **api_version**: 1  API version. Can also be specified in the config file.
- **api_url**: Custom API URL in case the user has a StatusPage service running in a custom environment.

CLI Example:

```
salt 'minion' statuspage.delete endpoint='components' id='ftgks51sfs2d'
```

Example output:

```
minion: ----------
comment: None
out: True
result: True
```

**salt.modules.statuspage.retrieve** *(endpoint='incidents', api_url=None, page_id=None, api_key=None, api_version=None)*

Retrieve a specific endpoint from the Statuspage API.

- **endpoint**: incidents  Request a specific endpoint.
- **page_id**: Page ID. Can also be specified in the config file.
- **api_key**: API key. Can also be specified in the config file.
- **api_version**: 1  API version. Can also be specified in the config file.
- **api_url**: Custom API URL in case the user has a StatusPage service running in a custom environment.

CLI Example:

```
salt 'minion' statuspage.retrieve components
```

Example output:
minion:

comment:

out:

('----------

backfilled:
False

created_at:
2015-01-26T20:25:02.702Z

id:
kh2qwjbheqdc36

impact:
major

impact_override:
None

incident_updates:

('----------

affected_components:
None

body:
We are currently investigating this issue.

created_at:
2015-01-26T20:25:02.849Z

display_at:
2015-01-26T20:25:02.849Z

id:
zvx7xz2z5skr

incident_id:
kh2qwjbheqdc36

status:
investigating

twitter_updated_at:
None

updated_at:
2015-01-26T20:25:02.849Z

wants_twitter_update:
False

monitoring_at:
None

name:
just testing some stuff

page_id:
ksdhgfjiuhaa

postmortem_body:
None

postmortem_body_last_updated_at:
None

postmortem_ignored:
False

postmortem_notified_subscribers:
False

postmortem_notified_twitter:
False

postmortem_published_at:
None

(continues on next page)
 resolved_at: None
 scheduled_auto_completed: False
 scheduled_auto_in_progress: False
 scheduled_for: None
 scheduled_remind_prior: False
 scheduled_reminded_at: None
 scheduled_until: None
 shortlink: http://stspg.io/voY
 status: investigating
 result: True

salt.modules.statuspage.update(endpoint='incidents', id=None, api_url=None, page_id=None, api_key=None, api_version=None, **kwargs)

Update attribute(s) of a specific endpoint.

id The unique ID of the endpoint entry.
endpoint: incidents Endpoint name.
page_id Page ID. Can also be specified in the config file.
api_key API key. Can also be specified in the config file.
api_version: 1 API version. Can also be specified in the config file.
api_url Custom API URL in case the user has a StatusPage service running in a custom environment.

CLI Example:
salt 'minion' statuspage.update id=dz959yz2nd4l status=resolved

Example output:

minion:  
comment:  
out:  
created_at: 2017-01-03T15:25:30.718Z
description: None
group_id: 993vgplshj12
id: dz959yz2nd4l
name:
23.9.96 salt.modules.supervisord

Provide the service module for system supervisord or supervisord in a virtualenv

salt.modules.supervisord.add(name, user=None, conf_file=None, bin_env=None)
Activates any updates in config for process/group.

user user to run supervisorctl as
conf_file path to supervisord config file
bin_env path to supervisorctl bin or path to virtualenv with supervisor installed

CLI Example:
salt '*' supervisord.add <name>

salt.modules.supervisord.custom(command, user=None, conf_file=None, bin_env=None)
Run any custom supervisord command

user user to run supervisorctl as
conf_file path to supervisord config file
bin_env path to supervisorctl bin or path to virtualenv with supervisor installed

CLI Example:
salt '*' supervisord.custom "mstop '*'gunicorn*'"

salt.modules.supervisord.options(name, conf_file=None)
New in version 2014.1.0.
Read the config file and return the config options for a given process

name Name of the configured process
conf_file path to supervisord config file

CLI Example:
salt '*' supervisord.options foo

salt.modules.supervisord.remove(name, user=None, conf_file=None, bin_env=None)
Removes process/group from active config

user user to run supervisorctl as
conf_file path to supervisord config file

23.9. execution modules
bin_env  path to supervisorctl bin or path to virtualenv with supervisor installed

CLI Example:

```
salt '*' supervisord.remove <name>
```

salt.modules.supervisord.reread(user=None, conf_file=None, bin_env=None)
Reload the daemon's configuration files

user  user to run supervisorctl as
conf_file  path to supervisord config file
bin_env  path to supervisorctl bin or path to virtualenv with supervisor installed

CLI Example:

```
salt '*' supervisord.reread
```

salt.modules.supervisord.restart(name='all', user=None, conf_file=None, bin_env=None)
Restart the named service. Process group names should not include a trailing asterisk.

user  user to run supervisorctl as
conf_file  path to supervisord config file
bin_env  path to supervisorctl bin or path to virtualenv with supervisor installed

CLI Example:

```
salt '*' supervisord.restart <service>
salt '*' supervisord.restart <group>: 
```

salt.modules.supervisord.start(name='all', user=None, conf_file=None, bin_env=None)
Start the named service. Process group names should not include a trailing asterisk.

user  user to run supervisorctl as
conf_file  path to supervisord config file
bin_env  path to supervisorctl bin or path to virtualenv with supervisor installed

CLI Example:

```
salt '*' supervisord.start <service>
salt '*' supervisord.start <group>: 
```

salt.modules.supervisord.status(name=None, user=None, conf_file=None, bin_env=None)
List programs and its state

user  user to run supervisorctl as
conf_file  path to supervisord config file
bin_env  path to supervisorctl bin or path to virtualenv with supervisor installed

CLI Example:

```
salt '*' supervisord.status
```

salt.modules.supervisord.status_bool(name, expected_state=None, user=None, conf_file=None, bin_env=None)
Check for status of a specific supervisord process and return boolean result.

name  name of the process to check
**expected_state**  search for a specific process state. If set to None - any process state will match.

**user**  user to run supervisorctl as

**conf_file**  path to supervisord config file

**bin_env**  path to supervisorctl bin or path to virtualenv with supervisor installed

CLI Example:

```bash
salt '*' supervisord.status_bool nginx expected_state='RUNNING'
```

salt.modules.supervisord.status_raw(name=None, user=None, conf_file=None, bin_env=None)

Display the raw output of status

**user**  user to run supervisorctl as

**conf_file**  path to supervisord config file

**bin_env**  path to supervisorctl bin or path to virtualenv with supervisor installed

CLI Example:

```bash
salt '*' supervisord.status_raw
```

salt.modules.supervisord.stop(name='all', user=None, conf_file=None, bin_env=None)

Stop the named service. Process group names should not include a trailing asterisk.

**user**  user to run supervisorctl as

**conf_file**  path to supervisord config file

**bin_env**  path to supervisorctl bin or path to virtualenv with supervisor installed

CLI Example:

```bash
salt '*' supervisord.stop <service>
salt '*' supervisord.stop <group>:
```

salt.modules.supervisord.update(user=None, conf_file=None, bin_env=None, name=None)

Reload config and add/remove/update as necessary

**user**  user to run supervisorctl as

**conf_file**  path to supervisord config file

**bin_env**  path to supervisorctl bin or path to virtualenv with supervisor installed

**name**  name of the process group to update. if none then update any process group that has changes

CLI Example:

```bash
salt '*' supervisord.update
```
23.9.97 salt.modules.telegram

Module for sending messages via Telegram.

**configuration** In order to send a message via the Telegram, certain configuration is required in /etc/salt/minion on the relevant minions or in the pillar. Some sample configs might look like:

```
telegram.chat_id: '123456789'
telegram.token: '00000000:xxxxxxxxxxxxxxxxxxxxxxxxxx'
```

salt.modules.telegram.post_message(*message, chat_id=None, token=None*)

Send a message to a Telegram chat.

**Parameters**
- message -- The message to send to the Telegram chat.
- chat_id -- (optional) The Telegram chat id.
- token -- (optional) The Telegram API token.

**Returns** Boolean if message was sent successfully.

CLI Example:

```
salt '*' telegram.post_message message="Hello Telegram!"
```

23.9.98 salt.modules.temp

Simple module for creating temporary directories and files

This is a thin wrapper around Pythons tempfile module

New in version 2015.8.0.

salt.modules.temp.dir(*suffix='', prefix='tmp', parent=None*)

Create a temporary directory

CLI Example:

```
salt '*' temp.dir
salt '*' temp.dir prefix='mytemp-' parent='/var/run/
```

salt.modules.temp.file(*suffix='', prefix='tmp', parent=None*)

Create a temporary file

CLI Example:

```
salt '*' temp.file
salt '*' temp.file prefix='mytemp-' parent='/var/run/
```
23.9.99  **salt.modules.test_virtual**

Module for running arbitrary tests with a __virtual__ function

```
salt.modules.test_virtual.ping()
```

23.9.100  **salt.modules.testinframod**

This module exposes the functionality of the TestInfra library for use with SaltStack in order to verify the state of your minions. In order to allow for the addition of new resource types in TestInfra this module dynamically generates wrappers for the various resources by iterating over the values in the __all__ variable exposed by the testinfra.modules namespace.

23.9.101  **salt.modules.twilio_notify**

Module for notifications via Twilio

New in version 2014.7.0.

```
depends

- twilio python module

configuration  Configure this module by specifying the name of a configuration profile in the minion config, minion pillar, or master config (with pillar_opts set to True).

For example:

```
my-twilio-account:
    twilio.account_sid: AC32a3c83990934481add5ce1659f04d2
    twilio.auth_token: mytoken
```

salt.modules.twilio_notify.send_sms(profile, body, to, from_)

Send an sms

CLI Example:

```
twilio.send_sms my-twilio-account 'Test sms' '+18019999999' '+18011111111'
```

23.9.102  **salt.modules.uptime**

Wrapper around uptime API

```
salt.modules.uptime.check_exists(name)

Check if a given URL is in being monitored by uptime

CLI Example:

```
salt '*' uptime.check_exists http://example.org
```

salt.modules.uptime.checks_list()

List URL checked by uptime

CLI Example:

```
salt '*' uptime.checks_list
```

23.9.  **execution modules**
salt.modules.uptime.create(name, **params)

Create a check on a given URL.

Additional parameters can be used and are passed to API (for example interval, maxTime, etc). See the documentation https://github.com/fzaninotto/uptime for a full list of the parameters.

CLI Example:

```
salt '*' uptime.create http://example.org
```

salt.modules.uptime.delete(name)

Delete a check on a given URL

CLI Example:

```
salt '*' uptime.delete http://example.org
```

23.9.103 salt.modules.vault

Functions to interact with Hashicorp Vault.

maintainer SaltStack

maturity new

platform all

note If you see the following error, you’ll need to upgrade requests to at least 2.4.2

```
<timestamp> [salt.pillar][CRITICAL][14337] Pillar render error: Failed to load ext_pillar vault: {'error': "request() got an unexpected keyword argument 'json'"}
```

configuration The salt-master must be configured to allow peer-runner configuration, as well as configuration for the module.

Add this segment to the master configuration file, or /etc/salt/master.d/vault.conf:

```
vault:
    url: https://vault.service.domain:8200
    verify: /etc/ssl/certs/ca-certificates.crt
    role_name: minion_role
    auth:
        method: approle
        role_id: 11111111-2222-3333-4444-1111111111111
        secret_id: 11111111-1111-1111-1111-1111111111111
    policies:
        - saltstack/minions
        - saltstack/minion/{minion}
        .. more policies
    keys:
        - n63/TbrQuL3xaIW7ZzpuXj/tIfnK1/MbVxO4vT3wYD2A
        - S90wCvMRhErEA4NVELYBs6w/M6+urgUr24xGK44Uy3
        - F1j4b7JKq8S0NS6Kboiy5laJ0xY8dWJvB3fcwA+SraYl
        - 1cVtvjKJNDVam9c7HNqJufINk4PyyAXIpjkpN/sIuzPv
        - 3pPK5x6vGtwLhNOFv1u2elahECz3HpRUfNXJFYLw6lid
```

url Url to your Vault installation. Required.

verify For details please see https://requests.readthedocs.io/en/master/user/advanced/

#ssl-cert-verification

1278 Chapter 23. Salt Module Reference
New in version 2018.3.0.

**role_name**  Role name for minion tokens created. If omitted, minion tokens will be created without any role, thus being able to inherit any master token policy (including token creation capabilities). Optional.

For details please see: https://www.vaultproject.io/api/auth/token/index.html#create-token

Example configuration: https://www.nomadproject.io/docs/vault-integration/index.html#vault-token-role-configuration

**auth**  Currently only token and approle auth types are supported. Required.

Approle is the preferred way to authenticate with Vault as it provide some advanced options to control authentication process. Please visit Vault documentation for more info: https://www.vaultproject.io/docs/auth/approle.html

The token must be able to create tokens with the policies that should be assigned to minions. You can still use the token auth via a OS environment variable via this config example:

```yaml
vault:
  url: https://vault.service.domain:8200
  auth:
    method: token
    token: xxxxxx
    osenv:
      driver: env
```

And then export the VAULT_TOKEN variable in your OS:

```bash
export VAULT_TOKEN=11111111-1111-1111-1111-111111111111
```

Configuration keys uses or ttl may also be specified under auth to configure the tokens generated on behalf of minions to be reused for the defined number of uses or length of time in seconds. These settings may also be configured on the minion when allow_minion_override is set to True in the master config.

Defining uses will cause the salt master to generate a token with that number of uses rather than a single use token. This multi-use token will be cached on the minion. The type of minion cache can be specified with token_backend: session or token_backend: disk. The value of session is the default, and will store the vault information in memory only for that session. The value of disk will write to an on disk file, and persist between state runs (most helpful for multi-use tokens).

```yaml
vault:
  auth:
    method: token
    token: xxxxxx
    uses: 10
    ttl: 43200
    allow_minion_override: True
    token_backend: disk
```

**policies**  Policies that are assigned to minions when requesting a token. These can either be static, eg saltstack/minions, or templated with grain values, eg, my-policies/{grains[os]}. {minion} is shorthand for grains[id], saltstack/minion/{minion}.
If a template contains a grain which evaluates to a list, it will be expanded into multiple policies. For example, given the template `saltstack/by-role/{grains[roles]}`, and a minion having these grains:

```
grains:
  roles:
    - web
    - database
```

The minion will have the policies `saltstack/by-role/web` and `saltstack/by-role/database`.

Optional. If policies is not configured, `saltstack/minions` and `saltstack/{minion}` are used as defaults.

**Note:** list members which do not have simple string representations, such as dictionaries or objects, do not work and will throw an exception. Strings and numbers are examples of types which work well.

**keys** List of keys to use to unseal vault server with the vault.unseal runner.

Add this segment to the master configuration file, or `/etc/salt/master.d/peer_run.conf`:

```
peer_run:
  .*:
    - vault.generate_token
```

**salt.modules.vault.clear_token_cache()**

Changed in version 3001.

Delete minion Vault token cache file

CLI Example:

```
salt '*' vault.clear_token_cache
```

**salt.modules.vault.delete_secret(path)**

Delete secret at the path in vault. The vault policy used must allow this.

CLI Example:

```
salt '*' vault.delete_secret "secret/my/secret"
```

**salt.modules.vault.destroy_secret(path, *args)**

New in version 3001.

Destroy specified secret version at the path in vault. The vault policy used must allow this. Only supported on Vault KV version 2

CLI Example:

```
salt '*' vault.destroy_secret "secret/my/secret" 1 2
```

**salt.modules.vault.list_secrets(path, default=<class 'salt.exceptions.CommandExecutionError'>)**

Changed in version 3001: The `default` argument has been added. When the path or path/key combination is not found, an exception will be raised, unless a default is provided.

List secret keys at the path in vault. The vault policy used must allow this. The path should end with a trailing slash.
CLI Example:

```bash
salt '*' vault.list_secrets "secret/my/"
```

**salt.modules.vault.read_secret**(path, key=None, metadata=False, default=\(\text{class} 'salt.exceptions.CommandExecutionError'\))

Changed in version 3001: The `default` argument has been added. When the path or path/key combination is not found, an exception will be raised, unless a default is provided.

Return the value of key at path in vault, or entire secret.

Parameters

- **metadata** -- Optional - If using KV v2 backend, display full results, including metadata

  New in version 3001.

Jinja Example:

```jinja
my-secret: {{ salt['vault'].read_secret('secret/my/secret', 'some-key') }}

{% set supersecret = salt['vault'].read_secret('secret/my/secret') %}
secrets:
  first: {{ supersecret.first }}
  second: {{ supersecret.second }}
```

**salt.modules.vault.write_raw**(path, raw)

Set raw data at the path in vault. The vault policy used must allow this.

CLI Example:

```bash
salt '*' vault.write_raw "secret/my/secret" \{"user":"foo","password": "bar"\}
```

**salt.modules.vault.write_secret**(path, **kwargs)

Set secret at the path in vault. The vault policy used must allow this.

CLI Example:

```bash
salt '*' vault.write_secret "secret/my/secret" user="foo" password="bar"
```

### 23.9.104 salt.modules.vbox_guest

VirtualBox Guest Additions installer

**salt.modules.vbox_guest.additions_install**(**kwargs)

Install VirtualBox Guest Additions. Uses the CD, connected by VirtualBox.

To connect VirtualBox Guest Additions via VirtualBox graphical interface press ‘Host+D’ (Host’ is usually ‘Right Ctrl’).

See [https://www.virtualbox.org/manual/ch04.html#idp52733088](https://www.virtualbox.org/manual/ch04.html#idp52733088) for more details.

CLI Example:

```bash
salt '*' vbox_guest.additions_install
salt '*' vbox_guest.additions_install reboot=True
salt '*' vbox_guest.additions_install upgrade_os=True
```
Parameters

- **reboot** *(bool)* -- reboot computer to complete installation
- **upgrade_os** *(bool)* -- upgrade OS (to ensure the latest version of kernel and developer tools are installed)

Returns version of VirtualBox Guest Additions or string with error

```python
salt.modules.vbox_guest.additions_mount()
```

Mount VirtualBox Guest Additions CD to the temp directory.

To connect VirtualBox Guest Additions via VirtualBox graphical interface press 'Host+D' ('Host' is usually 'Right Ctrl').

CLI Example:

```bash
salt '*' vbox_guest.additions_mount
```

Returns True or OSError exception

```python
salt.modules.vbox_guest.additions_remove(**kwargs)
```

Remove VirtualBox Guest Additions.

Firstly it tries to uninstall itself by executing '/opt/VBoxGuestAdditions-VERSION/uninstall.run uninstall'. It uses the CD, connected by VirtualBox if it failes.

CLI Example:

```bash
salt '*' vbox_guest.additions_remove
salt '*' vbox_guest.additions_remove force=True
```

Parameters **force** *(bool)* -- force VirtualBox Guest Additions removing

Returns True if VirtualBox Guest Additions were removed successfully else False

```python
salt.modules.vbox_guest.additions_umount(mount_point)
```

Unmount VirtualBox Guest Additions CD from the temp directory.

CLI Example:

```bash
salt '*' vbox_guest.additions_umount
```

Parameters **mount_point** -- directory VirtualBox Guest Additions is mounted to

Returns True or an string with error

```python
salt.modules.vbox_guest.additions_version()
```

Check VirtualBox Guest Additions version.

CLI Example:

```bash
salt '*' vbox_guest.additions_version
```

Returns version of VirtualBox Guest Additions or False if they are not installed
salt.modules.vbox_guest.grant_access_to_shared_folders_to(name, users=None)

Grant access to auto-mounted shared folders to the users.

User is specified by its name. To grant access for several users use argument users. Access will be denied to the users not listed in users argument.

See https://www.virtualbox.org/manual/ch04.html#sf_mount_auto for more details.

CLI Example:
```
salt '*' vbox_guest.grant_access_to_shared_folders_to fred
salt '*' vbox_guest.grant_access_to_shared_folders_to users ['fred', 'roman']
```

Parameters

- name (str) -- name of the user to grant access to auto-mounted shared folders to
- users (list of str) -- list of names of users to grant access to auto-mounted shared folders to (if specified, name will not be taken into account)

Returns list of users who have access to auto-mounted shared folders

salt.modules.vbox_guest.list_shared_folders_users()

List users who have access to auto-mounted shared folders.

See https://www.virtualbox.org/manual/ch04.html#sf_mount_auto for more details.

CLI Example:
```
salt '*' vbox_guest.list_shared_folders_users
```

Returns list of users who have access to auto-mounted shared folders

23.9.105 salt.modules.win_timezone

Module for managing timezone on Windows systems.

class salt.modules.win_timezone.TzMapper(unix_to_win)

add(k, v)

get_unix(key, default=None)

gnewin(key, default=None)

list_unix()

list_win()

remove(k)

salt.modules.win_timezone.get_hwclock()

Get current hardware clock setting (UTC or localtime)

Note: The hardware clock is always local time on Windows so this will always return "localtime"

CLI Example:
salt '*' timezone.get_hwclock

**salt.modules.win_timezone.get_offset()**
Get current numeric timezone offset from UTC (i.e. -0700)

Returns Offset from UTC

Return type str

CLI Example:
```
salt '*' timezone.get_offset
```

**salt.modules.win_timezone.get_zone()**
Get current timezone (i.e. America/Denver)

Returns Timezone in unix format

Return type str

Raises `CommandExecutionError` -- If timezone could not be gathered

CLI Example:
```
salt '*' timezone.get_zone
```

**salt.modules.win_timezone.get_zonecode()**
Get current timezone (i.e. PST, MDT, etc)

Returns An abbreviated timezone code

Return type str

CLI Example:
```
salt '*' timezone.get_zonecode
```

**salt.modules.win_timezone.list** *(unix_style=True)*
Return a list of Timezones that this module supports. These can be in either Unix or Windows format.

New in version 2018.3.3.

Parameters

- `unix_style` (bool) -- True returns Unix-style timezones. False returns Windows-style timezones. Default is True

Returns A list of supported timezones

Return type list

CLI Example:
```
# Unix-style timezones
salt '*' timezone.list

# Windows-style timezones
salt '*' timezone.list unix_style=False
```

**salt.modules.win_timezone.set_hwclock**(clock)
Sets the hardware clock to be either UTC or localtime

---

Note: The hardware clock is always local time on Windows so this will always return False
CLI Example:
```
salt '*' timezone.set_hwclock UTC
```

**salt.modules.win_timezone.set_zone(timezone)**
Sets the timezone using the tzutil.

- **Parameters**
  - `timezone` *(str)* - A valid timezone
- **Returns**
  - True if successful, otherwise False
- **Return type**
  - bool
- **Raises**
  - CommandExecutionError -- If invalid timezone is passed

CLI Example:
```
salt '*' timezone.set_zone 'America/Denver'
```

**salt.modules.win_timezone.zone_compare(timezone)**
Compares the given timezone with the machine timezone. Mostly useful for running state checks.

- **Parameters**
  - `timezone` *(str)* - The timezone to compare. This can be in Windows or Unix format. Can be any of the values returned by the `timezone.list` function
- **Returns**
  - True if they match, otherwise False
- **Return type**
  - bool

Example:
```
salt '*' timezone.zone_compare 'America/Denver'
```

### 23.9.106 salt.modules.xml

XML file manager

New in version 3000.

**salt.modules.xml.get_attribute(file, element)**
Return the attributes of the matched xpath element.

CLI Example:
```
salt '*' xml.get_attribute /tmp/test.xml ".//element[@id='3']"
```

**salt.modules.xml.get_value(file, element)**
Returns the value of the matched xpath element

CLI Example:
```
salt '*' xml.get_value /tmp/test.xml ".//element"
```

**salt.modules.xml.set_attribute(file, element, key, value)**
Set the requested attribute key and value for matched xpath element.

CLI Example:
```
salt '*' xml.set_attribute /tmp/test.xml ".//element[@id='3']" editedby "gal"
```
salt.modules.xml.set_value(file, element, value)
Sets the value of the matched xpath element

CLI Example:

```
salt '*' xml.set_value /tmp/test.xml "./element" "new value"
```

23.9.107 salt.modules.xmpp

Module for Sending Messages via XMPP (a.k.a. Jabber)

New in version 2014.1.0.

**depends**

- sleekxmpp>=1.3.1
- pyasn1
- pyasn1-modules
- dnspython

**configuration** This module can be used by either passing a jid and password directly to send_message, or by specifying the name of a configuration profile in the minion config, minion pillar, or master config.

For example:

```
my-xmpp-login:
 xmpp.jid: myuser@jabber.example.org/resource
 xmpp.password: verybadpass
```

The resourcename refers to the resource that is using this account. It is user-definable, and optional. The following configurations are both valid:

```
my-xmpp-login:
 xmpp.jid: myuser@jabber.example.org/salt
 xmpp.password: verybadpass

my-xmpp-login:
 xmpp.jid: myuser@jabber.example.org
 xmpp.password: verybadpass
```

class salt.modules.xmpp.SendMsgBot(jid, password, recipient, msg)

**classmethod create_multi(jid, password, msg, recipients=None, rooms=None, nick='SaltStack Bot')**

Alternate constructor that accept multiple recipients and rooms

**start(event)**

class salt.modules.xmpp.SleekXMPPMUC(name="")

**filter(record)**

Determine if the specified record is to be logged.

Is the specified record to be logged? Returns 0 for no, nonzero for yes. If deemed appropriate, the record may be modified in-place.
salt.modules.xmpp.send_msg(recipient, message, jid=None, password=None, profile=None)
Send a message to an XMPP recipient. Designed for use in states.

CLI Examples:

```
xmpp.send_msg 'admins@xmpp.example.com' 'This is a salt module test' → profile='my-xmpp-account'
xmpp.send_msg 'admins@xmpp.example.com' 'This is a salt module test' → jid='myuser@xmpp.example.com/salt' password='verybadpass'
```

salt.modules.xmpp.send_msg_multi(message, recipients=None, rooms=None, jid=None, password=None, nick='SaltStack Bot', profile=None)
Send a message to an XMPP recipient, support send message to multiple recipients or chat room.

CLI Examples:

```
xmpp.send_msg recipients=['admins@xmpp.example.com'] rooms=['secret@conference.xmpp.example.com'] 'This is a salt module test' → profile='my-xmpp-account'
xmpp.send_msg recipients=['admins@xmpp.example.com'] rooms=['secret@conference.xmpp.example.com'] 'This is a salt module test' → jid='myuser@xmpp.example.com/salt' password='verybadpass'
```

23.9.108  salt.modules.zk_concurrency

Concurrency controls in zookeeper

depends kazoo

configuration  See salt.modules.zookeeper for setup instructions.

This module allows you to acquire and release a slot. This is primarily useful for ensuring that no more than N
hosts take a specific action at once. This can also be used to coordinate between masters.

salt.modules.zk_concurrency.lock(path, zk_hosts=None, identifier=None, max_concurrency=1, timeout=None, ephemeral_lease=False, force=False, profile=None, scheme=None, username=None, password=None, default_acl=None)

Get lock (with optional timeout)

path  The path in zookeeper where the lock is

zk_hosts  zookeeper connect string

identifier  Name to identify this minion, if unspecified defaults to the hostname

max_concurrency  Maximum number of lock holders

timeout  timeout to wait for the lock. A None timeout will block forever

ephemeral_lease  Whether the locks in zookeeper should be ephemeral

force  Forcibly acquire the lock regardless of available slots

Example:

```
salt minion zk_concurrency.lock /lock/path host1:1234,host2:1234
```
salt.modules.zk_concurrency.lock_holders(path, zk_hosts=None, identifier=None, max_concurrency=1, timeout=None, ephemeral_lease=False, scheme=None, username=None, password=None, default_acl=None)

Return an un-ordered list of lock holders

**path** The path in zookeeper where the lock is

**zk_hosts** zookeeper connect string

**identifier** Name to identify this minion, if unspecified defaults to hostname

**max_concurrency** Maximum number of lock holders

**timeout** timeout to wait for the lock. A None timeout will block forever

**ephemeral_lease** Whether the locks in zookeeper should be ephemeral

Example:

```
salt minion zk_concurrency.lock_holders /lock/path host1:1234,host2:1234
```

salt.modules.zk_concurrency.party_members(path, zk_hosts=None, min_nodes=1, blocking=False, profile=None, scheme=None, username=None, password=None, default_acl=None)

Get the List of identifiers in a particular party, optionally waiting for the specified minimum number of nodes (min_nodes) to appear

**path** The path in zookeeper where the lock is

**zk_hosts** zookeeper connect string

**min_nodes** The minimum number of nodes expected to be present in the party

**blocking** The boolean indicating if we need to block until min_nodes are available

Example:

```
salt minion zk_concurrency.party_members /lock/path host1:1234,host2:1234
salt minion zk_concurrency.party_members /lock/path host1:1234,host2:1234 min_nodes=3 blocking=True
```

salt.modules.zk_concurrency.unlock(path, zk_hosts=None, identifier=None, max_concurrency=1, ephemeral_lease=False, scheme=None, profile=None, username=None, password=None, default_acl=None)

Remove lease from semaphore

**path** The path in zookeeper where the lock is

**zk_hosts** zookeeper connect string

**identifier** Name to identify this minion, if unspecified defaults to hostname

**max_concurrency** Maximum number of lock holders

**timeout** timeout to wait for the lock. A None timeout will block forever

**ephemeral_lease** Whether the locks in zookeeper should be ephemeral

Example:

```
salt minion zk_concurrency.unlock /lock/path host1:1234,host2:1234
```
23.9.109 salt.modules.zookeeper

Zookeeper Module

maintainer SaltStack
maturity new
platform all
depends kazoo

New in version 2018.3.0.

Configuration

configuration This module is not usable until the following are specified either in a pillar or in the
minion’s config file:

```yaml
zookeeper:
  hosts: zoo1,zoo2,zoo3
  default_acl:
    - username: daniel
    password: test
    read: true
    write: true
    create: true
    delete: true
    admin: true
  username: daniel
  password: test
```

If configuration for multiple zookeeper environments is required, they can be set up as different
configuration profiles. For example:

```yaml
zookeeper:
  prod:
    hosts: zoo1,zoo2,zoo3
    default_acl:
      - username: daniel
        password: test
        read: true
        write: true
        create: true
        delete: true
        admin: true
      username: daniel
      password: test
  dev:
    hosts:
      - dev1
      - dev2
      - dev3
    default_acl:
      - username: daniel
        password: test
        read: true
        write: true
        create: true
        delete: true
        admin: true
  username: daniel
  password: test
```

(continues on next page)
write: true
create: true
delete: true
admin: true
username: daniel
password: test

salt.modules.zookeeper.create(path, value='', acls=None, ephemeral=False, sequence=False, makepath=False, profile=None, hosts=None, scheme=None, username=None, password=None, default_acl=None)

Create Znode

path path of znode to create
value value to assign to znode (Default: '')
acls list of acl dictionaries to be assigned (Default: None)
ephemeral indicate node is ephemeral (Default: False)
sequence indicate node is suffixed with a unique index (Default: False)
makepath Create parent paths if they do not exist (Default: False)
profile Configured Zookeeper profile to authenticate with (Default: None)
hosts Lists of Zookeeper Hosts (Default: '127.0.0.1:2181')
scheme Scheme to authenticate with (Default: 'digest')
username Username to authenticate (Default: None)
password Password to authenticate (Default: None)
default_acl Default acls to assign if a node is created in this connection (Default: None)

CLI Example:
salt minion1 zookeeper.create /test/name daniel profile=prod

salt.modules.zookeeper.delete(path, version=-1, recursive=False, profile=None, hosts=None, scheme=None, username=None, password=None, default_acl=None)

Delete znode

path path to znode
version only delete if version matches (Default: -1 (always matches))
profile Configured Zookeeper profile to authenticate with (Default: None)
hosts Lists of Zookeeper Hosts (Default: '127.0.0.1:2181')
scheme Scheme to authenticate with (Default: 'digest')
username Username to authenticate (Default: None)
password Password to authenticate (Default: None)
default_acl Default acls to assign if a node is created in this connection (Default: None)

CLI Example:
salt minion1 zookeeper.delete /test/name profile=prod
salt.modules.zookeeper.**ensure_path**(*path*, *acls=None*, *profile=None*, *hosts=None*, *scheme=None*, *username=None*, *password=None*, *default_acl=None*)

Ensure Znode path exists

- **path** Parent path to create
- **acls** list of acls dictionaries to be assigned (Default: None)
- **profile** Configured Zookeeper profile to authenticate with (Default: None)
- **hosts** Lists of Zookeeper Hosts (Default: '127.0.0.1:2181)
- **scheme** Scheme to authenticate with (Default: 'digest')
- **username** Username to authenticate (Default: None)
- **password** Password to authenticate (Default: None)
- **default_acl** Default acls to assign if a node is created in this connection (Default: None)

CLI Example:
```
salt minion1 zookeeper.ensure_path /test/name profile=prod
```

salt.modules.zookeeper.**exists**(*path*, *profile=None*, *hosts=None*, *scheme=None*, *username=None*, *password=None*, *default_acl=None*)

Check if path exists

- **path** path to check
- **profile** Configured Zookeeper profile to authenticate with (Default: None)
- **hosts** Lists of Zookeeper Hosts (Default: '127.0.0.1:2181)
- **scheme** Scheme to authenticate with (Default: 'digest')
- **username** Username to authenticate (Default: None)
- **password** Password to authenticate (Default: None)
- **default_acl** Default acls to assign if a node is created in this connection (Default: None)

CLI Example:
```
salt minion1 zookeeper.exists /test/name profile=prod
```

salt.modules.zookeeper.**get**(*path*, *profile=None*, *hosts=None*, *scheme=None*, *username=None*, *password=None*, *default_acl=None*)

Get value saved in znode

- **path** path to check
- **profile** Configured Zookeeper profile to authenticate with (Default: None)
- **hosts** Lists of Zookeeper Hosts (Default: '127.0.0.1:2181)
- **scheme** Scheme to authenticate with (Default: 'digest')
- **username** Username to authenticate (Default: None)
- **password** Password to authenticate (Default: None)
- **default_acl** Default acls to assign if a node is created in this connection (Default: None)

CLI Example:
```
salt minion1 zookeeper.get /test/name profile=prod
```
salt.modules.zookeeper.get_acls(path, profile=None, hosts=None, scheme=None, username=None, password=None, default_acl=None)

Get acls on a znode

path  path to znode

profile  Configured Zookeeper profile to authenticate with (Default: None)

hosts  Lists of Zookeeper Hosts (Default: '127.0.0.1:2181)

scheme  Scheme to authenticate with (Default: 'digest')

username  Username to authenticate (Default: None)

password  Password to authenticate (Default: None)

default_acl  Default acls to assign if a node is created in this connection (Default: None)

CLI Example:

```
salt minion1 zookeeper.get_acls /test/name profile=prod
```

salt.modules.zookeeper.get_children(path, profile=None, hosts=None, scheme=None, username=None, password=None, default_acl=None)

Get children in znode path

path  path to check

profile  Configured Zookeeper profile to authenticate with (Default: None)

hosts  Lists of Zookeeper Hosts (Default: '127.0.0.1:2181)

scheme  Scheme to authenticate with (Default: 'digest')

username  Username to authenticate (Default: None)

password  Password to authenticate (Default: None)

default_acl  Default acls to assign if a node is created in this connection (Default: None)

CLI Example:

```
salt minion1 zookeeper.get_children /test profile=prod
```

salt.modules.zookeeper.make_digest_acl(username, password, read=False, write=False, create=False, delete=False, admin=False, allperms=False)

Generate acl object

Note:  This is heavily used in the zookeeper state and probably is not useful as a cli module

username  username of acl

password  plain text password of acl

read  read acl

write  write acl

create  create acl

delete  delete acl

admin  admin acl
Salt Documentation, Release 3002.5

allperms set all other acls to True
CLI Example:
salt minion1 zookeeper.make_digest_acl username=daniel password=mypass
,→allperms=True

salt.modules.zookeeper.set(path, value, version=- 1, profile=None, hosts=None, scheme=None, username=None, password=None, default_acl=None)
Update znode with new value
path znode to update
value value to set in znode
version only update znode if version matches (Default: -1 (always matches))
profile Configured Zookeeper profile to authenticate with (Default: None)
hosts Lists of Zookeeper Hosts (Default: '127.0.0.1:2181)
scheme Scheme to authenticate with (Default: 'digest')
username Username to authenticate (Default: None)
password Password to authenticate (Default: None)
default_acl Default acls to assign if a node is created in this connection (Default: None)
CLI Example:
salt minion1 zookeeper.set /test/name gtmanfred profile=prod

salt.modules.zookeeper.set_acls(path, acls, version=- 1, profile=None, hosts=None, scheme=None,
username=None, password=None, default_acl=None)
Set acls on a znode
path path to znode
acls list of acl dictionaries to set on the znode
version only set acls if version matches (Default: -1 (always matches))
profile Configured Zookeeper profile to authenticate with (Default: None)
hosts Lists of Zookeeper Hosts (Default: '127.0.0.1:2181)
scheme Scheme to authenticate with (Default: 'digest')
username Username to authenticate (Default: None)
password Password to authenticate (Default: None)
default_acl Default acls to assign if a node is created in this connection (Default: None)
CLI Example:
salt minion1 zookeeper.set_acls /test/name acls='[{"username": "gtmanfred",
,→"password": "test", "all": True}]' profile=prod

23.9. execution modules

1293


23.10 netapi modules

- rest_cherrypy
- rest_tornado
- rest_wsgi

23.11 output modules

Follow one of the below links for further information and examples

- dson
- highstate
- json_out
- key
- nested
- newline_values_only
- no_out_quiet
- no_return
- overstatestage
- pony
- pprint_out
- profile Class for profiling Python code.
- progress
- raw
- table_out
- txt
- virt_query
- yaml_out

23.12 pillar modules

- azureblob
- cmd_json
- cmd_yml
- cmd_yamlex
- cobbler
- confidant
- consul_pillar
- csvpillar
- digicert
- django ORM
- ec2_pillar
- etcd_pillar
- extra_minion_data_in_pillar
- file_tree
- foreman

continues on next page
Table 12 – continued from previous page

<table>
<thead>
<tr>
<th>Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>git_pillar</td>
</tr>
<tr>
<td>gpg</td>
</tr>
<tr>
<td>hg_pillar</td>
</tr>
<tr>
<td>hiera</td>
</tr>
<tr>
<td>http_json</td>
</tr>
<tr>
<td>http_yaml</td>
</tr>
<tr>
<td>libvirt</td>
</tr>
<tr>
<td>makostack</td>
</tr>
<tr>
<td>mongo</td>
</tr>
<tr>
<td>mysql</td>
</tr>
<tr>
<td>nacl</td>
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<tr>
<td>netbox</td>
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<tr>
<td>neutron</td>
</tr>
<tr>
<td>nodegroups</td>
</tr>
<tr>
<td>pepa</td>
</tr>
<tr>
<td>pillar_ldap</td>
</tr>
<tr>
<td>postgres</td>
</tr>
<tr>
<td>puppet</td>
</tr>
<tr>
<td>reclass_adapter</td>
</tr>
<tr>
<td>redismod</td>
</tr>
<tr>
<td>rethinkdb_pillar</td>
</tr>
<tr>
<td>s3</td>
</tr>
<tr>
<td>saltclass</td>
</tr>
<tr>
<td>sql_base</td>
</tr>
<tr>
<td>sqlcipher</td>
</tr>
<tr>
<td>sqlite3</td>
</tr>
<tr>
<td>stack</td>
</tr>
<tr>
<td>svn_pillar</td>
</tr>
<tr>
<td>varstack_pillar</td>
</tr>
<tr>
<td>vault</td>
</tr>
<tr>
<td>venafi</td>
</tr>
<tr>
<td>virtkey</td>
</tr>
<tr>
<td>vmware_pillar</td>
</tr>
</tbody>
</table>

23.13 proxy modules

<table>
<thead>
<tr>
<th>Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>arista_pyeapi</td>
</tr>
<tr>
<td>chronos</td>
</tr>
<tr>
<td>cimc</td>
</tr>
<tr>
<td>cisconsio</td>
</tr>
<tr>
<td>docker</td>
</tr>
<tr>
<td>dummy</td>
</tr>
<tr>
<td>esxcluster</td>
</tr>
<tr>
<td>esxdatalcenter</td>
</tr>
<tr>
<td>esxi</td>
</tr>
</tbody>
</table>

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### 23.13.1 salt.proxy.cimc

Proxy Minion interface module for managing Cisco Integrated Management Controller devices

New in version 2018.3.0.

```plaintext
codeauthor Spencer Ervin <spencer_ervin@hotmail.com>
maturity new
depends none
platform unix
```

This proxy minion enables Cisco Integrated Management Controller devices (hereafter referred to as simply 'cimc' devices to be treated individually like a Salt Minion.

The cimc proxy leverages the XML API functionality on the Cisco Integrated Management Controller. The Salt proxy must have access to the cimc on HTTPS (tcp/443).

More in-depth conceptual reading on Proxy Minions can be found in the *Proxy Minion* section of Salt’s documentation.

### Configuration

To use this integration proxy module, please configure the following:

**Pillar**

Proxy minions get their configuration from Salt’s Pillar. Every proxy must have a stanza in Pillar and a reference in the Pillar top-file that matches the ID.

```plaintext
proxy:
  proxytype: cimc
  host: <ip or dns name of cimc host>
  username: <cimc username>
```

(continues on next page)
**proxytype**

The `proxytype` key and value pair is critical, as it tells Salt which interface to load from the `proxy` directory in Salt's install hierarchy, or from `/srv/salt/_proxy` on the Salt Master (if you have created your own proxy module, for example). To use this cimc Proxy Module, set this to `cimc`.

**host**

The location, or ip/dns, of the cimc host. Required.

**username**

The username used to login to the cimc host. Required.

**password**

The password used to login to the cimc host. Required.

```python
password: <cimc password>
verify_ssl: True
```

salt.proxy.cimc.get_config_resolver_class(cid=None, hierarchical=False)

The configResolveClass method returns requested managed object in a given class.

salt.proxy.cimc.grains()

Get the grains from the proxied device

salt.proxy.cimc.grains_refresh()

Refresh the grains from the proxied device

salt.proxy.cimc.init(opts)

This function gets called when the proxy starts up.

salt.proxy.cimc.initialized()

Since grains are loaded in many different places and some of those places occur before the proxy can be initialized, return whether our init() function has been called

salt.proxy.cimc.logon()

Logs into the cimc device and returns the session cookie.

salt.proxy.cimc.logout(cookie=None)

Closes the session with the device.

salt.proxy.cimc.ping()

Returns true if the device is reachable, else false.

salt.proxy.cimc.prepare_return(x)

Converts the etree to dict

salt.proxy.cimc.set_config_modify(dn=None, inconfig=None, hierarchical=False)

The configConfMo method configures the specified managed object in a single subtree (for example, DN).

salt.proxy.cimc.shutdown()

Shutdown the connection to the proxy device. For this proxy, shutdown is a no-op.
23.13.2 salt.proxy.cisonso

Proxy Minion interface module for managing (practically) any network device with Cisco Network Services Orchest-urator (Cisco NSO). Cisco NSO uses a series of remote polling agents, APIs and SSH commands to fetch network configuration and represent it in a data model. PyNSO, the Python module used by this proxy minion does the task of converting native Python dictionaries into NETCONF/YANG syntax that the REST API for Cisco NSO can then use to set the configuration of the target network device.

Supported devices:

- A10 AX Series
- Arista 7150 Series
- Ciena 3000, 5000, ESM
- H3c S5800 Series
- Overture 1400, 2200, 5000, 5100, 6000
- Accedian MetroNID
- Avaya ERS 4000, SR8000, VSP 9000
- Cisco: APIC-DC, ASA, IOS, IOS XE, IOS XR, er, ME-4600, NX OS, Prime Network Registrar, Quantum, StarOS, UCS ManagWSA
- Huawei: NE40E, quidway series, Enterprise Network Simulation Framework
- PaloAlto PA-2000, PA-3000, Virtualized Firewalls
- Adtran 900 Series
- Brocade ADX, MLX, Netiron, Vyatta
- Dell Force 10 Networking S-Series
- Infinera DTN-X Multi-Terabit Packet Optical Network Platform
- Pulsecom SuperG
- Adva 150CC Series
- CableLabs Converged Cable Access Platform
- Ericsson EFN324 Series, SE family
- Juniper: Contrail, EX, M, MX, QFX, SRX, Virtual SRX
- Quagga Routing Software
- Affirmed Networks
- Citrix Netscaler
- F5 BIG-IP
- NEC iPasolink
- Riverbed Steelhead Series
- Alcatel-Lucent 7XXX, SAM
- Clavister
- Fortinet
- Nominum DCS
This proxy minion enables a consistent interface to fetch, control and maintain the configuration of network devices via a NETCONF-compliant control plane. Cisco Network Services Orchestrator.

More in-depth conceptual reading on Proxy Minions can be found in the Proxy Minion section of Salt’s documentation.

**Dependencies**

- pynso Python module

**PyNSO**

PyNSO can be installed via pip:

```
pip install pynso
```

**Configuration**

To use this integration proxy module, please configure the following:

**Pillar**

Proxy minions get their configuration from Salt’s Pillar. Every proxy must have a stanza in Pillar and a reference in the Pillar top-file that matches the ID. At a minimum for communication with the NSO host, the pillar should look like this:

```
proxy:
    proxitype: cisconso
    host: <ip or dns name of host>
    port: 8080
    use_ssl: false
    username: <username>
    password: password
```
proxytype

The proxytype key and value pair is critical, as it tells Salt which interface to load from the proxy directory in Salt's install hierarchy, or from /srv/salt/_proxy on the Salt Master (if you have created your own proxy module, for example). To use this Cisco NSO Proxy Module, set this to cisconso.

host

The location, or IP/dns, of the Cisco NSO API host. Required.

username

The username used to login to the Cisco NSO host, such as admin. Required.

passwords

The password for the given user. Required.

use_ssl

Whether to use HTTPS messaging to speak to the API.

port

The port that the Cisco NSO API is running on, 8080 by default

Salt Proxy

After your pillar is in place, you can test the proxy. The proxy can run on any machine that has network connectivity to your Salt Master and to the Cisco NSO host in question. SaltStack recommends that the machine running the salt-proxy process also run a regular minion, though it is not strictly necessary.

On the machine that will run the proxy, make sure there is an /etc/salt/proxy file with at least the following in it:

```
master: <ip or hostname of salt-master>
```

You can then start the salt-proxy process with:

```
salt-proxy --proxyid <id you want to give the host>
```

You may want to add -l debug to run the above in the foreground in debug mode just to make sure everything is OK.

Next, accept the key for the proxy on your salt-master, just like you would for a regular minion:

```
salt-key -a <id you gave the cisconso host>
```

You can confirm that the pillar data is in place for the proxy:
salt <id> pillar.items

And now you should be able to ping the Cisco NSO host to make sure it is responding:

salt <id> test.ping

```python
salt.proxy.cisconso.apply_rollback(datastore, name)

Apply a system rollback

Parameters

- `datastore` (DatastoreType(str enum)) -- The datastore, e.g. running, operational. One of the NETCONF store IETF types
- `name` (str) -- an ID of the rollback to restore
```

```python
salt.proxy.cisconso.get_data(datastore, path)

Get the configuration of the device tree at the given path

Parameters

- `datastore` (DatastoreType(str enum)) -- The datastore, e.g. running, operational. One of the NETCONF store IETF types
- `path` (list of str OR tuple) -- The device path, a list of element names in order, comma separated

Returns The network configuration at that tree

Return type dict
```

```python
salt cisco-nso cisconso.get_data devices
```

```python
salt.proxy.cisconso.get_rollback(name)

Get the backup of stored a configuration rollback

Parameters `name` (str) -- Typically an ID of the backup

Return type str

Returns the contents of the rollback snapshot
```

```python
salt.proxy.cisconso.get_rollbacks()

Get a list of stored configuration rollbacks
```

```python
salt.proxy.cisconso.grains()

Get the grains from the proxy device.
```

```python
salt.proxy.cisconso.init(opts)
```

```python
salt.proxy.cisconso.ping()

Check to see if the host is responding. Returns False if the host didn't respond, True otherwise.

CLI Example:

```
salt cisco-nso test.ping
```

```python
salt.proxy.cisconso.set_data_value(datastore, path, data)

Get a data entry in a datastore

Parameters

- `datastore` (DatastoreType(str enum)) -- The datastore, e.g. running, operational. One of the NETCONF store IETF types
```

23.13. proxy modules
- **path** (list of str OR tuple) -- The device path to set the value at, a list of element names in order, comma separated
- **data** (dict) -- The new value at the given path

**Return type** bool

**Returns** True if successful, otherwise error.

`salt.proxy.cisconso.shutdown()`

Shutdown the connection to the proxy device. For this proxy, shutdown is a no-op.

### 23.13.3 salt.proxy.docker

Docker Proxy Minion

New in version 2019.2.0.

- **depends** docker

This proxy minion is just a shim to the docker executor, which will use the `docker.call` for everything except state runs.

To configure the proxy minion:

```yaml
proxy:
  proxytype: docker
  name: festive_leakey
```

It is also possible to just name the proxy minion the same name as the container, and use grains to configure the proxy minion:

```yaml
proxy:
  proxytype: docker
  name: {{grains['id']}}
```

- **name**
  
  Name of the docker container

- **salt.proxy.docker.init**(opts)
  
  Always initialize

- **salt.proxy.docker.initialized()**
  
  This should always be initialized

- **salt.proxy.docker.module_executors()**
  
  List of module executors to use for this Proxy Minion

- **salt.proxy.docker.shutdown**(opts)
  
  Nothing needs to be done to shutdown
23.13.4 salt.proxy.esxvm

Proxy Minion interface module for managing VMWare ESXi virtual machines.

Dependencies

- pyVmomi
- jsonschema

Configuration

To use this integration proxy module, please configure the following:

Pillar

Proxy minions get their configuration from Salt’s Pillar. This can now happen from the proxy’s configuration file.

Example pillars:

```
userpass mechanism:

proxy:
    proxytype: esxvm
    datacenter: <datacenter name>
    vcenter: <ip or dns name of parent vcenter>
    mechanism: userpass
    username: <vCenter username>
    passwords: (required if userpass is used)
        - first_password
        - second_password
        - third_password

sspi mechanism:

proxy:
    proxytype: esxvm
    datacenter: <datacenter name>
    vcenter: <ip or dns name of parent vcenter>
    mechanism: sspi
    domain: <user domain>
    principal: <host kerberos principal>
```

proxytype

To use this Proxy Module, set this to esxvm.
datacenter

Name of the datacenter where the virtual machine should be deployed. Required.

vcenter

The location of the VMware vCenter server (host of ip) where the virtual machine should be managed. Required.

mechanism

The mechanism used to connect to the vCenter server. Supported values are userpass and sspi. Required.

Note: Connections are attempted using all (username, password) combinations on proxy startup.

username

The username used to login to the host, such as root. Required if mechanism is userpass.

passwords

A list of passwords to be used to try and login to the vCenter server. At least one password in this list is required if mechanism is userpass. When the proxy comes up, it will try the passwords listed in order.

domain

User realm domain. Required if mechanism is sspi.

principal

Kerberos principal. Required if mechanism is sspi.

protocol

If the ESXi host is not using the default protocol, set this value to an alternate protocol. Default is https.
port

If the ESXi host is not using the default port, set this value to an alternate port. Default is 443.

Salt Proxy

After your pillar is in place, you can test the proxy. The proxy can run on any machine that has network connectivity to your Salt Master and to the vCenter server in the pillar. SaltStack recommends that the machine running the salt-proxy process also run a regular minion, though it is not strictly necessary.

To start a proxy minion one needs to establish its identity <id>:

```bash
salt-proxy --proxyid <proxy_id>
```

On the machine that will run the proxy, make sure there is a configuration file present. By default this is `/etc/salt/proxy`. If in a different location, the `<configuration_folder>` has to be specified when running the proxy: file with at least the following in it:

```bash
salt-proxy --proxyid <proxy_id> -c <configuration_folder>
```

Commands

Once the proxy is running it will connect back to the specified master and individual commands can be runs against it:

```bash
# Master - minion communication
salt <proxy_id> test.ping

# Test vcenter connection
salt <proxy_id> vsphere.test_vcenter_connection
```

States

Associated states are documented in `salt.states.esxvm`. Look there to find an example structure for Pillar as well as an example.sls file for configuring an ESX virtual machine from scratch.

```python
salt.proxy.esxvm.find_credentials()
    Cycle through all the possible credentials and return the first one that works.

salt.proxy.esxvm.get_details()
    Function that returns the cached details

salt.proxy.esxvm.init(opts)
    This function gets called when the proxy starts up. For login the protocol and port are cached.

salt.proxy.esxvm.ping()
    Returns True.
    CLI Example:
    ```bash
    salt esx-vm test.ping
    ```

salt.proxy.esxvm.shutdown()
    Shutdown the connection to the proxy device. For this proxy, shutdown is a no-op.

23.13. proxy modules
23.13.5 salt.proxy.junos

Interface with a Junos device via proxy-minion. To connect to a junos device via junos proxy, specify the host information in the pillar in '/srv/pillar/details.sls'

```yaml
proxy:
  proxytype: junos
  host: <ip or dns name of host>
  username: <username>
  port: 830
  password: <secret>
```

In '/srv/pillar/top.sls' map the device details with the proxy name.

```yaml
base:
  'vmx':
    - details
```

After storing the device information in the pillar, configure the proxy in '/etc/salt/proxy'

```yaml
master: <ip or hostname of salt-master>
```

Run the salt proxy via the following command:

```bash
salt-proxy --proxyid=vmx
```

```python
class salt.proxy.junos.RebootActive(**kwargs)
    Class to get static variable, to indicate when a reboot/shutdown is being processed and the keep_alive should not probe the connection since it interferes with the shutdown process.
    reboot_shutdown = False

class salt.proxy.junos.Alive(opts)
    Validate and return the connection status with the remote device.
    New in version 2018.3.0.

class salt.proxy.junos.Conn()

class salt.proxy.junos.GetRebootActive()

class salt.proxy.junos.GetSerializedFacts()

class salt.proxy.junos.Init(opts)
    Open the connection to the Junos device, login, and bind to the Resource class

class salt.proxy.junos.Initialized()

class salt.proxy.junos.Ping()
    Ping? Pong!

class salt.proxy.junos.Proxytype()
    Returns the name of this proxy

class salt.proxy.junos.RebootActive()

class salt.proxy.junos.RebootClear()

class salt.proxy.junos.Shutdown(opts)
    This is called when the proxy-minion is exiting to make sure the connection to the device is closed cleanly.
```
23.13.6 salt.proxy.nxos_api

Proxy Minion to manage Cisco Nexus Switches (NX-OS) over the NX-API
New in version 2019.2.0.
Proxy module for managing Cisco Nexus switches via the NX-API.

codeauthor Mircea Ulinic <ping@mirceaulinic.net>
maturity new
platform any

Usage

Note: To be able to use this module you need to enable to NX-API on your switch, by executing feature nxapi in configuration mode.

Configuration example:

```
switch# conf t
switch(config)# feature nxapi
```

To check that NX-API is properly enabled, execute show nxapi.

Output example:

```
switch# show nxapi
nxapi enabled
HTTPS Listen on port 443
```

Note: NX-API requires modern NXOS distributions, typically at least 7.0 depending on the hardware. Due to reliability reasons it is recommended to run the most recent version.


Pillar

The nxos_api proxy configuration requires the following parameters in order to connect to the network switch:

- transport: https Specifies the type of connection transport to use. Valid values for the connection are http, and https.
- host: localhost The IP address or DNS host name of the connection device.
- username: admin The username to pass to the device to authenticate the NX-API connection.
- password The password to pass to the device to authenticate the NX-API connection.
- port The TCP port of the endpoint for the NX-API connection. If this keyword is not specified, the default value is automatically determined by the transport type (80 for http, or 443 for https).
- timeout: 60 Time in seconds to wait for the device to respond. Default: 60 seconds.
verify: **True** Either a boolean, in which case it controls whether we verify the NX-API TLS certificate, or a string, in which case it must be a path to a CA bundle to use. Defaults to True.

When there is no certificate configuration on the device and this option is set as True (default), the commands will fail with the following error: `SSLError: [SSL: CERTIFICATE_VERIFY_FAILED] certificate verify failed (_ssl.c:581)`. In this case, you either need to configure a proper certificate on the device (recommended), or bypass the checks setting this argument as False with all the security risks considered.


All the arguments may be optional, depending on your setup.

**Proxy Pillar Example**

```yaml
proxy:
  proxitype: nxos_api
  host: switch1.example.com
  username: example
  password: example
```

**salt.proxy.nxos_api.get_conn_args()**

Returns the connection arguments of the Proxy Minion.

**salt.proxy.nxos_api.init(opts)**

Open the connection to the Nexus switch over the NX-API.

As the communication is HTTP based, there is no connection to maintain, however, in order to test the connectivity and make sure we are able to bring up this Minion, we are executing a very simple command (show clock) which doesn’t come with much overhead and it’s sufficient to confirm we are indeed able to connect to the NX-API endpoint as configured.

**salt.proxy.nxos_api.initialized()**

Connection finished initializing?

**salt.proxy.nxos_api.ping()**

Connection open successfully?

**salt.proxy.nxos_api.rpc(commands, method='cli', **kwargs)**

Executes an RPC request over the NX-API.

**salt.proxy.nxos_api.shutdown(opts)**

Closes connection with the device.

### 23.14 queue modules

- pgjsonb_queue
- sqlite_queue
23.15 roster modules

ansible
cache
cloud
clustershell
flat
range
scan
sshconfig
terraform

23.16 runner modules

asam
Novell ASAM Runner
auth
bgp
cache
cloud
config
ddns
digicertapi
doc
drac
Manage Dell DRAC from the Master
derror
event
f5
Runner to provide F5 Load Balancer functionality
fileserver
get_pillar
http
jobs
launchd
Manage launchd plist files
lxc
manage
mattermost
mine
nacl
net
network
pagerduty
pillar
pkg
queue
A multi-producer, multi-consumer queue.
reactor
salt
Salt package
saltutil
sdb
smartos_vmadm
continues on next page
23.16.1 salt.runners.asam

Novell ASAM Runner

New in version 2015.8.0.

Runner to interact with Novell ASAM Fan-Out Driver

   codeauthor Nitin Madhok <nmadhok@g.clemson.edu>

To use this runner, set up the Novell Fan-Out Driver URL, username and password in the master configuration at /etc/salt/master or /etc/salt/master.d/asam.conf:

```yaml
asam:
  prov1.domain.com
  username: "testuser"
  password: "verybadpass"
  verify_ssl: true
  prov2.domain.com
  username: "testuser"
  password: "verybadpass"
  verify_ssl: true
```

Note: Optionally, protocol and port can be specified if the Fan-Out Driver server is not using the defaults. Default is protocol: https and port: 3451.

salt.runners.asam.add_platform(name, platform_set, server_url)

To add an ASAM platform using the specified ASAM platform set on the Novell Fan-Out Driver

CLI Example:

```
salt-run asam.add_platform my-test-vm test-platform-set prov1.domain.com
```

salt.runners.asam.list_platform_sets(server_url)

To list all ASAM platform sets present on the Novell Fan-Out Driver

CLI Example:

```
salt-run asam.list_platform_sets prov1.domain.com
```
salt.runners.asam.list_platforms(server_url)
To list all ASAM platforms present on the Novell Fan-Out Driver

   CLI Example:
   
   salt-run asam.list_platforms prov1.domain.com

salt.runners.asam.remove_platform(name, server_url)
To remove specified ASAM platform from the Novell Fan-Out Driver

   CLI Example:
   
   salt-run asam.remove_platform my-test-vm prov1.domain.com

23.16.2 salt.runners.drac

Manage Dell DRAC from the Master

The login credentials need to be configured in the Salt master configuration file.

   drac:
     username: admin
     password: secret

salt.runners.drac.poweroff(hostname, timeout=20, username=None, password=None)
Power server off

   CLI Example:
   
   salt-run drac.poweroff example.com

salt.runners.drac.poweron(hostname, timeout=20, username=None, password=None)
Power server on

   CLI Example:
   
   salt-run drac.poweron example.com

salt.runners.drac.pxe(hostname, timeout=20, username=None, password=None)
Connect to the Dell DRAC and have the boot order set to PXE and power cycle the system to PXE boot

   CLI Example:
   
   salt-run drac.pxe example.com

salt.runners.drac.reboot(hostname, timeout=20, username=None, password=None)
Reboot a server using the Dell DRAC

   CLI Example:
   
   salt-run drac.reboot example.com

salt.runners.drac.version(hostname, timeout=20, username=None, password=None)
Display the version of DRAC

   CLI Example:
   
   salt-run drac.version example.com
23.16.3 salt.runners.f5

Runner to provide F5 Load Balancer functionality

depends
  • pycontrol Python module

configuration In order to connect to a F5 Load Balancer, you must specify in the Salt master configuration the currently available load balancers

```
load_balancers:
  bigip1.example.com:
    username: admin
    password: secret
  bigip2.example.com:
    username: admin
    password: secret
```

class salt.runners.f5.F5Mgmt(lb, username, password)

  add_pool_member(name, port, pool_name)
  Add a node to a pool

  check_member_pool(member, pool_name)
  Check a pool member exists in a specific pool

  check_pool(name)
  Check to see if a pool exists

  check_virtualserver(name)
  Check to see if a virtual server exists

  create_pool(name, method='ROUND_ROBIN')
  Create a pool on the F5 load balancer

  create_vs(name, ip, port, protocol, profile, pool_name)
  Create a virtual server

  lbmethods()
  List all the load balancer methods

salt.runners.f5.add_pool_member(lb, name, port, pool_name)
  Add a node to a pool

CLI Examples:

```
salt-run f5.add_pool_member load_balancer 10.0.0.1 80 my_pool
```

salt.runners.f5.check_member_pool(lb, member, pool_name)
  Check a pool member exists in a specific pool

CLI Examples:

```
salt-run f5.check_member_pool load_balancer 10.0.0.1 my_pool
```

salt.runners.f5.check_pool(lb, name)
  Check to see if a pool exists

CLI Examples:
**salt-run f5.check_pool load_balancer pool_name**

```bash
salt.runners.f5.check_virtualserver(lb, name)
Check to see if a virtual server exists
```

CLI Examples:

```
salt-run f5.check_virtualserver load_balancer virtual_server
```

```bash
salt.runners.f5.create_pool(lb, name, method='ROUND_ROBIN')
Create a pool on the F5 load balancer
```

CLI Examples:

```
salt-run f5.create_pool load_balancer pool_name
salt-run f5.create_pool load_balancer my_pool ROUND_ROBIN
```

```bash
salt.runners.f5.create_vs(lb, name, ip, port, protocol, profile, pool_name)
Create a virtual server
```

CLI Examples:

```
salt-run f5.create_vs lbalancer vs_name 10.0.0.1 80 tcp http poolname
```

### 23.16.4 salt.runners.launchd

Manage launchd plist files

```bash
salt.runners.launchd.write_launchd_plist(program)
Write a launchd plist for managing salt-master or salt-minion
```

CLI Example:

```
salt-run launchd.write_launchd_plist salt-master
```

### 23.16.5 salt.runners.spacewalk

**Spacewalk Runner**

New in version 2016.3.0.

Runner to interact with Spacewalk using Spacewalk API

**codeauthor** Nitin Madhok <nmadhok@g.clemson.edu>, Joachim Werner <joe@suse.com>, Benedikt Werner <1benediktwerner@gmail.com>

**maintainer** Benedikt Werner <1benediktwerner@gmail.com>

To use this runner, set up the Spacewalk URL, username and password in the master configuration at `/etc/salt/master` or `/etc/salt/master.d/spacewalk.conf`:

```
spacewalk:
spacewalk01.domain.com:
  username: 'testuser'
  password: 'verybadpass'
spacewalk02.domain.com:
```

(continues on next page)
username: 'testuser'
password: 'verybadpass'

Note: Optionally, protocol can be specified if the spacewalk server is not using the defaults. Default is protocol: https.

salt.runners.spacewalk.addGroupsToKey(server, activation_key, groups)
Add server groups to a activation key

CLI Example:
salt-run spacewalk.addGroupsToKey spacewalk01.domain.com 1-my-key '[group1,group2]'

salt.runners.spacewalk.api(server, command, *args, **kwargs)
Call the Spacewalk xmlrpc api.

CLI Example:
salt-run spacewalk.api spacewalk01.domain.com systemgroup.create MyGroup
Arguments:
"MyGroup", "Description"

State Example:

create_group:
salt.runner:
  - name: spacewalk.api
  - server: spacewalk01.domain.com
  - command: systemgroup.create
  - arguments:
    - MyGroup
    - Description

salt.runners.spacewalk.deleteAllActivationKeys(server)
Delete all activation keys from Spacewalk

CLI Example:
salt-run spacewalk.deleteAllActivationKeys spacewalk01.domain.com

salt.runners.spacewalk.deleteAllGroups(server)
Delete all server groups from Spacewalk

salt.runners.spacewalk.deleteAllSystems(server)
Delete all systems from Spacewalk

CLI Example:
salt-run spacewalk.deleteAllSystems spacewalk01.domain.com

salt.runners.spacewalk.unregister(name, server_url)
Unregister specified server from Spacewalk

CLI Example:
23.16.6 salt.runners.test

This runner is used only for test purposes and serves no production purpose.

salt.runners.test.arg(*args, **kwargs)
Output the given args and kwargs
Kwargs will be filtered for 'private' keynames.

salt.runners.test.get_opts()
New in version 2018.3.0.
Return the configuration options of the master.

CLI Example:
salt-run test.get_opts

salt.runners.test.metasyntactic(locality='us')
Return common metasyntactic variables for the given locality

salt.runners.test.raw_arg(*args, **kwargs)
Output the given args and kwargs

salt.runners.test.sleep(s_time=10)
Sleep t seconds, then return True

salt.runners.test.stdout_print()
Print 'foo' and return 'bar'

salt.runners.test.stream()
Return True

23.17 sdb modules

<table>
<thead>
<tr>
<th>module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cache</td>
<td></td>
</tr>
<tr>
<td>confidant</td>
<td>An SDB module for getting credentials from confidant.</td>
</tr>
<tr>
<td>consul</td>
<td>Consul sdb Module</td>
</tr>
<tr>
<td>couchdb</td>
<td></td>
</tr>
<tr>
<td>env</td>
<td>Environment sdb Module</td>
</tr>
<tr>
<td>etcd_db</td>
<td>etcd Database Module</td>
</tr>
<tr>
<td>keyring_db</td>
<td>Keyring Database Module</td>
</tr>
<tr>
<td>memcached</td>
<td>Memcached sdb Module</td>
</tr>
<tr>
<td>redis_sdb</td>
<td>Redis SDB module</td>
</tr>
<tr>
<td>rest</td>
<td></td>
</tr>
<tr>
<td>sqlite3</td>
<td></td>
</tr>
<tr>
<td>tism</td>
<td></td>
</tr>
<tr>
<td>vault</td>
<td>Vault SDB Module</td>
</tr>
<tr>
<td>yaml</td>
<td></td>
</tr>
</tbody>
</table>
23.17.1 salt.sdb.confidant

An SDB module for getting credentials from confidant.

Configuring the Confidant module

The module can be configured via sdb in the minion config:

```
confidant:
  driver: confidant
  url: 'https://confidant-production.example.com'
  auth_context:
    from: example-production-iad
    to: confidant-production-iad
    user_type: service
  auth_key: "alias/authnz"
  token_cache_file: /run/confidant/confidant_token
  token_duration: 60

# key, keyid and region can be defined in the profile, but it's generally
# best to use IAM roles or environment variables for AWS auth.
keyid: 98nh9h9h908h09kjjk
key: jhf908gyeghehe0he0g8h9u0j0n0n09hj09h0
region: us-east-1
```

depends confidant-common, confidant-client

Module Documentation

`salt.sdb.confidant.get(key, profile=None)`

Read pillar data from Confidant via its API.

CLI Example:

```
salt myminion sdb.get 'sdb://confidant/credentials'
```

Valid keys are: credentials, credentials_metadata, result. credentials returns a dict of joined credential_pairs, credentials_metadata returns a dict of metadata relevant to the credentials mapped to the confidant service, and result returns a bool that can be used to determine if the sdb call succeeded or failed to fetch credentials from confidant (or from local cache). If result is false, the data in credentials or credentials_metadata can't be trusted.
23.17.2 salt.sdb.consul

Consul sdb Module

maintainer SaltStack

maturity New

platform all

This module allows access to Consul using an sdb:// URI.

Like all sdb modules, the Consul module requires a configuration profile to be configured in either the minion or master configuration file. This profile requires very little. For example:

```
myconsul:
    driver: consul
    host: 127.0.0.1
    port: 8500
    token: b6376760-a8bb-edd5-fcda-33bc13bfc556
    scheme: http
    consistency: default
    dc: dev
    verify: True
```

The `driver` refers to the Consul module, all other options are optional. For option details see: https://python-consul.readthedocs.io/en/latest/#consul

salt.sdb.consul.get(key, profile=None)
salt.sdb.consul.get_conn(profile)
    Return a client object for accessing consul
salt.sdb.consul.set_(key, value, profile=None)

23.17.3 salt.sdb.env

Environment sdb Module

maintainer SaltStack

maturity New

depends None

platform all

This module allows access to environment variables using an sdb:// URI.

Example configuration for this module:

```
osenv:
    driver: env
```
WARNING:

OS environment variables will be available to read via SDB. Please make sure you don’t have any sensitive data in your environment variables‼

Example usage of sdb env module:

```
set some env var:
  cmd.run:
    - name: echo {{ salt['sdb.set']('sdb://osenv/foo', 'bar') }}
    - order: 1

{% if salt['sdb.get']('sdb://osenv/foo') == 'bar' %}
  always-changes-and-succeeds:
    test.succeed_with_changes:
      - name: foo
{% else %}
  always-changes-and-fails:
    test.fail_with_changes:
      - name: foo
{% endif %}
```

The above example will return success.

The env sdb module can also be used with salt cloud. Assuming you have exported the environment variable named compute (and have osenv defined). The example below will look for the salt cloud config key compute_name in the environment:

```
my-openstack-config:
  compute_name: sdb://osenv/compute
```

```
salt.sdb.env.get(key, profile=None)
  Get a value
	salt.sdb.env.set_(key, value, profile=None)
  Set a key/value pair
```

23.17.4 salt.sdb.etcd_db

etcd Database Module

maintainer SaltStack

maturity New

depends python-etcd

platform all

New in version 2015.5.0.

This module allows access to the etcd database using an sdb:// URI. This package is located at https://pypi.python.org/pypi/python-etcd.

Like all sdb modules, the etcd module requires a configuration profile to be configured in either the minion or master configuration file. This profile requires very little. In the example:
**myetcd:**
- **driver:** etcd
- **etcd.host:** 127.0.0.1
- **etcd.port:** 2379

The **driver** refers to the etcd module, **etcd.host** refers to the host that is hosting the etcd database and **etcd.port** refers to the port on that host.

**password:** sdb://myetcd/mypassword

```python
salt.sdb.etcd_db.delete(key, service=None, profile=None)
```
Get a value from the etcd service

```python
salt.sdb.etcd_db.get(key, service=None, profile=None)
```
Get a value from the etcd service

```python
salt.sdb.etcd_db.set_(key, value, service=None, profile=None)
```
Set a key/value pair in the etcd service

## 23.17.5 salt.sdb.keyring_db

Keyring Database Module
- **maintainer** SaltStack
- **maturity** New
- **depends** keyring
- **platform** all

This module allows access to the keyring package using an **sdb://** URI. This package is located at [https://pypi.python.org/pypi/keyring](https://pypi.python.org/pypi/keyring).

Care must be taken when using keyring. Not all keyend backends are supported on all operating systems. Also, many backends require an agent to be running in order to work. For instance, the "Secret Service" backend requires a compatible agent such as `gnome-keyring-daemon` or `kwallet` to be running. The keyczar backend does not seem to enjoy the benefits of an agent, and so using it will require either that the password is typed in manually (which is unreasonable for the salt-minion and salt-master daemons, especially in production) or an agent is written for it.

Like all sdb modules, the keyring module requires a configuration profile to be configured in either the minion or master configuration file. This profile requires very little. In the example:

```yaml
mykeyring:
  driver: keyring
  service: system
```

The **driver** refers to the keyring module, **service** refers to the service that will be used inside of keyring (which may be likened unto a database table) and **mykeyring** refers to the name that will appear in the URI:

**password:** sdb://mykeyring/mypassword

The underlying backend configuration must be configured via keyring itself. For examples and documentation, see keyring:
- [https://pypi.python.org/pypi/keyring](https://pypi.python.org/pypi/keyring)

New in version 2014.1.4.
salt.sdb.keyring_db.get(key, service=None, profile=None)
Get a value from a keyring service

salt.sdb.keyring_db.set_(key, value, service=None, profile=None)
Set a key/value pair in a keyring service

23.17.6 salt.sdb.memcached

Memcached sdb Module

maintainer SaltStack
maturity New
depends python-memcached
platform all

This module allows access to memcached using an sdb:// URI. This package is located at https://pypi.python.org/pypi/python-memcached.

Like all sdb modules, the memcached module requires a configuration profile to be configured in either the minion or master configuration file. This profile requires very little. In the example:

```
mymemcache:
  driver: memcached
  memcached.host: localhost
  memcached.port: 11211
```

The driver refers to the memcached module, host and port the memcached server to connect to (defaults to localhost and 11211, and mymemcached refers to the name that will appear in the URI:

```
password: sdb://mymemcached/mykey
```

salt.sdb.memcached.get(key, profile=None)
Get a value from memcached

salt.sdb.memcached.set_(key, value, profile=None)
Set a key/value pair in memcached

23.17.7 salt.sdb.redis_sdb

Redis SDB module

New in version 2019.2.0.

This module allows access to Redis using an sdb:// URI.

Like all SDB modules, the Redis module requires a configuration profile to be configured in either the minion or master configuration file. This profile requires very little. For example:

```
sdb_redis:
  driver: redis
  host: 127.0.0.1
  port: 6379
  password: pass
  db: 1
```
The driver refers to the Redis module, all other options are optional. For option details see: https://redis-py.readthedocs.io/en/latest/.

```python
salt.sdb.redis_sdb.delete(key, profile=None)
    Delete a key from the Redis SDB.

salt.sdb.redis_sdb.get(key, profile=None)
    Get a value from the Redis SDB.

salt.sdb.redis_sdb.set_(key, value, profile=None)
    Set a value into the Redis SDB.
```

### 23.17.8 salt.sdb.vault

Vault SDB Module

- **maintainer**: SaltStack
- **maturity**: New
- **platform**: all

New in version 2016.11.0.

This module allows access to Hashicorp Vault using an `sdb://` URI.

Base configuration instructions are documented in the execution module docs. Below are noted extra configuration required for the sdb module, but the base configuration must also be completed.

Like all sdb modules, the vault module requires a configuration profile to be configured in either the minion configuration file or a pillar. This profile requires only setting the `driver` parameter to `vault`:

```yaml
myvault:
    driver: vault
```

Once configured you can access data using a URL such as:

```text
password: sdb://myvault/secret/passwords/mypassword
```

In this URL, `myvault` refers to the configuration profile, `secret/passwords` is the path where the data resides, and `mypassword` is the key of the data to return.

The above URI is analogous to running the following vault command:

```bash
$ vault read -field=mypassword secret/passwords
```

```python
salt.sdb.vault.get(key, profile=None)
    Get a value from the vault service

salt.sdb.vault.set_(key, value, profile=None)
    Set a key/value pair in the vault service
```
23.18 serializer modules

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>configparser</td>
<td>salt.serializers.configparser</td>
</tr>
<tr>
<td>json</td>
<td>JSON (JavaScript Object Notation) <a href="http://json.org">http://json.org</a> is used as a lightweight data interchange format.</td>
</tr>
<tr>
<td>msgpack</td>
<td></td>
</tr>
<tr>
<td>plist</td>
<td>salt.serializers.plist</td>
</tr>
<tr>
<td>python</td>
<td></td>
</tr>
<tr>
<td>toml</td>
<td>salt.serializers.toml</td>
</tr>
<tr>
<td>yaml</td>
<td></td>
</tr>
<tr>
<td>yamlex</td>
<td></td>
</tr>
</tbody>
</table>

23.18.1 salt.serializers.configparser

salt.serializers.configparser

New in version 2016.3.0.
Implements a configparser serializer.

salt.serializers.configparser.deserialize(stream_or_string, **options)

Deserializes any string or stream-like object into a Python data structure.

Parameters

- **stream_or_string** -- stream or string to deserialize.
- **options** -- options given to lower configparser module.

salt.serializers.configparser.serialize(obj, **options)

Serializes Python data to a configparser formatted string or file.

Parameters

- **obj** -- the data structure to serialize
- **options** -- options given to lower configparser module.

23.18.2 salt.serializers.plist

salt.serializers.plist

New in version 3001.
Implements plist serializer.

Wrapper around plistlib.

salt.serializers.plist.deserialize(stream_or_string, **options)

Deserializes any string or stream-like object into a Python data structure.

Parameters

- **stream_or_string** -- stream or string to deserialize.
- **options** -- options given to lower plist module.
Returns Deserialized data structure.

salt.serializers.plist.serialize(value, **options)
Serialize Python data to plist. To create a binary plist pass fmt: FMT_BINARY as an option.

Parameters
- **obj** -- the data structure to serialize
- **options** -- options given to lower plist module.

Returns bytes of serialized plist.

23.18.3 salt.serializers.toml

salt.serializers.toml

Implements TOML serializer.
It’s just a wrapper around the python toml module.

salt.serializers.toml.deserialize(stream_or_string, **options)
Deserialize from TOML into Python data structure.

Parameters
- **stream_or_string** -- toml stream or string to deserialize.
- **options** -- options given to the python toml module.

salt.serializers.toml.serialize(obj, **options)
Serialize Python data to TOML.

Parameters
- **obj** -- the data structure to serialize.
- **options** -- options given to the python toml module.

23.19 state modules

<table>
<thead>
<tr>
<th>State</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>acme</td>
<td>ACME / Let’s Encrypt certificate management state</td>
</tr>
<tr>
<td>alias</td>
<td>Configuration of email aliases</td>
</tr>
<tr>
<td>alternatives</td>
<td>Configuration of the alternatives system</td>
</tr>
<tr>
<td>ansible</td>
<td>Configuration disposable regularly scheduled tasks for at.</td>
</tr>
<tr>
<td>apache</td>
<td>Manage Apache Modules</td>
</tr>
<tr>
<td>apache_conf</td>
<td>Manage Apache Sites</td>
</tr>
<tr>
<td>artifactory</td>
<td>This state downloads artifacts from artifactory.</td>
</tr>
<tr>
<td>at</td>
<td>Configuration disposable regularly scheduled tasks for at.</td>
</tr>
<tr>
<td>augeas</td>
<td>Manage SQS Queues</td>
</tr>
<tr>
<td>aws_sqs</td>
<td>Manage SQS Queues</td>
</tr>
</tbody>
</table>

continues on next page
<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>azurearm_compute</td>
<td>Azure (ARM) Compute State Module</td>
</tr>
<tr>
<td>azurearm_dns</td>
<td>Azure (ARM) DNS State Module</td>
</tr>
<tr>
<td>azurearm_network</td>
<td>Azure (ARM) Network State Module</td>
</tr>
<tr>
<td>azurearm_resource</td>
<td>Management of the Salt beacons</td>
</tr>
<tr>
<td>beacon</td>
<td>Management of the Salt beacons</td>
</tr>
<tr>
<td>bigip</td>
<td>Management of the Salt beacons</td>
</tr>
<tr>
<td>blockdev</td>
<td>Management of the Salt beacons</td>
</tr>
<tr>
<td>boto3_elasticache</td>
<td>Manage Elasticache with boto3</td>
</tr>
<tr>
<td>boto3_elasticsearch</td>
<td>Manage Elasticache with boto3</td>
</tr>
<tr>
<td>boto3_route53</td>
<td>Manage Elasticache with boto3</td>
</tr>
<tr>
<td>boto3_sns</td>
<td>Manage Elasticache with boto3</td>
</tr>
<tr>
<td>boto_apigateway</td>
<td>Manage Elasticache with boto3</td>
</tr>
<tr>
<td>boto_asg</td>
<td>Manage Autoscale Groups</td>
</tr>
<tr>
<td>boto_cloudfront</td>
<td>Manage CloudFront distributions</td>
</tr>
<tr>
<td>boto_cloudtrail</td>
<td>Manage CloudFront distributions</td>
</tr>
<tr>
<td>boto_cloudwatch_alarm</td>
<td>Manage CloudWatch Alarm</td>
</tr>
<tr>
<td>boto_cloudwatch_event</td>
<td>Manage CloudWatch Event</td>
</tr>
<tr>
<td>boto_cognitoidentity</td>
<td>Manage CognitoIdentity Functions</td>
</tr>
<tr>
<td>boto_datapipeline</td>
<td>Manage DynamoDB Tables</td>
</tr>
<tr>
<td>boto_dynamodb</td>
<td>Manage DynamoDB Tables</td>
</tr>
<tr>
<td>boto_ec2</td>
<td>Manage DynamoDB Tables</td>
</tr>
<tr>
<td>boto_elasticache</td>
<td>Manage Elasticache</td>
</tr>
<tr>
<td>boto_elasticsearch_domain</td>
<td>Manage Elasticache with boto3</td>
</tr>
<tr>
<td>boto_elb</td>
<td>Manage AWS Application Load Balancer</td>
</tr>
<tr>
<td>boto_iam</td>
<td>Manage IAM roles</td>
</tr>
<tr>
<td>boto_iam_role</td>
<td>Manage IAM roles</td>
</tr>
<tr>
<td>boto_iot</td>
<td>Manage IAM roles</td>
</tr>
<tr>
<td>boto_kinesis</td>
<td>Manage Kinesis Streams</td>
</tr>
<tr>
<td>boto_kms</td>
<td>Manage KMS keys, key policies and grants.</td>
</tr>
<tr>
<td>boto_lambda</td>
<td>Manage Launch Configurations</td>
</tr>
<tr>
<td>boto_lc</td>
<td>Manage Launch Configurations</td>
</tr>
<tr>
<td>boto_rds</td>
<td>Manage Launch Configurations</td>
</tr>
<tr>
<td>boto_route53</td>
<td>Manage Launch Configurations</td>
</tr>
<tr>
<td>boto_s3</td>
<td>Manage Launch Configurations</td>
</tr>
<tr>
<td>boto_s3_bucket</td>
<td>Manage Security Groups</td>
</tr>
<tr>
<td>boto_secgroup</td>
<td>Manage Security Groups</td>
</tr>
<tr>
<td>boto_sns</td>
<td>Manage SNS Topics</td>
</tr>
<tr>
<td>boto_sqs</td>
<td>Manage SNS Topics</td>
</tr>
<tr>
<td>boto_vpc</td>
<td>Manage VPCs</td>
</tr>
<tr>
<td>bower</td>
<td>Installation of Bower Packages</td>
</tr>
<tr>
<td>btrfs</td>
<td>Installation of Bower Packages</td>
</tr>
</tbody>
</table>

**Maintainer**: Alberto Planas

*mailto:* <aplanas@suse.com>
Table 19 – continued from previous page

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>chronos_job</strong></td>
<td>Configure Chronos jobs via a salt proxy.</td>
</tr>
<tr>
<td><strong>cimc</strong></td>
<td>A state module to manage Cisco UCS chassis devices.</td>
</tr>
<tr>
<td><strong>cisconso</strong></td>
<td></td>
</tr>
<tr>
<td><strong>cloud</strong></td>
<td></td>
</tr>
<tr>
<td><strong>cmd</strong></td>
<td>A generic class to build line-oriented command interpreters.</td>
</tr>
<tr>
<td><strong>composer</strong></td>
<td>Installation of Composer Packages</td>
</tr>
<tr>
<td><strong>cron</strong></td>
<td></td>
</tr>
<tr>
<td><strong>cryptdev</strong></td>
<td>Opening of Encrypted Devices</td>
</tr>
<tr>
<td><strong>csf</strong></td>
<td>CSF Ip tables management</td>
</tr>
<tr>
<td><strong>cyg</strong></td>
<td>Installation of Cygwin packages.</td>
</tr>
<tr>
<td><strong>ddns</strong></td>
<td>Dynamic DNS updates</td>
</tr>
<tr>
<td><strong>debconfmod</strong></td>
<td>Management of debconf selections</td>
</tr>
<tr>
<td><strong>dellchassis</strong></td>
<td>Manage chassis via Salt Proxies.</td>
</tr>
<tr>
<td><strong>disk</strong></td>
<td>Disk monitoring state</td>
</tr>
<tr>
<td><strong>docker_container</strong></td>
<td></td>
</tr>
<tr>
<td><strong>docker_image</strong></td>
<td></td>
</tr>
<tr>
<td><strong>docker_network</strong></td>
<td></td>
</tr>
<tr>
<td><strong>docker_volume</strong></td>
<td></td>
</tr>
<tr>
<td><strong>drac</strong></td>
<td></td>
</tr>
<tr>
<td><strong>dvs</strong></td>
<td>Manage VMware distributed virtual switches (DVSs) and their distributed virtual portgroups (DVport-groups).</td>
</tr>
<tr>
<td><strong>elasticsearch</strong></td>
<td></td>
</tr>
<tr>
<td><strong>elasticsearch_index</strong></td>
<td>State module to manage Elasticsearch indices</td>
</tr>
<tr>
<td><strong>elasticsearch_index_template</strong></td>
<td>State module to manage Elasticsearch index templates</td>
</tr>
<tr>
<td><strong>environ</strong></td>
<td></td>
</tr>
<tr>
<td><strong>eselect</strong></td>
<td>Management of Gentoo configuration using eselect</td>
</tr>
<tr>
<td><strong>esxcluster</strong></td>
<td></td>
</tr>
<tr>
<td><strong>esxdatacenter</strong></td>
<td>Salt states to create and manage VMware vSphere datacenters (datacenters).</td>
</tr>
<tr>
<td><strong>esxi</strong></td>
<td></td>
</tr>
<tr>
<td><strong>esxvm</strong></td>
<td></td>
</tr>
<tr>
<td><strong>etcd_mod</strong></td>
<td>Manage etcd Keys</td>
</tr>
<tr>
<td><strong>ethtool</strong></td>
<td>Configuration of network device</td>
</tr>
<tr>
<td><strong>event</strong></td>
<td></td>
</tr>
<tr>
<td><strong>file</strong></td>
<td>State to check firewall configurations</td>
</tr>
<tr>
<td><strong>firewall</strong></td>
<td></td>
</tr>
<tr>
<td><strong>firewalld</strong></td>
<td></td>
</tr>
<tr>
<td><strong>gem</strong></td>
<td>Installation of Ruby modules packaged as gems</td>
</tr>
<tr>
<td><strong>git</strong></td>
<td></td>
</tr>
<tr>
<td><strong>github</strong></td>
<td>Github User State Module</td>
</tr>
<tr>
<td><strong>glance</strong></td>
<td>Managing Images in OpenStack Glance</td>
</tr>
<tr>
<td><strong>glance_image</strong></td>
<td>Management of OpenStack Glance Images</td>
</tr>
<tr>
<td><strong>glassfish</strong></td>
<td></td>
</tr>
<tr>
<td><strong>glusterfs</strong></td>
<td></td>
</tr>
<tr>
<td><strong>gnomedesktop</strong></td>
<td>Configuration of the GNOME desktop</td>
</tr>
<tr>
<td><strong>gpg</strong></td>
<td>Management of the GPG keychains</td>
</tr>
<tr>
<td><strong>grafana</strong></td>
<td></td>
</tr>
<tr>
<td><strong>grafana4_dashboard</strong></td>
<td></td>
</tr>
</tbody>
</table>

continues on next page
<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>grafana4_datasource</td>
<td>Manage Grafana v4.0 data sources</td>
</tr>
<tr>
<td>grafana4_org</td>
<td>Manage Grafana v4.0 orgs</td>
</tr>
<tr>
<td>grafana4_user</td>
<td>Manage Grafana v4.0 users</td>
</tr>
<tr>
<td>grafana_dashboard</td>
<td>Manage Grafana v2.0 data sources</td>
</tr>
<tr>
<td>grains</td>
<td>Manage grains on the minion</td>
</tr>
<tr>
<td>group</td>
<td></td>
</tr>
<tr>
<td>heat</td>
<td></td>
</tr>
<tr>
<td>helm</td>
<td></td>
</tr>
<tr>
<td>highstate_doc</td>
<td>To be used with processors in module highstate_doc.</td>
</tr>
<tr>
<td>host</td>
<td>HTTP monitoring states</td>
</tr>
<tr>
<td>icinga2</td>
<td>Idem Support</td>
</tr>
<tr>
<td>ifttt</td>
<td>Trigger an event in IFTTT</td>
</tr>
<tr>
<td>incron</td>
<td>Management of incron, the inotify cron</td>
</tr>
<tr>
<td>influxdb08_database</td>
<td>Management of Influxdb 0.8 databases</td>
</tr>
<tr>
<td>influxdb08_user</td>
<td>Management of InfluxDB 0.8 users</td>
</tr>
<tr>
<td>influxdb_continuous_query</td>
<td>Management of Influxdb continuous queries</td>
</tr>
<tr>
<td>influxdb_database</td>
<td>Management of Influxdb databases</td>
</tr>
<tr>
<td>influxdb_retention_policy</td>
<td>Management of Influxdb retention policies</td>
</tr>
<tr>
<td>influxdb_user</td>
<td>Management of InfluxDB users</td>
</tr>
<tr>
<td>infoblox_a</td>
<td>Infoblox A record management.</td>
</tr>
<tr>
<td>infoblox_cname</td>
<td>Infoblox CNAME management.</td>
</tr>
<tr>
<td>infoblox_host_record</td>
<td>Infoblox host record management.</td>
</tr>
<tr>
<td>infoblox_range</td>
<td>Infoblox host record management.</td>
</tr>
<tr>
<td>ini_manage</td>
<td>Manage ini files</td>
</tr>
<tr>
<td>ipmi</td>
<td>Manage IPMI devices over LAN</td>
</tr>
<tr>
<td>ipset</td>
<td>Management of ipsets</td>
</tr>
<tr>
<td>iptables</td>
<td></td>
</tr>
<tr>
<td>jboss7</td>
<td>Manage JBoss 7 Application Server via CLI interface</td>
</tr>
<tr>
<td>keystone</td>
<td>State modules to interact with Junos devices.</td>
</tr>
<tr>
<td>keystore</td>
<td></td>
</tr>
<tr>
<td>kernelpkg</td>
<td>Manage kernel packages and active kernel version</td>
</tr>
<tr>
<td>keyboard</td>
<td>Management of keyboard layouts</td>
</tr>
<tr>
<td>keystone</td>
<td>Management of Keystone users</td>
</tr>
<tr>
<td>keystone_domain</td>
<td>Management of OpenStack Keystone Domains</td>
</tr>
<tr>
<td>keystone_endpoint</td>
<td>Management of OpenStack Keystone Endpoints</td>
</tr>
<tr>
<td>keystone_group</td>
<td>Management of OpenStack Keystone Groups</td>
</tr>
<tr>
<td>keystone_project</td>
<td>Management of OpenStack Keystone Projects</td>
</tr>
<tr>
<td>keystone_role</td>
<td>Management of OpenStack Keystone Roles</td>
</tr>
<tr>
<td>keystone_role_grant</td>
<td>Management of OpenStack Keystone Role Grants</td>
</tr>
<tr>
<td>keystone_service</td>
<td>Management of OpenStack Keystone Services</td>
</tr>
<tr>
<td>keystone_user</td>
<td>Management of OpenStack Keystone Users</td>
</tr>
<tr>
<td>keystore</td>
<td>State management of a java keystore</td>
</tr>
<tr>
<td>kmod</td>
<td>Loading and unloading of kernel modules</td>
</tr>
<tr>
<td>kubernetes</td>
<td>Manage kubernetes resources as salt states</td>
</tr>
<tr>
<td>layman</td>
<td>Management of Gentoo Overlays using layman</td>
</tr>
</tbody>
</table>

continues on next page
<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ldap</td>
<td>Manage entries in an LDAP database</td>
</tr>
<tr>
<td>libcloud_dns</td>
<td>Manage DNS records and zones using libcloud</td>
</tr>
<tr>
<td>libcloud_loadbalancer</td>
<td>Apache Libcloud Load Balancer State</td>
</tr>
<tr>
<td>libcloud_storage</td>
<td>Apache Libcloud Storage State</td>
</tr>
<tr>
<td>linux_acl</td>
<td>Management of languages/locales</td>
</tr>
<tr>
<td>locale</td>
<td>Module for managing logrotate.</td>
</tr>
<tr>
<td>logadm</td>
<td>Loop state</td>
</tr>
<tr>
<td>logrotate</td>
<td>Management of LVS (Linux Virtual Server) Real Server</td>
</tr>
<tr>
<td>lxc</td>
<td>Manage Linux Containers</td>
</tr>
<tr>
<td>lvs_server</td>
<td>Management of LVS (Linux Virtual Server) Service</td>
</tr>
<tr>
<td>lvs_service</td>
<td>Manage LXD profiles.</td>
</tr>
<tr>
<td>lxd_container</td>
<td>Manage LXD containers.</td>
</tr>
<tr>
<td>lxd_image</td>
<td>Manage LXD images.</td>
</tr>
<tr>
<td>lxd_profile</td>
<td>Manage LXD profiles.</td>
</tr>
<tr>
<td>mac_assistive</td>
<td>Allows you to manage extended attributes on files or</td>
</tr>
<tr>
<td>mac_keychain</td>
<td>directories</td>
</tr>
<tr>
<td>mac_xattr</td>
<td>Management of Gentoo make.conf</td>
</tr>
<tr>
<td>marathon_app</td>
<td>Configure Marathon apps via a salt proxy.</td>
</tr>
<tr>
<td>mdadm_raid</td>
<td>State to control Apache modjk</td>
</tr>
<tr>
<td>memcached</td>
<td>Manage modjk workers</td>
</tr>
<tr>
<td>modjk</td>
<td>Mounting of filesystems</td>
</tr>
<tr>
<td>mongoddb_database</td>
<td>Management of MongoDB Databases</td>
</tr>
<tr>
<td>mongoddb_user</td>
<td>Management of MongoDB Users</td>
</tr>
<tr>
<td>monit</td>
<td>Monit state</td>
</tr>
<tr>
<td>mount</td>
<td>Management of Microsoft SQLServer Databases</td>
</tr>
<tr>
<td>mssql_login</td>
<td>Management of Microsoft SQLServer Logins</td>
</tr>
<tr>
<td>mssql_role</td>
<td>Management of Microsoft SQLServer Databases</td>
</tr>
<tr>
<td>mssql_user</td>
<td>Management of Microsoft SQLServer Users</td>
</tr>
<tr>
<td>msteams</td>
<td>Send a message card to Microsoft Teams</td>
</tr>
<tr>
<td>mysql_database</td>
<td>Management of MySQL databases (schemas)</td>
</tr>
<tr>
<td>mysql_grants</td>
<td>Management of MySQL grants (user permissions)</td>
</tr>
<tr>
<td>mysql_query</td>
<td></td>
</tr>
<tr>
<td>mysql_user</td>
<td></td>
</tr>
<tr>
<td>net_napalm_yang</td>
<td></td>
</tr>
<tr>
<td>netacl</td>
<td></td>
</tr>
<tr>
<td>netconfig</td>
<td></td>
</tr>
<tr>
<td>netntnp</td>
<td></td>
</tr>
<tr>
<td>netsnmp</td>
<td></td>
</tr>
<tr>
<td>netusers</td>
<td></td>
</tr>
<tr>
<td>network</td>
<td></td>
</tr>
</tbody>
</table>

continues on next page
<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>neutron_network</td>
<td>Management of OpenStack Neutron Networks</td>
</tr>
<tr>
<td>neutron_secgroup</td>
<td>Management of OpenStack Neutron Security Groups</td>
</tr>
<tr>
<td>neutron_secgroup_rule</td>
<td>Management of OpenStack Neutron Security Group Rules</td>
</tr>
<tr>
<td>neutron_subnet</td>
<td>Management of OpenStack Neutron Subnets</td>
</tr>
<tr>
<td>nexus</td>
<td>This state downloads artifacts from Nexus 3.x.</td>
</tr>
<tr>
<td>nfs_export</td>
<td></td>
</tr>
<tr>
<td>npm</td>
<td>Installation of NPM Packages</td>
</tr>
<tr>
<td>ntp</td>
<td></td>
</tr>
<tr>
<td>nxos</td>
<td>State module for Cisco NX-OS Switch Proxy and Native minions</td>
</tr>
<tr>
<td>nxos_upgrade</td>
<td>Manage NX-OS System Image Upgrades.</td>
</tr>
<tr>
<td>openstack_config</td>
<td>Manage OpenStack configuration file settings.</td>
</tr>
<tr>
<td>openvswitch_bridge</td>
<td>Management of Open vSwitch bridges.</td>
</tr>
<tr>
<td>openvswitch_port</td>
<td>Management of Open vSwitch ports.</td>
</tr>
<tr>
<td>opsgenie</td>
<td>Create/Close an alert in OpsGenie</td>
</tr>
<tr>
<td>pagerduty</td>
<td>Create an Event in PagerDuty</td>
</tr>
<tr>
<td>pagerduty_escalation_policy</td>
<td>Manage PagerDuty escalation policies.</td>
</tr>
<tr>
<td>pagerduty_schedule</td>
<td>Manage PagerDuty schedules.</td>
</tr>
<tr>
<td>pagerduty_service</td>
<td>Manage PagerDuty services</td>
</tr>
<tr>
<td>pagerduty_user</td>
<td>Manage PagerDuty users.</td>
</tr>
<tr>
<td>panos</td>
<td></td>
</tr>
<tr>
<td>pbm</td>
<td>Manages VMware storage policies (called pbm because the vCenter endpoint is /pbm)</td>
</tr>
<tr>
<td>pcs</td>
<td></td>
</tr>
<tr>
<td>pdbedit</td>
<td></td>
</tr>
<tr>
<td>pecl</td>
<td>Installation of PHP Extensions Using pecl</td>
</tr>
<tr>
<td>pip_state</td>
<td></td>
</tr>
<tr>
<td>pkg</td>
<td></td>
</tr>
<tr>
<td>pkgbuild</td>
<td>The pkgbuild state is the front of Salt package building backend.</td>
</tr>
<tr>
<td>pkgng</td>
<td>Manage package remote repo using FreeBSD pkgng</td>
</tr>
<tr>
<td>pkgrepo</td>
<td></td>
</tr>
<tr>
<td>portage_config</td>
<td>Management of Portage package configuration on Gento</td>
</tr>
<tr>
<td>ports</td>
<td></td>
</tr>
<tr>
<td>postgres_cluster</td>
<td>Management of PostgreSQL clusters</td>
</tr>
<tr>
<td>postgres_database</td>
<td>Management of PostgreSQL databases</td>
</tr>
<tr>
<td>postgres_extension</td>
<td></td>
</tr>
<tr>
<td>postgres_group</td>
<td></td>
</tr>
<tr>
<td>postgres_initdb</td>
<td>Initialization of PostgreSQL data directory</td>
</tr>
<tr>
<td>postgres_language</td>
<td>Management of PostgreSQL languages</td>
</tr>
<tr>
<td>postgres_privileges</td>
<td>Management of PostgreSQL Privileges</td>
</tr>
<tr>
<td>postgres_schema</td>
<td>Management of PostgreSQL schemas</td>
</tr>
<tr>
<td>postgres_tablespace</td>
<td>Management of PostgreSQL tablespace</td>
</tr>
<tr>
<td>postgres_user</td>
<td></td>
</tr>
<tr>
<td>powerpath</td>
<td>Powerpath configuration support</td>
</tr>
<tr>
<td>probes</td>
<td></td>
</tr>
<tr>
<td>process</td>
<td>Process Management</td>
</tr>
</tbody>
</table>

continues on next page
<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>proxy</td>
<td>Send a message to PushOver</td>
</tr>
<tr>
<td>pushover</td>
<td>Managing Python installations with pyenv</td>
</tr>
<tr>
<td>pyenv</td>
<td>Manage Rackspace Queues</td>
</tr>
<tr>
<td>pyrax_queues</td>
<td>Management of POSIX Quotas</td>
</tr>
<tr>
<td>quota</td>
<td></td>
</tr>
<tr>
<td>rabbitmq_cluster</td>
<td>Manage RabbitMQ Plugins</td>
</tr>
<tr>
<td>rabbitmq_plugin</td>
<td></td>
</tr>
<tr>
<td>rabbitmq_policy</td>
<td></td>
</tr>
<tr>
<td>rabbitmq_upstream</td>
<td></td>
</tr>
<tr>
<td>rabbitmq_user</td>
<td></td>
</tr>
<tr>
<td>rabbitmq_vhost</td>
<td></td>
</tr>
<tr>
<td>rbac_solaris</td>
<td>Management of Solaris RBAC</td>
</tr>
<tr>
<td>rbenv</td>
<td>Managing Ruby installations with rbenv</td>
</tr>
<tr>
<td>rdp</td>
<td>Manage RDP Service on Windows servers</td>
</tr>
<tr>
<td>redismod</td>
<td>Management of Redis server</td>
</tr>
<tr>
<td>reg</td>
<td>Manage the Windows registry</td>
</tr>
<tr>
<td>rsync</td>
<td>Managing Ruby installations and gemsets with Ruby Version Manager (RVM)</td>
</tr>
<tr>
<td>rvm</td>
<td></td>
</tr>
<tr>
<td>salt_proxy</td>
<td>Salt proxy state</td>
</tr>
<tr>
<td>saltmod</td>
<td></td>
</tr>
<tr>
<td>saltutil</td>
<td>Saltutil State</td>
</tr>
<tr>
<td>schedule</td>
<td>Management of the Salt scheduler</td>
</tr>
<tr>
<td>selinux</td>
<td>Management of SELinux rules</td>
</tr>
<tr>
<td>serverdensity_device</td>
<td></td>
</tr>
<tr>
<td>service</td>
<td></td>
</tr>
<tr>
<td>slack</td>
<td>Send a message to Slack</td>
</tr>
<tr>
<td>smartos</td>
<td></td>
</tr>
<tr>
<td>smtp</td>
<td>Sending Messages via SMTP</td>
</tr>
<tr>
<td>snapper</td>
<td>Managing implicit state and baselines using snapshots</td>
</tr>
<tr>
<td>solrcloud</td>
<td>Splunk User State Module</td>
</tr>
<tr>
<td>splunk</td>
<td>Splunk Search State Module</td>
</tr>
<tr>
<td>splunk_search</td>
<td>Management of SQLite3 databases</td>
</tr>
<tr>
<td>sqlite3</td>
<td>Control of entries in SSH authorized_key files</td>
</tr>
<tr>
<td>ssh_auth</td>
<td></td>
</tr>
<tr>
<td>ssh_known_hosts</td>
<td>Stateconf System</td>
</tr>
<tr>
<td>stateconf</td>
<td>Minion status monitoring</td>
</tr>
<tr>
<td>status</td>
<td>StatusPage</td>
</tr>
<tr>
<td>statuspage</td>
<td>Interaction with the Supervisor daemon</td>
</tr>
<tr>
<td>supervisord</td>
<td></td>
</tr>
<tr>
<td>svn</td>
<td></td>
</tr>
<tr>
<td>syslog_ng</td>
<td>State module for syslog_ng</td>
</tr>
<tr>
<td>systrc</td>
<td>State to work with systrc</td>
</tr>
<tr>
<td>telemetry_alert</td>
<td>Manage Telemetry alert configurations</td>
</tr>
<tr>
<td>test</td>
<td></td>
</tr>
<tr>
<td>testinframod</td>
<td></td>
</tr>
<tr>
<td>timezone</td>
<td>Management of timezones</td>
</tr>
<tr>
<td>tls</td>
<td>Enforce state for SSL/TLS</td>
</tr>
<tr>
<td>tomcat</td>
<td>Manage Apache Tomcat web applications</td>
</tr>
</tbody>
</table>

continues on next page
Table 19 – continued from previous page

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>trafficserver</code></td>
<td>Control Apache Traffic Server</td>
</tr>
<tr>
<td><code>tuned</code></td>
<td>Interface to Red Hat tuned-adm module</td>
</tr>
<tr>
<td><code>uptime</code></td>
<td>Monitor Web Server with Uptime</td>
</tr>
<tr>
<td><code>user</code></td>
<td></td>
</tr>
<tr>
<td><code>vagrant</code></td>
<td>States for managing Hashicorp Vault.</td>
</tr>
<tr>
<td><code>vault</code></td>
<td>VirtualBox Guest Additions installer state</td>
</tr>
<tr>
<td><code>victorops</code></td>
<td>Create an Event in VictorOps</td>
</tr>
<tr>
<td><code>virt</code></td>
<td></td>
</tr>
<tr>
<td><code>virtualenv_mod</code></td>
<td></td>
</tr>
<tr>
<td><code>webutil</code></td>
<td></td>
</tr>
<tr>
<td><code>win_certutil</code></td>
<td>Windows Object Access Control Lists</td>
</tr>
<tr>
<td><code>win_dacl</code></td>
<td>Module for configuring DNS Client on Windows systems</td>
</tr>
<tr>
<td><code>win_dns_client</code></td>
<td>State for configuring Windows Firewall</td>
</tr>
<tr>
<td><code>win_iis</code></td>
<td>Microsoft IIS site management</td>
</tr>
<tr>
<td><code>win_lgpo</code></td>
<td></td>
</tr>
<tr>
<td><code>win_license</code></td>
<td>Manage the Windows System PATH</td>
</tr>
<tr>
<td><code>win_path</code></td>
<td>Microsoft certificate management via the Pki Power-Shell module.</td>
</tr>
<tr>
<td><code>win_powercfg</code></td>
<td></td>
</tr>
<tr>
<td><code>win_servermanager</code></td>
<td></td>
</tr>
<tr>
<td><code>win_smtp_server</code></td>
<td></td>
</tr>
<tr>
<td><code>win_snmp</code></td>
<td>Module for managing SNMP service settings on Windows servers.</td>
</tr>
<tr>
<td><code>win_system</code></td>
<td></td>
</tr>
<tr>
<td><code>win_wua</code></td>
<td></td>
</tr>
<tr>
<td><code>win_wusa</code></td>
<td></td>
</tr>
<tr>
<td><code>winrepo</code></td>
<td></td>
</tr>
<tr>
<td><code>wordpress</code></td>
<td>This state module is used to manage Wordpress installations</td>
</tr>
<tr>
<td><code>x509</code></td>
<td>Manage X509 Certificates</td>
</tr>
<tr>
<td><code>xml</code></td>
<td>XML Manager</td>
</tr>
<tr>
<td><code>xmpp</code></td>
<td>Sending Messages over XMPP</td>
</tr>
<tr>
<td><code>zabbix_action</code></td>
<td>New in version 2017.7.</td>
</tr>
<tr>
<td><code>zabbix_host</code></td>
<td>Management of Zabbix host groups.</td>
</tr>
<tr>
<td><code>zabbix_mediatype</code></td>
<td>Management of Zabbix mediatypes.</td>
</tr>
<tr>
<td><code>zabbix_template</code></td>
<td>New in version 2017.7.</td>
</tr>
<tr>
<td><code>zabbix_user</code></td>
<td>Management of Zabbix user groups.</td>
</tr>
<tr>
<td><code>zabbix_usergroup</code></td>
<td>Management of Zabbix usermacros.</td>
</tr>
<tr>
<td><code>zabbix_valuemap</code></td>
<td>New in version 2017.7.</td>
</tr>
</tbody>
</table>

continues on next page
Table 19 – continued from previous page

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>zcbuildout</td>
<td>Management of zc.buildout</td>
</tr>
<tr>
<td>zenoss</td>
<td>State to manage monitoring in Zenoss.</td>
</tr>
<tr>
<td>zfs</td>
<td>States for managing zfs datasets</td>
</tr>
<tr>
<td>zk_concurrency</td>
<td>Control concurrency of steps within state execution using zookeeper</td>
</tr>
<tr>
<td>zone</td>
<td></td>
</tr>
<tr>
<td>zookeeper</td>
<td>depends kazoo</td>
</tr>
<tr>
<td>zpool</td>
<td>States for managing zpools</td>
</tr>
</tbody>
</table>

23.19.1 salt.states.acme

ACME / Let’s Encrypt certificate management state

New in version 2016.3.

See also the module documentation

```python
reload-gitlab:
    cmd.run:
        - name: gitlab-ctl hup

dev.example.com:
    acme.cert:
        - aliases:
        - gitlab.example.com
        - email: acmemaster@example.com
        - webroot: /opt/gitlab/embedded/service/gitlab-rails/public
        - renew: 14
        - fire_event: acme/dev.example.com
        - onchanges_in:
            - cmd: reload-gitlab

salt.states.acme.cert(name, aliases=None, email=None, webroot=None, test_cert=False, renew=None, keysize=None, server=None, owner='root', group='root', mode='0640', certname=None, preferred_challenges=None, tls_sni_01_port=None, tls_sni_01_address=None, http_01_port=None, http_01_address=None, dns_plugin=None, dns_plugin_credentials=None)
```

Obtain/renew a certificate from an ACME CA, probably Let’s Encrypt.

Parameters

- **name** -- Common Name of the certificate (DNS name of certificate)
- **aliases** -- subjectAltNames (Additional DNS names on certificate)
- **email** -- e-mail address for interaction with ACME provider
- **webroot** -- True or a full path to webroot. Otherwise use standalone mode
- **test_cert** -- Request a certificate from the Happy Hacker Fake CA (mutually exclusive with 'server')
- **renew** -- True/‘force’ to force a renewal, or a window of renewal before expiry in days
- **keysize** -- RSA key bits
- **server** -- API endpoint to talk to
- **owner** -- owner of the private key file
- **group** -- group of the private key file
- **mode** -- mode of the private key file
- **certname** -- Name of the certificate to save
- **preferred_challenges** -- A sorted, comma delimited list of the preferred challenge to use during authorization with the most preferred challenge listed first.
- **tls_sni_01_port** -- Port used during tls-sni-01 challenge. This only affects the port Certbot listens on. A conforming ACME server will still attempt to connect on port 443.
- **tls_sni_01_address** -- The address the server listens to during tls-sni-01 challenge.
- **http_01_port** -- Port used in the http-01 challenge. This only affects the port Certbot listens on. A conforming ACME server will still attempt to connect on port 80.
- **https_01_address** -- The address the server listens to during http-01 challenge.
- **dns_plugin** -- Name of a DNS plugin to use (currently only 'cloudflare')
- **dns_plugin_credentials** -- Path to the credentials file if required by the specified DNS plugin

### 23.19.2 salt.states.alias

Configuration of email aliases

The mail aliases file can be managed to contain definitions for specific email aliases:

```yaml
username:
  alias.present:
    - target: user@example.com

thomas:
  alias.present:
    - target: thomas@example.com
```

The default alias file is set to `/etc/aliases`, as defined in Salt's config execution module. To change the alias file from the default location, set the following in your minion config:

```yaml
aliases.file: /my/alias/file
```

**salt.states.alias.absent**(name)

Ensure that the named alias is absent

- **name** The alias to remove

**salt.states.alias.present**(name, target)

Ensures that the named alias is present with the given target or list of targets. If the alias exists but the target differs from the previous entry, the target(s) will be overwritten. If the alias does not exist, the alias will be created.

- **name** The local user/address to assign an alias to
- **target** The forwarding address
23.19.3 salt.states.alternatives

Configuration of the alternatives system

Control the alternatives system

{% set my_hadoop_conf = '/opt/hadoop/conf' %}

{{ my_hadoop_conf }}:
  file.directory

hadoop-0.20-conf:
  alternatives.install:
    - name: hadoop-0.20-conf
    - link: /etc/hadoop-0.20/conf
    - path: {{ my_hadoop_conf }}
    - priority: 30
    - require:
      - file: {{ my_hadoop_conf }}

hadoop-0.20-conf:
  alternatives.remove:
    - name: hadoop-0.20-conf
    - path: {{ my_hadoop_conf }}

salt.states.alternatives.auto(name)
  New in version 0.17.0.
  Instruct alternatives to use the highest priority path for <name>

  name is the master name for this link group (e.g. pager)

salt.states.alternatives.install(name, link, path, priority)
  Install new alternative for defined <name>

  name is the master name for this link group (e.g. pager)

  link is the symlink pointing to /etc/alternatives/<name>. (e.g. /usr/bin/pager)

  path is the location of the new alternative target. NB: This file / directory must already exist. (e.g. /usr/bin/less)

  priority is an integer; options with higher numbers have higher priority in automatic mode.

salt.states.alternatives.remove(name, path)
  Removes installed alternative for defined <name> and <path> or fallback to default alternative, if some defined before.

  name is the master name for this link group (e.g. pager)

  path is the location of one of the alternative target files. (e.g. /usr/bin/less)

salt.states.alternatives.set_(name, path)
  New in version 0.17.0.
  Sets alternative for <name> to <path>, if <path> is defined as an alternative for <name>.

  name is the master name for this link group (e.g. pager)

  path is the location of one of the alternative target files. (e.g. /usr/bin/less)
23.19.4 salt.states.apache_module

Manage Apache Modules
New in version 2014.7.0.
Enable and disable apache modules.

Enable cgi module:
   apache_module.enabled:
      - name: cgi

Disable cgi module:
   apache_module.disabled:
      - name: cgi

salt.states.apache_module.disabled(name)
   Ensure an Apache module is disabled.
   New in version 2016.3.0.
   name Name of the Apache module

salt.states.apache_module.enabled(name)
   Ensure an Apache module is enabled.
   New in version 2016.3.0.
   name Name of the Apache module

23.19.5 salt.states.apache_site

Manage Apache Sites
New in version 2016.3.0.
Enable and disable apache sites.

Enable default site:
   apache_site.enabled:
      - name: default

Disable default site:
   apache_site.disabled:
      - name: default

salt.states.apache_site.disabled(name)
   Ensure an Apache site is disabled.
   name Name of the Apache site

salt.states.apache_site.enabled(name)
   Ensure an Apache site is enabled.
   name Name of the Apache site
23.19.6 salt.states.artifactory

This state downloads artifacts from artifactory.

```
salt.states.artifactory.downloaded(name, artifact, target_dir='tmp', target_file=None, use_literal_group_id=False)
```

Ensures that the artifact from artifactory exists at given location. If it doesn’t exist, then it will be downloaded. If it already exists then the checksum of existing file is checked against checksum in artifactory. If it is different then the step will fail.

**artifact** Details of the artifact to be downloaded from artifactory. Various options are:

- **artifactory_url**: URL of the artifactory instance
- **repository**: Repository in artifactory
- **artifact_id**: Artifact ID
- **group_id**: Group ID
- **packaging**: Packaging
- **classifier**: Classifier .. versionadded:: 2015.8.0
- **version**: Version One of the following: - Version to download - latest - Download the latest release of this artifact - latest_snapshot - Download the latest snapshot for this artifact
- **username**: Artifactory username .. versionadded:: 2015.8.0
- **password**: Artifactory password .. versionadded:: 2015.8.0

**target_dir** Directory where the artifact should be downloaded. By default it is downloaded to /tmp directory.

**target_file** Target file to download artifact to. By default file name is resolved by artifactory.

An example to download an artifact to a specific file:

```
jboss_module_downloaded:
artifactory.downloaded:
  - artifact:
      artifactory_url: http://artifactory.intranet.example.com/artifactory
      repository: 'libs-release-local'
      artifact_id: 'module'
      group_id: 'com.company.module'
      packaging: 'jar'
      classifier: 'sources'
      version: '1.0'
      target_file: /opt/jboss7/modules/com/company/lib/module.jar
```

Download artifact to the folder (automatically resolves file name):

```
jboss_module_downloaded:
artifactory.downloaded:
  - artifact:
      artifactory_url: http://artifactory.intranet.example.com/artifactory
      repository: 'libs-release-local'
      artifact_id: 'module'
      group_id: 'com.company.module'
      packaging: 'jar'
      classifier: 'sources'
      version: '1.0'
      target_dir: /opt/jboss7/modules/com/company/lib
```
23.19.7 salt.states.at

Configuration disposable regularly scheduled tasks for at.

The at state can be add disposable regularly scheduled tasks for your system.

salt.states.at.absent(name, jobid=None, **kwargs)
   Changed in version 2017.7.0.
   Remove a job from queue

   jobid: string|int  Specific jobid to remove
   tag  [string] Job's tag
   runas  [string] Runs user-specified jobs
   kwargs  Addition kwargs can be provided to filter jobs. See output of at.jobcheck for more.

   example1:
      at.absent:

   Warning: this will remove all jobs!

   example2:
      at.absent:
         - year: 13

   example3:
      at.absent:
         - tag: rose

   example4:
      at.absent:
         - tag: rose
         - day: 13
         - hour: 16

   example5:
      at.absent:
         - jobid: 4

salt.states.at.mod_watch(name, **kwargs)
   The at watcher, called to invoke the watch command.

   Note: This state exists to support special handling of the watch requisite. It should not be called directly.
   Parameters for this function should be set by the state being triggered.

   name  The name of the atjob

salt.states.at.present(name, timespec, tag=None, user=None, job=None, unique_tag=False)
   Changed in version 2017.7.0.
   Add a job to queue.
job  [string] Command to run.

timespec  [string] The 'timespec' follows the format documented in the at(1) manpage.
tag  [string] Make a tag for the job.
user  [string] The user to run the at job .. versionadded:: 2014.1.4
unique_tag  [boolean] If set to True job will not be added if a job with the tag exists. .. versionadded:: 2017.7.0

```python
rose:
at.present:
    - job: 'echo "I love saltstack" > love'
    - timespec: '9:09 11/09/13'
    - tag: love
    - user: jam
```

salt.states.at.watch(name, timespec, tag=None, user=None, job=None, unique_tag=False)
New in version 2017.7.0.
Add an at job if trigger by watch

job  [string] Command to run.
timespec  [string] The 'timespec' follows the format documented in the at(1) manpage.
tag  [string] Make a tag for the job.
user  [string] The user to run the at job .. versionadded:: 2014.1.4
unique_tag  [boolean] If set to True job will not be added if a job with the tag exists. .. versionadded:: 2017.7.0

```python
minion_restart:
at.watch:
    - job: 'salt-call --local service.restart salt-minion'
    - timespec: 'now +1 min'
    - tag: minion_restart
    - unique_tag: trye
    - watch:
        - file: /etc/salt/minion
```

23.19.8 salt.states.aws_sqs

Manage SQS Queues

Create and destroy SQS queues. Be aware that this interacts with Amazon’s services, and so may incur charges.

This module uses the awscli tool provided by Amazon. This can be downloaded from pip. Also check the documentation for awscli for configuration information.

```python
myqueue:
    aws_sqs.exists:
        - region: eu-west-1
```

salt.states.aws_sqs.absent(name, region, user=None, opts=False)
Remove the named SQS queue if it exists.

name  Name of the SQS queue.
region  Region to remove the queue from
user  Name of the user performing the SQS operations
opts Include additional arguments and options to the aws command line

salt.states.aws_sqs.exists(name, region, user=None, opts=False)
Ensure the SQS queue exists.
name Name of the SQS queue.
region Region to create the queue
user Name of the user performing the SQS operations
opts Include additional arguments and options to the aws command line

23.19.9 salt.states.azurearm_compute

Azure (ARM) Compute State Module
New in version 2019.2.0.
maintainer <devops@decisionlab.io>
maturity new
depends
- azure >= 2.0.0
- azure-common >= 1.1.8
- azure-mgmt >= 1.0.0
- azure-mgmt-compute >= 1.0.0
- azure-mgmt-network >= 1.7.1
- azure-mgmt-resource >= 1.1.0
- azure-mgmt-storage >= 1.0.0
- azure-mgmt-web >= 0.32.0
- azure-storage >= 0.34.3
- msrestazure >= 0.4.21
platform linux

configuration This module requires Azure Resource Manager credentials to be passed as a dictionary of keyword arguments to the connection_auth parameter in order to work properly. Since the authentication parameters are sensitive, it’s recommended to pass them to the states via pillar.

Required provider parameters:
if using username and password:
  • subscription_id
  • username
  • password
if using a service principal:
  • subscription_id
  • tenant
  • client_id
Optional provider parameters:

cloud_environment: Used to point the cloud driver to different API endpoints, such as Azure GovCloud. Possible values:

- AZURE_PUBLIC_CLOUD (default)
- AZURE_CHINA_CLOUD
- AZURE_US_GOV_CLOUD
- AZURE_GERMAN_CLOUD

Example Pillar for Azure Resource Manager authentication:

```yaml
azurearm:
  user_pass_auth:
    subscription_id: 3287abc8-f98a-c678-3bde-326766fd3617
    username: fletch
    password: 123pass
  mysubscription:
    subscription_id: 3287abc8-f98a-c678-3bde-326766fd3617
    tenant: ABCDEFA-1234-ABCD-1234-ABCDDEFAABCD
    client_id: ABCDEFA-1234-ABCD-1234-ABCDDEFAABCD
    secret: XXXXXXXXXXXXXXXXXXXXXX
    cloud_environment: AZURE_PUBLIC_CLOUD
```

Example states using Azure Resource Manager authentication:

```yaml
{% set profile = salt['pillar.get']( 'azurearm:mysubscription') %}
Ensure availability set exists:
  azurearm_compute.availability_set_present:
    - name: my_avail_set
    - resource_group: my_rg
    - virtual_machines:
        - my_vm1
        - my_vm2
    - tags:
        how_awesome: very
        contact_name: Elmer Fudd Gantry
    - connection_auth: {{ profile }}

Ensure availability set is absent:
  azurearm_compute.availability_set_absent:
    - name: other_avail_set
    - resource_group: my_rg
    - connection_auth: {{ profile }}
```

```
salt.states.azurearm_compute.availability_set_absent(name, resource_group, connection_auth=None)
```

New in version 2019.2.0.

Ensure an availability set does not exist in a resource group.

Parameters

- **name** -- Name of the availability set.
- **resource_group** -- Name of the resource group containing the availability set.
• **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

```python
salt.states.azurearm_compute.availability_set_present(name, resource_group,
          tags=None, platform_update_domain_count=None,
          platform_fault_domain_count=None,
          virtual_machines=None, sku=None,
          connection_auth=None, **kwargs)
```

New in version 2019.2.0.

Ensure an availability set exists.

Parameters

- **name** -- Name of the availability set.
- **resource_group** -- The resource group assigned to the availability set.
- **tags** -- A dictionary of strings can be passed as tag metadata to the availability set object.
- **platform_update_domain_count** -- An optional parameter which indicates groups of virtual machines and underlying physical hardware that can be rebooted at the same time.
- **platform_fault_domain_count** -- An optional parameter which defines the group of virtual machines that share a common power source and network switch.
- **virtual_machines** -- A list of names of existing virtual machines to be included in the availability set.
- **sku** -- The availability set SKU, which specifies whether the availability set is managed or not. Possible values are 'Aligned' or 'Classic'. An 'Aligned' availability set is managed, 'Classic' is not.
- **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

Example usage:

```yaml
Ensure availability set exists:
  azurearm_compute.availability_set_present:
    - name: aset1
    - resource_group: group1
    - platform_update_domain_count: 5
    - platform_fault_domain_count: 3
    - sku: aligned
    - tags:
      - contact_name: Elmer Fudd Gantry
    - connection_auth: {{ profile }}
    - require:
      - azurearm_resource: Ensure resource group exists
```
23.19.10 salt.states.azurearm_dns

Azure (ARM) DNS State Module
New in version 3000.

maintainer  <devops@eitr.tech>
maturity  new
depends  
  • azure >= 2.0.0
  • azure-common >= 1.1.8
  • azure-mgmt >= 1.0.0
  • azure-mgmt-compute >= 1.0.0
  • azure-mgmt-dns >= 1.0.1
  • azure-mgmt-network >= 1.7.1
  • azure-mgmt-resource >= 1.1.0
  • azure-mgmt-storage >= 1.0.0
  • azure-mgmt-web >= 0.32.0
  • azure-storage >= 0.34.3
  • msrestazure >= 0.4.21

platform  linux

configuration  This module requires Azure Resource Manager credentials to be passed as a dictionary of keyword arguments to the connection_auth parameter in order to work properly. Since the authentication parameters are sensitive, it’s recommended to pass them to the states via pillar.

Required provider parameters:
  if using username and password:
    • subscription_id
    • username
    • password
  if using a service principal:
    • subscription_id
    • tenant
    • client_id
    • secret

Optional provider parameters:
  cloud_environment: Used to point the cloud driver to different API endpoints, such as Azure GovCloud.
    Possible values:
      Possible values:
        • AZURE_PUBLIC_CLOUD (default)
        • AZURE_CHINA_CLOUD
Example Pillar for Azure Resource Manager authentication:

```python
azurearm:
    user_pass_auth:
        subscription_id: 3287abc8-f98a-c678-3bde-326766fd3617
        username: fletch
        password: 123pass
    mysubscription:
        subscription_id: 3287abc8-f98a-c678-3bde-326766fd3617
        tenant: ABCDEFAB-1234-ABCD-1234-ABCDEFABCDEF
        client_id: ABCDEFAB-1234-ABCD-1234-ABCDEFABCDEF
        secret: XXXXXXXXXXXXXXXXXXXXXX
        cloud_environment: AZURE_PUBLIC_CLOUD
```

Example states using Azure Resource Manager authentication:

```python
{% set profile = salt['pillar.get']('azurearm:mysubscription') %}
Ensure DNS zone exists:
    azurearm_dns.zone_present:
        - name: contoso.com
        - resource_group: my_rg
        - tags:
            how_awesome: very
            contact_name: Elmer Fudd Gantry
        - connection_auth: {{ profile }}

Ensure DNS record set exists:
    azurearm_dns.record_set_present:
        - name: web
        - zone_name: contoso.com
        - resource_group: my_rg
        - record_type: A
        - ttl: 300
        - arecords:
            - ipv4_address: 10.0.0.1
        - tags:
            how_awesome: very
            contact_name: Elmer Fudd Gantry
        - connection_auth: {{ profile }}

Ensure DNS record set is absent:
    azurearm_dns.record_set_absent:
        - name: web
        - zone_name: contoso.com
        - resource_group: my_rg
        - record_type: A
        - connection_auth: {{ profile }}

Ensure DNS zone is absent:
    azurearm_dns.zone_absent:
        - name: contoso.com
        - resource_group: my_rg
        - connection_auth: {{ profile }}
```

salt.states.azurearm_dns.record_set_absent(name, zone_name, resource_group, connection_auth=None)
New in version 3000.

Ensure a record set does not exist in the DNS zone.

**Parameters**

- **name** -- Name of the record set.
- **zone_name** -- Name of the DNS zone.
- **resource_group** -- The resource group assigned to the DNS zone.
- **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

```python
salt.states.azurearm_dns.record_set_present(name, zone_name, resource_group, record_type, if_match=None, if_none_match=None, etag=None, metadata=None, ttl=None, arecords=None, aaaa_records=None, mx_records=None, ns_records=None, ptr_records=None, srv_records=None, txt_records=None, cname_record=None, soa_record=None, caa_records=None, connection_auth=None, **kwargs)
```

New in version 3000.

Ensure a record set exists in a DNS zone.

**Parameters**

- **name** -- The name of the record set, relative to the name of the zone.
- **zone_name** -- Name of the DNS zone (without a terminating dot).
- **resource_group** -- The resource group assigned to the DNS zone.
- **record_type** -- The type of DNS record in this record set. Record sets of type SOA can be updated but not created (they are created when the DNS zone is created). Possible values include: 'A', 'AAAA', 'CAA', 'CNAME', 'MX', 'NS', 'PTR', 'SOA', 'SRV', 'TXT'
- **if_match** -- The etag of the record set. Omit this value to always overwrite the current record set. Specify the last-seen etag value to prevent accidentally overwriting any concurrent changes.
- **if_none_match** -- Set to '*' to allow a new record set to be created, but to prevent updating an existing record set. Other values will be ignored.
- **etag** -- The etag of the record set. Etags are used to handle concurrent changes to the same resource safely.
- **metadata** -- A dictionary of strings can be passed as tag metadata to the record set object.
- **ttl** -- The TTL (time-to-live) of the records in the record set. Required when specifying record information.
- **arecords** -- The list of A records in the record set. View the Azure SDK documentation to create a list of dictionaries representing the record objects.
- **aaaaa_records** -- The list of AAAA records in the record set. View the Azure SDK documentation to create a list of dictionaries representing the record objects.
- **mx_records** -- The list of MX records in the record set. View the Azure SDK documentation to create a list of dictionaries representing the record objects.
• **ns_records** -- The list of NS records in the record set. View the Azure SDK documentation to create a list of dictionaries representing the record objects.

• **ptr_records** -- The list of PTR records in the record set. View the Azure SDK documentation to create a list of dictionaries representing the record objects.

• **srv_records** -- The list of SRV records in the record set. View the Azure SDK documentation to create a list of dictionaries representing the record objects.

• **txt_records** -- The list of TXT records in the record set. View the Azure SDK documentation to create a list of dictionaries representing the record objects.

• **cname_record** -- The CNAME record in the record set. View the Azure SDK documentation to create a dictionary representing the record object.

• **soa_record** -- The SOA record in the record set. View the Azure SDK documentation to create a dictionary representing the record object.

• **caa_records** -- The list of CAA records in the record set. View the Azure SDK documentation to create a list of dictionaries representing the record objects.

• **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

Example usage:

```python
Ensure record set exists:
azurearm_dns.record_set_present:
  - name: web
  - zone_name: contoso.com
  - resource_group: my_rg
  - record_type: A
  - ttl: 300
  - arecords:
  - ipv4_address: 10.0.0.1
  - metadata:
    how_awesome: very
    contact_name: Elmer Fudd Gantry
  - connection_auth: {{ profile }}
```

```python
salt.states.azurearm_dns.zone_absent(name, resource_group, connection_auth=None)
New in version 3000.
Ensure a DNS zone does not exist in the resource group.

Parameters

• **name** -- Name of the DNS zone.

• **resource_group** -- The resource group assigned to the DNS zone.

• **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

salt.states.azurearm_dns.zone_present(name, resource_group, etag=None, if_match=None, if_none_match=None, registration_virtual_networks=None, resolution_virtual_networks=None, tags=None, zone_type='Public', connection_auth=None, **kwargs)
New in version 3000.
Ensure a DNS zone exists.
Parameters

- **name** -- Name of the DNS zone (without a terminating dot).

- **resource_group** -- The resource group assigned to the DNS zone.

- **etag** -- The etag of the zone. Etags are used to handle concurrent changes to the same resource safely.

- **if_match** -- The etag of the DNS zone. Omit this value to always overwrite the current zone. Specify the last-seen etag value to prevent accidentally overwriting any concurrent changes.

- **if_none_match** -- Set to '*' to allow a new DNS zone to be created, but to prevent updating an existing zone. Other values will be ignored.

- **registration_virtual_networks** -- A list of references to virtual networks that register hostnames in this DNS zone. This is only when zone_type is Private. (requires azure-mgmt-dns >= 2.0.0rc1)

- **resolution_virtual_networks** -- A list of references to virtual networks that resolve records in this DNS zone. This is only when zone_type is Private. (requires azure-mgmt-dns >= 2.0.0rc1)

- **tags** -- A dictionary of strings can be passed as tag metadata to the DNS zone object.

- **zone_type** --
  The type of this DNS zone (Public or Private). Possible values include: 'Public', 'Private'. Default value: 'Public' (requires azure-mgmt-dns >= 2.0.0rc1)

- **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API

Example usage:

```yaml
Ensure DNS zone exists:
  azurearm_dns.zone_present:
    - name: contoso.com
    - resource_group: my_rg
    - zone_type: Private
    - registration_virtual_networks: /subscriptions/{{ sub }}/resourceGroups/my_rg/providers/Microsoft.
      → Network/virtualNetworks/test_vnet
    - tags:
      how_awesome: very
      contact_name: Elmer Fudd Gantry
    - connection_auth: {{ profile }}
```

23.19.11 salt.states.azurearm_network

Azure (ARM) Network State Module

New in version 2019.2.0.

Maintainer: <devops@decisionlab.io>

Maturity: new

Depends:

- azure >= 2.0.0
platform linux

classification This module requires Azure Resource Manager credentials to be passed as a dictionary of keyword arguments to the `connection_auth` parameter in order to work properly. Since the authentication parameters are sensitive, it’s recommended to pass them to the states via pillar.

Required provider parameters:

if using username and password:

- subscription_id
- username
- password

if using a service principal:

- subscription_id
- tenant
- client_id
- secret

Optional provider parameters:

cloud_environment: Used to point the cloud driver to different API endpoints, such as Azure GovCloud. Possible values:

- AZURE_PUBLIC_CLOUD (default)
- AZURE_CHINA_CLOUD
- AZURE_US_GOV_CLOUD
- AZURE_GERMAN_CLOUD

Example Pillar for Azure Resource Manager authentication:

```
azurearm:
  user_pass_auth:
    subscription_id: 3287abc8-f98a-c678-3bde-326766fd3617
    username: fletch
    password: 123pass
  mysubscription:
    subscription_id: 3287abc8-f98a-c678-3bde-326766fd3617
    tenant: ABCDEFA1234-ABCD-1234-ABCD-1234ABCD1234
```

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Example states using Azure Resource Manager authentication:

```
{% set profile = salt['pillar.get']('azurearm:my_subscription') %}
Ensures virtual network exists:
  azurearm_network.virtual_network_present:
    - name: my_vnet
    - resource_group: my_rg
    - address_prefixes:
      - '10.0.0.0/8'
      - '192.168.0.0/16'
    - dns_servers:
      - '8.8.8.8'
    - tags:
      how_awesome: very
      contact_name: Elmer Fudd Gantry
    - connection_auth: {{ profile }}

Ensures virtual network is absent:
  azurearm_network.virtual_network_absent:
    - name: other_vnet
    - resource_group: my_rg
    - connection_auth: {{ profile }}
```

`salt.states.azurearm_network.load_balancer_absent(name, resource_group, connection_auth=None)`

New in version 2019.2.0.

Ensure a load balancer does not exist in the resource group.

Parameters

- **name** -- Name of the load balancer.
- **resource_group** -- The resource group assigned to the load balancer.
- **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

`salt.states.azurearm_network.load_balancer_present(name, resource_group, sku=None, frontend_ip_configurations=None, backend_address_pools=None, load_balancing_rules=None, probes=None, inbound_nat_rules=None, inbound_nat_pools=None, outbound_nat_rules=None, tags=None, connection_auth=None, **kwargs)`

New in version 2019.2.0.

Ensure a load balancer exists.

Parameters

- **name** -- Name of the load balancer.
- **resource_group** -- The resource group assigned to the load balancer.
- **sku** -- The load balancer SKU, which can be ‘Basic’ or ‘Standard’.
- **tags** -- A dictionary of strings can be passed as tag metadata to the load balancer object.
- **frontend_ip_configurations** -- An optional list of dictionaries representing valid FrontendIPConfiguration objects. A frontend IP configuration can be either private (using private IP address and subnet parameters) or public (using a reference to a public IP address object). Valid parameters are:
  - name: The name of the resource that is unique within a resource group.
  - private_ip_address: The private IP address of the IP configuration. Required if ‘private_ip_allocation_method’ is ‘Static’.
  - private_ip_allocation_method: The Private IP allocation method. Possible values are: ‘Static’ and ‘Dynamic’.
  - subnet: Name of an existing subnet inside of which the frontend IP will reside.
  - public_ip_address: Name of an existing public IP address which will be assigned to the frontend IP object.
- **backend_address_pools** -- An optional list of dictionaries representing valid BackendAddressPool objects. Only the ‘name’ parameter is valid for a BackendAddressPool dictionary. All other parameters are read-only references from other objects linking to the backend address pool. Inbound traffic is randomly load balanced across IPs in the backend IPs.
- **probes** -- An optional list of dictionaries representing valid Probe objects. Valid parameters are:
  - name: The name of the resource that is unique within a resource group.
  - protocol: The protocol of the endpoint. Possible values are ‘Http’ or ‘Tcp’. If ‘Tcp’ is specified, a received ACK is required for the probe to be successful. If ‘Http’ is specified, a 200 OK response from the specified URI is required for the probe to be successful.
  - port: The port for communicating the probe. Possible values range from 1 to 65535, inclusive.
  - interval_in_seconds: The interval, in seconds, for how frequently to probe the endpoint for health status. Typically, the interval is slightly less than half the allocated timeout period (in seconds) which allows two full probes before taking the instance out of rotation. The default value is 15, the minimum value is 5.
  - number_of_probes: The number of probes where if no response, will result in stopping further traffic from being delivered to the endpoint. This values allows endpoints to be taken out of rotation faster or slower than the typical times used in Azure.
  - request_path: The URI used for requesting health status from the VM. Path is required if a protocol is set to ‘Http’. Otherwise, it is not allowed. There is no default value.
- **load_balancing_rules** -- An optional list of dictionaries representing valid LoadBalancingRule objects. Valid parameters are:
  - name: The name of the resource that is unique within a resource group.
  - load_distribution: The load distribution policy for this rule. Possible values are ‘Default’, ‘SourceIP’, and ‘SourceIPProtocol’.

1348 Chapter 23. Salt Module Reference
- **frontend_port**: The port for the external endpoint. Port numbers for each rule must be unique within the Load Balancer. Acceptable values are between 0 and 65534. Note that value 0 enables 'Any Port'.

- **backend_port**: The port used for internal connections on the endpoint. Acceptable values are between 0 and 65535. Note that value 0 enables 'Any Port'.

- **idle_timeout_in_minutes**: The timeout for the TCP idle connection. The value can be set between 4 and 30 minutes. The default value is 4 minutes. This element is only used when the protocol is set to TCP.

- **enable_floating_ip**: Configures a virtual machine's endpoint for the floating IP capability required to configure a SQL AlwaysOn Availability Group. This setting is required when using the SQL AlwaysOn Availability Groups in SQL server. This setting can't be changed after you create the endpoint.

- **disable_outbound_snat**: Configures SNAT for the VMs in the backend pool to use the public IP address specified in the frontend of the load balancing rule.

- **frontend_ip_configuration**: Name of the frontend IP configuration object used by the load balancing rule object.

- **backend_address_pool**: Name of the backend address pool object used by the load balancing rule object. Inbound traffic is randomly load balanced across IPs in the backend IPs.

- **probe**: Name of the probe object used by the load balancing rule object.

- **inbound_nat_rules** -- An optional list of dictionaries representing valid InboundNatRule objects. Defining inbound NAT rules on your load balancer is mutually exclusive with defining an inbound NAT pool. Inbound NAT pools are referenced from virtual machine scale sets. NICs that are associated with individual virtual machines cannot reference an Inbound NAT pool. They have to reference individual inbound NAT rules. Valid parameters are:
  - **name**: The name of the resource that is unique within a resource group.
  - **frontend_ip_configuration**: Name of the frontend IP configuration object used by the inbound NAT rule object.
  - **protocol**: Possible values include 'Udp', 'Tcp', or 'All'.
  - **frontend_port**: The port for the external endpoint. Port numbers for each rule must be unique within the Load Balancer. Acceptable values range from 1 to 65534.
  - **backend_port**: The port used for the internal endpoint. Acceptable values range from 1 to 65535.
  - **idle_timeout_in_minutes**: The timeout for the TCP idle connection. The value can be set between 4 and 30 minutes. The default value is 4 minutes. This element is only used when the protocol is set to TCP.
  - **enable_floating_ip**: Configures a virtual machine's endpoint for the floating IP capability required to configure a SQL AlwaysOn Availability Group. This setting is required when using the SQL AlwaysOn Availability Groups in SQL server. This setting can't be changed after you create the endpoint.

- **inbound_nat_pools** -- An optional list of dictionaries representing valid InboundNatPool objects. They define an external port range for inbound NAT to a single backend port on NICs associated with a load balancer. Inbound NAT rules are created automatically for each NIC associated with the Load Balancer using an external port from this range. Defining an Inbound NAT pool on your Load Balancer is mutually exclusive with defining
inbound NAT rules. Inbound NAT pools are referenced from virtual machine scale sets. NICs that are associated with individual virtual machines cannot reference an inbound NAT pool. They have to reference individual inbound NAT rules. Valid parameters are:

- **name**: The name of the resource that is unique within a resource group.
- **frontend_ip_configuration**: Name of the frontend IP configuration object used by the inbound NAT pool object.
- **protocol**: Possible values include 'Udp', 'Tcp', or 'All'.
- **frontend_port_range_start**: The first port number in the range of external ports that will be used to provide Inbound NAT to NICs associated with a load balancer. Acceptable values range between 1 and 65534.
- **frontend_port_range_end**: The last port number in the range of external ports that will be used to provide Inbound NAT to NICs associated with a load balancer. Acceptable values range between 1 and 65535.
- **backend_port**: The port used for internal connections to the endpoint. Acceptable values are between 1 and 65535.

- **outbound_nat_rules** -- An optional list of dictionaries representing valid OutboundNatRule objects. Valid parameters are:
  - **name**: The name of the resource that is unique within a resource group.
  - **frontend_ip_configuration**: Name of the frontend IP configuration object used by the outbound NAT rule object.
  - **backend_address_pool**: Name of the backend address pool object used by the outbound NAT rule object. Outbound traffic is randomly load balanced across IPs in the backend IPs.
  - **allocated_outbound_ports**: The number of outbound ports to be used for NAT.

- **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

Example usage:

```python
Ensure load balancer exists:
    azurearm_network.load_balancer_present:
    - name: lb1
    - resource_group: group1
    - location: eastus
    - frontend_ip_configurations:
        - name: lb1_feip1
          public_ip_address: pub_ip1
    - backend_address_pools:
        - name: lb1_bepool1
    - probes:
        - name: lb1_webprobe1
          protocol: tcp
          port: 80
          interval_in_seconds: 5
          number_of_probes: 2
    - load_balancing_rules:
        - name: lb1_webprobe1
          protocol: tcp
          frontend_port: 80
```

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backend_port: 80
idle_timeout_in_minutes: 4
frontend_ip_configuration: lb1_feip1
backend_address_pool: lb1_bepool1
probe: lb1_webprobe1
- tags:
  - contact_name: Elmer Fudd Gantry
  - connection_auth: {{ profile }}
  - require:
    - azurearm_resource: Ensure resource group exists
    - azurearm_network: Ensure public IP exists

salt.states.azurearm_network.network_interface_absent(name, resource_group, connection_auth=None)

New in version 2019.2.0.

Ensure a network interface does not exist in the resource group.

Parameters

- name -- Name of the network interface.
- resource_group -- The resource group assigned to the network interface.
- connection_auth -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

salt.states.azurearm_network.network_interface_present(name, ip_configurations, subnet, virtual_network, resource_group, tags=None, virtual_machine=None, network_security_group=None, dns_settings=None, mac_address=None, primary=None, enable_accelerated_networking=None, enable_ip_forwarding=None, connection_auth=None, **kwargs)

New in version 2019.2.0.

Ensure a network interface exists.

Parameters

- name -- Name of the network interface.
- ip_configurations -- A list of dictionaries representing valid NetworkInterfaceIP-Configuration objects. The 'name' key is required at minimum. At least one IP Configuration must be present.
- subnet -- Name of the existing subnet assigned to the network interface.
- virtual_network -- Name of the existing virtual network containing the subnet.
- resource_group -- The resource group assigned to the virtual network.
- tags -- A dictionary of strings can be passed as tag metadata to the network interface object.
• **network_security_group** -- The name of the existing network security group to assign to the network interface.

• **virtual_machine** -- The name of the existing virtual machine to assign to the network interface.

• **dns_settings** -- An optional dictionary representing a valid NetworkInterfaceDnsSettings object. Valid parameters are:
  
  - **dns_servers**: List of DNS server IP addresses. Use 'AzureProvidedDNS' to switch to Azure provided DNS resolution. 'AzureProvidedDNS' value cannot be combined with other IPs, it must be the only value in dns_servers collection.
  
  - **internal_dns_name_label**: Relative DNS name for this NIC used for internal communications between VMs in the same virtual network.

  - **internal_fqdn**: Fully qualified DNS name supporting internal communications between VMs in the same virtual network.

  - **internal_domain_name_suffix**: Even if internal_dns_name_label is not specified, a DNS entry is created for the primary NIC of the VM. This DNS name can be constructed by concatenating the VM name with the value of internal_domain_name_suffix.

• **mac_address** -- Optional string containing the MAC address of the network interface.

• **primary** -- Optional boolean allowing the interface to be set as the primary network interface on a virtual machine with multiple interfaces attached.

• **enable_accelerated_networking** -- Optional boolean indicating whether accelerated networking should be enabled for the interface.

• **enable_ip_forwarding** -- Optional boolean indicating whether IP forwarding should be enabled for the interface.

• **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

Example usage:

```yaml
Ensure network interface exists:
  azurearm_network.network_interface_present:
    - name: iface1
    - subnet: vnet1_sn1
    - virtual_network: vnet1
    - resource_group: group1
    - ip_configurations:
      - name: iface1_ipc1
        public_ip_address: pub_ip2
      - dns_settings:
        - internal_dns_name_label: decisionlab-int-test-label
        - primary: True
        - enable_accelerated_networking: True
        - enable_ip_forwarding: False
        - network_security_group: nsg1
        - connection_auth: {{ profile }}
    - require:
      - azurearm_network: Ensure subnet exists
      - azurearm_network: Ensure network security group exists
      - azurearm_network: Ensure another public IP exists
```
salt.states.azurearm_network.network_security_group_absent(name, resource_group, connection_auth=None)

New in version 2019.2.0.

Ensure a network security group does not exist in the resource group.

Parameters

- **name** -- Name of the network security group.
- **resource_group** -- The resource group assigned to the network security group.
- **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

salt.states.azurearm_network.network_security_group_present(name, resource_group, tags=None, security_rules=None, connection_auth=None, **kwargs)

New in version 2019.2.0.

Ensure a network security group exists.

Parameters

- **name** -- Name of the network security group.
- **resource_group** -- The resource group assigned to the network security group.
- **tags** -- A dictionary of strings can be passed as tag metadata to the network security group object.
- **security_rules** -- An optional list of dictionaries representing valid SecurityRule objects. See the documentation for the security_rule_present state or security_rule_create_or_update execution module for more information on required and optional parameters for security rules. The rules are only managed if this parameter is present. When this parameter is absent, implemented rules will not be removed, and will merely become unmanaged.
- **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

Example usage:

```python
Ensure network security group exists:
    azurearm_network.network_security_group_present:
        - name: nsg1
        - resource_group: group1
        - security_rules:
            - name: nsg1_rule1
              priority: 100
              protocol: tcp
              access: allow
              direction: outbound
              source_address_prefix: virtualnetwork
              destination_address_prefix: internet
              source_port_range: '*'
              destination_port_range: '*'
```

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- name: nsg1_rule2
  priority: 101
  protocol: tcp
  access: allow
  direction: inbound
  source_address_prefix: internet
  destination_address_prefix: virtualnetwork
  source_port_range: *
  destination_port_ranges:
    - 80
    - 443
- tags:
  - contact_name: Elmer Fudd Gantry
  - connection_auth: {{ profile }}
  - require:
    - azurearm_resource: Ensure resource group exists

salt.states.azurearm_network.public_ip_address_absent(name, resource_group, connection_auth=None)

New in version 2019.2.0.

Ensure a public IP address does not exist in the resource group.

Parameters

- name -- Name of the public IP address.
- resource_group -- The resource group assigned to the public IP address.
- connection_auth -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

salt.states.azurearm_network.public_ip_address_present(name, resource_group, tags=None, sku=None, public_ip_allocation_method=None, public_ip_address_version=None, dns_settings=None, idle_timeout_in_minutes=None, connection_auth=None, **kwargs)

New in version 2019.2.0.

Ensure a public IP address exists.

Parameters

- name -- Name of the public IP address.
- resource_group -- The resource group assigned to the public IP address.
- dns_settings -- An optional dictionary representing a valid PublicIPAddressDnsSettings object. Parameters include 'domain_name_label' and 'reverse_fqdn', which accept strings. The 'domain_name_label' parameter is concatenated with the regionalized DNS zone make up the fully qualified domain name associated with the public IP address. If a domain name label is specified, an A DNS record is created for the public IP in the Microsoft Azure DNS system. The 'reverse_fqdn' parameter is a user-visible, fully qualified domain name that resolves to this public IP address. If the reverse FQDN is specified, then a PTR DNS record is created pointing from the IP address in the in-addr.arpa domain to the reverse FQDN.
- **sku** -- The public IP address SKU, which can be 'Basic' or 'Standard'.
- **public_ip_allocation_method** -- The public IP allocation method. Possible values are: 'Static' and 'Dynamic'.
- **public_ip_address_version** -- The public IP address version. Possible values are: 'IPv4' and 'IPv6'.
- **idle_timeout_in_minutes** -- An integer representing the idle timeout of the public IP address.
- **tags** -- A dictionary of strings can be passed as tag metadata to the public IP address object.
- **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

Example usage:

```python
Ensure public IP exists:

salt.states.azurearm_network.public_ip_address_present:
  - name: pub_ip1
  - resource_group: group1
  - dns_settings:
    - domain_name_label: decisionlab-ext-test-label
    - sku: basic
    - public_ip_allocation_method: static
    - public_ip_address_version: ipv4
    - idle_timeout_in_minutes: 4
  - tags:
    - contact_name: Elmer Fudd Gantry
  - connection_auth: {{ profile }}
  - require:
    - azurearm_resource: Ensure resource group exists
```

**salt.states.azurearm_network.route_absent**(name, route_table, resource_group, connection_auth=None)

New in version 2019.2.0.

Ensure a route table does not exist in the resource group.

Parameters

- **name** -- Name of the route table.
- **route_table** -- The name of the existing route table containing the route.
- **resource_group** -- The resource group assigned to the route table.
- **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

**salt.states.azurearm_network.route_present**(name, address_prefix, next_hop_type, route_table, resource_group, next_hop_ip_address=None, connection_auth=None, **kwargs)

New in version 2019.2.0.

Ensure a route exists within a route table.

Parameters

- **name** -- Name of the route.
• **address_prefix** -- The destination CIDR to which the route applies.

• **next_hop_type** -- The type of Azure hop the packet should be sent to. Possible values are: 'VirtualNetworkGateway', 'VnetLocal', 'Internet', 'VirtualAppliance', and 'None'.

• **next_hop_ip_address** -- The IP address packets should be forwarded to. Next hop values are only allowed in routes where the next hop type is 'VirtualAppliance'.

• **route_table** -- The name of the existing route table which will contain the route.

• **resource_group** -- The resource group assigned to the route table.

• **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

Example usage:

```yaml
Ensure route exists:
azurearm_network.route_present:
  - name: rt1_route2
  - route_table: rt1
  - resource_group: group1
  - address_prefix: '192.168.0.0/16'
  - next_hop_type: vnetlocal
  - connection_auth: {{ profile }}
  - require: azurearm_network: Ensure route table exists
```

salt.states.azurearm_network.route_table_absent(name, resource_group, connection_auth=None)

New in version 2019.2.0.

Ensure a route table does not exist in the resource group.

Parameters

• **name** -- Name of the route table.

• **resource_group** -- The resource group assigned to the route table.

• **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

salt.states.azurearm_network.route_table_present(name, resource_group, tags=None, routes=None, disable_bgp_route_propagation=None, connection_auth=None, **kwargs)

New in version 2019.2.0.

Ensure a route table exists.

Parameters

• **name** -- Name of the route table.

• **resource_group** -- The resource group assigned to the route table.

• **routes** -- An optional list of dictionaries representing valid Route objects contained within a route table. See the documentation for the route_present state or route_create_or_update execution module for more information on required and optional parameters for routes. The routes are only managed if this parameter is present. When this parameter is absent, implemented routes will not be removed, and will merely become unmanaged.
• **disable_bgp_route_propagation** -- An optional boolean parameter setting whether to disable the routes learned by BGP on the route table.

• **tags** -- A dictionary of strings can be passed as tag metadata to the route table object.

• **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

Example usage:

```python
Ensure route table exists:
   azurearm_network.route_table_present:
   - name: rt1
   - resource_group: group1
   - routes:
     - name: rt1_route1
       address_prefix: '0.0.0.0/0'
       next_hop_type: internet
     - name: rt1_route2
       address_prefix: '192.168.0.0/16'
       next_hop_type: vnetlocal
     - tags:
       - contact_name: Elmer Fudd Gantry
     - connection_auth: {{ profile }}
   - require:
   - azurearm_resource: Ensure resource group exists
```

```python
salt.states.azurearm_network.security_rule_absent(name, security_group, resource_group, connection_auth=None)
```

New in version 2019.2.0.

Ensure a security rule does not exist in the network security group.

Parameters

• **name** -- Name of the security rule.

• **security_group** -- The network security group containing the security rule.

• **resource_group** -- The resource group assigned to the network security group.

• **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

```python
salt.states.azurearm_network.security_rule_present(name, access, direction, priority, protocol, security_group, resource_group, destination_address_prefix=None, destination_port_range=None, source_address_prefix=None, source_port_range=None, description=None, destination_address_prefixes=None, destination_port_ranges=None, source_address_prefixes=None, source_port_ranges=None, connection_auth=None, **kwargs)
```

New in version 2019.2.0.

Ensure a security rule exists.
Parameters

- **name** -- Name of the security rule.
- **access** -- 'allow' or 'deny'
- **direction** -- 'inbound' or 'outbound'
- **priority** -- Integer between 100 and 4096 used for ordering rule application.
- **protocol** -- 'tcp', 'udp', or '*'
- **security_group** -- The name of the existing network security group to contain the security rule.
- **resource_group** -- The resource group assigned to the network security group.
- **description** -- Optional description of the security rule.
- **destination_address_prefix** -- The CIDR or destination IP range. Asterix '*' can also be used to match all destination IPs. Default tags such as 'VirtualNetwork', 'AzureLoadBalancer' and 'Internet' can also be used. If this is an ingress rule, specifies where network traffic originates from.
- **destination_port_range** -- The destination port or range. Integer or range between 0 and 65535. Asterix '*' can also be used to match all ports.
- **source_address_prefix** -- The CIDR or source IP range. Asterix '*' can also be used to match all source IPs. Default tags such as 'VirtualNetwork', 'AzureLoadBalancer' and 'Internet' can also be used. If this is an ingress rule, specifies where network traffic originates from.
- **source_port_range** -- The source port or range. Integer or range between 0 and 65535. Asterix '*' can also be used to match all ports.
- **destination_address_prefixes** -- A list of destination_address_prefix values. This parameter overrides destination_address_prefix and will cause any value entered there to be ignored.
- **destination_port_ranges** -- A list of destination_port_range values. This parameter overrides destination_port_range and will cause any value entered there to be ignored.
- **source_address_prefixes** -- A list of source_address_prefix values. This parameter overrides source_address_prefix and will cause any value entered there to be ignored.
- **source_port_ranges** -- A list of source_port_range values. This parameter overrides source_port_range and will cause any value entered there to be ignored.
- **connection_auth** -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

**Example usage:**

```
Ensure security rule exists:
    azurearm_network.security_rule_present:
        - name: nsg1_rule2
        - security_group: nsg1
        - resource_group: group1
        - priority: 101
        - protocol: tcp
        - access: allow
        - direction: inbound
        - source_address_prefix: internet
```
salt.states.azurearm_network.subnet_absent(name, virtual_network, resource_group, connection_auth=None)

New in version 2019.2.0.

Ensure a virtual network does not exist in the virtual network.

Parameters

- name -- Name of the subnet.
- virtual_network -- Name of the existing virtual network containing the subnet.
- resource_group -- The resource group assigned to the virtual network.
- connection_auth -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

salt.states.azurearm_network.subnet_present(name, address_prefix, virtual_network, resource_group, security_group=None, route_table=None, connection_auth=None, **kwargs)

New in version 2019.2.0.

Ensure a subnet exists.

Parameters

- name -- Name of the subnet.
- address_prefix -- A CIDR block used by the subnet within the virtual network.
- virtual_network -- Name of the existing virtual network to contain the subnet.
- resource_group -- The resource group assigned to the virtual network.
- security_group -- The name of the existing network security group to assign to the subnet.
- route_table -- The name of the existing route table to assign to the subnet.
- connection_auth -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

Example usage:

```python
Ensure subnet exists:
  azurearm_network.subnet_present:
    - name: vnet1_sn1
    - virtual_network: vnet1
    - resource_group: group1
    - address_prefix: '192.168.1.0/24'
    - security_group: nsg1
    - route_table: rt1
```
salt.states.azurearm_network.virtual_network_absent(name, resource_group, connection_auth=None)

New in version 2019.2.0.

Ensure a virtual network does not exist in the resource group.

Parameters

- name -- Name of the virtual network.
- resource_group -- The resource group assigned to the virtual network.
- connection_auth -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

salt.states.azurearm_network.virtual_network_present(name, address_prefixes, resource_group, dns_servers=None, tags=None, connection_auth=None, **kwargs)

New in version 2019.2.0.

Ensure a virtual network exists.

Parameters

- name -- Name of the virtual network.
- resource_group -- The resource group assigned to the virtual network.
- address_prefixes -- A list of CIDR blocks which can be used by subnets within the virtual network.
- dns_servers -- A list of DNS server addresses.
- tags -- A dictionary of strings can be passed as tag metadata to the virtual network object.
- connection_auth -- A dict with subscription and authentication parameters to be used in connecting to the Azure Resource Manager API.

Example usage:

```yaml
Ensure virtual network exists:
  azurearm_network.virtual_network_present:
    - name: vnet1
    - resource_group: group1
    - address_prefixes:
      - '10.0.0.0/8'
      - '192.168.0.0/16'
    - dns_servers:
      - '8.8.8.8'
    - tags:
      contact_name: Elmer Fudd Gantry
    - connection_auth: {{ profile }}
    - require:
      - azurearm_resource: Ensure resource group exists
```
23.19.12  salt.states.beacon

Management of the Salt beacons

New in version 2015.8.0.

```yaml
ps:
  beacon.present:
    - save: True
    - enable: False
    - services:
      salt-master: running
      apache2: stopped

sh:
  beacon.present: []

load:
  beacon.present:
    - averages:
      1m:
        - 0.0
        - 2.0
      5m:
        - 0.0
        - 1.5
      15m:
        - 0.1
        - 1.0

.. versionadded:: 3000

Beginning in the 3000 release, multiple copies of a beacon can be configured using the `beacon_module` parameter.

inotify_infs:
  beacon.present:
    - save: True
    - enable: True
    - files:
      /etc/infs.conf:
        mask:
          - create
          - delete
          - modify
          recurse: True
          auto_add: True
      - interval: 10
      - beacon_module: inotify
      - disable_during_state_run: True

inotify_ntp:
  beacon.present:
    - save: True
    - enable: True
    - files:
      /etc/ntp.conf:

(continues on next page)
```
    mask:
    - create
    - delete
    - modify
    recurse: True
    auto_add: True
    - interval: 10
    - beacon_module: inotify
    - disable_during_state_run: True
```

salt.states.beacon.absent(name, save=False, **kwargs)

   Ensure beacon is absent.

   - name  The name of the beacon that is ensured absent.
   - save  True/False, if True the beacons.conf file be updated too. Default is False.

   Example:
```
remove_beacon:
    beacon.absent:
        - name: ps
        - save: True
```

salt.states.beacon.disabled(name, **kwargs)

   Disable a beacon.

   - name  The name of the beacon to disable.

   Example:
```
disable_beacon:
    beacon.disabled:
        - name: psp
```

salt.states.beacon.enabled(name, **kwargs)

   Enable a beacon.

   - name  The name of the beacon to enable.

   Example:
```
enable_beacon:
    beacon.enabled:
        - name: ps
```

salt.states.beacon.present(name, save=False, **kwargs)

   Ensure beacon is configured with the included beacon data.

   - name  The name of the beacon to ensure is configured.
   - save  True/False, if True the beacons.conf file be updated too. Default is False.

   Example:
```
ps_beacon:
    beacon.present:
        - name: ps
        - save: True
        - enable: False
```
23.19.13 salt.states.boto3_elasticache

Manage Elasticache with boto3

New in version 2017.7.0.

Create, destroy and update Elasticache clusters. Be aware that this interacts with Amazon's services, and so may incur charges.

This module uses boto3 behind the scenes - as a result it inherits any limitations it boto3's implementation of the AWS API. It is also designed to as directly as possible leverage boto3's parameter naming and semantics. This allows one to use http://boto3.readthedocs.io/en/latest/reference/services/elasticache.html as an excellent source for details too involved to reiterate here.

Note: This module is designed to be transparent ("intentionally ignorant" is the phrase I used to describe it to my boss) to new AWS / boto options - since all AWS API params are passed directly through both the state and executions modules, any new args to existing functions which become available after this documentation is written should work immediately.

Brand new API calls, of course, would still require new functions to be added :)

This module accepts explicit elasticache credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information is available here.

If IAM roles are not used you need to specify them either in a pillar file or in the minion's config file:

```yaml
elasticache.keyid: GKTADJGHEIQSXMKKRBJ08H
elasticache.key: askdjghsdfkjghWupUjasdfklkdfklgjsdfjajkghs
```

It's also possible to specify key, keyid and region via a profile, either passed in as a dict, or as a string to pull from pillars or minion config:

```yaml
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfkjghWupUjasdfklkdfklgjsdfjajkghs
  region: us-east-1
```

```yaml
Ensure myelasticache exists:
boto3_elasticache.present:
  - name: myelasticache
    - engine: redis
    - cache_node_type: cache.t1.micro
    - num_cache_nodes: 1
    - region: us-east-1
    - keyid: GKTADJGHEIQSXMKKRBJ08H
    - key: askdjghsdfkjghWupUjasdfklkdfklgjsdfjajkghs
```

# Using a profile from pillars
Ensure myelasticache exists:

```yaml
(continues on next page)
```
boto3_elasticache.present:
- name: myelasticache
- engine: redis
- cache_node_type: cache.t1.micro
- num_cache_nodes: 1
- region: us-east-1
- profile: myprofile

# Passing in a profile
Ensure myelasticache exists:

boto3_elasticache.present:
- name: myelasticache
- engine: redis
- cache_node_type: cache.t1.micro
- num_cache_nodes: 1
- region: us-east-1
- profile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs

salt.states.boto3_elasticache.cache_cluster_absent(name, wait=600, region=None, key=None, keyid=None, profile=None, **args)

Ensure a given cache cluster is deleted.

name Name of the cache cluster.

wait Integer describing how long, in seconds, to wait for confirmation from AWS that the resource is in the desired state. Zero meaning to return success or failure immediately of course. Note that waiting for the cluster to become available is generally the better course, as failure to do so will often lead to subsequent failures when managing dependent resources.

CacheClusterId The node group (shard) identifier. Note: In general this parameter is not needed, as 'name' is used if it's not provided.

FinalSnapshotIdentifier The user-supplied name of a final cache cluster snapshot. This is the unique name that identifies the snapshot. ElastiCache creates the snapshot, and then deletes the cache cluster immediately afterward.

region Region to connect to.

key Secret key to be used.

keyid Access key to be used.

profile A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

salt.states.boto3_elasticache.cache_cluster_present(name, wait=900, security_groups=None, region=None, key=None, keyid=None, profile=None, **args)

Ensure a given cache cluster exists.

name Name of the cache cluster (cache cluster id).

wait Integer describing how long, in seconds, to wait for confirmation from AWS that the resource is in the desired state. Zero meaning to return success or failure immediately of course. Note that waiting for the
cluster to become available is generally the better course, as failure to do so will often lead to subsequent failures when managing dependent resources.

**security_groups** One or more VPC security groups (names and/or IDs) associated with the cache cluster.

**Note:** This is additive with any sec groups provided via the SecurityGroupIds parameter below. Use this parameter ONLY when you are creating a cluster in a VPC.

**CacheClusterId** The node group (shard) identifier. This parameter is stored as a lowercase string.

**Constraints:**
- A name must contain from 1 to 20 alphanumeric characters or hyphens.
- The first character must be a letter.
- A name cannot end with a hyphen or contain two consecutive hyphens.

**Note:** In general this parameter is not needed, as 'name' is used if it's not provided.

**ReplicationGroupId** The ID of the replication group to which this cache cluster should belong. If this parameter is specified, the cache cluster is added to the specified replication group as a read replica; otherwise, the cache cluster is a standalone primary that is not part of any replication group. If the specified replication group is Multi-AZ enabled and the Availability Zone is not specified, the cache cluster is created in Availability Zones that provide the best spread of read replicas across Availability Zones.

**AZMode** Specifies whether the nodes in this Memcached cluster are created in a single Availability Zone or created across multiple Availability Zones in the cluster's region. If the AZMode and PreferredAvailabilityZones are not specified, ElastiCache assumes single-az mode.

**Note:** This parameter is ONLY supported for Memcached cache clusters.

**PreferredAvailabilityZone** The EC2 Availability Zone in which the cache cluster is created. All nodes belonging to this Memcached cache cluster are placed in the preferred Availability Zone. If you want to create your nodes across multiple Availability Zones, use PreferredAvailabilityZones.

Default: System chosen Availability Zone.

**PreferredAvailabilityZones** A list of the Availability Zones in which cache nodes are created. The order of the zones in the list is not important. The number of Availability Zones listed must equal the value of NumCacheNodes. If you want all the nodes in the same Availability Zone, use PreferredAvailabilityZone instead, or repeat the Availability Zone multiple times in the list.

Default: System chosen Availability Zones.

**Note:** This option is ONLY supported on Memcached.

If you are creating your cache cluster in an Amazon VPC (recommended) you can only locate nodes in Availability Zones that are associated with the subnets in the selected subnet group.

**NumCacheNodes** The initial (integer) number of cache nodes that the cache cluster has.

**Note:** For clusters running Redis, this value must be 1.
For clusters running Memcached, this value must be between 1 and 20.

**CacheNodeType**  The compute and memory capacity of the nodes in the node group (shard). Valid node types (and pricing for them) are exhaustively described at [https://aws.amazon.com/elasticache/pricing/](https://aws.amazon.com/elasticache/pricing/)

**Note:**

- All T2 instances must be created in a VPC
- Redis backup/restore is not supported for Redis (cluster mode disabled) T1 and T2 instances.
- Backup/restore is supported on Redis (cluster mode enabled) T2 instances.
- Redis Append-only files (AOF) functionality is not supported for T1 or T2 instances.

**Engine**  The name of the cache engine to be used for this cache cluster. Valid values for this parameter are: memcached | redis

**EngineVersion**  The version number of the cache engine to be used for this cache cluster. To view the supported cache engine versions, use the DescribeCacheEngineVersions operation.

**Note:**  You can upgrade to a newer engine version but you cannot downgrade to an earlier engine version. If you want to use an earlier engine version, you must delete the existing cache cluster or replication group and create it anew with the earlier engine version.

**CacheParameterGroupName**  The name of the parameter group to associate with this cache cluster. If this argument is omitted, the default parameter group for the specified engine is used. You cannot use any parameter group which has cluster-enabled='yes' when creating a cluster.

**CacheSubnetGroupName**  The name of the Cache Subnet Group to be used for the cache cluster. Use this parameter ONLY when you are creating a cache cluster within a VPC.

**Note:**  If you’re going to launch your cluster in an Amazon VPC, you need to create a subnet group before you start creating a cluster.

**CacheSecurityGroupNames**  A list of Cache Security Group names to associate with this cache cluster. Use this parameter ONLY when you are creating a cache cluster outside of a VPC.

**SecurityGroupIds**  One or more VPC security groups associated with the cache cluster. Use this parameter ONLY when you are creating a cache cluster within a VPC.

**Tags**  A list of tags to be added to this resource. Note that due to shortcomings in the AWS API for ElastiCache, these can only be set during resource creation - later modification is not (currently) supported.

**SnapshotArns**  A single-element string list containing an Amazon Resource Name (ARN) that uniquely identifies a Redis RDB snapshot file stored in Amazon S3. The snapshot file is used to populate the node group (shard). The Amazon S3 object name in the ARN cannot contain any commas.

**Note:**  This parameter is ONLY valid if the Engine parameter is redis.

**SnapshotName**  The name of a Redis snapshot from which to restore data into the new node group (shard). The snapshot status changes to restoring while the new node group (shard) is being created.
**Note:** This parameter is ONLY valid if the Engine parameter is redis.

**PreferredMaintenanceWindow**  Specifies the weekly time range during which maintenance on the cache cluster is permitted. It is specified as a range in the format ddd:hh24:mi-ddd:hh24:mi (24H Clock UTC). The minimum maintenance window is a 60 minute period. Valid values for ddd are: sun, mon, tue, wed, thu, fri, sat

Example: sun:23:00-mon:01:30

**Port**  The port number on which each of the cache nodes accepts connections.

Default: 6379

**NotificationTopicArn**  The Amazon Resource Name (ARN) of the Amazon Simple Notification Service (SNS) topic to which notifications are sent.

**Note:** The Amazon SNS topic owner must be the same as the cache cluster owner.

**AutoMinorVersionUpgrade**  This (boolean) parameter is currently disabled.

**SnapshotRetentionLimit**  The number of days for which ElastiCache retains automatic snapshots before deleting them.

Default: 0 (i.e., automatic backups are disabled for this cache cluster).

**Note:** This parameter is ONLY valid if the Engine parameter is redis.

**SnapshotWindow**  The daily time range (in UTC) during which ElastiCache begins taking a daily snapshot of your node group (shard). If you do not specify this parameter, ElastiCache automatically chooses an appropriate time range.

Example: 05:00-09:00

**Note:** This parameter is ONLY valid if the Engine parameter is redis.

**AuthToken**  The password used to access a password protected server.

Password constraints:
- Must be only printable ASCII characters.
- Must be at least 16 characters and no more than 128 characters in length.
- Cannot contain any of the following characters: '/', '"', or '@'.

**CacheNodeIdsToRemove**  A list of cache node IDs to be removed. A node ID is a numeric identifier (0001, 0002, etc.). This parameter is only valid when NumCacheNodes is less than the existing number of cache nodes. The number of cache node IDs supplied in this parameter must match the difference between the existing number of cache nodes in the cluster or pending cache nodes, whichever is greater, and the value of NumCacheNodes in the request.

**NewAvailabilityZones**  The list of Availability Zones where the new Memcached cache nodes are created. This parameter is only valid when NumCacheNodes in the request is greater than the sum of the number of active cache nodes and the number of cache nodes pending creation (which may be zero). The number of Availability Zones supplied in this list must match the cache nodes being added in this request. Note: This option is only supported on Memcached clusters.
NotificationTopicStatus  The status of the SNS notification topic. Notifications are sent only if the status is active.

Valid values: active | inactive

region  Region to connect to.

key  Secret key to be used.

keyid  Access key to be used.

profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

salt.states.boto3_elasticache.cache_subnet_group_absent(name, region=None, key=None, keyid=None, profile=None, **args)

Ensure a given cache subnet group is deleted.

name  Name of the cache subnet group.

CacheSubnetGroupName  A name for the cache subnet group. Note: In general this parameter is not needed, as 'name' is used if it's not provided.

region  Region to connect to.

key  Secret key to be used.

keyid  Access key to be used.

profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

salt.states.boto3_elasticache.cache_subnet_group_present(name, subnets=None, region=None, key=None, keyid=None, profile=None, **args)

Ensure cache subnet group exists.

name  A name for the cache subnet group. This value is stored as a lowercase string. Constraints: Must contain no more than 255 alphanumeric characters or hyphens.

subnets  A list of VPC subnets (IDs, Names, or a mix) for the cache subnet group.

CacheSubnetGroupName  A name for the cache subnet group. This value is stored as a lowercase string. Constraints: Must contain no more than 255 alphanumeric characters or hyphens. Note: In general this parameter is not needed, as 'name' is used if it's not provided.

CacheSubnetGroupDescription  A description for the cache subnet group.

SubnetIds  A list of VPC subnet IDs for the cache subnet group. This is ADDITIVE with 'subnets' above.

region  Region to connect to.

key  Secret key to be used.

keyid  Access key to be used.

profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

salt.states.boto3_elasticache.replication_group_absent(name, wait=600, region=None, key=None, keyid=None, profile=None, **args)

Ensure a given replication group is deleted.
name  Name of the replication group.

wait  Integer describing how long, in seconds, to wait for confirmation from AWS that the resource is in the desired state. Zero meaning to return success or failure immediately of course. Note that waiting for the cluster to become available is generally the better course, as failure to do so will often lead to subsequent failures when managing dependent resources.

ReplicationGroupId  The replication group identifier. Note: In general this parameter is not needed, as 'name' is used if it's not provided.

RetainPrimaryCluster  If set to true, all of the read replicas are deleted, but the primary node is retained.

FinalSnapshotIdentifier  The name of a final node group (shard) snapshot. ElastiCache creates the snapshot from the primary node in the cluster, rather than one of the replicas; this is to ensure that it captures the freshest data. After the final snapshot is taken, the replication group is immediately deleted.

region  Region to connect to.

dict  Secret key to be used.
keyid  Access key to be used.

profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

salt.states.boto3_elasticache.replication_group_present(name, wait=900, security_groups=None, region=None, key=None, keyid=None, profile=None, **args)

Ensure a replication group exists and is in the given state.

name  Name of replication group

wait  Integer describing how long, in seconds, to wait for confirmation from AWS that the resource is in the desired state. Zero meaning to return success or failure immediately of course. Note that waiting for the cluster to become available is generally the better course, as failure to do so will often lead to subsequent failures when managing dependent resources.

security_groups  One or more VPC security groups (names and/or IDs) associated with the cache cluster.

Note:  This is additive with any sec groups provided via the SecurityGroupIds parameter below. Use this parameter ONLY when you are creating a cluster in a VPC.

ReplicationGroupId  The replication group identifier. This parameter is stored as a lowercase string.

Constraints:

- A name must contain from 1 to 20 alphanumeric characters or hyphens.
- The first character must be a letter.
- A name cannot end with a hyphen or contain two consecutive hyphens.

Note:  In general this parameter is not needed, as 'name' is used if it's not provided.

ReplicationGroupDescription  A user-created description for the replication group.

PrimaryClusterId  The identifier of the cache cluster that serves as the primary for this replication group. This cache cluster must already exist and have a status of available. This parameter is not required if NumCacheClusters, NumNodeGroups, or ReplicasPerNodeGroup is specified.
**AutomaticFailoverEnabled** Specifies whether a read-only replica is automatically promoted to read/write primary if the existing primary fails. If true, Multi-AZ is enabled for this replication group. If false, Multi-AZ is disabled for this replication group.

Default: False

**Note:** AutomaticFailoverEnabled must be enabled for Redis (cluster mode enabled) replication groups.

ElastiCache Multi-AZ replication groups is not supported on:

- Redis versions earlier than 2.8.6.
- Redis (cluster mode disabled): T1 and T2 node types.
- Redis (cluster mode enabled): T2 node types.

**NumCacheClusters** The number of clusters this replication group initially has. This parameter is not used if there is more than one node group (shard). You should use ReplicasPerNodeGroup instead. If Multi-AZ is enabled, the value of this parameter must be at least 2. The maximum permitted value for NumCacheClusters is 6 (primary plus 5 replicas).

**PreferredCacheClusterAZs** A list of EC2 Availability Zones in which the replication group's cache clusters are created. The order of the Availability Zones in the list is the order in which clusters are allocated. The primary cluster is created in the first AZ in the list. This parameter is not used if there is more than one node group (shard). You should use NodeGroupConfiguration instead. The number of Availability Zones listed must equal the value of NumCacheClusters.

Default: System chosen Availability Zones.

**Note:** If you are creating your replication group in an Amazon VPC (recommended), you can only locate cache clusters in Availability Zones associated with the subnets in the selected subnet group.

**NumNodeGroups** An optional parameter that specifies the number of node groups (shards) for this Redis (cluster mode enabled) replication group. For Redis (cluster mode disabled) either omit this parameter or set it to 1.

Default: 1

**ReplicasPerNodeGroup** An optional parameter that specifies the number of replica nodes in each node group (shard). Valid values are: 0 to 5

**NodeGroupConfiguration** A list of node group (shard) configuration options. Each node group (shard) configuration has the following: Slots, PrimaryAvailabilityZone, ReplicaAvailabilityZones, ReplicaCount. If you're creating a Redis (cluster mode disabled) or a Redis (cluster mode enabled) replication group, you can use this parameter to configure one node group (shard) or you can omit this parameter. For fidely details of the expected data layout of this param, see http://boto3.readthedocs.io/en/latest/reference/services/elasticache.html?#ElastiCache.Client.create_replication_group

**CacheNodeType** The compute and memory capacity of the nodes in the node group (shard). See https://aws.amazon.com/elasticache/pricing/ for current sizing, prices, and constraints.

**Engine** The name of the cache engine to be used for the cache clusters in this replication group.

**EngineVersion** The version number of the cache engine to be used for the cache clusters in this replication group. To view the supported cache engine versions, use the DescribeCacheEngineVersions operation.

**Note:** You can upgrade to a newer engine version but you cannot downgrade to an earlier engine version. If you want to use an earlier engine version, you must delete the existing cache cluster or replication
group and create it anew with the earlier engine version.

**CacheParameterGroupName** The name of the parameter group to associate with this replication group. If this argument is omitted, the default cache parameter group for the specified engine is used.

**Note:** If you are running Redis version 3.2.4 or later, only one node group (shard), and want to use a default parameter group, we recommend that you specify the parameter group by name.

To create a Redis (cluster mode disabled) replication group, use `CacheParameterGroupName=default.redis3.2`

To create a Redis (cluster mode enabled) replication group, use `CacheParameterGroupName=default.redis3.2.cluster.on`

**CacheSubnetGroupName** The name of the cache subnet group to be used for the replication group.

**Note:** If you're going to launch your cluster in an Amazon VPC, you need to create a subnet group before you start creating a cluster. For more information, see Subnets and Subnet Groups.

**CacheSecurityGroupNames** A list of cache security group names to associate with this replication group.

**SecurityGroupIds** One or more Amazon VPC security groups associated with this replication group. Use this parameter only when you are creating a replication group in an VPC.

**Tags** A list of tags to be added to this resource. Note that due to shortcomings in the AWS API for Elasticache, these can only be set during resource creation - later modification is not (currently) supported.

**SnapshotArns** A list of ARNs that uniquely identify the Redis RDB snapshot files stored in Amazon S3. These snapshot files are used to populate the replication group. The Amazon S3 object name in the ARN cannot contain any commas. The list must match the number of node groups (shards) in the replication group, which means you cannot repartition.

**Note:** This parameter is only valid if the Engine parameter is redis.

**SnapshotName** The name of a snapshot from which to restore data into the new replication group. The snapshot status changes to restoring while the new replication group is being created. Note: This parameter is only valid if the Engine parameter is redis.

**PreferredMaintenanceWindow** Specifies the weekly time range during which maintenance on the cluster is performed. It is specified as a range in the format ddd:hh24:mi-ddd:hh24:mi (24H Clock UTC). The minimum maintenance window is a 60 minute period. Valid values for ddd are: sun, mon, tue, wed, thu, fri, sat

Example: sun:23:00-mon:01:30

**Port** The port number on which each member of the replication group accepts connections.

**NotificationTopicArn** The ARN of an SNS topic to which notifications are sent.

**Note:** The SNS topic owner must be the same as the cache cluster owner.

**AutoMinorVersionUpgrade** This parameter is currently disabled.
SnapshotRetentionLimit The number of days for which ElastiCache will retain automatic snapshots before deleting them.

Default: 0 (that is, automatic backups are disabled for this cache cluster).

Note: This parameter is only valid if the Engine parameter is redis.

SnapshotWindow The daily time range (in UTC) during which ElastiCache begins taking a daily snapshot of your node group (shard). If you do not specify this parameter, ElastiCache automatically chooses an appropriate time range.

Example: 05:00-09:00

Note: This parameter is only valid if the Engine parameter is redis.

AuthToken The password used to access a password protected server. Password constraints:

- Must be only printable ASCII characters.
- Must be at least 16 characters and no more than 128 characters in length.
- Cannot contain any of the following characters: '/', '"', or '@'.

SnapshootingClusterId The cache cluster ID that is used as the daily snapshot source for the replication group.

NotificationTopicStatus The status of the SNS notification topic. Notifications are sent only if the status is active. Valid values: active | inactive

region Region to connect to.
key Secret key to be used.
keyid Access key to be used.
profile A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

23.19.14 salt.states.boto_asg

Manage Autoscale Groups

New in version 2014.7.0.

Create and destroy autoscale groups. Be aware that this interacts with Amazon's services, and so may incur charges.

This module uses boto, which can be installed via package, or pip.

This module accepts explicit autoscale credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More Information available at:


If IAM roles are not used you need to specify them either in a pillar or in the minion's config file:

| asg.keyid: GKTADJGHEIQSXMKKRBJ08H |
| asg.key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs |
It's also possible to specify key, keyid and region via a profile, either as a passed in dict, or as a string to pull from pillars or minion config:

```yaml
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfkjghWupUjasdfklkdfklglgjsdfjajkghs
  region: us-east-1
```

Ensure myasg exists:
```
boto_asg.present:
  - name: myasg
    launch_config_name: mylc
    availability_zones:
      - us-east-1a
      - us-east-1b
    min_size: 1
    max_size: 1
    desired_capacity: 1
    load_balancers:
      - myelb
    suspended_processes:
      - AddToLoadBalancer
      - AlarmNotification
    scaling_policies:
      - adjustment_type: ChangeInCapacity
        as_name: api-production-iad
        cooldown: 1800
        min_adjustment_step: None
        name: ScaleDown
        scaling_adjustment: -1
      region: us-east-1
    keyid: GKTADJGHEIQSXMKKRBJ08H
    key: askdjghsdfkjghWupUjasdfklkdfklglgjsdfjajkghs
```  

# Using a profile from pillars.
Ensure myasg exists:
```
boto_asg.present:
  - name: myasg
    launch_config_name: mylc
    availability_zones:
      - us-east-1a
      - us-east-1b
    min_size: 1
    max_size: 1
    desired_capacity: 1
    load_balancers:
      - myelb
    profile: myprofile
```

# Passing in a profile.
Ensure myasg exists:
```
boto_asg.present:
  - name: myasg
    launch_config_name: mylc
    availability_zones:
      - us-east-1a
      - us-east-1b
    min_size: 1
```

(continues on next page)
- **max_size**: 1
- **desired_capacity**: 1
- **load_balancers**: myelb
- **profile**: keyid: GKTADJGHEIQSXMKKRBJ08H
text: askdjghsdfjkgWupUjasdflkdfklgsdjfgs
region: us-east-1

# Deleting an autoscale group with running instances.
**Ensure myasg is deleted:**
```
boto_asg.absent:
  - name: myasg
# If instances exist, we must force the deletion of the asg.
  - force: True
```

It's possible to specify cloudwatch alarms that will be setup along with the ASG. Note the alarm name will be the
name attribute defined, plus the ASG resource name.

**Ensure myasg exists:**
```
boto_asg.present:
  - name: myasg
    - launch_config_name: mylc
    - availability_zones:
      - us-east-1a
      - us-east-1b
    - min_size: 1
    - max_size: 1
    - desired_capacity: 1
    - load_balancers: myelb
    - profile: myprofile
    - alarms:
      - CPU:
        name: 'ASG CPU **MANAGED BY SALT**'
        attributes:
          metric: CPUUtilization
          namespace: AWS/EC2
          statistic: Average
          comparison: '>= '
          threshold: 65.0
          period: 60
          evaluation_periods: 30
          unit: null
          description: 'ASG CPU'
          alarm_actions: [ 'arn:aws:sns:us-east-1:12345:myalarm' ]
          insufficient_data_actions: []
          ok_actions: [ 'arn:aws:sns:us-east-1:12345:myalarm' ]
```

You can also use alarms from pillars, and override values from the pillar alarms by setting overrides on the resource.
Note that 'boto_asg_alarms' will be used as a default value for all resources, if defined and can be used to ensure
alarms are always set for an ASG resource.

Setting the alarms in a pillar:
```
my_asg_alarm:
  CPU:
```

(continues on next page)
Overriding the alarm values on the resource:

```
name: 'ASG CPU **MANAGED BY SALT**'
attributes:
  metric: CPUUtilization
  namespace: AWS/EC2
  statistic: Average
  comparison: '>='
  threshold: 65.0
  period: 60
  evaluation_periods: 30
  unit: null
description: 'ASG CPU'
insufficient_data_actions: []
ok_actions: ['arn:aws:sns:us-east-1:12345:myalarm']
```

salt.states.boto_asg.absent(name, force=False, region=None, key=None, keyid=None, profile=None, remove_lc=False)

Ensure the named autoscale group is deleted.

- **name** Name of the autoscale group.
- **force** Force deletion of autoscale group.
- **remove_lc** Delete the launch config as well.
- **region** The region to connect to.
- **key** Secret key to be used.
- **keyid** Access key to be used.
- **profile** A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.
salt.states.boto_asg.present(name, launch_config_name, availability_zones, min_size, max_size, launch_config=None, desired_capacity=None, load_balancers=None, default_cooldown=None, health_check_type=None, health_check_period=None, placement_group=None, vpc_zone_identifier=None, subnet_names=None, tags=None, termination_policies=None, termination_policies_from_pillar='boto_asg_termination_policies', suspended_processes=None, scaling_policies=None, scaling_policies_from_pillar='boto_asg_scaling_policies', scheduled_actions=None, scheduled_actions_from_pillar='boto_asg_scheduled_actions', alarms=None, alarms_from_pillar='boto_asg_alarms', region=None, key=None, keyid=None, profile=None, notification_arn=None, notification_arn_from_pillar='boto_asg_notification_arn', notification_types=None, notification_types_from_pillar='boto_asg_notification_types')

Ensure the autoscale group exists.

name  Name of the autoscale group.

launch_config_name  Name of the launch config to use for the group. Or, if launch_config is specified, this will be the launch config name's prefix. (see below)

launch_config  A dictionary of launch config attributes. If specified, a launch config will be used or created, matching this set of attributes, and the autoscale group will be set to use that launch config. The launch config name will be the Launch_config_name followed by a hyphen followed by a hash of the launch_config dict contents. Example:

```
my_asg:
  boto_asg.present:
    - launch_config:
      - ebs_optimized: false
      - instance_profile_name: my_iam_profile
      - kernel_id: '
      - ramdisk_id: '
      - key_name: my_ssh_key
      - image_name: aws2015091-hvm
      - instance_type: c3.xlarge
      - instance_monitoring: false
      - security_groups:
        - my_sec_group_01
        - my_sec_group_02
```

availability_zones  List of availability zones for the group.

min_size  Minimum size of the group.

max_size  Maximum size of the group.

desired_capacity  The desired capacity of the group.

load_balancers  List of load balancers for the group. Once set this can not be updated (Amazon restriction).

default_cooldown  Number of seconds after a Scaling Activity completes before any further scaling activities can start.

health_check_type  The service you want the health status from, Amazon EC2 or Elastic Load Balancer (EC2 or ELB).

health_check_period  Length of time in seconds after a new EC2 instance comes into service that Auto Scaling starts checking its health.
**placement_group**  Physical location of your cluster placement group created in Amazon EC2. Once set this can not be updated (Amazon restriction).

**vpc_zone_identifier**  A list of the subnet identifiers of the Virtual Private Cloud.

**subnet_names**  For VPC, a list of subnet names (NOT subnet IDs) to deploy into. Exclusive with vpc_zone_identifier.

**tags**  A list of tags. Example:

```yaml
- key: 'key'
  value: 'value'
  propagate_at_launch: true
```

**termination_policies**  A list of termination policies. Valid values are:

- OldestInstance
- NewestInstance
- OldestLaunchConfiguration
- ClosestToNextInstanceHour
- Default

If no value is specified, the Default value is used.

**termination_policies_from_pillar:**  name of pillar dict that contains termination policy settings. Termination policies defined for this specific state will override those from pillar.


**scaling_policies_from_pillar:**  name of pillar dict that contains scaling policy settings. Scaling policies defined for this specific state will override those from pillar.

**scheduled_actions:**  a dictionary of scheduled actions. Each key is the name of scheduled action and each value is dictionary of options. For example:

```yaml
- scheduled_actions:
  scale_up_at_10:
    desired_capacity: 4
    min_size: 3
    max_size: 5
    recurrence: "0 9 * * 1-5"
  scale_down_at_7:
    desired_capacity: 1
    min_size: 1
    max_size: 1
    recurrence: "0 19 * * 1-5"
```

**scheduled_actions_from_pillar:**  name of pillar dict that contains scheduled_actions settings. Scheduled actions for this specific state will override those from pillar.

**alarms:**  a dictionary of name->boto_cloudwatch_alarm sections to be associated with this ASG. All attributes should be specified except for dimension which will be automatically set to this ASG.

See the `salt.states.boto_cloudwatch_alarm` state for information about these attributes.
If any alarm actions include ":self:" this will be replaced with the asg name. For example, alarm_actions reading ":["scaling_policy:self:ScaleUp"]" will map to the arn for this asg's scaling policy named "ScaleUp". In addition, any alarms that have only scaling_policy as actions will be ignored if min_size is equal to max_size for this ASG.

alarms_from_pillar: name of pillar dict that contains alarm settings. Alarms defined for this specific state will override those from pillar.

region The region to connect to.
key Secret key to be used.
keyid Access key to be used.
profile A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.
notification_arn The AWS arn that notifications will be sent to
notification_arn_from_pillar name of the pillar dict that contains notification_arn settings. A notification_arn defined for this specific state will override the one from pillar.
notification_types A list of event names that will trigger a notification. The list of valid notification types is:
  - autoscaling:EC2_INSTANCE_LAUNCH
  - autoscaling:EC2_INSTANCE_LAUNCH_ERROR
  - autoscaling:EC2_INSTANCE_TERMINATE
  - autoscaling:EC2_INSTANCE_TERMINATE_ERROR
  - autoscaling:TEST_NOTIFICATION
notification_types_from_pillar name of the pillar dict that contains notification_types settings. notification_types defined for this specific state will override those from the pillar.

23.19.15 salt.states.boto_cloudfront

Manage CloudFront distributions
New in version 2018.3.0.
Create, update and destroy CloudFront distributions.
This module accepts explicit AWS credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available here.

If IAM roles are not used you need to specify them, either in a pillar file or in the minion's config file:

```
cloudfront.keyid: GKTADJGHEIQSXMKKRBJ08H
cloudfront.key: askdjghsdfjkgWupUjasdfdlkdfklgjsdfjajkghs
```

It's also possible to specify key, keyid, and region via a profile, either passed in as a dict, or a string to pull from pillars or minion config:

```
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfjkgWupUjasdfdlkdfklgjsdfjajkghs
  region: us-east-1
```
aws:
    region: us-east-1:
        profile:
            keyid: GKTADJGHEIQSXMKKRBJ08H
            key: askdjghsdfjkghWupUjasdfklkdfklgjdsfjajkghs
            region: us-east-1

depends boto3

salt.states.boto_cloudfront.present(name, config, tags, region=None, key=None, keyid=None, profile=None)

Ensure the CloudFront distribution is present.

name (string) Name of the CloudFront distribution
config (dict) Configuration for the distribution
tags (dict) Tags to associate with the distribution
region (string) Region to connect to
key (string) Secret key to use
keyid (string) Access key to use
profile (dict or string) A dict with region, key, and keyid, or a pillar key (string) that contains such a dict.

Example:

Manage my_distribution CloudFront distribution:
    boto_cloudfront.present:
        - name: my_distribution
        - config:
            Comment: 'partial config shown, most parameters elided'
            Enabled: True
        - tags:
            testing_key: testing_value

23.19.16 salt.states.boto_cognitoidentity

Manage CognitoIdentity Functions

New in version 2016.11.0.

Create and destroy CognitoIdentity identity pools. Be aware that this interacts with Amazon’s services, and so may incur charges.

This module uses boto3, which can be installed via package, or pip.

This module accepts explicit vpc credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available here.

If IAM roles are not used you need to specify them either in a pillar file or in the minion’s config file:

vpc.keyid: GKTADJGHEIQSXMKKRBJ08H
vpc.key: askdjghsdfjkghWupUjasdfklkdfklgjdsfjajkghs
It's also possible to specify key, keyid and region via a profile, either passed in as a dict, or as a string to pull from pillars or minion config:

```
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfjkgfhUjasdfklgjdsfjajkg
  region: us-east-1
```

Ensure function exists:

```
boto_cognitoidentity.pool_present:
  - PoolName: my_identity_pool
  - region: us-east-1
  - keyid: GKTADJGHEIQSXMKKRBJ08H
  - key: askdjghsdfjkgfhUjasdfklgjdsfjajkg
```

salt.states.boto_cognitoidentity.pool_absent(name, IdentityPoolName, RemoveAllMatched=False, region=None, key=None, keyid=None, profile=None)

Ensure cognito identity pool with passed properties is absent.

- **name** The name of the state definition.
- **IdentityPoolName** Name of the Cognito Identity Pool. Please note that this may match multiple pools with the same given name, in which case, all will be removed.
- **RemoveAllMatched** If True, all identity pools with the matching IdentityPoolName will be removed. If False and there are more than one identity pool with the matching IdentityPoolName, no action will be taken. If False and there is only one identity pool with the matching IdentityPoolName, the identity pool will be removed.
- **region** Region to connect to.
- **key** Secret key to be used.
- **keyid** Access key to be used.
- **profile** A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

salt.states.boto_cognitoidentity.pool_present(name, IdentityPoolName, AuthenticatedRole, AllowUnauthenticatedIdentities=False, UnauthenticatedRole=None, SupportedLoginProviders=None, DeveloperProviderName=None, OpenIdConnectProviderARNs=None, region=None, key=None, keyid=None, profile=None)

Ensure Cognito Identity Pool exists.

- **name** The name of the state definition
- **IdentityPoolName** Name of the Cognito Identity Pool
- **AuthenticatedRole** An IAM role name or ARN that will be associated with temporary AWS credentials for an authenticated cognito identity.
- **AllowUnauthenticatedIdentities** Whether to allow anonymous user identities
- **UnauthenticatedRole** An IAM role name or ARN that will be associated with anonymous user identities
- **SupportedLoginProviders** A dictionary or pillar that contains key: value pairs mapping provider names to provider app IDs.
**DeveloperProviderName**  A string which is the domain by which Cognito will refer to your users. This name acts as a placeholder that allows your backend and the Cognito service to communicate about the developer provider. Once you have set a developer provider name, you cannot change it. Please take care in setting this parameter.

**OpenIdConnectProviderARNs**  A list or pillar name that contains a list of OpenID Connect provider ARNs.

- **region**  Region to connect to.
- **key**  Secret key to be used.
- **keyid**  Access key to be used.
- **profile**  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

### 23.19.17 salt.states.boto_dynamodb

**Manage DynamoDB Tables**

New in version 2015.5.0.

Create and destroy DynamoDB tables. Be aware that this interacts with Amazon's services, and so may incur charges. This module uses boto, which can be installed via package, or pip.

This module accepts explicit DynamoDB credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available [here](#).

If IAM roles are not used you need to specify them either in a pillar file or in the minion's config file:

```yaml
keyid: GKTADJGHEIQSXMKKRBJ08H
key: askdjghsdfdfjkgWupUjasdflkdfklgjsdfajkghs
region: us-east-1
```

It's also possible to specify key, keyid and region via a profile, either passed in as a dict, or as a string to pull from pillars or minion config:

```yaml
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfdfjkgWupUjasdflkdfklgjsdfajkghs
  region: us-east-1
```

**Ensure DynamoDB table does not exist:**

```yaml
boto_dynamodb.absent:
  - table_name: new_table
  - keyid: GKTADJGHEIQSXMKKRBJ08H
  - key: askdjghsdfdfjkgWupUjasdflkdfklgjsdfajkghs
  - region: us-east-1
```

**Ensure DynamoDB table exists:**

```yaml
boto_dynamodb.present:
  - table_name: new_table
  - read_capacity_units: 1
  - write_capacity_units: 2
  - hash_key: primary_id
  - hash_key_data_type: N
```

(continues on next page)
It's possible to specify cloudwatch alarms that will be setup along with the DynamoDB table. Note the alarm name will be defined by the name attribute provided, plus the DynamoDB resource name.

Ensure DynamoDB table exists:

```python
boto_dynamodb.present:
  - name: new_table
  - read_capacity_units: 1
  - write_capacity_units: 2
  - hash_key: primary_id
  - hash_key_data_type: N
  - range_key: start_timestamp
  - range_key_data_type: N
  - alarms:
    ConsumedWriteCapacityUnits:
      name: 'DynamoDB ConsumedWriteCapacityUnits **MANAGED BY SALT**'
      attributes:
        metric: ConsumedWriteCapacityUnits
        namespace: AWS/DynamoDB
        statistic: Sum
        comparison: '>='
        # threshold_percent is used to calculate the actual threshold
        # based on the provisioned capacity for the table.
        threshold_percent: 0.75
        period: 300
        evaluation_periods: 2
        unit: Count
        description: 'DynamoDB ConsumedWriteCapacityUnits'
        alarm_actions: [ arn:aws:sns:us-east-1:1234:my-alarm ]
        insufficient_data_actions: []
        ok_actions: [ arn:aws:sns:us-east-1:1234:my-alarm ]
  - keyid: GKTADJGHEIQSXMKKRBJ08H
  - key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
  - region: us-east-1
```

You can also use alarms from pillars, and override values from the pillar alarms by setting overrides on the resource.
Note that 'boto_dynamodb_alarms' will be used as a default value for all resources, if defined and can be used to ensure alarms are always set for a resource.

Setting the alarms in a pillar:

```yaml
boto_dynamodb_alarms:
  ConsumedWriteCapacityUnits:
    name: 'DynamoDB ConsumedWriteCapacityUnits **MANAGED BY SALT**'
    attributes:
      metric: ConsumedWriteCapacityUnits
      namespace: AWS/DynamoDB
      statistic: Sum
      comparison: '>='
      # threshold_percent is used to calculate the actual threshold based on the provisioned capacity for the table.
      threshold_percent: 0.75
      period: 300
      evaluation_periods: 2
      unit: Count
      description: 'DynamoDB ConsumedWriteCapacityUnits'
    alarm_actions: ['arn:aws:sns:us-east-1:1234:my-alarm']
    insufficient_data_actions: []
    ok_actions: ['arn:aws:sns:us-east-1:1234:my-alarm']
```

Ensure DynamoDB table exists:

```yaml
boto_dynamodb.present:
  - name: new_table
  - read_capacity_units: 1
  - write_capacity_units: 2
  - hash_key: primary_id
  - hash_key_data_type: N
  - range_key: start_timestamp
  - range_key_data_type: N
  - alarms:
      ConsumedWriteCapacityUnits:
        attributes:
          threshold_percent: 0.90
          period: 900
```

**exception** `salt.states.boto_dynamodb.GsiNotUpdatableError`

Raised when a global secondary index cannot be updated.

`salt.states.boto_dynamodb.absent(name, region=None, key=None, keyid=None, profile=None)`

Ensure the DynamoDB table does not exist.

- **name** Name of the DynamoDB table.
- **region** Region to connect to.
- **key** Secret key to be used.
- **keyid** Access key to be used.
- **profile** A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.
salt.states.boto_dynamodb.present(name=None, table_name=None, region=None, key=None, keyid=None, profile=None, read_capacity_units=None, write_capacity_units=None, alarms=None, alarms_from_pillar='boto_dynamodb_alarms', hash_key=None, hash_key_data_type=None, range_key=None, range_key_data_type=None, local_indexes=None, global_indexes=None, backup_configs_from_pillars='boto_dynamodb_backup_configs')

Ensure the DynamoDB table exists. Table throughput can be updated after table creation.

Global secondary indexes (GSIs) are managed with some exceptions:

- If a GSI deletion is detected, a failure will occur (deletes should be done manually in the AWS console).
- If multiple GSIs are added in a single Salt call, a failure will occur (boto supports one creation at a time).
  Note that this only applies after table creation; multiple GSIs can be created during table creation.
- Updates to existing GSIs are limited to read/write capacity only (DynamoDB limitation).

name Name of the DynamoDB table

table_name Name of the DynamoDB table (deprecated)

region Region to connect to.

key Secret key to be used.

keyid Access key to be used.

profile A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

read_capacity_units The read throughput for this table

write_capacity_units The write throughput for this table

hash_key The name of the attribute that will be used as the hash key for this table

hash_key_data_type The DynamoDB datatype of the hash key

range_key The name of the attribute that will be used as the range key for this table

range_key_data_type The DynamoDB datatype of the range key

local_indexes The local indexes you would like to create

global_indexes The global indexes you would like to create

backup_configs_from_pillars Pillars to use to configure DataPipeline backups

23.19.18 salt.states.boto_elasticache

Manage Elasticache

New in version 2014.7.0.

Create, destroy and update Elasticache clusters. Be aware that this interacts with Amazon's services, and so may incur charges.

Note: This module currently only supports creation and deletion of elasticache resources and will not modify clusters when their configuration changes in your state files.

This module uses boto, which can be installed via package, or pip.
This module accepts explicit elasticache credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available here.

If IAM roles are not used you need to specify them either in a pillar file or in the minion’s config file:

```yaml
elasticache.keyid: GKTADJGHEIQSXMKKRBJ08H
elasticache.key: askdjghsdfjkghWupUjasdfdkfklgjsdfajkghs
```

It’s also possible to specify key, keyid and region via a profile, either passed in as a dict, or as a string to pull from pillars or minion config:

```yaml
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfjkghWupUjasdfdkfklgjsdfajkghs
  region: us-east-1
```

```yaml
Ensure myelasticache exists:
boto_elasticache.present:
  - name: myelasticache
  - engine: redis
  - cache_node_type: cache.t1.micro
  - num_cache_nodes: 1
  - region: us-east-1
  - keyid: GKTADJGHEIQSXMKKRBJ08H
  - key: askdjghsdfjkghWupUjasdfdkfklgjsdfajkghs
```

```yaml
# Using a profile from pillars
Ensure myelasticache exists:
boto_elasticache.present:
  - name: myelasticache
  - engine: redis
  - cache_node_type: cache.t1.micro
  - num_cache_nodes: 1
  - region: us-east-1
  - profile: myprofile
```

```yaml
# Passing in a profile
Ensure myelasticache exists:
boto_elasticache.present:
  - name: myelasticache
  - engine: redis
  - cache_node_type: cache.t1.micro
  - num_cache_nodes: 1
  - region: us-east-1
  - profile:
    keyid: GKTADJGHEIQSXMKKRBJ08H
    key: askdjghsdfjkghWupUjasdfdkfklgjsdfajkghs
```

```bash
salt.states.boto_elasticache.absent(name, wait=True, region=None, key=None, keyid=None, profile=None)
```

Ensure the named elasticache cluster is deleted.

- **name** Name of the cache cluster.
- **wait** Boolean. Wait for confirmation from boto that the cluster is in the deleting state.
region Region to connect to.
key Secret key to be used.
keyid Access key to be used.
profile A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.
salt.states.boto_elasticache.cache_cluster_absent("args, **kwargs")
salt.states.boto_elasticache.cache_cluster_present("args, **kwargs")
salt.states.boto_elasticache.creategroup(name, primary_cluster_id, replication_group_description, wait=None, region=None, key=None, keyid=None, profile=None)

Ensure the a replication group is create.
name Name of replication group
wait Waits for the group to be available
primary_cluster_id Name of the master cache node
replication_group_description Description for the group
region Region to connect to.
key Secret key to be used.
keyid Access key to be used.
profile A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.
salt.states.boto_elasticache.present(name, engine=None, cache_node_type=None, num_cache_nodes=None, preferred_availability_zone=None, port=None, cache_parameter_group_name=None, cache_security_group_names=None, replication_group_id=None, auto_minor_version_upgrade=True, security_group_ids=None, cache_subnet_group_name=None, engine_version=None, notification_topic_arn=None, preferred_maintenance_window=None, wait=None, region=None, key=None, keyid=None, profile=None)

Ensure the cache cluster exists.
name Name of the cache cluster (cache cluster id).
engine The name of the cache engine to be used for this cache cluster. Valid values are memcached or redis.
cache_node_type The compute and memory capacity of the nodes in the cache cluster. cache.t1.micro, cache.m1.small, etc. See: https://boto.readthedocs.io/en/latest/ref/elasticache.html#boto.elasticache.layer1.ElastiCacheConnection.create_cache_cluster
num_cache_nodes The number of cache nodes that the cache cluster will have.
preferred_availability_zone The EC2 Availability Zone in which the cache cluster will be created. All cache nodes belonging to a cache cluster are placed in the preferred availability zone.
port The port number on which each of the cache nodes will accept connections.
cache_parameter_group_name The name of the cache parameter group to associate with this cache cluster. If this argument is omitted, the default cache parameter group for the specified engine will be used.
**cache_security_group_names**  A list of cache security group names to associate with this cache cluster. Use this parameter only when you are creating a cluster outside of a VPC.

**replication_group_id**  The replication group to which this cache cluster should belong. If this parameter is specified, the cache cluster will be added to the specified replication group as a read replica; otherwise, the cache cluster will be a standalone primary that is not part of any replication group.

**auto_minor_version_upgrade**  Determines whether minor engine upgrades will be applied automatically to the cache cluster during the maintenance window. A value of True allows these upgrades to occur; False disables automatic upgrades.

**security_group_ids**  One or more VPC security groups associated with the cache cluster. Use this parameter only when you are creating a cluster in a VPC.

**cache_subnet_group_name**  The name of the cache subnet group to be used for the cache cluster. Use this parameter only when you are creating a cluster in a VPC.

**engine_version**  The version number of the cache engine to be used for this cluster.

**notification_topic_arn**  The Amazon Resource Name (ARN) of the Amazon Simple Notification Service (SNS) topic to which notifications will be sent. The Amazon SNS topic owner must be the same as the cache cluster owner.

**preferred_maintenance_window**  The weekly time range (in UTC) during which system maintenance can occur. Example: sun:05:00-sun:09:00

**wait**  Boolean. Wait for confirmation from boto that the cluster is in the available state.

**region**  Region to connect to.

**key**  Secret key to be used.

**keyid**  Access key to be used.

**profile**  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

```python
salt.states.boto_elasticache.replication_group_absent(name, tags=None, region=None, key=None, keyid=None, profile=None)
salt.states.boto_elasticache.replication_group_present(*args, **kwargs)
salt.states.boto_elasticache.subnet_group_absent(name, tags=None, region=None, key=None, keyid=None, profile=None)
salt.states.boto_elasticache.subnet_group_present(name, subnet_ids=None, subnet_names=None, description=None, tags=None, region=None, key=None, keyid=None, profile=None)
```

Ensure ElastiCache subnet group exists.

New in version 2015.8.0.

**name**  The name for the ElastiCache subnet group. This value is stored as a lowercase string.

**subnet_ids**  A list of VPC subnet IDs for the cache subnet group. Exclusive with subnet_names.

**subnet_names**  A list of VPC subnet names for the cache subnet group. Exclusive with subnet_ids.

**description**  Subnet group description.

**tags**  A list of tags.

**region**  Region to connect to.
key  Secret key to be used.
keyid  Access key to be used.
profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

23.19.19  salt.states.boto_elbv2

Manage AWS Application Load Balancer
New in version 2017.7.0.
Add and remove targets from an ALB target group.
This module uses boto3, which can be installed via package, or pip.
This module accepts explicit alb credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available here.
If IAM roles are not used you need to specify them either in a pillar file or in the minion's config file:

```
elbv2.keyid: GKTADJGHEIQSXMKKRBJ08H
elbv2.key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
elbv2.region: us-west-2
```

It's also possible to specify key, keyid and region via a profile, either passed in as a dict, or as a string to pull from pillars or minion config:

```
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
  region: us-east-1
```

salt.states.boto_elbv2.create_target_group(name, protocol, port, vpc_id, region=None, key=None, keyid=None, profile=None, health_check_protocol='HTTP', health_check_port='traffic-port', health_check_path='/', health_check_interval_seconds=30, health_check_timeout_seconds=5, healthy_threshold_count=5, unhealthy_threshold_count=2, **kwargs)

New in version 2017.11.0.
Create target group if not present.
name (string) - The name of the target group.
protocol (string) - The protocol to use for routing traffic to the targets
port (int) - The port on which the targets receive traffic. This port is used unless you specify a port override when registering the traffic.
vpc_id (string) - The identifier of the virtual private cloud (VPC).
health_check_protocol (string) - The protocol the load balancer uses when performing health check on targets. The default is the HTTP protocol.
**health_check_port** (string) - The port the load balancer uses when performing health checks on targets. The default is 'traffic-port', which indicates the port on which each target receives traffic from the load balancer.

**health_check_path** (string) - The ping path that is the destination on the targets for health checks. The default is '/'.

**health_check_interval_seconds** (integer) - The approximate amount of time, in seconds, between health checks of an individual target. The default is 30 seconds.

**health_check_timeout_seconds** (integer) - The amount of time, in seconds, during which no response from a target means a failed health check. The default is 5 seconds.

**healthy_threshold_count** (integer) - The number of consecutive health checks successes required before considering an unhealthy target healthy. The default is 5.

**unhealthy_threshold_count** (integer) - The number of consecutive health check failures required before considering a target unhealthy. The default is 2.

**returns** (bool) - True on success, False on failure.

**CLI Example:**

```yaml
create-target:
  boto_elb2.create_target_group:
    - name: myALB
    - protocol: https
    - port: 443
    - vpc_id: myVPC
```

```
salt.states.boto_elbv2.delete_target_group(name, region=None, key=None, keyid=None, profile=None)
```

Delete target group.

**name** (string) - The Amazon Resource Name (ARN) of the resource.

**returns** (bool) - True on success, False on failure.

**CLI Example:**

```yaml
check-target:
  boto_elb2.delete_target_group:
    - name: myALB
    - protocol: https
    - port: 443
    - vpc_id: myVPC
```

```
salt.states.boto_elbv2.targets_deregistered(name, targets, region=None, key=None, keyid=None, profile=None, **kwargs)
```

Remove targets to an Application Load Balancer target group.

**name** The ARN of the Application Load Balancer Target Group to remove targets from.

**targets** A list of target IDs or a string of a single target registered to the target group to be removed

New in version 2017.7.0.

```yaml
remove-targets:
  boto_elb.targets_deregistered:
    - name: arn:myloadbalancer
    - targets:
```

(continues on next page)
salt.states.boto_elbv2.targets_registered(name, targets, region=None, key=None, keyid=None, profile=None, **kwargs)

New in version 2017.7.0.

Add targets to an Application Load Balancer target group. This state will not remove targets.

name The ARN of the Application Load Balancer Target Group to add targets to.

targets A list of target IDs or a string of a single target that this target group should distribute traffic to.

23.19.20 salt.states.boto_iam_role

Manage IAM roles

New in version 2014.7.0.

This module uses boto, which can be installed via package, or pip.

This module accepts explicit IAM credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available here.

If IAM roles are not used you need to specify them either in a pillar file or in the minion's config file:

```python
iam.keyid: GKTADJGHEIQSXMKKRBJ08H
iam.key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
```

It's also possible to specify key, keyid and region via a profile, either passed in as a dict, or as a string to pull from pillars or minion config:

```python
myprofile:
    keyid: GKTADJGHEIQSXMKKRBJ08H
    key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
    region: us-east-1
```

Creating a role will automatically create an instance profile and associate it with the role. This is the default behavior of the AWS console.

```python
myrole:
    boto_iam_role.present:
        - region: us-east-1
        - key: GKTADJGHEIQSXMKKRBJ08H
        - keyid: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
        - policies_from_pillars:
            - shared_iam_bootstrap_policy
        - policies:
```

(continues on next page)
MySQSPolicy:
Statement:
  - Action:
    - sqs:*  
  Effect: Allow  
  Resource:
    - arn:aws:sqs:*:*:* 
  Sid: MyPolicySQS1  

MyS3Policy:
Statement:
  - Action:
    - s3:GetObject  
  Effect: Allow  
  Resource:
    - arn:aws:s3:*:*:mybucket/*  

# Using a credentials profile from pillars
myrole:
  boto_iam_role.present:
    - profile: myiamprofile

# Passing in a credentials profile
myrole:
  boto_iam_role.present:
    - profile:
      key: GKTADJGHEIQSXMKKRBJ08H  
      keyid: askdjghsdfjkghWupUjasdfsflkjdfklgjsdfajkghs  
      region: us-east-1  

If delete_policies: False is specified, existing policies that are not in the given list of policies will not be deleted. This allows manual modifications on the IAM role to be persistent. This functionality was added in 2015.8.0.

Note: When using the profile parameter and region is set outside of the profile group, region is ignored and a default region will be used.

If region is missing from the profile data set, us-east-1 will be used as the default region.

salt.states.boto_iam_role.absent(name, region=None, key=None, keyid=None, profile=None)
Ensure the IAM role is deleted.
- name Name of the IAM role.
- region Region to connect to.
- key Secret key to be used.
- keyid Access key to be used.
- profile A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

salt.states.boto_iam_role.present(name, policy_document=None, policy_document_from_pillars=None, path=None, policies=None, policies_from_pillars=None, managed_policies=None, create_instance_profile=True, region=None, key=None, keyid=None, profile=None, delete_policies=True)
Ensure the IAM role exists.
name  Name of the IAM role.
	policy_document  The policy that grants an entity permission to assume the role. (See https://boto.readthedocs.io/en/latest/ref/iam.html#boto.iam.connection.IAMConnection.create_role)
	policy_document_from_pillars  A pillar key that contains a role policy document. The statements defined here will be appended with the policy document statements defined in the policy_document argument. New in version 2017.7.0.

path  The path to the role/instance profile. (See https://boto.readthedocs.io/en/latest/ref/iam.html#boto.iam.connection.IAMConnection.create_role)

policies  A dict of IAM role policies.
	policies_from_pillars  A list of pillars that contain role policy dicts. Policies in the pillars will be merged in the order defined in the list and key conflicts will be handled by later defined keys overriding earlier defined keys. The policies defined here will be merged with the policies defined in the policies argument. If keys conflict, the keys in the policies argument will override the keys defined in policies_from_pillars.

managed_policies  A list of (AWS or Customer) managed policies to be attached to the role.

create_instance_profile  A boolean of whether or not to create an instance profile and associate it with this role.

region  Region to connect to.

key  Secret key to be used.

keyid  Access key to be used.

profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

delete_policies  Deletes existing policies that are not in the given list of policies. Default value is True. If False is specified, existing policies will not be deleted allowing manual modifications on the IAM role to be persistent. New in version 2015.8.0.

23.19.21  salt.states.boto_kinesis

Manage Kinesis Streams

New in version 2017.7.0.

Create and destroy Kinesis streams. Be aware that this interacts with Amazon's services, and so may incur charges. This module uses boto3, which can be installed via package, or pip.

This module accepts explicit Kinesis credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available here.

If IAM roles are not used you need to specify them either in a pillar file or in the minion's config file:

| keyid: | GKTADJGHEIQSXMKKRBJ08H |
| key:   | askdjghsdfjkgshWupUjasdfklasdfklgjsdfjajkghs |
| region: | us-east-1 |

It's also possible to specify key, keyid and region via a profile, either passed in as a dict, or as a string to pull from pillars or minion config:
Ensure Kinesis stream does not exist:
`boto_kinesis.absent`
- name: new_stream
  - keyid: GKTADJGHEIQSXMKKRBJ08H
  - key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkgfs
  - region: us-east-1

Ensure Kinesis stream exists:
`boto_kinesis.present`
- name: new_stream
  - retention_hours: 168
  - enhanced_monitoring: ['ALL']
  - num_shards: 2
  - keyid: GKTADJGHEIQSXMKKRBJ08H
  - key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkgfs
  - region: us-east-1

salt.states.boto_kinesis.absent(name, region=None, key=None, keyid=None, profile=None)
Delete the kinesis stream, if it exists.

name (string) Stream name
region (string) Region to connect to.
key (string) Secret key to be used.
keyid (string) Access key to be used.
profile (dict) A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

salt.states.boto_kinesis.present(name, retention_hours=None, enhanced_monitoring=None, num_shards=None, do_reshard=True, region=None, key=None, keyid=None, profile=None)
Ensure the kinesis stream is properly configured and scaled.

name (string) Stream name
retention_hours (int) Retain data for this many hours. AWS allows minimum 24 hours, maximum 168 hours.
enhanced_monitoring (list of string) Turn on enhanced monitoring for the specified shard-level metrics.
  Pass in ['ALL'] or True for all metrics, [] or False for no metrics. Turn on individual metrics by passing in a list: ['IncomingBytes', 'OutgoingBytes'] Note that if only some metrics are supplied, the remaining metrics will be turned off.
num_shards (int) Reshard stream (if necessary) to this number of shards ‼‼! Resharding is expensive! Each split or merge can take up to 30 seconds, and the reshard method balances the partition space evenly. Resharding from N to N+1 can require 2N operations. Resharding is much faster with powers of 2 (e.g. $2^N$ to $2^{N+1}$) ‼‼!
do_reshard (boolean) If set to False, this script will NEVER reshard the stream, regardless of other input. Useful for testing.
region (string) Region to connect to.
key (string) Secret key to be used.
keyid (string)  Access key to be used.

profile (dict)  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key
and keyid.

23.19.22  salt.states.boto_kms

Manage KMS keys, key policies and grants.

New in version 2015.8.0.

Be aware that this interacts with Amazon’s services, and so may incur charges.

This module uses boto, which can be installed via package, or pip.

This module accepts explicit kms credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available here.

If IAM roles are not used you need to specify them either in a pillar file or in the minion's config file:

<table>
<thead>
<tr>
<th>elb.keyid</th>
<th>GKTADJGHEIQSXMKKRBJ08H</th>
</tr>
</thead>
<tbody>
<tr>
<td>elb.key</td>
<td>askdjghsdfjkgWupUjasdflkdfklgjfdsfjajkghs</td>
</tr>
</tbody>
</table>

It’s also possible to specify key, keyid and region via a profile, either passed in as a dict, or as a string to pull from pillars or minion config:

```
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfjkgWupUjasdflkdfklgjfdsfjajkghs
  region: us-east-1
```

Ensure mykey key exists:
```
boto_kms.key_present:
  - name: mykey
    - region: us-east-1
```

# Using a profile from pillars

Ensure mykey key exists:
```
boto_kms.key_present:
  - name: mykey
    - region: us-east-1
    - profile: myprofile
```

# Passing in a profile

Ensure mykey key exists:
```
boto_key.key_present:
  - name: mykey
    - region: us-east-1
    - profile:
      keyid: GKTADJGHEIQSXMKKRBJ08H
      key: askdjghsdfjkgWupUjasdflkdfklgjfdsfjajkghs
```

salt.states.boto_kms.key_present(name, policy, description=None, key_usage=None, grants=None, manage_grants=False, key_rotation=False, enabled=True, region=None, key=None, keyid=None, profile=None)

Ensure the KMS key exists. KMS keys can not be deleted, so this function must be used to ensure the key is enabled or disabled.
name  Name of the key.
policy  Key usage policy.
description  Description of the key.
key_usage  Specifies the intended use of the key. Can only be set on creation, defaults to ENCRYPT_DECRYPT, which is also the only supported option.
grants  A list of grants to apply to the key. Not currently implemented.
manage_grants  Whether or not to manage grants. False by default, which will not manage any grants.
key_rotation  Whether or not key rotation is enabled for the key. False by default.
enabled  Whether or not the key is enabled. True by default.
region  Region to connect to.
key  Secret key to be used.
keyid  Access key to be used.
profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

23.19.23 salt.states.boto_lc

Manage Launch Configurations
New in version 2014.7.0.
Create and destroy Launch Configurations. Be aware that this interacts with Amazon's services, and so may incur charges.

A limitation of this module is that you cannot modify launch configurations once they have been created. If a launch configuration with the specified name exists, this module will always report success, even if the specified configuration doesn't match. This is due to a limitation in Amazon's launch configuration API, as it only allows launch configurations to be created and deleted.

Also note that a launch configuration that's in use by an autoscale group cannot be deleted until the autoscale group is no longer using it. This may affect the way in which you want to order your states.

This module uses boto, which can be installed via package, or pip.

This module accepts explicit autoscale credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available here.

If IAM roles are not used you need to specify them either in a pillar file or in the minion's config file:

```
[asg]
    asg.keyid: GKTADJGHEIQSXMKKRBJ08H
    asg.key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
```

It's also possible to specify key, keyid and region via a profile, either passed in as a dict, or as a string to pull from pillars or minion config:

```
[myprofile]
    keyid: GKTADJGHEIQSXMKKRBJ08H
    key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
    region: us-east-1
```
Credential information is shared with autoscale groups as launch configurations and autoscale groups are completely dependent on each other.

```yaml
Ensure mylc exists:
  boto_lc.present:
    - name: mylc
    - image_id: ami-0b9c9f62
    - key_name: mykey
    - security_groups:
        - mygroup
    - instance_type: m1.small
    - instance_monitoring: true
    - block_device_mappings:
        - '/dev/sda1':
          size: 20
          volume_type: 'io1'
          iops: 220
          delete_on_termination: true
    cloud_init:
      boothooks:
        'disable-master.sh': |
        #!/bin/bash
        echo "manual" > /etc/init/salt-master.override
      scripts:
        'run_salt.sh': |
        #!/bin/bash
        add-apt-repository -y ppa:saltstack/salt
        apt-get update
        apt-get install -y salt-minion
        salt-call state.highstate
    region: us-east-1
    keyid: GKTADJGHEIQSXMKKRBJ08H
    key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs

# Using a profile from pillars.
Ensure mylc exists:
  boto_lc.present:
    - name: mylc
    - image_id: ami-0b9c9f62
    - profile: myprofile

# Passing in a profile.
Ensure mylc exists:
  boto_lc.present:
    - name: mylc
    - image_id: ami-0b9c9f62
    - profile:
      keyid: GKTADJGHEIQXSXMKRRBJ08H
      key: askdjghsdfjkgHupUjasdflkdfklgjsdfjajkghs
      region: us-east-1
```

`salt.states.boto_lc.absent(name, region=None, key=None, keyid=None, profile=None)`

Ensure the named launch configuration is deleted.

- **name** Name of the launch configuration.
- **region** The region to connect to.
- **key** Secret key to be used.
keyid  Access key to be used.

profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

```
salt.states.boto_lc.present(name, image_id, key_name=None, vpc_id=None, vpc_name=None,
  security_groups=None, user_data=None, cloud_init=None, instance_type='m1.small',
  kernel_id=None, ramdisk_id=None, block_device_mappings=None, delete_on_termination=None,
  instance_monitoring=False, spot_price=None, instance_profile_name=None, ebs_optimized=False,
  associate_public_ip_address=None, region=None, key=None, keyid=None, profile=None)
```

Ensure the launch configuration exists.

name  Name of the launch configuration.

image_id  AMI to use for instances. AMI must exist or creation of the launch configuration will fail.

key_name  Name of the EC2 key pair to use for instances. Key must exist or creation of the launch configuration will fail.

vpc_id  The VPC id where the security groups are defined. Only necessary when using named security groups that exist outside of the default VPC. Mutually exclusive with vpc_name.

vpc_name  Name of the VPC where the security groups are defined. Only Necessary when using named security groups that exist outside of the default VPC. Mutually exclusive with vpc_id.

security_groups  List of Names or security group id’s of the security groups with which to associate the EC2 instances or VPC instances, respectively. Security groups must exist, or creation of the launch configuration will fail.

user_data  The user data available to launched EC2 instances.

cloud_init  A dict of cloud_init configuration. Currently supported keys: boothooks, scripts and cloud-config. Mutually exclusive with user_data.

instance_type  The instance type. ex: m1.small.

kernel_id  The kernel id for the instance.

ramdisk_id  The RAM disk ID for the instance.

block_device_mappings  A dict of block device mappings that contains a dict with volume_type, delete_on_termination, iops, size, encrypted, snapshot_id.

  volume_type  Indicates what volume type to use. Valid values are standard, io1, gp2. Default is standard.

  delete_on_termination  Whether the volume should be explicitly marked for deletion when its instance is terminated (True), or left around (False). If not provided, or None is explicitly passed, the default AWS behaviour is used, which is True for ROOT volumes of instances, and False for all others.

  iops  For Provisioned IOPS (SSD) volumes only. The number of I/O operations per second (IOPS) to provision for the volume.

  size  Desired volume size (in GiB).

  encrypted  Indicates whether the volume should be encrypted. Encrypted EBS volumes must be attached to instances that support Amazon EBS encryption. Volumes that are created from encrypted snapshots are automatically encrypted. There is no way to create an encrypted volume from an unencrypted snapshot or an unencrypted volume from an encrypted snapshot.

instance_monitoring  Whether instances in group are launched with detailed monitoring.
spot_price  The spot price you are bidding. Only applies if you are building an autoscaling group with spot instances.

instance_profile_name  The name or the Amazon Resource Name (ARN) of the instance profile associated with the IAM role for the instance. Instance profile must exist or the creation of the launch configuration will fail.

ebs_optimized  Specifies whether the instance is optimized for EBS I/O (true) or not (false).

associate_public_ip_address  Used for Auto Scaling groups that launch instances into an Amazon Virtual Private Cloud. Specifies whether to assign a public IP address to each instance launched in a Amazon VPC.

region  The region to connect to.

key  Secret key to be used.

keyid  Access key to be used.

profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

23.19.24 salt.states.boto_secgroup

Manage Security Groups

New in version 2014.7.0.

Create and destroy Security Groups. Be aware that this interacts with Amazon's services, and so may incur charges. This module uses boto, which can be installed via package, or pip.

This module accepts explicit EC2 credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available here.

If IAM roles are not used you need to specify them either in a pillar file or in the minion's config file:

```yaml
secgroup.keyid: GKTADJGHEIQSXMKKRBJ08H
secgroup.key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
```

It's also possible to specify key, keyid and region via a profile, either passed in as a dict, or as a string to pull from pillars or minion config:

```yaml
myprofile:
    keyid: GKTADJGHEIQXSXMKKRBJ08H
    key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
    region: us-east-1
```

Ensure mysecgroup exists:
```
salt_states.boto_secgroup:
    - name: mysecgroup
    - description: My security group
    - vpc_name: myvpc
    - rules:
        - ip_protocol: tcp
          from_port: 80
          to_port: 80
          cidr_ip:
```

(continues on next page)
- 10.0.0.0/8
- 192.168.0.0/16
- **ip_protocol**: tcp
  - **from_port**: 8080
  - **to_port**: 8090
- **cidr_ip**:
  - 10.0.0.0/8
  - 192.168.0.0/16
- **ip_protocol**: icmp
  - **from_port**: -1
  - **to_port**: -1
  - **source_group_name**: mysecgroup
- **ip_protocol**: tcp
  - **from_port**: 8080
  - **to_port**: 8080
  - **source_group_name**: MyOtherSecGroup
  - **source_group_name_vpc**: MyPeeredVPC
- **rules_egress**:
  - **ip_protocol**: all
    - **from_port**: -1
    - **to_port**: -1
    - **cidr_ip**:
      - 10.0.0.0/8
      - 192.168.0.0/16
- **tags**:
  - **SomeTag**: 'My Tag Value'
  - **SomeOtherTag**: 'Other Tag Value'
  - **region**: us-east-1
  - **keyid**: GKTADJGHEIQSXMKKRBJ08H
  - **key**: askdjghsdfjkgjWupUjasdfklkdklgjsdfjajkgjsdfjajkgjhs

# Using a profile from pillars
Ensure mysecgroup exists:
```
boto_secgroup.present:
  - name: mysecgroup
  - description: My security group
  - profile: myprofile
```

# Passing in a profile
Ensure mysecgroup exists:
```
boto_secgroup.present:
  - name: mysecgroup
  - description: My security group
  - profile:
    - keyid: GKTADJGHEIQSXMKKRB08H
    - key: askdjghsdsjkghjWupUjasdfkdkfklkgjsdfjajkgjhs
    - region: us-east-1
```

Note: When using the **profile** parameter and **region** is set outside of the profile group, region is ignored and a default region will be used.

If **region** is missing from the **profile** data set, us-east-1 will be used as the default region.

```
salt.states.boto_secgroup.absent(name, vpc_id=None, vpc_name=None, region=None, key=None, keyid=None, profile=None)
```

Ensure a security group with the specified name does not exist.
name  Name of the security group.

vpc_id  The ID of the VPC to remove the security group from, if any. Exclusive with vpc_name.

vpc_name  The name of the VPC to remove the security group from, if any. Exclusive with vpc_name.
         New in version 2016.3.0.

region  Region to connect to.

key   Secret key to be used.

keyid  Access key to be used.

profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and
         keyid.
         New in version 2016.3.0.

salt.states.boto_secgroup.present(name, description, vpc_id=None, vpc_name=None, rules=None, rules_egress=None, delete_ingress_rules=True, delete_egress_rules=True, region=None, key=None, keyid=None, profile=None, tags=None)

Ensure the security group exists with the specified rules.

name  Name of the security group.

description  A description of this security group.

vpc_id  The ID of the VPC to create the security group in, if any. Exclusive with vpc_name.

vpc_name  The name of the VPC to create the security group in, if any. Exclusive with vpc_id.
         New in version 2016.3.0.
         New in version 2015.8.2.

rules  A list of ingress rule dicts. If not specified, rules=None, the ingress rules will be unmanaged. If set to
        an empty list, [], then all ingress rules will be removed.

rules_egress  A list of egress rule dicts. If not specified, rules_egress=None, the egress rules will be
              unmanaged. If set to an empty list, [], then all egress rules will be removed.

delete_ingress_rules  Some tools (EMR comes to mind) insist on adding rules on-the-fly, which salt will hap-
                       pily remove on the next run. Set this param to False to avoid deleting rules which were added outside of salt.

delete_egress_rules  Some tools (EMR comes to mind) insist on adding rules on-the-fly, which salt will happily
                      remove on the next run. Set this param to False to avoid deleting rules which were added outside of salt.

region  Region to connect to.

key   Secret key to be used.

keyid  Access key to be used.

profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key, and
         keyid.

tags  List of key:value pairs of tags to set on the security group
         New in version 2016.3.0.
23.19.25 salt.states.boto_sns

Manage SNS Topics

Create and destroy SNS topics. Be aware that this interacts with Amazon's services, and so may incur charges.

This module uses boto, which can be installed via package, or pip.

This module accepts explicit AWS credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available here.

If IAM roles are not used you need to specify them either in a pillar file or in the minion’s config file:

```
sns.keyid: GKTADJGHEIQSXMKKRBJ08H
sns.key: askdjghsdfjkgWupUjasdflkdfklgjsdfjajkghs
```

It's also possible to specify key, keyid and region via a profile, either passed in as a dict, or as a string to pull from pillars or minion config:

```
myprofile:
  keyid: GKTADJGHEIQSXMKKRBJ08H
  key: askdjghsdfjkgWupUjasdflkdfklgjsdfjajkghs
  region: us-east-1
```

```
mytopic:
  boto_sns.present:
    - region: us-east-1
    - keyid: GKTADJGHEIQSXMKKRBJ08H
    - key: askdjghsdfjkgWupUjasdflkdfklgjsdfjajkghs

# Using a profile from pillars
mytopic:
  boto_sns.present:
    - region: us-east-1
    - profile: mysnsprofile

# Passing in a profile
mytopic:
  boto_sns.present:
    - region: us-east-1
    - profile:
        keyid: GKTADJGHEIQSXMKKRBJ08H
        key: askdjghsdfjkgWupUjasdflkdfklgjsdfjajkghs
```

salt.states.boto_sns.absent(name, region=None, key=None, keyid=None, profile=None, unsubscribe=False)

Ensure the named sns topic is deleted.

name Name of the SNS topic.
region Region to connect to.
key Secret key to be used.
keyid Access key to be used.
profile A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.
unsubscribe If True, unsubscribe all subscriptions to the SNS topic before deleting the SNS topic.
New in version 2016.11.0.

`salt.states.boto_sns.present(name, subscriptions=None, region=None, key=None, keyid=None, profile=None)`

Ensure the SNS topic exists.

- **name** Name of the SNS topic.
- **subscriptions** List of SNS subscriptions.

Each subscription is a dictionary with a protocol and endpoint key:

```python
[
    {'protocol': 'https', 'endpoint': 'https://www.example.com/sns-endpoint'},
    {'protocol': 'sqs', 'endpoint': 'arn:aws:sqs:us-west-2:123456789012:MyQueue'}
]
```

- **region** Region to connect to.
- **key** Secret key to be used.
- **keyid** Access key to be used.
- **profile** A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

### 23.19.26 salt.states.boto_vpc

Manage VPCs

New in version 2015.8.0.

```python
depends
```

- `boto >= 2.8.0`
- `boto3 >= 1.2.6`

Create and destroy VPCs. Be aware that this interacts with Amazon's services, and so may incur charges.

This module accepts explicit vpc credentials but can also utilize IAM roles assigned to the instance through Instance Profiles. Dynamic credentials are then automatically obtained from AWS API and no further configuration is necessary. More information available [here](#).

If IAM roles are not used you need to specify them either in a pillar file or in the minion's config file:

```python
vpc.keyid: GKTADJGHEIQSXMKKRBJ08H
vpc.key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
```

It's also possible to specify `key`, `keyid` and `region` via a profile, either passed in as a dict, or as a string to pull from pillars or minion config:

```python
myprofile:
    keyid: GKTADJGHEIQSXMKKRBJ08H
    key: askdjghsdfjkghWupUjasdflkdfklgjsdfjajkghs
    region: us-east-1

aws:
    region:
        us-east-1:
```

(continues on next page)
profile:
    keyid: GKTADJGHEIQSXMKKRBJ08H
    key: askdjghsdfjkghWupUjasdflkdfklgjsdfajkghs
    region: us-east-1

Ensure VPC exists:
    boto_vpc.present:
        - name: myvpc
        - cidr_block: 10.10.11.0/24
        - dns_hostnames: True
        - region: us-east-1
        - keyid: GKTADJGHEIQSXMKKRBJ08H
        - key: askdjghsdfjkghWupUjasdflkdfklgjsdfajkghs

Ensure subnet exists:
    boto_vpc.subnet_present:
        - name: mysubnet
        - vpc_id: vpc-123456
        - cidr_block: 10.0.0.0/16
        - region: us-east-1
        - profile: myprofile

{% set profile = salt['pillar.get']('aws:region:us-east-1:profile') %}

Ensure internet gateway exists:
    boto_vpc.internet_gateway_present:
        - name: myigw
        - vpc_name: myvpc
        - profile: {{ profile }}

Ensure route table exists:
    boto_vpc.route_table_present:
        - name: my_route_table
        - vpc_id: vpc-123456
        - routes:
            - destination_cidr_block: 0.0.0.0/0
              instance_id: i-123456
            - subnet_names:
              - subnet1
              - subnet2
        - region: us-east-1
        - profile:
            keyid: GKTADJGHEIQSXMKKRBJ08H
            key: askdjghsdfjkghWupUjasdflkdfklgjsdfajkghs

New in version 2016.11.0.

Request, accept and delete VPC peering connections. VPC peering connections can be named allowing the name to be used throughout the state file. Following example shows how to request and accept a VPC peering connection.

accept the vpc peering connection:
    boto_vpc.accept_vpc_peering_connection:
        - conn_name: salt_vpc_peering
        - region: us-west-2
        - require:
            - boto_vpc: request a vpc peering connection

(continues on next page)
request a vpc peering connection:
  boto_vpc.request_vpc_peering_connection:
    - requester_vpc_id: vpc-4a3d522e
    - peer_vpc_id: vpc-ae81e9ca
    - region: us-west-2
    - conn_name: salt_vpc_peering

VPC peering connections need not be named. In this case the VPC peering connection ID should be used in the state file.

accept the vpc peering connection:
  boto_vpc.accept_vpc_peering_connection:
    - conn_id: pcx-1873c371
    - region: us-west-2

VPC peering connections can be deleted, as shown below.

delete a named vpc peering connection:
  boto_vpc.delete_vpc_peering_connection:
    - conn_name: salt_vpc_peering

Delete also accepts a VPC peering connection id.

delete a vpc peering connection by id:
  boto_vpc.delete_vpc_peering_connection:
    - conn_id: pcx-1873c371

salt.states.boto_vpc.absent(name, tags=None, region=None, key=None, keyid=None, profile=None)
  Ensure VPC with passed properties is absent.
  name  Name of the VPC.
  tags  A list of tags. All tags must match.
  region  Region to connect to.
  key  Secret key to be used.
  keyid  Access key to be used.
  profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

call.salt.states.boto_vpc.accept_vpc_peering_connection(name=None, conn_id=None, conn_name=None, region=None, key=None, keyid=None, profile=None)
  Accept a VPC pending requested peering connection between two VPCs.
  name  Name of this state
  conn_id  The connection ID to accept. Exclusive with conn_name. String type.
  conn_name  The name of the VPC peering connection to accept. Exclusive with conn_id. String type.
  region  Region to connect to.
  key  Secret key to be used.
  keyid  Access key to be used.
profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

New in version 2016.11.0.

Example:

```
boto_vpc.accept_vpc_peering_connection:
  - conn_name: salt_peering_connection
# usage with vpc peering connection id and region
boto_vpc.accept_vpc_peering_connection:
  - conn_id: pbx-1873d472
  - region: us-west-2
```

salt.states.boto_vpc.delete_vpc_peering_connection(name, conn_id=None, conn_name=None, region=None, key=None, keyid=None, profile=None)

ame  Name of the state

conn_id  ID of the peering connection to delete. Exclusive with conn_name.

conn_name  The name of the peering connection to delete. Exclusive with conn_id.

region  Region to connect to.

key  Secret key to be used.

keyid  Access key to be used.

profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

New in version 2016.11.0.

Example:

```
delete a vpc peering connection:
  boto_vpc.delete_vpc_peering_connection:
    - region: us-west-2
    - conn_id: pcx-4613b12e
```

Connection name can be specified (instead of ID). Specifying both conn_name and conn_id will result in an error.

```
delete a vpc peering connection:
  boto_vpc.delete_vpc_peering_connection:
    - conn_name: salt_vpc_peering
```

salt.states.boto_vpc.dhcp_options_absent(name=None, dhcp_options_id=None, region=None, key=None, keyid=None, profile=None)

Ensure a set of DHCP options with the given settings exist.

name  (string) Name of the DHCP options set.

dhcp_options_id  (string) Id of the DHCP options set.

region  (string) Region to connect to.

key  (string) Secret key to be used.

keyid  (string) Access key to be used.
profile (various) A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

New in version 2016.3.0.

salt.states.boto_vpc.dhcp_options_present(name, dhcp_options_id=None, vpc_name=None, vpc_id=None, domain_name=None, domain_name_servers=None, ntp_servers=None, netbios_name_servers=None, netbios_node_type=None, tags=None, region=None, key=None, keyid=None, profile=None)

Ensure a set of DHCP options with the given settings exist. Note that the current implementation only SETS values during option set creation. It is unable to update option sets in place, and thus merely verifies the set exists via the given name and/or dhcp_options_id param.

name (string) Name of the DHCP options.

vpc_name (string) Name of a VPC to which the options should be associated. Either vpc_name or vpc_id must be provided.

vpc_id (string) Id of a VPC to which the options should be associated. Either vpc_name or vpc_id must be provided.

domain_name (string) Domain name to be associated with this option set.

domain_name_servers (list of strings) The IP address(es) of up to four domain name servers.

ntp_servers (list of strings) The IP address(es) of up to four desired NTP servers.

netbios_name_servers (list of strings) The IP address(es) of up to four NetBIOS name servers.

netbios_node_type (string) The NetBIOS node type (1, 2, 4, or 8). For more information about the allowed values, see RFC 2132. The recommended is 2 at this time (broadcast and multicast are currently not supported).

tags (dict of key:value pairs) A set of tags to be added.

region (string) Region to connect to.

key (string) Secret key to be used.

keyid (string) Access key to be used.

profile (various) A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

New in version 2016.3.0.

salt.states.boto_vpc.internet_gateway_absent(name, detach=False, region=None, key=None, keyid=None, profile=None)

Ensure the named internet gateway is absent.

name Name of the internet gateway.

detach First detach the internet gateway from a VPC, if attached.

region Region to connect to.

key Secret key to be used.

keyid Access key to be used.

profile A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.
salt.states.boto_vpc.internet_gateway_present(name, vpc_name=None, vpc_id=None, 
tags=None, region=None, key=None, 
keyid=None, profile=None)

Ensure an internet gateway exists.

name Name of the internet gateway.

vpc_name Name of the VPC to which the internet gateway should be attached.

vpc_id Id of the VPC to which the internet_gateway should be attached. Only one of vpc_name or vpc_id may be provided.

tags A list of tags.

region Region to connect to.

key Secret key to be used.

keyid Access key to be used.

profile A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

salt.states.boto_vpc.nat_gateway_absent(name=None, subnet_name=None, subnet_id=None, region=None, key=None, keyid=None, profile=None, 
wait_for_delete_retries=0)

Ensure the nat gateway in the named subnet is absent.

This function requires boto3.

New in version 2016.11.0.

name Name of the state.

subnet_name Name of the subnet within which the nat gateway should exist

subnet_id Id of the subnet within which the nat gateway should exist. Either subnet_name or subnet_id must be provided.

region Region to connect to.

key Secret key to be used.

keyid Access key to be used.

profile A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

wait_for_delete_retries NAT gateway may take some time to be go into deleted or failed state. During the deletion process, subsequent release of elastic IPs may fail; this state will automatically retry this number of times to ensure the NAT gateway is in deleted or failed state before proceeding. Default is set to 0 for backward compatibility.

salt.states.boto_vpc.nat_gateway_present(name, subnet_name=None, subnet_id=None, region=None, key=None, keyid=None, profile=None, 
allocation_id=None)

Ensure a nat gateway exists within the specified subnet

This function requires boto3.

New in version 2016.11.0.

Example:

```bash
boto_vpc.nat_gateway_present:
  - subnet_name: my-subnet
```
name Name of the state

subnet_name Name of the subnet within which the nat gateway should exist

subnet_id Id of the subnet within which the nat gateway should exist. Either subnet_name or subnet_id must be provided.

allocation_id If specified, the elastic IP address referenced by the ID is associated with the gateway. Otherwise, a new allocation_id is created and used.

region Region to connect to.

dns_hostnames Indicates whether the instances launched in the VPC get DNS hostnames.

region Region to connect to.

key Secret key to be used.

keyid Access key to be used.

profile A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

```
salt.states.boto_vpc.present(name, cidr_block, instance_tenancy=\None, dns_support=\None, dns_hostnames=\None, tags=\None, region=\None, key=\None, keyid=\None, profile=\None)
```

Ensure VPC exists.

ame Name of the VPC.

cidr_block The range of IPs in CIDR format, for example: 10.0.0.0/24. Block size must be between /16 and /28 netmask.

instance_tenancy Instances launched in this VPC will be single-tenant or dedicated hardware.

dns_support Indicates whether the DNS resolution is supported for the VPC.

dns_hostnames Indicates whether the instances launched in the VPC get DNS hostnames.

tags A list of tags.

region Region to connect to.

dns_hostnames Indicates whether the instances launched in the VPC get DNS hostnames.

```
salt.states.boto_vpc.request_vpc_peering_connection(name, requester_vpc_id=\None, requester_vpc_name=\None, peer_vpc_id=\None, peer_vpc_name=\None, conn_name=\None, peer_owner_id=\None, region=\None, key=\None, keyid=\None, profile=\None)
```

name Name of the state

requester_vpc_id ID of the requesting VPC. Exclusive with requester_vpc_name. String type.

requester_vpc_name Name tag of the requesting VPC. Exclusive with requester_vpc_id. String type.

peer_vpc_id ID of the VPC to create VPC peering connection with. This can be a VPC in another account. Exclusive with peer_vpc_name. String type.

peer_vpc_name Name tag of the VPC to create VPC peering connection with. This can only be a VPC the same account. Exclusive with peer_vpc_id. String type.
**conn_name**  The (optional) name to use for this VPC peering connection. String type.

**peer_owner_id**  ID of the owner of the peer VPC. String type. If this isn't supplied AWS uses your account ID. Required if peering to a different account.

**region**  Region to connect to.

**key**  Secret key to be used.

**keyid**  Access key to be used.

**profile**  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

New in version 2016.11.0.

Example:

```python
request a vpc peering connection:
boto_vpc.request_vpc_peering_connection:
   - requester_vpc_id: vpc-4b3522e
   - peer_vpc_id: vpc-aee83f9ca
   - conn_name: salt_peering_connection
```

**salt.states.boto_vpc.route_table_absent**(name, region=None, key=None, keyid=None, profile=None)

Ensure the named route table is absent.

**name**  Name of the route table.

**region**  Region to connect to.

**key**  Secret key to be used.

**keyid**  Access key to be used.

**profile**  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

**salt.states.boto_vpc.route_table_present**(name, vpc_name=None, vpc_id=None, routes=None, subnet_ids=None, subnet_names=None, tags=None, region=None, key=None, keyid=None, profile=None)

Ensure route table with routes exists and is associated to a VPC.

This function requires boto3 to be installed if nat gateways are specified.

Example:

```python
boto_vpc.route_table_present:
   - name: my_route_table
   - vpc_id: vpc-123456
   - routes:
      - destination_cidr_block: 0.0.0.0/8
        internet_gateway_name: InternetGateway
      - destination_cidr_block: 10.0.11.0/24
        instance_id: i-123456
      - destination_cidr_block: 10.0.12.0/24
        interface_id: eni-123456
      - destination_cidr_block: 10.0.13.0/24
        instance_name: mygatewayserver
   - subnet_names:
```

(continues on next page)
name  Name of the route table.

vpc_name  Name of the VPC with which the route table should be associated.

vpc_id  Id of the VPC with which the route table should be associated. Either vpc_name or vpc_id must be provided.

routes  A list of routes. Each route has a cidr and a target.

subnet_ids  A list of subnet ids to associate

subnet_names  A list of subnet names to associate

tags  A list of tags.

region  Region to connect to.

key  Secret key to be used.

keyid  Access key to be used.

profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

```
salt.states.boto_vpc.subnet_absent(name=None, subnet_id=None, region=None, key=None, keyid=None, profile=None)
```

Ensure subnet with passed properties is absent.

name  Name of the subnet.

region  Region to connect to.

key  Secret key to be used.

keyid  Access key to be used.

profile  A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

```
salt.states.boto_vpc.subnet_present(name=None, cidr_block, vpc_name=None, vpc_id=None, availability_zone=None, tags=None, region=None, key=None, keyid=None, profile=None, route_table_id=None, route_table_name=None, auto_assign_public_ipv4=False)
```

Ensure a subnet exists.

name  Name of the subnet.

cidr_block  The range if IPs for the subnet, in CIDR format. For example: 10.0.0.0/24. Block size must be between /16 and /28 netmask.

vpc_name  Name of the VPC in which the subnet should be placed. Either vpc_name or vpc_id must be provided.

vpc_id  Id of the VPC in which the subnet should be placed. Either vpc_name or vpc_id must be provided.

availability_zone  AZ in which the subnet should be placed.

tags  A list of tags.
route_table_id A route table ID to explicitly associate the subnet with. If both route_table_id and route_table_name are specified, route_table_id will take precedence.

New in version 2016.11.0.

route_table_name A route table name to explicitly associate the subnet with. If both route_table_id and route_table_name are specified, route_table_id will take precedence.

New in version 2016.11.0.

region Region to connect to.

key Secret key to be used.

keyid Access key to be used.

profile A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

salt.states.boto_vpc.vpc_peering_connection_absent(name, conn_id=None, conn_name=None, region=None, key=None, keyid=None, profile=None)

salt.states.boto_vpc.vpc_peering_connection_present(name, requester_vpc_id=None, requester_vpc_name=None, peer_vpc_id=None, peer_vpc_name=None, conn_name=None, peer_owner_id=None, region=None, key=None, keyid=None, profile=None)

name Name of the state

requester_vpc_id ID of the requesting VPC. Exclusive with requester_vpc_name.

requester_vpc_name Name tag of the requesting VPC. Exclusive with requester_vpc_id.

peer_vpc_id ID of the VPC to create VPC peering connection with. This can be a VPC in another account. Exclusive with peer_vpc_name.

peer_vpc_name Name tag of the VPC to create VPC peering connection with. This can only be a VPC in the same account, else resolving it into a vpc ID will fail. Exclusive with peer_vpc_id.

c conn_name The name to use for this VPC peering connection.

peer_owner_id ID of the owner of the peer VPC. Defaults to your account ID, so a value is required if peering with a VPC in a different account.

region Region to connect to.

key Secret key to be used.

keyid Access key to be used.

profile A dict with region, key and keyid, or a pillar key (string) that contains a dict with region, key and keyid.

New in version 2016.11.0.

Example:
ensure peering twixt local vpc and the other guys:

```python
boto_vpc.vpc_peering_connection_present:
  - requester_vpc_name: my_local_vpc
  - peer_vpc_name: some_other_guys_vpc
  - conn_name: peering_from_here_to_there
  - peer_owner_id: 012345654321
```

### 23.19.27 salt.states.bower

**Installation of Bower Packages**

These states manage the installed packages using Bower. Note that npm, git and bower must be installed for these states to be available, so bower states should include requisites to pkg.installed states for the packages which provide npm and git (simply npm and git in most cases), and npm.installed state for the package which provides bower.

Example:

```python
npm:
  pkg.installed
git:
  pkg.installed
bower:
  npm.installed
  require:
    - pkg: npm
    - pkg: git

underscore:
  bower.installed:
    - dir: /path/to/project
    - require:
      - npm: bower
```

**salt.states.bower.bootstrap(name, user=None)**

Bootsraps a frontend distribution.

*Will execute 'bower install' on the specified directory.*

**user** The user to run Bower with

**salt.states.bower.installed(name, dir, pkgs=None, user=None, env=None)**

Verify that the given package is installed and is at the correct version (if specified).

```python
underscore:
  bower.installed:
    - dir: /path/to/project
    - user: someuser
jquery#2.0:
  bower.installed:
    - dir: /path/to/project
```

**name** The package to install

**dir** The target directory in which to install the package
pkgs  A list of packages to install with a single Bower invocation; specifying this argument will ignore the name argument
user  The user to run Bower with
env  A list of environment variables to be set prior to execution. The format is the same as the cmd.run state function.

```python
salt.states.bower.pruned(name, user=None, env=None)
```
New in version 2017.7.0.
Cleans up local bower_components directory.
Will execute 'bower prune' on the specified directory (param: name)
user  The user to run Bower with

```python
salt.states.bower.removed(name, dir, user=None)
```
Verify that the given package is not installed.
dir  The target directory in which to install the package
user  The user to run Bower with

### `salt.states.btrfs`

**maintainer** Alberto Planas <aplanas@suse.com>

**maturity** new

**depends** None

**platform** Linux

```python
salt.states.btrfs.properties(name, device, use_default=False, __dest=None, **properties)
```
Makes sure that a list of properties are set in a subvolume, file or device.
name  Name of the object to change
device  Device where the object lives, if None, the device will be in name
use_default  If True, this subvolume will be resolved to the default subvolume assigned during the create operation
properties  Dictionary of properties
Valid properties are 'ro', 'label' or 'compression'. Check the documentation to see where those properties are valid for each object.

```python
salt.states.btrfs.subvolume_created(name, device, qgroupids=None, set_default=False, copy_on_write=True, force_set_default=True, __dest=None)
```
Makes sure that a btrfs subvolume is present.
name  Name of the subvolume to add
device  Device where to create the subvolume
qgroupids  Add the newly created subvolume to a qgroup. This parameter is a list
set_default  If True, this new subvolume will be set as default when mounted, unless subvol option in mount is used
copy_on_write  If false, set the subvolume with chattr +C
force_set_default  If false and the subvolume is already present, it will not force it as default if set_default is True

salt.states.btrfs.subvolume_deleted(name, device, commit=False, __dest=None)
Makes sure that a btrfs subvolume is removed.

name  Name of the subvolume to remove
device  Device where to remove the subvolume
commit  Wait until the transaction is over

23.19.29 salt.states.chef

Execute Chef client runs

Run chef-client or chef-solo

```
my-chef-run:
  chef.client:
    - override-runlist: 'demo1,demo2'
    - server: 'https://chef.domain.com'

default-chef-run:
  chef.client: []

my-solo-run:
  chef.solo:
    - environment: dev
```

salt.states.chef.client(name, **kwargs)

name  Unique identifier for the state. Does not affect the Chef run.
server  The chef server URL
client_key  Set the client key file location
config  The configuration file to use
config-file-jail  Directory under which config files are allowed to be loaded (no client.rb or knife.rb outside this path will be loaded).
environment  Set the Chef Environment on the node
group  Group to set privilege to
json-attributes  Load attributes from a JSON file or URL
localmode  Point chef-client at local repository if True
log_level  Set the log level (debug, info, warn, error, fatal)
logfile  Set the log file location
node-name  The node name for this client
override-runlist  Replace current run list with specified items for a single run
pid  Set the PID file location, defaults to /tmp/chef-client.pid
run-lock-timeout  Set maximum duration to wait for another client run to finish, default is indefinitely.
runlist  Permanently replace current run list with specified items
user  User to set privilege to

validation_key  Set the validation key file location, used for registering new clients

salt.states.chef.solo(name, **kwargs)

name  Unique identifier for the state. Does not affect the Chef run.

config  The configuration file to use

environment  Set the Chef Environment on the node

group  Group to set privilege to

json-attributes  Load attributes from a JSON file or URL

log_level  Set the log level (debug, info, warn, error, fatal)

logfile  Set the log file location

node-name  The node name for this client

override-runlist  Replace current run list with specified items for a single run

recipe-url  Pull down a remote gzipped tarball of recipes and untar it to the cookbook cache

run-lock-timeout  Set maximum duration to wait for another client run to finish, default is indefinitely.

user  User to set privilege to

23.19.30  salt.states.chronos_job

Configure Chronos jobs via a salt proxy.

```
my_job:
  chronos_job.config:
    - config:
      schedule: "R//PT2S"
      command: "echo 'hi'"
      owner: "me@example.com"
```

New in version 2015.8.2.

salt.states.chronos_job.absent(name)

Ensure that the chronos job with the given name is not present.

Parameters  name -- The app name

Returns  A standard Salt changes dictionary

salt.states.chronos_job.config(name, config)

Ensure that the chronos job with the given name is present and is configured to match the given config values.

Parameters

- name -- The job name
- config -- The configuration to apply (dict)

Returns  A standard Salt changes dictionary
23.19.31 salt.states.cimc

A state module to manage Cisco UCS chassis devices.

   codeauthor Spencer Ervin <spencer_ervin@hotmail.com>
   maturity new
   depends none
   platform unix

About

This state module was designed to handle connections to a Cisco Unified Computing System (UCS) chassis. This module relies on the CIMC proxy module to interface with the device.

See also:

CIMC Proxy Module

salt.states.cimc.hostname(name, hostname=None)

Ensures that the hostname is set to the specified value.

   New in version 2019.2.0.
   
   name: The name of the module function to execute.
   
   hostname(str): The hostname of the server.

SLS Example:

   set_name:
       cimc.hostname:
           - hostname: foobar

salt.states.cimc.logging_levels(name, remote=None, local=None)

Ensures that the logging levels are set on the device. The logging levels must match the following options: emergency, alert, critical, error, warning, notice, informational, debug.

   New in version 2019.2.0.
   
   name: The name of the module function to execute.
   
   remote(str): The logging level for SYSLOG logs.
   
   local(str): The logging level for the local device.

SLS Example:

   logging_levels:
       cimc.logging_levels:
           - remote: informational
           - local: notice

salt.states.cimc.ntp(name, servers)

Ensures that the NTP servers are configured. Servers are provided as an individual string or list format. Only four NTP servers will be reviewed. Any entries past four will be ignored.

   name: The name of the module function to execute.
   
   servers(str, list): The IP address or FQDN of the NTP servers.

SLS Example:
ntp_configuration_list:
  cimc.ntp:
    - servers:
      - foo.bar.com
      - 10.10.10.10

ntp_configuration_str:
  cimc.ntp:
    - servers: foo.bar.com

salt.states.cimc.power_configuration(name, policy=None, delayType=None, delayValue=None)
Ensures that the power configuration is configured on the system. This is only available on some C-Series servers.

New in version 2019.2.0.

name: The name of the module function to execute.

delayValue(int): If a fixed delay is selected, once chassis power is restored and the Cisco IMC has finished rebooting, the system waits for the specified number of seconds before restarting the server. Enter an integer between 0 and 240.

SLS Example:

reset_power:
  cimc.power_configuration:
    - policy: reset
    - delayType: fixed
    - delayValue: 0

power_off:
  cimc.power_configuration:
    - policy: stay-off

salt.states.cimc.syslog(name, primary=None, secondary=None)
Ensures that the syslog servers are set to the specified values. A value of None will be ignored.

name: The name of the module function to execute.

SLS Example:
**syslog_configuration**:

```bash
cimc.syslog:
  - primary: 10.10.10.10
  - secondary: foo.bar.com
```

**salt.states.cimc.user** *(name, id=", user=", priv=", password=", status='active')*

Ensures that a user is configured on the device. Due to being unable to verify the user password. This is a forced operation.

New in version 2019.2.0.

name: The name of the module function to execute.

id(int): The user ID slot on the device.

user(str): The username of the user.

priv(str): The privilege level of the user.

password(str): The password of the user.

status(str): The status of the user. Can be either active or inactive.

SLS Example:

```yaml
user_configuration:
  cimc.user:
    - id: 11
    - user: foo
    - priv: admin
    - password: mypassword
    - status: active
```

23.19.32 salt.states.composer

Installation of Composer Packages

These states manage the installed packages for composer for PHP. Note that either composer is installed and accessible via a bin directory or you can pass the location of composer in the state.

```bash
get-composer:
cmd.run:
  - name: 'CURL=`which curl`; $CURL -sS https://getcomposer.org/installer | php'
  - unless: test -f /usr/local/bin/composer
  - cwd: /root/

install-composer:
cmd.wait:
  - name: mv /root/composer.phar /usr/local/bin/composer
  - cwd: /root/
  - watch:
    - cmd: get-composer

/path/to/project:
composer.installed:
  - no_dev: true
  - require:
    - cmd: install-composer
```

(continues on next page)
# Without composer installed in your PATH
# Note: composer.phar must be executable for state to work properly

/path/to/project:

  composer.installed:
    - composer: /path/to/composer.phar
    - php: /usr/local/bin/php
    - no_dev: true

salt.states.composer.installed(name, composer=None, php=None, user=None, prefer_source=None, prefer_dist=None, no_scripts=None, no_plugins=None, optimize=None, no_dev=None, quiet=False, composer_home='/root', always_check=True, env=None)

Verify that the correct versions of composer dependencies are present.

name Directory location of the composer.json file.

composer Location of the composer.phar file. If not set composer will just execute composer as if it is installed globally. (i.e. /path/to/composer.phar)

php Location of the php executable to use with composer. (i.e. /usr/bin/php)

user Which system user to run composer as.

    New in version 2014.1.4.

prefer_source --prefer-source option of composer.

prefer_dist --prefer-dist option of composer.

no_scripts --no-scripts option of composer.

no_plugins --no-plugins option of composer.

optimize --optimize-autoloader option of composer. Recommended for production.

no_dev --no-dev option for composer. Recommended for production.

quiet --quiet option for composer. Whether or not to return output from composer.

composer_home $COMPOSER_HOME environment variable

always_check If True, always run composer install in the directory. This is the default behavior. If False, only run composer install if there is no vendor directory present.

env A list of environment variables to be set prior to execution.

salt.states.composer.update(name, composer=None, php=None, user=None, prefer_source=None, prefer_dist=None, no_scripts=None, no_plugins=None, optimize=None, no_dev=None, quiet=False, composer_home='/root', env=None)

Composer update the directory to ensure we have the latest versions of all project dependencies.

name Directory location of the composer.json file.

composer Location of the composer.phar file. If not set composer will just execute composer as if it is installed globally. (i.e. /path/to/composer.phar)

php Location of the php executable to use with composer. (i.e. /usr/bin/php)

user Which system user to run composer as.

    New in version 2014.1.4.

prefer_source --prefer-source option of composer.
prefer_dist --prefer-dist option of composer.

no_scripts --no-scripts option of composer.

no_plugins --no-plugins option of composer.

optimize --optimize-autoloader option of composer. Recommended for production.

no_dev --no-dev option for composer. Recommended for production.

quiet --quiet option for composer. Whether or not to return output from composer.

composer_home $COMPOSER_HOME environment variable

eval A list of environment variables to be set prior to execution.

23.19.33 salt.states.cryptdev

Opening of Encrypted Devices

Ensure that an encrypted device is mapped with the mapped function:

```yaml
mappedname:
  cryptdev.mapped:
    - device: /dev/sdb1
    - keyfile: /etc/keyfile.key
    - opts:
      - size=256

swap:
  crypted.mapped:
    - device: /dev/sdx4
    - keyfile: /dev/urandom
    - opts: swap,cipher=aes-cbc-essiv:sha256,size=256

mappedbyuuid:
  crypted.mapped:
    - device: UUID=066e0200-2867-4ebe-b9e6-f30026ca2314
    - keyfile: /etc/keyfile.key
    - config: /etc/alternate-crypttab
```

New in version 2018.3.0.

salt.states.cryptdev.mapped(name, device, keyfile=None, opts=None, config='/etc/crypttab', persist=True, immediate=False, match_on='name')

Verify that a device is mapped

name The name under which the device is to be mapped

device The device name, typically the device node, such as /dev/sdb1 or UUID=066e0200-2867-4ebe-b9e6-f30026ca2314.

keyfile Either None if the password is to be entered manually on boot, or an absolute path to a keyfile. If the password is to be asked interactively, the mapping cannot be performed with immediate=True.

opts A list object of options or a comma delimited list

config Set an alternative location for the crypttab, if the map is persistent, Default is /etc/crypttab

persist Set if the map should be saved in the crypttab, Default is True
immediate Set if the device mapping should be executed immediately. Requires that the keyfile not be `None`, because the password cannot be asked interactively. Note that options are not passed through on the initial mapping. Default is `False`.

match_on A name or list of crypttab properties on which this state should be applied. Default is `name`, meaning that the line is matched only by the name parameter. If the desired configuration requires two devices mapped to the same name, supply a list of parameters to match on.

```python
salt.states.cryptdev.unmapped(name, config='/etc/crypttab', persist=False, immediate=False)
```
Ensure that a device is unmapped

**name** The name to ensure is not mapped

**config** Set an alternative location for the crypttab, if the map is persistent, Default is `/etc/crypttab`

**persist** Set if the map should be removed from the crypttab. Default is `True`

**immediate** Set if the device should be unmapped immediately. Default is `False`.

### 23.19.34 salt.states.csf

CSF Ip tables management

depends

- csf utility

**configuration** See [http://download.configserver.com/csf/install.txt](http://download.configserver.com/csf/install.txt) for setup instructions.

```
Simply allow/deny rules:
csf.rule_present:
ip: 1.2.3.4
method: allow
```

```python
salt.states.csf.nics_skip(name, nics, ipv6)
```
Alias for `csf.nics_skipped`

```python
salt.states.csf.nics_skipped(name, nics, ipv6=False)
```

**name** Meaningless arg, but required for state.

**nics** A list of nics to skip.

**ipv6** Boolean. Set to true if you want to skip the ipv6 interface. Default false (ipv4).

```python
salt.states.csf.option_present(name, value, reload=False)
```
Ensure the state of a particular option/setting in csf.

**name** The option name in csf.conf

**value** The value it should be set to.

**reload** Boolean. If set to true, csf will be reloaded after.

```python
salt.states.csf.ports_open(name, ports, proto='tcp', direction='in')
```
Ensure ports are open for a protocol, in a direction. e.g. - proto='tcp', direction='in' would set the values for TCP_IN in the csf.conf file.

**ports** A list of ports that should be open.

**proto** The protocol. May be one of 'tcp', 'udp', 'tcp6', or 'udp6'.

---

23.19. state modules 1421
**direction** Choose ‘in’, ‘out’, or both to indicate the port should be opened for inbound traffic, outbound traffic, or both.

```python
salt.states.csf.rule_absent(name, method, port=None, proto='tcp', direction='in', port_origin='d', ip_origin='s', ttl=None, reload=False)
```
Ensure iptable is not present.

- **name** The ip address or CIDR for the rule.
- **method** The type of rule. Either ‘allow’ or ‘deny’.
- **port** Optional port to open or close for the iptables rule.
- **proto** The protocol. Either ‘tcp’, ‘udp’. Only applicable if port is specified.
- **direction** The direction of traffic to apply the rule to. Either ‘in’, or ‘out’. Only applicable if port is specified.
- **port_origin** Specifies either the source or destination port is relevant for this rule. Only applicable if port is specified. Either ‘s’, or ‘d’.
- **ip_origin** Specifies whether the ip in this rule refers to the source or destination ip. Either ‘s’, or ‘d’. Only applicable if port is specified.
- **ttl** How long the rule should exist. If supplied, `csf.tempallow()` or `csf.tempdeny()` are used.
- **reload** Reload the csf service after applying this rule. Default false.

```python
salt.states.csf.rule_present(name, method, port=None, proto='tcp', direction='in', port_origin='d', ip_origin='s', ttl=None, comment='', reload=False)
```
Ensure iptable rule exists.

- **name** The ip address or CIDR for the rule.
- **method** The type of rule. Either ‘allow’ or ‘deny’.
- **port** Optional port to open or close for the iptables rule.
- **proto** The protocol. Either ‘tcp’, or ‘udp’. Only applicable if port is specified.
- **direction** The direction of traffic to apply the rule to. Either ‘in’, or ‘out’. Only applicable if port is specified.
- **port_origin** Specifies either the source or destination port is relevant for this rule. Only applicable if port is specified. Either ‘s’, or ‘d’.
- **ip_origin** Specifies whether the ip in this rule refers to the source or destination ip. Either ‘s’, or ‘d’. Only applicable if port is specified.
- **ttl** How long the rule should exist. If supplied, `csf.tempallow()` or `csf.tempdeny()` are used.
- **comment** An optional comment to appear after the rule as a #comment.
- **reload** Reload the csf service after applying this rule. Default false.

```python
salt.states.csf.testing_off(name, reload=False)
```
Ensure testing mode is enabled in csf.

- **reload** Reload CSF after changing the testing status. Default false.

```python
salt.states.csf.testing_on(name, reload=False)
```
Ensure testing mode is enabled in csf.

- **reload** Reload CSF after changing the testing status. Default false.
23.19.35  salt.states.cyg

Installation of Cygwin packages.
A state module to manage cygwin packages. Packages can be installed or removed.

```python
dos2unix:
cyg.installed

class salt.states.cyg.DictDiffer(
current_dict, past_dict)
Calculate the difference between two dictionaries.

(1) items added
(2) items removed
(3) keys same in both but changed values
(4) keys same in both and unchanged values

added()
Return a set of additions to past_dict.

changed()
Return a set of the keys with changed values.

removed()
Return a set of things removed from past_dict.

same()
True if the two dicts are the same.

unchanged()
Return a set of the keys with unchanged values.

salt.states.cyg.installed(name, cyg_arch='x86_64', mirrors=None)
Make sure that a package is installed.

name The name of the package to install

cyg_arch [x86_64] The cygwin architecture to install the package into. Current options are x86 and x86_64

mirrors [None] List of mirrors to check. None will use a default mirror (kernel.org)

CLI Example:

rsync:
cyg.installed:
- mirrors:
  - http://mirror/without/public/key: ""

salt.states.cyg.removed(name, cyg_arch='x86_64', mirrors=None)
Make sure that a package is not installed.

name The name of the package to uninstall

cyg_arch [x86_64] The cygwin architecture to remove the package from. Current options are x86 and x86_64

mirrors [None] List of mirrors to check. None will use a default mirror (kernel.org)

CLI Example:
rsync:
  cyg.removed:
  - mirrors:
    - http://mirror/without/public/key: ""

salt.states.cyg.updated(name=None, cyg_arch='x86_64', mirrors=None)
Make sure all packages are up to date.

name [None] No affect, salt fails poorly without the arg available
cyg_arch [x86_64] The cygwin architecture to update. Current options are x86 and x86_64
mirrors [None] List of mirrors to check. None will use a default mirror (kernel.org)

CLI Example:

rsync:
  cyg.updated:
  - mirrors:
    - http://mirror/without/public/key: ""

23.19.36 salt.states.ddns

Dynamic DNS updates

Ensure a DNS record is present or absent utilizing RFC 2136 type dynamic updates.

depends
  • dnspython

Note: The dnspython module is required when managing DDNS using a TSIG key. If you are not using a TSIG key, DDNS is allowed by ACLs based on IP address and the dnspython module is not required.

Example:

webserver:
  ddns.present:
    - zone: example.com
    - ttl: 60
    - data: 111.222.333.444
    - nameserver: 123.234.345.456
    - keyfile: /srv/salt/dnspy_tsig_key.txt

salt.states.ddns.absent(name, zone, data=None, rdtype=None, **kwargs)
Ensures that the named DNS record is absent.

name The host portion of the DNS record, e.g., ‘webserver’. Name and zone are concatenated when the entry is created unless name includes a trailing dot, so make sure that information is not duplicated in these two arguments.
zone The zone to check
data Data for the DNS record. E.g., the IP address for an A record. If omitted, all records matching name (and rdtype, if provided) will be purged.
**rdtype** DNS resource type. If omitted, all types will be purged.

**kwargs** Additional arguments the ddns.update function may need (e.g. nameserver, keyfile, keyname).

Note that the nsupdate key file can’t be reused by this function, the keyfile and other arguments must follow the dnspython spec.

```python
class salt.states.ddns.present:
    def __init__(self, name, zone, ttl, data, rdtype='A', **kwargs):
        self.name = name
        self.zone = zone
        self.ttl = ttl
        self.data = data
        self.rdtype = rdtype

    def __call__(self):
        self.check_present

    def check_present(self):
        # Implementation goes here
```

Ensures that the named DNS record is present with the given ttl.

**name** The host portion of the DNS record, e.g., 'webserver'. Name and zone are concatenated when the entry is created unless name includes a trailing dot, so make sure that information is not duplicated in these two arguments.

**zone** The zone to check/update

**ttl** TTL for the record

**data** Data for the DNS record. E.g., the IP address for an A record.

**rdtype** DNS resource type. Default ‘A’.

**kwargs** Additional arguments the ddns.update function may need (e.g. nameserver, keyfile, keyname).

Note that the nsupdate key file can’t be reused by this function, the keyfile and other arguments must follow the dnspython spec.

### 23.19.37 salt.states.debconfmod

Management of debconf selections

```
depends
```

- debconf-utils package

The debconfmod state module manages the enforcement of debconf selections, this state can set those selections prior to package installation.

**Available Functions**

The debconfmod state has two functions, the `set` and `set_file` functions

**set** Set debconf selections from the state itself

**set_file** Set debconf selections from a file

```
nullmailer-debconf:
    debconf.set:
        - name: nullmailer
        - data:
            'shared/mailname': {'type': 'string', 'value': 'server.domain.tld'}
            'nullmailer/relayhost': {'type': 'string', 'value': 'mail.domain.tld'}

ferm-debconf:
    debconf.set:
        - name: ferm
        - data:
            'ferm/enable': {'type': 'boolean', 'value': True}
```

---

23.19. state modules 1425
Note: Due to how PyYAML imports nested dicts (see [here](#)), the values in the data dict must be indented four spaces instead of two.

If you're setting debconf values that requires `dpkg-reconfigure`, you can use the onchanges requisite to reconfigure your package:

```yaml
set-default-shell:
  debconf.set:
    - name: dash
      data:
        'dash/sh': {'type': 'boolean', 'value': false}

reconfigure-dash:
  cmd.run:
    - name: dpkg-reconfigure -f noninteractive dash
    - onchanges:
      - debconf: set-default-shell
```

Every time the set-default-shell state changes, the reconfigure-dash state will also run.

Note: For boolean types, the value should be true or false, not 'true' or 'false'.

```python
salt.states.debconfmod.set(name, data, **kwargs)
```

Set debconf selections

```python
<state_id>:
  debconf.set:
    - name: <name>
    - data:
      <question>: {'type': <type>, 'value': <value>}
      <question>: {'type': <type>, 'value': <value>}

<state_id>:
  debconf.set:
    - name: <name>
    - data:
      <question>: {'type': <type>, 'value': <value>}
      <question>: {'type': <type>, 'value': <value>}
```

name: The package name to set answers for.

data: A set of questions/answers for debconf. Note that everything under this must be indented twice.

question: The question that is being pre-answered

type: The type of question that is being asked (string, boolean, select, etc.)

value: The answer to the question

```python
salt.states.debconfmod.set_file(name, source, template=None, context=None, defaults=None, **kwargs)
```

Set debconf selections from a file or a template

```python
<state_id>:
  debconf.set_file:
```

(continues on next page)
source: The location of the file containing the package selections

template If this setting is applied then the named templating engine will be used to render the package selections file, currently jinja, mako, and wempy are supported

context Overrides default context variables passed to the template.

defaults Default context passed to the template.

23.19.38 salt.states.dellchassis

Manage chassis via Salt Proxies.

New in version 2015.8.2.

Below is an example state that sets basic parameters:

```
my-dell-chassis:
  dellchassis.chassis:
    - chassis_name: my-dell-chassis
    - datacenter: dc-1-us
    - location: my-location
    - mode: 2
    - idrac_launch: 1
    - slot_names:
      - server-1: my-slot-name
      - server-2: my-other-slot-name
    - blade_power_states:
      - server-1: on
      - server-2: off
      - server-3: powercycle
```

However, it is possible to place the entire set of chassis configuration data in pillar. Here's an example pillar structure:

```
proxy:
  host: 10.27.20.18
  admin_username: root
  fallback_admin_username: root
  passwords:
    - super-secret
    - old-secret
  proxytype: fx2
```
chassis:
  name: fx2-1
  username: root
  password: saltstack1
  datacenter: london
  location: rack-1-shelf-3
  management_mode: 2
  idrac_launch: 0
  slot_names:
    - 'server-1': blade1
    - 'server-2': blade2

servers:
  server-1:
    idrac_password: saltstack1
    ipmi_over_lan: True
    ip: 172.17.17.132
    netmask: 255.255.0.0
    gateway: 172.17.17.1
  server-2:
    idrac_password: saltstack1
    ipmi_over_lan: True
    ip: 172.17.17.2
    netmask: 255.255.0.0
    gateway: 172.17.17.1
  server-3:
    idrac_password: saltstack1
    ipmi_over_lan: True
    ip: 172.17.17.20
    netmask: 255.255.0.0
    gateway: 172.17.17.1
  server-4:
    idrac_password: saltstack1
    ipmi_over_lan: True
    ip: 172.17.17.2
    netmask: 255.255.0.0
    gateway: 172.17.17.1

switches:
  switch-1:
    ip: 192.168.1.2
    netmask: 255.255.255.0
    gateway: 192.168.1.1
    snmp: nonpublic
    password: saltstack1
  switch-2:
    ip: 192.168.1.3
    netmask: 255.255.255.0
    gateway: 192.168.1.1
    snmp: nonpublic
    password: saltstack1

And to go with it, here's an example state that pulls the data from the pillar stated above:

```{%
set details = pillar.get('proxy:chassis', {})
%
standup-step1:
```
```
dellchassis.chassis:
  - name: {{ details['name'] }}
  - location: {{ details['location'] }}
  - mode: {{ details['management_mode'] }}
  - idrac_launch: {{ details['idrac_launch'] }}
  - slot_names:
    {% for entry in details['slot_names'] %}
      - {{ next(iter(entry)) }}: {{ entry[next(iter(entry))] }}
    {% endfor %}

blade_powercycle:
  dellchassis.chassis:
    - blade_power_states:
      - server-1: powercycle
      - server-2: powercycle
      - server-3: powercycle
      - server-4: powercycle

# Set idrac_passwords for blades. racadm needs them to be called 'server-x'
{% for k, v in details['servers'].iteritems() %}
  {{ k }}:
    dellchassis.blade_idrac:
      - idrac_password: {{ v['idrac_password'] }}
{% endfor %}

# Set management ip addresses, passwords, and snmp strings for switches
{% for k, v in details['switches'].iteritems() %}
  {{ k }}-switch-setup:
    dellchassis.switch:
      - name: {{ k }}
      - ip: {{ v['ip'] }}
      - netmask: {{ v['netmask'] }}
      - gateway: {{ v['gateway'] }}
      - password: {{ v['password'] }}
      - snmp: {{ v['snmp'] }}
{% endfor %}
```

**Note:** This state module relies on the dracr.py execution module, which runs racadm commands on the chassis, blades, etc. The racadm command runs very slowly and, depending on your state, the proxy minion return might timeout before the racadm commands have completed. If you are repeatedly seeing minions timeout after state calls, please use the `-t` CLI argument to increase the timeout variable.

For example:

```
salt '*' state.sls my-dell-chasis-state-name -t 60
```

**Note:** The Dell CMC units perform adequately but many iDRACs are excruciatingly slow. Some functions can take minutes to execute.

```
salt.states.dellchassis.blade_idrac(name, idrac_password=None, idrac_ipmi=None, idrac_ip=None, idrac_netmask=None, idrac_gateway=None, idrac_dnsname=None, idrac_dhcp=None)
```

---

23.19. state modules 1429
Set parameters for iDRAC in a blade.

**Parameters**

- **idrac_password** -- Password to use to connect to the iDRACs directly (idrac_ipmi and idrac_dnsname must be set directly on the iDRAC. They can't be set through the CMC. If this password is present, use it instead of the CMC password)
- **idrac_ipmi** -- Enable/Disable IPMI over LAN
- **idrac_ip** -- Set IP address for iDRAC
- **idrac_netmask** -- Set netmask for iDRAC
- **idrac_gateway** -- Set gateway for iDRAC
- **idrac_dhcp** -- Turn on DHCP for iDRAC (True turns on, False does nothing because setting a static IP will disable DHCP).

**Returns**

A standard Salt changes dictionary

**NOTE:** If any of the IP address settings is configured, all of ip, netmask, and gateway must be present.

```python
salt.states.dellchassis.chassis(name, chassis_name=None, password=None, datacenter=None, location=None, mode=None, idrac_launch=None, slot_names=None, blade_power_states=None)
```

Manage a Dell Chassis.

**chassis_name** The name of the chassis.

**datacenter** The datacenter in which the chassis is located

**location** The location of the chassis.

**password** Password for the chassis. Note: If this password is set for the chassis, the current implementation of this state will set this password both on the chassis and the iDrac passwords on any configured blades. If the password for the blades should be distinct, they should be set separately with the blade_idrac function.

**mode** The management mode of the chassis. Viable options are:

- 0: None
- 1: Monitor
- 2: Manage and Monitor

**idrac_launch** The iDRAC launch method of the chassis. Viable options are:

- 0: Disabled (launch iDRAC using IP address)
- 1: Enabled (launch iDRAC using DNS name)

**slot_names** The names of the slots, provided as a list identified by their slot numbers.

**blade_power_states** The power states of a blade server, provided as a list and identified by their server numbers. Viable options are:

- on: Ensure the blade server is powered on.
- off: Ensure the blade server is powered off.
- powercycle: Power cycle the blade server.

**Example:**
my-dell-chassis:
  dellchassis.chassis:
    - chassis_name: my-dell-chassis
    - location: my-location
    - datacenter: london
    - mode: 2
    - idrac_launch: 1
    - slot_names:
      - 1: my-slot-name
      - 2: my-other-slot-name
    - blade_power_states:
      - server-1: on
      - server-2: off
      - server-3: powercycle

salt.states.dellchassis.firmware_update(hosts=None, directory='')

State to update the firmware on host using the racadm command

firmwarefile filename (string) starting with salt://

host string representing the hostname supplied to the racadm command

directory Directory name where firmwarefile will be downloaded

dell-chassis-firmware-update:
  dellchassis.firmware_update:
    hosts:
      cmc:
        salt://firmware_cmc.exe
      server-1:
        salt://firmware.exe
    directory: /opt/firmwares

salt.states.dellchassis.switch(name=None, ip=None, netmask=None, gateway=None, dhcp=None, password=None, snmp=None)

Manage switches in a Dell Chassis.

name The switch designation (e.g. switch-1, switch-2)

ip The Static IP Address of the switch

netmask The netmask for the static IP

gateway The gateway for the static IP

dhcp True: Enable DHCP False: Do not change DHCP setup (disabling DHCP is automatic when a static IP is set)

password The access (root) password for the switch

snmp The SNMP community string for the switch

Example:

my-dell-chassis:
  dellchassis.switch:
    - switch: switch-1
    - ip: 192.168.1.1
    - netmask: 255.255.255.0
    - gateway: 192.168.1.254
23.19.39 salt.states.disk

Disk monitoring state

Monitor the state of disk resources.

The `disk.status` function can be used to report that the used space of a filesystem is within the specified limits.

```yaml
used_space:
  disk.status:
    - name: /dev/xda1
    - maximum: 79%
    - minimum: 11%
```

It can be used with an `onfail` requisite, for example, to take additional action in response to or in preparation for other states.

```yaml
storage_threshold:
  disk.status:
    - name: /dev/xda1
    - maximum: 97%

clear_cache:
  cmd.run:
    - name: rm -r /var/cache/app
    - onfail:
      - disk: storage_threshold
```

To use kilobytes (KB) for `minimum` and `maximum` rather than percents, specify the `absolute` flag:

```yaml
used_space:
  disk.status:
    - name: /dev/xda1
    - minimum: 1024 KB
    - maximum: 1048576 KB
    - absolute: True
```

```python
salt.states.disk.status(name, maximum=None, minimum=None, absolute=False, free=False)
```

Return the current disk usage stats for the named mount point

- `name` Disk mount or directory for which to check used space
- `maximum` The maximum disk utilization
- `minimum` The minimum disk utilization
- `absolute` By default, the utilization is measured in percentage. Set the `absolute` flag to use kilobytes.

- New in version 2016.11.0.
- `free` By default, `minimum` & `maximum` refer to the amount of used space. Set to `True` to evaluate the free space instead.
23.19.40 salt.states.dvs

Manage VMware distributed virtual switches (DVSs) and their distributed virtual portgroups (DVportgroups).

codeauthor Alexandru Bleotu <alexandru.bleotu@morganstaley.com>

Examples

Several settings can be changed for DVSs and DVportgroups. Here are two examples covering all of the settings. Fewer settings can be used.

DVS

```
'name': 'dvs1',
'max_mtu': 1000,
'uplink_names': [
    'dvUplink1',
    'dvUplink2',
    'dvUplink3'
],
'capability': {
    'portgroup_operation_supported': false,
    'operation_supported': true,
    'port_operation_supported': false
},
'lacp_api_version': 'multipleLag',
'contact_email': 'foo@email.com',
'product_info': {
    'version': '6.0.0',
    'vendor': 'VMware, Inc.',
    'name': 'DVS'
},
'network_resource_management_enabled': true,
'contact_name': 'me@email.com',
'infrastructure_traffic_resource_pools': [
    {
        'reservation': 0,
        'limit': 1000,
        'share_level': 'high',
        'key': 'management',
        'num_shares': 100
    },
    {
        'reservation': 0,
        'limit': -1,
        'share_level': 'normal',
        'key': 'faultTolerance',
        'num_shares': 50
    },
    {
        'reservation': 0,
    }
]
```
'limit': 32000,
'share_level': 'normal',
'key': 'vmotion',
'num_shares': 50
},
{
'reservation': 10000,
'limit': -1,
'share_level': 'normal',
'key': 'virtualMachine',
'num_shares': 50
},
{
'reservation': 0,
'limit': -1,
'share_level': 'custom',
'key': 'iSCSI',
'num_shares': 75
},
{
'reservation': 0,
'limit': -1,
'share_level': 'normal',
'key': 'nfs',
'num_shares': 50
},
{
'reservation': 0,
'limit': -1,
'share_level': 'normal',
'key': 'hbr',
'num_shares': 50
},
{
'reservation': 8750,
'limit': 15000,
'share_level': 'high',
'key': 'vsan',
'num_shares': 100
},
{
'reservation': 0,
'limit': -1,
'share_level': 'normal',
'key': 'vdp',
'num_shares': 50
}
],
'link_discovery_protocol': {
'operation':
'listen',
'protocol':
'cdp'
},
'network_resource_control_version': 'version3',
'description': 'Managed by Salt. Random settings.'}
Note: The mandatory attribute is: name.

**Portgroup**

```json
'security_policy': {
    'allow_promiscuous': true,
    'mac_changes': false,
    'forged_transmits': true
},
'name': 'vmotion-v702',
'out_shaping': {
    'enabled': true,
    'average_bandwidth': 1500,
    'burst_size': 4096,
    'peak_bandwidth': 1500
},
'num_ports': 128,
'teaming': {
    'port_order': {
        'active': ['dvUplink2'],
        'standby': ['dvUplink1']
    },
    'notify_switches': false,
    'reverse_policy': true,
    'rolling_order': false,
    'policy': 'failover_explicit',
    'failure_criteria': {
        'check_error_percent': true,
        'full_duplex': false,
        'check_duplex': false,
        'percentage': 50,
        'check_speed': 'minimum',
        'speed': 20,
        'check_beacon': true
    }
},
'type': 'earlyBinding',
'vlan_id': 100,
'description': 'Managed by Salt. Random settings.'
```

Note: The mandatory attributes are: name, type.
Dependencies

- pyVmomi Python Module

**pyVmomi**

PyVmomi can be installed via pip:

```
pip install pyVmomi
```

**Note:** Version 6.0 of pyVmomi has some problems with SSL error handling on certain versions of Python. If using version 6.0 of pyVmomi, Python 2.7.9, or newer must be present. This is due to an upstream dependency in pyVmomi 6.0 that is not supported in Python versions 2.7 to 2.7.8. If the version of Python is not in the supported range, you will need to install an earlier version of pyVmomi. See Issue #29537 for more information.

Based on the note above, to install an earlier version of pyVmomi than the version currently listed in PyPi, run the following:

```
pip install pyVmomi==5.5.0.2014.1.1
```

The 5.5.0.2014.1.1 is a known stable version that this original ESXi State Module was developed against.

```python
salt.states.dvs.dvs_configured(name, dvs)
```

Configures a DVS.

- **name** Name of the DVS
- **dvs** DVS dict representations (see module sysdocs)

```python
salt.states.dvs.portgroups_configured(name, dvs, portgroups)
```

Configures portgroups on a DVS.

- **name** Name of the DVS
- **dvs** Name of the DVS
- **portgroups** Portgroup dict representations (see module sysdocs)

```python
salt.states.dvs.uplink_portgroup_configured(name, dvs, uplink_portgroup)
```

Configures the uplink portgroup on a DVS. The state assumes there is only one uplink portgroup.

- **name** Name of the DVS
- **dvs** Name of the DVS
- **uplink_portgroup** Uplink portgroup dict representations (see module sysdocs)

### 23.19.41 salt.states.elasticsearch_index

State module to manage Elasticsearch indices

New in version 2015.8.0.

Deprecated since version 2017.7.0: Use elasticsearch state instead

```python
salt.states.elasticsearch_index.absent(name)
```

Ensure that the named index is absent.

- **name** Name of the index to remove
salt.states.elasticsearch_index.present(name, definition=None)

New in version 2015.8.0.

Changed in version 2017.3.0: Marked definition as optional.

Ensure that the named index is present.

name Name of the index to add

definition Optional dict for creation parameters as per https://www.elastic.co/guide/en/elasticsearch/reference/current/indices-create-index.html

Example:

```
# Default settings
mytestindex:
    elasticsearch_index.present

# Extra settings
mytestindex2:
    elasticsearch_index.present:
        - definition:
            settings:
                index:
                    number_of_shards: 10
```

23.19.42 salt.states.elasticsearch_index_template

State module to manage Elasticsearch index templates

New in version 2015.8.0.

Deprecated since version 2017.7.0: Use elasticsearch state instead

salt.states.elasticsearch_index_template.absent(name)

Ensure that the named index template is absent.

name Name of the index to remove

classpath.elasticsearch_index_template.present(name, definition)

New in version 2015.8.0.

Changed in version 2017.3.0: Marked definition as required.

Ensure that the named index template is present.

name Name of the index to add

definition Required dict for creation parameters as per https://www.elastic.co/guide/en/elasticsearch/reference/current/indices-templates.html

Example:

```
mytestindex2_template:
    elasticsearch_index_template.present:
        - definition:
            template: logstash-*
            order: 1
            settings:
                number_of_shards: 1
```
23.19.43  salt.states.eselect

Management of Gentoo configuration using eselect

A state module to manage Gentoo configuration via eselect

```python
salt.states.eselect.set_(name, target, module_parameter=None, action_parameter=None)
```

- **name** The name of the module
- **target** The target to be set for this module
- **module_parameter** additional params passed to the defined module
- **action_parameter** additional params passed to the defined action

---

23.19.44  salt.states.esxdatacenter

Salt states to create and manage VMware vSphere datacenters (datacenters).

- **codeauthor** Alexandru Bleotu <alexandru.bleotu@morganstaley.com>

**Dependencies**

- pyVmomi Python Module

**States**

**datacenter_configured**

Makes sure a datacenter exists and is correctly configured.

If the state is run by an esxdatacenter minion, the name of the datacenter is retrieved from the proxy details, otherwise the datacenter has the same name as the state.

**Supported proxies**: esxdatacenter

**Example:**

1. Make sure that a datacenter named `target_dc` exists on the vCenter, using a esxdatacenter proxy:

Proxy minion configuration (connects passthrough to the vCenter):

```yaml
proxy:
  proxytype: esxdatacenter
datacenter: target_dc
vcenter: vcenter.fake.com
mechanism: sspi
domain: fake.com
principal: host
```

State configuration:
**datacenter_state:**

```
esxdatacenter.datacenter_configured
```

`salt.states.esxdatacenter.datacenter_configured(name)`  
Makes sure a datacenter exists.  
If the state is run by an `esxdatacenter` minion, the name of the datacenter is retrieved from the proxy details, otherwise the datacenter has the same name as the state.  
Supported proxies: `esxdatacenter`  
`name`: Datacenter name. Ignored if the proxytype is `esxdatacenter`.

**23.19.45 salt.states.etcd_mod**

Manage etcd Keys

New in version 2015.8.0.

```python
depends
  • python-etcd
```
This state module supports setting and removing keys from etcd.

**Configuration**

To work with an etcd server you must configure an etcd profile. The etcd config can be set in either the Salt Minion configuration file or in pillar:

```yaml
my_etd_config:
  etcd.host: 127.0.0.1
  etcd.port: 4001
```

It is technically possible to configure etcd without using a profile, but this is not considered to be a best practice, especially when multiple etcd servers or clusters are available.

```yaml
etcd.host: 127.0.0.1
etcd.port: 4001
```

**Note:** The etcd configuration can also be set in the Salt Master config file, but in order to use any etcd configurations defined in the Salt Master config, the `pillar_opts` must be set to `True`.

Be aware that setting `pillar_opts` to `True` has security implications as this makes all master configuration settings available in all minion's pillars.

Etcd profile configuration can be overridden using following arguments: `host`, `port`, `username`, `password`, `ca`, `client_key` and `client_cert`.

```yaml
my-value:
  etcd.set:
    - name: /path/to/key
    - value: value
    - host: 127.0.0.1
```

(continues on next page)
Available Functions

- **set**
  This will set a value to a key in etcd. Changes will be returned if the key has been created or the value of the key has been updated. This means you can watch these states for changes.

```
/foo/bar/baz:
  etcd.set:
    - value: foo
    - profile: my_etcd_config
```

- **wait_set**
  Performs the same functionality as `set` but only if a watch requisite is `True`.

```
/some/file.txt:
  file.managed:
    - source: salt://file.txt

/foo/bar/baz:
  etcd.wait_set:
    - value: foo
    - profile: my_etcd_config
    - watch:
      - file: /some/file.txt
```

- **rm**
  This will delete a key from etcd. If the key exists then changes will be returned and thus you can watch for changes on the state, if the key does not exist then no changes will occur.

```
/foo/bar/baz:
  etcd.rm:
    - profile: my_etcd_config
```

- **wait_rm**
  Performs the same functionality as `rm` but only if a watch requisite is `True`.

```
/some/file.txt:
  file.managed:
    - source: salt://file.txt

/foo/bar/baz:
  etcd.wait_rm:
    - profile: my_etcd_config
    - watch:
      - file: /some/file.txt
```

```
salt.states.etcd_mod.directory(name, profile=None, **kwargs)
Create a directory in etcd.
```
**name**  The etcd directory name, for example: `/foo/bar/baz`.

**profile**  Optional, defaults to `None`. Sets the etcd profile to use which has been defined in the Salt Master config.

```yaml
my_etd_config:
  etcd.host: 127.0.0.1
  etcd.port: 4001
```

`salt.states.etcd_mod.mod_watch(name, **kwargs)`

The etcd watcher, called to invoke the watch command. When called, execute a etcd function based on a watch call requisite.

**Note:**  This state exists to support special handling of the `watch` requisite. It should not be called directly. Parameters for this function should be set by the state being triggered.

`salt.states.etcd_mod.rm(name, recurse=False, profile=None, **kwargs)`

Deletes a key from etcd

**name**  The etcd key name to remove, for example `/foo/bar/baz`.

**recurse**  Optional, defaults to `False`. If `True` performs a recursive delete.

**profile**  Optional, defaults to `None`. Sets the etcd profile to use which has been defined in the Salt Master config.

```yaml
my_etd_config:
  etcd.host: 127.0.0.1
  etcd.port: 4001
```

`salt.states.etcd_mod.set_(name, value, profile=None, **kwargs)`

Set a key in etcd

**name**  The etcd key name, for example: `/foo/bar/baz`.

**value**  The value the key should contain.

**profile**  Optional, defaults to `None`. Sets the etcd profile to use which has been defined in the Salt Master config.

```yaml
my_etd_config:
  etcd.host: 127.0.0.1
  etcd.port: 4001
```

`salt.states.etcd_mod.wait_rm(name, recurse=False, profile=None, **kwargs)`

Deletes a key from etcd only if the watch statement calls it. This function is also aliased as `wait_rm`.

**name**  The etcd key name to remove, for example `/foo/bar/baz`.

**recurse**  Optional, defaults to `False`. If `True` performs a recursive delete, see: https://python-etcd.readthedocs.io/en/latest/#delete-a-key.

**profile**  Optional, defaults to `None`. Sets the etcd profile to use which has been defined in the Salt Master config.

```yaml
my_etd_config:
  etcd.host: 127.0.0.1
  etcd.port: 4001
```
salt.states.etcd_mod.wait_set(name, value, profile=None, **kwargs)
    Set a key in etcd only if the watch statement calls it. This function is also aliased as wait_set.
    
    name  The etcd key name, for example: /foo/bar/baz.
    value The value the key should contain.
    profile The etcd profile to use that has been configured on the Salt Master, this is optional and defaults to None.

    my_etd_config:
        etcd.host: 127.0.0.1
        etcd.port: 4001

23.19.46 salt.states.ethtool

Configuration of network device
New in version 2016.11.0.

    codeauthor  Krzysztof Pawlowski <msciciel@msciciel.eu>
    maturity  new
    depends  python-ethtool
    platform  linux

    eth0:
        ethtool.coalesce:
            - name: eth0
            - rx_usecs: 24
            - tx_usecs: 48

    eth0:
        ethtool.ring:
            - name: eth0
            - rx: 1024
            - tx: 1024

    eth0:
        ethtool.offload:
            - name: eth0
            - tcp_segmentation_offload: on

salt.states.ethtool.coalesce(name, **kwargs)
Manage coalescing settings of network device

    name  Interface name to apply coalescing settings

    eth0:
        ethtool.coalesce:
            - name: eth0
            - adaptive_rx: on
            - adaptive_tx: on
            - rx_usecs: 24
            - rx_frame: 0
            - rx_usecs_irq: 0
            - rx_frames_irq: 0

(continues on next page)
salt.states.ethtool.offload(name, **kwargs)
Manage protocol offload and other features of network device

name Interface name to apply coalescing settings

```python
eth0:
  ethtool.offload:
    - name: eth0
    - tcp_segmentation_offload: on
```

salt.states.ethtool.ring(name, **kwargs)
Manage rx/tx ring parameters of network device

Use 'max' word to set with factory maximum

name Interface name to apply ring parameters

```python
eth0:
  ethtool.ring:
    - name: eth0
    - rx: 1024
    - rx_mini: 0
    - rx_jumbo: 0
    - tx: max
```

23.19.47 salt.states.firewall

State to check firewall configurations

New in version 2016.3.0.

salt.states.firewall.check(name, port=None, **kwargs)
Checks if there is an open connection from the minion to the defined host on a specific port.

name host name or ip address to test connection to

port The port to test the connection on

kwarg Additional parameters, parameters allowed are: proto (tcp or udp) family (ipv4 or ipv6) timeout
23.19.48 salt.states.gem

Installation of Ruby modules packaged as gems

A state module to manage rubygems. Gems can be set up to be installed or removed. This module will use RVM or rbenv if they are installed. In that case, you can specify what ruby version and gemset to target.

```
addressable:
gem.installed:
  - user: rvm
  - ruby: jruby@jgemset
```

**salt.states.gem.installed** *(name, ruby=None, gem_bin=None, user=None, version=None, rdoc=False, ri=False, pre_releases=False, proxy=None, source=None)*

Make sure that a gem is installed.

**name** The name of the gem to install

**ruby**: **None** Only for RVM or rbenv installations: the ruby version and gemset to target.

**gem_bin**: **None** Custom gem command to run instead of the default. Use this to install gems to a non-default ruby install. If you are using rvm or rbenv use the ruby argument instead.

**user**: **None** The user under which to run the gem command

New in version 0.17.0.

**version** [None] Specify the version to install for the gem. Doesn't play nice with multiple gems at once

**rdoc** [False] Generate RDoc documentation for the gem(s).

**ri** [False] Generate RI documentation for the gem(s).

**pre_releases** [False] Install pre-release version of gem(s) if available.

**proxy** [None] Use the specified HTTP proxy server for all outgoing traffic. Format: *http://hostname[:][port]*

**source** [None] Use the specified HTTP gem source server to download gem. Format: *http://hostname[:][port]*

**salt.states.gem.removed** *(name, ruby=None, user=None, gem_bin=None)*

Make sure that a gem is not installed.

**name** The name of the gem to uninstall

**gem_bin** [None] Full path to gem binary to use.

**ruby** [None] If RVM or rbenv are installed, the ruby version and gemset to use. Ignored if **gem_bin** is specified.

**user**: **None** The user under which to run the gem command

New in version 0.17.0.

**salt.states.gem.sources_add** *(name, ruby=None, user=None)*

Make sure that a gem source is added.
name  The URL of the gem source to be added
ruby: None  For RVM or rbenv installations: the ruby version and gemset to target.
user: None  The user under which to run the gem command

New in version 0.17.0.
salt.states.gem.sources_remove(name, ruby=None, user=None)
Make sure that a gem source is removed.
name  The URL of the gem source to be removed
ruby: None  For RVM or rbenv installations: the ruby version and gemset to target.
user: None  The user under which to run the gem command

New in version 0.17.0.

23.19.49  salt.states.github

Github User State Module
New in version 2016.3.0.
This state is used to ensure presence of users in the Organization.

```yaml
ensure user test is present in github:
  github.present:
    - name: 'Example TestUser1'
    - email: example@domain.com
    - username: 'gitexample'
```

salt.states.github.absent(name, profile='github', **kwargs)
Ensure a github user is absent

```yaml
ensure user test is absent in github:
  github.absent:
    - name: 'Example TestUser1'
    - email: example@domain.com
    - username: 'gitexample'
```

The following parameters are required:
name  Github handle of the user in organization

salt.states.github.present(name, profile='github', **kwargs)
Ensure a user is present

```yaml
ensure user test is present in github:
  github.present:
    - name: 'gitexample'
```

The following parameters are required:
name  This is the github handle of the user in the organization

salt.states.github.repos_absent(name, profile='github', **kwargs)
Ensure a repo is absent.
Example:
**ensure repo test is absent in github:**

```yaml
github.repo_absent:
  - name: 'test'
```

The following parameters are required:

- **name**  This is the name of the repository in the organization.

New in version 2016.11.0.

```python
salt.states.github.repo_present(name, description=None, homepage=None, private=None, has_issues=None, has_wiki=None, has_downloads=None, auto_init=False, gitignore_template=None, license_template=None, teams=None, profile='github', **kwargs)
```

Ensure a repository is present

- **name**  This is the name of the repository.

- **description**  The description of the repository.

- **homepage**  The URL with more information about the repository.

- **private**  The visibility of the repository. Note that private repositories require a paid GitHub account.

- **has_issues**  Whether to enable issues for this repository.

- **has_wiki**  Whether to enable the wiki for this repository.

- **has_downloads**  Whether to enable downloads for this repository.

- **auto_init**  Whether to create an initial commit with an empty README.

- **gitignore_template**  The desired language or platform for a .gitignore, e.g. "Haskell".

- **license_template**  The desired LICENSE template to apply, e.g. "mit" or "mozilla".

- **teams**  The teams for which this repo should belong to, specified as a dict of team name to permission ('pull', 'push' or 'admin').

New in version 2017.7.0.

Example:

```yaml
Ensure repo my-repo is present in github:
  github.repo_present:
    - name: 'my-repo'
    - description: 'My very important repository'
```

New in version 2016.11.0.

```python
salt.states.github.team_absent(name, profile='github', **kwargs)
```

Ensure a team is absent.

Example:

```yaml
ensure team test is present in github:
  github.team_absent:
    - name: 'test'
```

The following parameters are required:

- **name**  This is the name of the team in the organization.

New in version 2016.11.0.
salt.states.github.team_present(name, description=None, repo_names=None, privacy='secret', permission='pull', members=None, enforce_mfa=False, no_mfa_grace_seconds=0, profile='github', **kwargs)

Ensure a team is present

name This is the name of the team in the organization.
description The description of the team.
repo_names The names of repositories to add the team to.
privacy The level of privacy for the team, can be 'secret' or 'closed'. Defaults to secret.
permission The default permission for new repositories added to the team, can be 'pull', 'push' or 'admin'. Defaults to pull.
members The members belonging to the team, specified as a dict of member name to optional configuration. Options include 'enforce_mfa_from' and 'mfa_exempt'.
enforce_mfa Whether to enforce MFA requirements on members of the team. If True then all members without mfa_exempt: True configured will be removed from the team. Note that no_mfa_grace_seconds may be set to allow members a grace period.

no_mfa_grace_seconds The number of seconds of grace time that a member will have to enable MFA before being removed from the team. The grace period will begin from enforce_mfa_from on the member configuration, which defaults to 1970/01/01.

Example:

Ensure team test is present in github:

```python
github.team_present:
  - name: 'test'
  - members:
    user1: {}
    user2: {}
```

Ensure team test_mfa is present in github:

```python
github.team_present:
  - name: 'test_mfa'
  - members:
    user1:
      enforce_mfa_from: 2016/06/15
    - enforce_mfa: True
```

New in version 2016.11.0.

23.19.50 salt.states.glance

Managing Images in OpenStack Glance

salt.states.glance.image_present(name, visibility='public', protected=None, checksum=None, location=None, disk_format='raw', wait_for=None, timeout=30)

Checks if given image is present with properties set as specified.

An image should go through the stages 'queued', 'saving' before becoming 'active'. The attribute 'checksum' can only be checked once the image is active. If you don't specify 'wait_for' but 'checksum' the function will wait for the image to become active before comparing checksums. If you don't specify checksum either the function will return when the image reached 'saving'. The default timeout for both is 30 seconds.

Supported properties:
• visibility (‘public’ or ‘private’)
• protected (bool)
• checksum (string, md5sum)
• location (URL, to copy from)

23.19.51 salt.states.glance_image

Management of OpenStack Glance Images

New in version 2018.3.0.

depends shade

configuration see salt.modules.glanceng for setup instructions

Example States

create image:
  glance_image.present:
    - name: cirros
    - filename: cirros.raw
    - image_format: raw

delete image:
  glance_image.absent:
    - name: cirros

salt.states.glance_image.absent(name, auth=None)
  Ensure image does not exist
  name Name of the image

salt.states.glance_image.present(name, auth=None, **kwargs)
  Ensure image exists and is up-to-date
  name Name of the image
  enabled Boolean to control if image is enabled
  description An arbitrary description of the image

23.19.52 salt.states.gnomedesktop

Configuration of the GNOME desktop

Control the GNOME settings

localdesktop_wm_prefs:
  gnomedesktop.wm_preferences:
    - user: username
    - audible_bell: false
    - action_double_click_titlebar: 'toggle-maximize'
    - visual_bell: true
    - num_workspaces: 6

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localdesktop_lockdown:
    gnomedesktop.desktop_lockdown:
        - user: username
        - disable_user_switching: true

localdesktop_interface:
    gnomedesktop.desktop_interface:
        - user: username
        - clock_show_date: true
        - clock_format: 12h

salt.states.gnomedesktop.desktop_interface(name, user=None, automatic_mnemonics=None, buttons_have_icons=None, can_change_accels=None, clock_format=None, clock_show_date=None, clock_show_seconds=None, cursor_blink=None, cursor_blink_time=None, cursor_blink_timeout=None, cursor_size=None, cursor_theme=None, document_font_name=None, enableAnimations=None, font_name=None, gtk_color_palette=None, gtk_color_scheme=None, gtk_im_module=None, gtk_im_preedit_style=None, gtk_im_status_style=None, gtk_key_theme=None, gtk_theme=None, gtk_timeout_initial=None, gtk_timeout_repeat=None, icon_theme=None, menubar_accel=None, menubar_detachable=None, menus_have_icons=None, menus_have_tearoff=None, monospace_font_name=None, show_input_method_menu=None, show_unicode_menu=None, text_scaling_factor=None, toolbar_detachable=None, toolbar_icons_size=None, toolbar_style=None, toolkit_accessibility=None, **kwargs)

desktop_interface: sets values in the org.gnome.desktop.interface schema

salt.states.gnomedesktop.desktop_lockdown(name, user=None, disable_application_handlers=None, disable_command_line=None, disable_lock_screen=None, disable_log_out=None, disable_print_setup=None, disable_printing=None, disable_save_to_disk=None, disable_user_switching=None, user_administration_disabled=None, **kwargs)

desktop_lockdown: sets values in the org.gnome.desktop.desktop.lockdown schema
salt.states.gnomedesktop.wm_preferences(name, user=None, action_double_click_titlebar=None, action_middle_click_titlebar=None, action_right_click_titlebar=None, application_based=None, audible_bell=None, auto_raise=None, auto_raise_delay=None, button_layout=None, disable_workarounds=None, focus_mode=None, focus_new_windows=None, mouse_button_modifier=None, num_workspaces=None, raise_on_click=None, resize_with_right_button=None, theme=None, titlebar_font=None, titlebar_uses_system_font=None, visual_bell=None, visual_bell_type=None, workspace_names=None, **kwargs)

wm_preferences: sets values in the org.gnome.desktop.wm.preferences schema

23.19.53 salt.states.gpg

Management of the GPG keychains

New in version 2016.3.0.

salt.states.gpg.absent(name, keys=None, user=None, gnupghome=None, **kwargs)
Ensure GPG public key is absent in keychain

name The unique name or keyid for the GPG public key.
keys The keyId or keyIds to add to the GPG keychain.
user Remove GPG keys from the specified user’s keychain

gnupghome Override GNUPG Home directory

salt.states.gpg.present(name, keys=None, user=None, keyserver=None, gnupghome=None, trust=None, **kwargs)
Ensure GPG public key is present in keychain

name The unique name or keyid for the GPG public key.
keys The keyId or keyIds to add to the GPG keychain.
user Add GPG keys to the specified user’s keychain
keyserver The keyserver to retrieve the keys from.
gnupghome Override GNUPG Home directory

trust Trust level for the key in the keychain, ignored by default. Valid trust levels: expired, unknown, not_trusted, marginally, fully, ultimately
23.19.54  salt.states.grafana4_datasource

Manage Grafana v4.0 data sources

New in version 2017.7.0.

configuration  This state requires a configuration profile to be configured in the minion config, minion pillar, or master config. The module will use the 'grafana' key by default, if defined.

Example configuration using basic authentication:

```
grafana:
  grafana_url: http://grafana.localhost
  grafana_user: admin
  grafana_password: admin
  grafana_timeout: 3
```

Example configuration using token based authentication:

```
grafana:
  grafana_url: http://grafana.localhost
  grafana_token: token
  grafana_timeout: 3
```

The behavior of this module is to create data sources if the do not exists, and to update data sources if the already exists.

```
Ensure influxdb data source is present:
grafana4_datasource.present:
  - name: influxdb
  - type: influxdb
  - url: http://localhost:8086
  - access: proxy
  - basic_auth: true
  - basic_auth_user: myuser
  - basic_auth_password: mypass
  - is_default: true
```

**salt.states.grafana4_datasource.absent** *(name, orgname=None, profile='grafana')*

Ensure that a data source is absent.

name  Name of the data source to remove.

orgname  Name of the organization from which the data source should be absent.

profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

**salt.states.grafana4_datasource.present** *(name, type, url, access=None, user=None, password=None, database=None, basic_auth=None, basic_auth_user=None, basic_auth_password=None, tls_auth=None, json_data=None, is_default=None, with_credentials=None, type_logo_url=None, orgname=None, profile='grafana')*

Ensure that a data source is present.

name  Name of the data source.

type  Type of the datasource ('graphite', 'influxdb' etc.).

access  Use proxy or direct. Default: proxy

url  The URL to the data source API.
user  Optional - user to authenticate with the data source.
password  Optional - password to authenticate with the data source.
database  Optional - database to use with the data source.
basic_auth  Optional - set to True to use HTTP basic auth to authenticate with the data source.
basic_auth_user  Optional - HTTP basic auth username.
basic_auth_password  Optional - HTTP basic auth password.
json_data  Optional - additional json data to post (eg. "timeInterval").
is_default  Optional - set data source as default.
with_credentials  Optional - Whether credentials such as cookies or auth headers should be sent with cross-site requests.
type_logo_url  Optional - Logo to use for this datasource.
orname  Name of the organization in which the data source should be present.
profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

23.19.55  salt.states.grafana4_org

Manage Grafana v4.0 orgs

New in version 2017.7.0.

configuration  This state requires a configuration profile to be configured in the minion config, minion pillar, or master config. The module will use the 'grafana' key by default, if defined.

Example configuration using basic authentication:

```
grafana:  
  grafana_url: http://grafana.localhost  
grafana_user: admin  
grafana_password: admin  
grafana_timeout: 3
```

Example configuration using token based authentication:

```
grafana:  
  grafana_url: http://grafana.localhost  
grafana_token: token  
grafana_timeout: 3
```

Ensure foobar org is present:

```
saltstates.grafana4_org.present:  
  - name: foobar  
  - theme: ""  
  - home_dashboard_id: 0  
  - timezone: "utc"  
  - address1: ""  
  - address2: ""  
  - city: ""  
  - zip_code: ""  
  - state: ""  
  - country: ""
```
salt.states.grafana4_org.absent(name, profile='grafana')
  Ensure that a org is present.
  
  name  Name of the org to remove.
  
  profile Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

salt.states.grafana4_org.present(name, users=None, theme=None, home_dashboard_id=None, timezone=None, address1=None, address2=None, city=None, zip_code=None, address_state=None, country=None, profile='grafana')

  Ensure that an organization is present.
  
  name  Name of the org.
  
  users  Optional - Dict of user/role associated with the org. Example:

    users:
      foo: Viewer
      bar: Editor

  theme  Optional - Selected theme for the org.
  home_dashboard_id  Optional - Home dashboard for the org.
  timezone  Optional - Timezone for the org (one of: "browser", "utc", or ").
  address1  Optional - address1 of the org.
  address2  Optional - address2 of the org.
  city  Optional - city of the org.
  zip_code  Optional - zip_code of the org.
  address_state  Optional - state of the org.
  country  Optional - country of the org.
  profile  Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

23.19.56 salt.states.grafana4_user

Manage Grafana v4.0 users

New in version 2017.7.0.

configuration  This state requires a configuration profile to be configured in the minion config, minion pillar, or master config. The module will use the 'grafana' key by default, if defined.

Example configuration using basic authentication:

    grafana:
      grafana_url: http://grafana.localhost
      grafana_user: admin
      grafana_password: admin
      grafana_timeout: 3

Example configuration using token based authentication:
**grafana:**
- **grafana_url**: http://grafana.localhost
- **grafana_token**: token
- **grafana_timeout**: 3

**Ensure foobar user is present:**

```python
grafana4_user.present:
- name: foobar
- password: mypass
- email: "foobar@localhost"
- fullname: Foo Bar
- is_admin: true
```

**salt.states.grafana4_user.absent(name, profile='grafana')**

Ensure that a user is present.

- **name**: Name of the user to remove.
- **profile**: Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

**salt.states.grafana4_user.present(name, password, email, is_admin=False, fullname=None, theme=None, profile='grafana')**

Ensure that a user is present.

- **name**: Name of the user.
- **password**: Password of the user.
- **email**: Email of the user.
- **is_admin**: Optional - Set user as admin user. Default: False
- **fullname**: Optional - Full name of the user.
- **theme**: Optional - Selected theme of the user.
- **profile**: Configuration profile used to connect to the Grafana instance. Default is 'grafana'.

### 23.19.57 salt.states.grafana_datasource

Manage Grafana v2.0 data sources

New in version 2016.3.0.

**grafana:**
- **grafana_timeout**: 3
- **grafana_token**: qwertyuiop
- **grafana_url**: 'https://url.com'

**Ensure influxdb data source is present:**

```python
grafana_datasource.present:
- name: influxdb
- type: influxdb
- url: http://localhost:8086
- access: proxy
- basic_auth: true
- basic_auth_user: myuser
- basic_auth_password: mypass
- is_default: true
```
salt.states.grafana_datasource.absent(name, profile='grafana')

Ensure that a data source is present.

name  Name of the data source to remove.

salt.states.grafana_datasource.present(name, type, url, access='proxy', user='', password='',
    database='', basic_auth=False, basic_auth_user='',
    basic_auth_password='',
    is_default=False, json_data=None, profile='grafana')

Ensure that a data source is present.

name  Name of the data source.

type  Which type of data source it is ('graphite', 'influxdb' etc.).

url  The URL to the data source API.

user  Optional - user to authenticate with the data source

password  Optional - password to authenticate with the data source

basic_auth  Optional - set to True to use HTTP basic auth to authenticate with the data source.

basic_auth_user  Optional - HTTP basic auth username.

basic_auth_password  Optional - HTTP basic auth password.

is_default  Default: False

23.19.58  salt.states.grains

Manage grains on the minion

This state allows for grains to be set.

Grains set or altered with this module are stored in the 'grains' file on the minions, By default, this file is located at: /etc/salt/grains

Note: This does NOT override any grains set in the minion config file.

salt.states.grains.absent(name, destructive=False, delimiter=':', force=False)

New in version 2014.7.0.

Delete a grain from the grains config file

name  The grain name

destructive  If destructive is True, delete the entire grain. If destructive is False, set the grain's value to None. Defaults to False.

force  If force is True, the existing grain will be overwritten regardless of its existing or provided value type. Defaults to False

New in version 2015.8.2.

delimiter  A delimiter different from the default can be provided.

New in version 2015.8.2.

Changed in version 2015.8.2.

This state now support nested grains and complex values. It is also more conservative: if a grain has a value that is a list or a dict, it will not be removed unless the force parameter is True.

23.19.  state modules
**grain_name**: grains.absent

```
salt.states.grains.append(name, value, convert=False, delimiter=': ')
```

New in version 2014.7.0.

Append a value to a list in the grains config file. The grain that is being appended to (name) must exist before the new value can be added.

- **name**: The grain name
- **value**: The value to append
- **convert**: If convert is True, convert non-list contents into a list. If convert is False and the grain contains non-list contents, an error is given. Defaults to False.
- **delimiter**: A delimiter different from the default can be provided.

```yaml
grain_name:
  grains.append:
    - value: to_be_appended
```

**salt.states.grains.exists(name, delimiter=': ')**

Ensure that a grain is set

- **name**: The grain name
- **delimiter**: A delimiter different from the default can be provided.

Check whether a grain exists. Does not attempt to check or set the value.

```
salt.states.grains.list_absent(name, value, delimiter=': ')
```

Delete a value from a grain formed as a list.

New in version 2014.1.0.

- **name**: The grain name.
- **value**: The value to delete from the grain list.
- **delimiter**: A delimiter different from the default : can be provided.

New in version 2015.8.2.

The grain should be list type

```yaml
roles:
  grains.list_absent:
    - value: db
```

For multiple grains, the syntax looks like:

```yaml
roles:
  grains.list_absent:
    - value:
      - web
      - dev
```

```
salt.states.grains.list_present(name, value, delimiter=': ')
```

New in version 2014.1.0.
Ensure the value is present in the list-type grain. Note: If the grain that is provided in name is not present on
the system, this new grain will be created with the corresponding provided value.

**name**  The grain name.

**value**  The value is present in the list type grain.

**delimiter**  A delimiter different from the default : can be provided.

New in version 2015.8.2.

The grain should be list type

```
grains.list_present:
  - value: web
```

For multiple grains, the syntax looks like:

```
grains.list_present:
  - value:
    - web
    - dev
```

salt.states.grains.make_hashable(list_grain, result=None)

Ensure that a list grain is hashable.

**list_grain**  The list grain that should be hashable

**result**  This function is recursive, so it must be possible to use a sublist as parameter to the function. Should
not be used by a caller outside of the function.

Make it possible to compare two list grains to each other if the list contains complex objects.

salt.states.grains.present(name, value, delimiter=':', force=False)

Ensure that a grain is set

Changed in version 2015.8.2.

**name**  The grain name

**value**  The value to set on the grain

**force**  If force is True, the existing grain will be overwritten regardless of its existing or provided value type.

Defaults to False

New in version 2015.8.2.

**delimiter**  A delimiter different from the default can be provided.

New in version 2015.8.2.

It is now capable to set a grain to a complex value (ie. lists and dicts) and supports nested grains as well.

If the grain does not yet exist, a new grain is set to the given value. For a nested grain, the necessary keys
are created if they don’t exist. If a given key is an existing value, it will be converted, but an existing value
different from the given key will fail the state.

If the grain with the given name exists, its value is updated to the new value unless its existing or provided
value is complex (list or dict). Use force: True to overwrite.
cheese:
  grains.present:
    - value: edam

nested_grain_with_complex_value:
  grains.present:
    - name: icinga:Apache SSL
    - value:
      - command: check_https
      - params: -H localhost -p 443 -S

with,a,custom,delimiter:
  grains.present:
    - value: yay
    - delimiter: ","

23.19.59 salt.states.helm

salt.states.helm.release_absent(name, namespace=None, flags=None, kvflags=None)
Make sure the release name is absent.

    name (string) The release name to uninstall.
    namespace (string) The namespace scope for this request.
    flags (list) Flags in argument of the command without values. ex: ['help', '--help']
    kvflags (dict) Flags in argument of the command with values. ex: {'v': 2, '--v': 4}

Example:

    helm.release_is_absent:
    helm.release_absent:
      - name: release_name

    # In dry-run mode.
    helm.release_is_absent_dry-run:
    helm.release_absent:
      - name: release_name
      - flags:
        - dry-run

salt.states.helm.release_present(name, chart, values=None, version=None, namespace=None, set=None, flags=None, kvflags=None)
Make sure the release name is present.

    name (string) The release name to install.
    chart (string) The chart to install.
    values (string) Absolute path to the values.yaml file.
    version (string) The exact chart version to install. If this is not specified, the latest version is installed.
    namespace (string) The namespace scope for this request.
    set (string or list) Set a values on the command line.
    flags (list) Flags in argument of the command without values. ex: ['help', '--help']
    kvflags (dict) Flags in argument of the command with values. ex: {'v': 2, '--v': 4}
Example:

```yaml
helm_release_is_present:
  helm.release_present:
    - name: release_name
    - chart: repo/chart

# In dry-run mode.
helm_release_is_present_dry-run:
  helm.release_present:
    - name: release_name
    - chart: repo/chart
    - flags:
      - dry-run

# With values.yaml file.
helm_release_is_present_values:
  helm.release_present:
    - name: release_name
    - chart: repo/chart
    - kvflags:
      values: /path/to/values.yaml
```

salt.states.helm.`repo_managed`(name, `present=None`, `absent=None`, `prune=False`, `repo_update=False`, `namespace=None`, `flags=None`, `kvflags=None)

Make sure the repository is updated.

name (string) Not used.

present (list) List of repository to be present. It’s a list of dict: [{'name': 'local_name', 'url': 'repository_url'}]

absent (list) List of local name repository to be absent.

prune (boolean - default: False) If True, all repository already present but not in the present list would be removed.

repo_update (boolean - default: False) If True, the Helm repository is updated after a repository add or remove.

namespace (string) The namespace scope for this request.

flags (list) Flags in argument of the command without values. ex: ['help', '--help']

kvflags (dict) Flags in argument of the command with values. ex: {'v': 2, '--v': 4}

Example:

```yaml
helm.repository_is_managed:
  helm.repo_managed:
    - present:
        - name: local_name_1
        url: repository_url
      - absent:
        - local_name_2
```

salt.states.helm.`repo_updated`(name, `namespace=None`, `flags=None`, `kvflags=None`)

Make sure the repository is updated. To execute after a repository changes.

name (string) Not used.

namespace (string) The namespace scope for this request.

flags (list) Flags in argument of the command without values. ex: ['help', '--help']
**kvflags** (dict) Flags in argument of the command with values. ex: {'v': 2, '--v': 4}

Example:

```
helm_repository_is_updated:
    helm.repo_updated
```

### 23.19.60 salt.states.highstate_doc

To be used with processors in module *highstate_doc*.

**salt.states.highstate_doc.note** *(name, source=None, contents=None, **kwargs)*

Add content to a document generated using *highstate_doc.render*.

This state does not perform any tasks on the host. It only is used in highstate_doc lowstate processors to include extra documents.

```
{{sls}} example note:
    highstate_doc(note):
    - name: example note
    - require_in:
      - pkg: somepackage
    - contents: |
      example `highstate_doc.note`
      ------------------
      This state does not do anything to the system! It is only used by a processor you can use `requisites` and `order` to move your docs around the rendered file.
      .. this message appear above the `pkg: somepackage` state.
    - source: salt://{{tpldir}}/also_include_a_file.md

{{sls}} extra help:
    highstate_doc(note):
    - name: example
    - order: 0
    - source: salt://{{tpldir}}/HELP.md
```

### 23.19.61 salt.states.http

HTTP monitoring states

Perform an HTTP query and statefully return the result

New in version 2015.5.0.

**salt.states.http.query** *(name, match=None, match_type='string', status=None, status_type='string', wait_for=None, **kwargs)*

Perform an HTTP query and statefully return the result.

Passes through all the parameters described in the *utils.http.query* function:

- **name** The name of the query.
- **match** Specifies a pattern to look for in the return text. By default, this will perform a string comparison of looking for the value of match in the return text.
**match_type**  Specifies the type of pattern matching to use on match. Default is `string`, but can also be set to `pcre` to use regular expression matching if a more complex pattern matching is required.

**status**  The status code for a URL for which to be checked. Can be used instead of or in addition to the `match` setting. This can be passed as an individual status code or a list of status codes.

**status_type**  Specifies the type of pattern matching to use for status. Default is `string`, but can also be set to `pcre` to use regular expression matching if a more complex pattern matching is required. Additionally, if a list of strings representing statuses is given, the type `list` can be used.

New in version 3000.

**Note:** Despite the name of `match_type` for this argument, this setting actually uses Python’s `re.search()` function rather than Python’s `re.match()` function.

If both `match` and `status` options are set, both settings will be checked. However, note that if only one option is `True` and the other is `False`, then `False` will be returned. If this case is reached, the comments in the return data will contain troubleshooting information.

For more information about the `http.query` state, refer to the [HTTP Tutorial](#).

```python
query_example:
http.query:
- name: 'http://example.com/
- status: 200

query_example2:
http.query:
- name: 'http://example.com/
- status:
  - 200
  - 201
- status_type: list
```

salt.states.http.wait_for_successful_query(*name, wait_for=300, **kwargs*)

Like query but, repeat and wait until match/match_type or status is fulfilled. State returns result from last query state in case of success or if no successful query was made within `wait_for` timeout.

**name**  The name of the query.

**wait_for**  Total time to wait for requests that succeed.

**request_interval**  Optional interval to delay requests by N seconds to reduce the number of requests sent.

**Note:** All other arguments are passed to the http.query state.
23.19.62  salt.states.idem

Idem Support

This state provides access to idem states

New in version 3002.

```
salt.states.idem.state(name, sls, acct_file=None, acct_key=None, acct_profile=None, cache_dir=None, render=None, runtime=None, source_dir=None, test=False)
```

Execute an idem sls file through a salt state

- **sls** A list of idem sls files or sources
- **acct_file** Path to the acct file used in generating idem ctx parameters. Defaults to the value in the ACCT_FILE environment variable.
- **acct_key** Key used to decrypt the acct file. Defaults to the value in the ACCT_KEY environment variable.
- **acct_profile** Name of the profile to add to idem's ctx.acct parameter. Defaults to the value in the ACCT_PROFILE environment variable.
- **cache_dir** The location to use for the cache directory
- **render** The render pipe to use, this allows for the language to be specified (jinja|yaml)
- **runtime** Select which execution runtime to use (serial|parallel)
- **source_dir** The directory containing sls files

```
cheese:
    idem.state:
      - runtime: parallel
      - sls:
        - idem_state.sls
        - sls_source
```

Maturity  new

Depends  acct, pop, pop-config, idem

Platform  all

23.19.63  salt.states.ifttt

Trigger an event in IFTTT

This state is useful for trigging events in IFTTT.

New in version 2015.8.0.

```
ifttt-event:
  ifttt.trigger_event:
    - event: TestEvent
    - value1: 'This state was executed successfully.'
    - value2: 'Another value we can send.'
    - value3: 'A third value we can send.'
```

The api key can be specified in the master or minion configuration like below:

```
ifttt: secret_key: bzMRb-KKIAaNOwKEEw792J7Eb-B3z7muhdlhYblJn4V6
```
salt.states.ifttt.trigger_event(name, event, value1=None, value2=None, value3=None)

Trigger an event in IFTTT

```py
ifttt_event:
  ifttt.trigger_event:
    - event: TestEvent
    - value1: 'A value that we want to send.'
    - value2: 'A second value that we want to send.'
    - value3: 'A third value that we want to send.'
```

The following parameters are required:

- **name** The unique name for this event.
- **event** The name of the event to trigger in IFTTT.

The following parameters are optional:

- **value1** One of the values that we can send to IFTTT.
- **value2** One of the values that we can send to IFTTT.
- **value3** One of the values that we can send to IFTTT.

### 23.19.64 salt.states.incron

**Management of incron, the inotify cron**

The incron state module allows for user incrontabs to be cleanly managed.

Incron declarations require a number of parameters. The parameters needed to be declared: `path`, `mask`, and `cmd`. The `user` whose incrontab is to be edited also needs to be defined.

When making changes to an existing incron job, the `path` declaration is the unique factor, so if an existing cron that looks like this:

```bash
Watch for modifications in /home/user:
  incron.present:
    - user: root
    - path: /home/user
    - mask: - IN_MODIFY
    - cmd: 'echo "$$ $@"'
```

Is changed to this:

```bash
Watch for modifications and access in /home/user:
  incron.present:
    - user: root
    - path: /home/user
    - mask: - IN_MODIFY
    - cmd: 'echo "$$ $@"'
```

Then the existing cron will be updated, but if the cron command is changed, then a new cron job will be added to the user’s crontab.

New in version 0.17.0.
salt.states.incron.absent(name, path, mask, cmd, user='root')
Verifies that the specified incron job is absent for the specified user; only the name is matched when removing a incron job.

name Unique comment describing the entry
path The path that should be watched
user The name of the user who's crontab needs to be modified, defaults to the root user
mask The mask of events that should be monitored for

salt.states.incron.present(name, path, mask, cmd, user='root')
Verifies that the specified incron job is present for the specified user. For more advanced information about what exactly can be set in the cron timing parameters, check your incron system's documentation. Most Unix-like systems' incron documentation can be found via the incrontab man page: man 5 incrontab.

name Unique comment describing the entry
path The path that should be watched
user The name of the user who's crontab needs to be modified, defaults to the root user
mask The mask of events that should be monitored for

23.19.65 salt.states.influxdb08_database

Management of Influxdb 0.8 databases
(compatible with InfluxDB version 0.5-0.8)
New in version 2014.7.0.

salt.states.influxdb08_database.absent(name, user=None, password=None, host=None, port=None)
Ensure that the named database is absent

name The name of the database to remove
user The user to connect as (must be able to remove the database)
password The password of the user
host The host to connect to
port The port to connect to

salt.states.influxdb08_database.present(name, user=None, password=None, host=None, port=None)
Ensure that the named database is present

name The name of the database to create
user The user to connect as (must be able to remove the database)
password The password of the user
host The host to connect to
port The port to connect to
23.19.66 salt.states.influxdb08_user

Management of InfluxDB 0.8 users

(compatible with InfluxDB version 0.5-0.8)
New in version 2014.7.0.

salt.states.influxdb08_user.absent(name, database=None, user=None, password=None, host=None, port=None)

Ensure that the named cluster admin or database user is absent.

name The name of the user to remove

database The database to remove the user from

user The user to connect as (must be able to remove the user)

password The password of the user

host The host to connect to

port The port to connect to

salt.states.influxdb08_user.present(name, passwd, database=None, user=None, password=None, host=None, port=None)

Ensure that the cluster admin or database user is present.

name The name of the user to manage

passwd The password of the user

database The database to create the user in

user The user to connect as (must be able to create the user)

password The password of the user

host The host to connect to

port The port to connect to

23.19.67 salt.states.influxdb_continuous_query

Management of Influxdb continuous queries

New in version 2017.7.0.

(compatible with InfluxDB version 0.9+)

salt.states.influxdb_continuous_query.absent(name, database, **client_args)

Ensure that given continuous query is absent.

name Name of the continuous query to remove.

database Name of the database that the continuous query was defined on.

salt.states.influxdb_continuous_query.present(name, database, query, resample_time=None, coverage_period=None, **client_args)

Ensure that given continuous query is present.

name Name of the continuous query to create.

database Database to create continuous query on.
query  The query content
resample_time  [None] Duration between continuous query resampling.
coverage_period  [None] Duration specifying time period per sample.

23.19.68  salt.states.influxdb_database

Management of Influxdb databases

(compatible with InfluxDB version 0.9+)

salt.states.influxdb_database.absent(name, **client_args)
   Ensure that given database is absent.
   name  Name of the database to remove.

salt.states.influxdb_database.present(name, **client_args)
   Ensure that given database is present.
   name  Name of the database to create.

23.19.69  salt.states.influxdb_retention_policy

Management of Influxdb retention policies

New in version 2017.7.0.

(compatible with InfluxDB version 0.9+)

salt.states.influxdb_retention_policy.absent(name, database, **client_args)
   Ensure that given retention policy is absent.
   name  Name of the retention policy to remove.
   database  Name of the database that the retention policy was defined on.

salt.states.influxdb_retention_policy.convert_duration(duration)
   Convert the a duration string into XXhYYmZZs format
   duration  Duration to convert

Returns: duration_string  String representation of duration in XXhYYmZZs format

salt.states.influxdb_retention_policy.present(name, database, duration='7d', replication=1, default=False, **client_args)
   Ensure that given retention policy is present.
   name  Name of the retention policy to create.
   database  Database to create retention policy on.
23.19.70  salt.states.influxdb_user

Management of InfluxDB users

(compatible with InfluxDB version 0.9+)

```python
salt.states.influxdb_user.absent(name, **client_args)
   Ensure that given user is absent.
   name The name of the user to manage
```

```python
salt.states.influxdb_user.present(name, passwd, admin=False, grants=None, **client_args)
   Ensure that given user is present.
   name Name of the user to manage
   passwd Password of the user
   admin [False] Whether the user should have cluster administration privileges or not.
   grants Optional - Dict of database:privilege items associated with the user. Example:
      grants: foo_db: read bar_db: all
```

Example:

```python
example user present in influxdb:
influxdb_user.present:
   - name: example
   - passwd: somepassword
   - admin: False
   - grants:
      foo_db: read
      bar_db: all
```

23.19.71  salt.states.infoblox_a

Infoblox A record management.

functions accept api_opts:

api_verifyssl: verify SSL [default to True or pillar value]
api_url: server to connect to [default to pillar value]
api_username: [default to pillar value]
api_password: [default to pillar value]

```python
salt.states.infoblox_a.absent(name=None, ipv4addr=None, **api_opts)
   Ensure infoblox A record is removed.
```

State example:

```python
infoblox_a.absent:
   - name: example-ha-0.domain.com

infoblox_a.absent:
   - name:
   - ipv4addr: 127.0.23.23
```

```python
salt.states.infoblox_a.present(name=None, ipv4addr=None, data=None, ensure_data=True, **api_opts)
   Ensure infoblox A record.
```
When you wish to update a hostname ensure `name` is set to the hostname of the current record. You can give a new name in the `data.name`.

State example:

```yaml
infoblox_a.present:
  - name: example-ha-0.domain.com
  - data:
    name: example-ha-0.domain.com
    ipv4addr: 123.0.31.2
    view: Internal
```

### 23.19.72 salt.states.infoblox_cname

Infoblox CNAME management.

functions accept `api_opts`:

- `api_verifyssl`: verify SSL [default to True or pillar value]
- `api_url`: server to connect to [default to pillar value]
- `api_username`: [default to pillar value]
- `api_password`: [default to pillar value]

`salt.states.infoblox_cname.absent(name=None, canonical=None, **api_opts)`

Ensure the CNAME with the given name or canonical name is removed.

`salt.states.infoblox_cname.present(name=None, data=None, ensure_data=True, **api_opts)`

Ensure the CNAME with the given data is present.

- `name` CNAME of record
- `data` raw CNAME api data see: [https://INFOBLOX/wapidoc](https://INFOBLOX/wapidoc)

State example:

```yaml
infoblox_cname.present:
  - name: example-ha-0.domain.com
  - data:
    name: example-ha-0.domain.com
    canonical: example.domain.com
    zone: example.com
    view: Internal
    comment: Example comment

infoblox_cname.present:
  - name: example-ha-0.domain.com
  - data:
    name: example-ha-0.domain.com
    canonical: example.domain.com
    zone: example.com
    view: Internal
    comment: Example comment
    api_url: https://INFOBLOX/wapi/v1.2.1
    api_username: username
    api_password: passwd
```
23.19.73  salt.states.infoblox_host_record

Infoblox host record management.

functions accept api_opts:

  api_verifyssl: verify SSL [default to True or pillar value]
  api_url: server to connect to [default to pillar value]
  api_username: [default to pillar value]
  api_password: [default to pillar value]

salt.states.infoblox_host_record.absent(name=None, ipv4addr=None, mac=None, **api_opts)

Ensure the host with the given Name ipv4addr or mac is removed.

State example:

```
saltstates_infoblox_host_record.absent:
  - name: hostname.of.record.to.remove
saltstates_infoblox_host_record.absent:
  - name: 
    - ipv4addr: 192.168.0.1
saltstates_infoblox_host_record.absent:
  - name: 
    - mac: 12:02:12:31:23:43
```

salt.states.infoblox_host_record.present(name=None, data=None, ensure_data=True, **api_opts)

This will ensure that a host with the provided name exists. This will try to ensure that the state of the host matches the given data If the host is not found then one will be created.

When trying to update a hostname ensure name is set to the hostname of the current record. You can give a new name in the data.name.

Avoid race conditions, use func:nextavailableip:

- func:nextavailableip:network/ZG54dfgsrDFEFfsfsLzA:10.0.0.0/8/default
- func:nextavailableip:10.0.0.0/8
- func:nextavailableip:10.0.0.0/8,externalconfigure_for_dns
- func:nextavailableip:10.0.3-10.0.0.10

State Example:

```
# this would update 'original_hostname.example.ca' to changed 'data'.

infoblox_host_record.present:
  - name: original_hostname.example.ca
  - data: {'namhostname.example.ca': 'hostname.example.ca',
           'aliases': ['hostname.math.example.ca'],
           'extattrs': [{'Business Contact': {'value': 'EXAMPLE@example.ca'}},
                        {'configure_for_dhcp': True},
                        {'ipv4addr': 'func:nextavailableip:129.97.139.0/24',
                         'ipv4addr': 'func:nextavailableip:129.97.139.0/24',
                         'mac': '00:50:56:84:6e:ae']},
  'ipv6addrs': [],
```
23.19.74 salt.states.infoblox_range

Infoblox host record management.

Functions accept api_opts:

api_verifyssl: verify SSL [default to True or pillar value]
api_url: server to connect to [default to pillar value]
api_username: [default to pillar value]
api_password: [default to pillar value]

salt.states.infoblox_range.absent(name=None, start_addr=None, end_addr=None, data=None, **api_opts)

Ensure the range is removed
Supplying the end of the range is optional.

State example:

```yaml
infoblox_range.absent:
  - name: 'vlan10'

infoblox_range.absent:
  - name: 
  - start_addr: 127.0.1.20

infoblox_range.absent
  ```

salt.states.infoblox_range.present(name=None, start_addr=None, end_addr=None, data=None, **api_opts)

Ensure range record is present.

infoblox_range.present: start_addr: '129.97.150.160', end_addr: '129.97.150.170',

Verbose state example:

```yaml
infoblox_range.present:
  data: {
    'always_update_dns': False,
    'authority': False,
    'comment': 'range of IP addresses used for salt.. was used for ghost images deployment',
    'ddns_generate_hostname': True,
    'deny_all_clients': False,
    'deny_bootp': False,
    'disable': False,
    'email_list': [],
    'enable_ddns': False,
    'enable_dhcp_thresholds': False,
    'enable_email_warnings': False,
    'enable_ifmap_publishing': False,
    'enable_snmp_warnings': False,
    'end_addr': '129.97.150.169',
    'exclude': [],
    'extattrs': {},
    'fingerprint_filter_rules': [],
    'high_water_mark': 95,
    'high_water_mark_reset': 85,
    'ignore_dhcp_option_list_request': False,
    'lease_scavenge_time': -1,
    'logic_filter_rules': [],
    'low_water_mark': 0,
    'low_water_mark_reset': 10,
    'mac_filter_rules': [],
  }
```

(continues on next page)
23.19.75  salt.states.ini_manage

Manage ini files

maintainer  <akilesh1597@gmail.com>
maturity  new
depends  re
platform  all
salt.states.ini_manage.options_absent(name, sections=None, separator='=')

```
/home/saltminion/api-paste.ini:
ini.options_absent:

(continues on next page)```
- separator: '='
- sections:
  test:
    - testkey
    - secondoption
  test1:
    - testkey1

options present in file and not specified in sections dict will be untouched
changes dict will contain the list of changes made

salt.states.ini_manage.options_present(name, sections=None, separator='=', strict=False)

/home/saltminion/api-paste.ini:
in.options_present:
  - separator: '='
  - strict: True
  - sections:
    test:
      testkey: 'testval'
      secondoption: 'secondvalue'
    test1:
      testkey1: 'testval121'

options present in file and not specified in sections dict will be untouched, unless strict: True flag is used
changes dict will contain the list of changes made

salt.states.ini_manage.sections_absent(name, sections=None, separator='=')

/home/saltminion/api-paste.ini:
in.sections_absent:
  - separator: '='
  - sections:
    - test
    - test1

options present in file and not specified in sections will be deleted changes dict will contain the sections that changed

salt.states.ini_manage.sections_present(name, sections=None, separator='=')

/home/saltminion/api-paste.ini:
in.sections_present:
  - separator: '='
  - sections:
    - section_one
    - section_two

This will only create empty sections. To also create options, use options_present state

options present in file and not specified in sections will be deleted changes dict will contain the sections that changed
23.19.76 salt.states.ipmi

Manage IPMI devices over LAN

The following configuration defaults can be defined in the minion, master config or pillar:

```yaml
ipmi.config:
  api_host: 127.0.0.1
  api_user: admin
  api_pass: apassword
  api_port: 623
  api_kg: None
```

Every call can override the config defaults:

```yaml
ensure myipmi system is set to network boot:
  ipmi.boot_device:
    - name: network
    - api_host: myipmi.hostname.com
    - api_user: root
    - api_pass: apassword
    - api_kg: None

ensure myipmi system is powered on:
  ipmi.power:
    - name: boot
    - api_host: myipmi.hostname.com
    - api_user: root
    - api_pass: apassword
```

`salt.states.ipmi.boot_device(name='default', **kwargs)
``
Request power state change

   name = default

   • network -- Request network boot
   • hd -- Boot from hard drive
   • safe -- Boot from hard drive, requesting 'safe mode'
   • optical -- boot from CD/DVD/BD drive
   • setup -- Boot into setup utility
   • default -- remove any IPMI directed boot device request

`kwargs`

   • api_host=localhost
   • api_user=admin
   • api_pass=
   • api_port=623
   • api_kg= None

`salt.states.ipmi.power(name='power_on', wait=300, **kwargs)
``
Request power state change

   name
Ensure power state one of:

- power_on -- system turn on
- power_off -- system turn off (without waiting for OS)
- shutdown -- request OS proper shutdown
- reset -- reset (without waiting for OS)
- boot -- If system is off, then 'on', else 'reset'

wait wait X seconds for the job to complete before forcing. (defaults to 300 seconds)

kwargs

- api_host=localhost
- api_user=admin
- api_pass=
- api_port=623
- api_kg=None

salt.states.ipmi.user_absent(name, channel=14, **kwargs)

Remove user Delete all user (uid) records having the matching name.

name string name of user to delete

channel channel to remove user access from defaults to 14 for auto.

kwargs

- api_host=localhost
- api_user=admin
- api_pass=
- api_port=623
- api_kg=None

salt.states.ipmi.user_present(name, uid, password, channel=14, callback=False, link_auth=True, ipmi_msg=True, privilege_level='administrator', **kwargs)

Ensure IPMI user and user privileges.

name name of user (limit 16 bytes)

uid user id number (1 to 7)

password user password (limit 16 bytes)

channel ipmi channel defaults to 14 for auto

callback User Restricted to Callback

False = User Privilege Limit is determined by the User Privilege Limit parameter privilege_level, for both callback and non-callback connections.

True = User Privilege Limit is determined by the privilege_level parameter for callback connections, but is restricted to Callback level for non-callback connections. Thus, a user can only initiate a Callback when they 'call in' to the BMC, but once the callback connection has been made, the user could potentially establish a session as an Operator.
**link_auth** User Link authentication True/False user name and password information will be used for link authentication, e.g. PPP CHAP) for the given channel. Link authentication itself is a global setting for the channel and is enabled/disabled via the serial/modem configuration parameters.

**ipmi_msg** User IPMI Messaging True/False user name and password information will be used for IPMI Messaging. In this case, 'IPMI Messaging' refers to the ability to execute generic IPMI commands that are not associated with a particular payload type. For example, if IPMI Messaging is disabled for a user, but that user is enabled for activating the SOL payload type, then IPMI commands associated with SOL and session management, such as Get SOL Configuration Parameters and Close Session are available, but generic IPMI commands such as Get SEL Time are unavailable.) ipmi_msg

**privilege_level**
- callback
- user
- operator
- administrator
- proprietary
- no_access

**kwargs**
- api_host=localhost
- api_user=admin
- api_pass=
- api_port=623
- api_kg=None

### 23.19.77 salt.states.ipset

**Management of ipsets**

This is an ipset-specific module designed to manage IPSets for use in IPTables Firewalls.

```
setname:
    ipset.set_present:
        - set_type: bitmap:ip
        - range: 192.168.0.0/16
        - comment: True

setname:
    ipset.set_absent:
        - set_type: bitmap:ip
        - range: 192.168.0.0/16
        - comment: True

setname_entries:
    ipset.present:
        - set_name: setname
        - entry: 192.168.0.3
        - comment: Hello
        - require:
```

(continues on next page)
- **ipset**: baz

```
setname_entries:
ipset.present:
  - **set_name**: setname
  - **entry**:
    - 192.168.0.3
    - 192.168.1.3
  - **comment**: Hello
  - **require**:
    - **ipset**: baz

setname_entries:
ipset.absent:
  - **set_name**: setname
  - **entry**:
    - 192.168.0.3
    - 192.168.1.3
  - **comment**: Hello
  - **require**:
    - **ipset**: baz
```

**salt.states.ipset.absent**(name, entry=None, entries=None, family='ipv4', **kwargs)

New in version 2014.7.0.

Remove a entry or entries from a chain

- **name** A user-defined name to call this entry by in another part of a state or formula. This should not be an actual entry.
- **family** Network family, ipv4 or ipv6.

**salt.states.ipset.flush**(name, family='ipv4', **kwargs)

New in version 2014.7.0.

Flush current ipset set

- **family** Networking family, either ipv4 or ipv6

**salt.states.ipset.present**(name, entry=None, family='ipv4', **kwargs)

New in version 2014.7.0.

Append a entry to a set

- **name** A user-defined name to call this entry by in another part of a state or formula. This should not be an actual entry.
- **entry** A single entry to add to a set or a list of entries to add to a set
- **family** Network family, ipv4 or ipv6.

**salt.states.ipset.set_absent**(name, family='ipv4', **kwargs)

New in version 2014.7.0.

Verify the set is absent.

- **family** Networking family, either ipv4 or ipv6
salt.states.ipset.set_present(name, set_type, family='ipv4', **kwargs)

New in version 2014.7.0.

Verify the set exists.

name A user-defined set name.

set_type The type for the set.

family Networking family, either ipv4 or ipv6

23.19.78 salt.states.jboss7

Manage JBoss 7 Application Server via CLI interface
New in version 2015.5.0.

This state uses the jboss-cli.sh script from a JBoss or Wildfly installation and parses its output to determine the execution result.

In order to run each state, a jboss_config dictionary with the following properties must be passed:

```
jboss:
  cli_path: '/opt/jboss/jboss-7.0/bin/jboss-cli.sh'
  controller: 10.11.12.13:9999
  cli_user: 'jbossadm'
  cli_password: 'jbossadm'
```

If the controller doesn't require a password, then the cli_user and cli_password parameters are optional.

Since same dictionary with configuration will be used in all the states, it may be more convenient to move JBoss configuration and other properties to the pillar.

Example of application deployment from local filesystem:

```
application_deployed:
  jboss7.deployed:
  - salt_source:
      target_file: '/tmp/webapp.war'
  - jboss_config: {{ pillar['jboss'] }}
```

For the sake of brevity, examples for each state assume that jboss_config is contained in the pillar.

salt.states.jboss7.bindings_exist(name, jboss_config, bindings, profile=None)

Ensures that given JNDI binding are present on the server. If a binding doesn't exist on the server it will be created. If it already exists its value will be changed.

jboss_config: Dict with connection properties (see state description)

bindings: Dict with bindings to set.

profile: The profile name (domain mode only)

Example:

```
jndi_entries_created:
  jboss7.bindings_exist:
  - bindings:
      'java:global/sampleapp/environment': 'DEV'
      'java:global/sampleapp/configurationFile': '/var/opt/sampleapp/config.
    properties'
  - jboss_config: {{ pillar['jboss'] }}
```
salt.states.jboss7.datasource_exists(name, jboss_config, datasource_properties, recreate=False, profile=None)

Ensures that a datasource with given properties exist on the jboss instance. If datasource doesn’t exist, it is created, otherwise only the properties that are different will be updated.

name  Datasource property name
jboss_config  Dict with connection properties (see state description)
datasource_properties  Dict with datasource properties
recreate  [False] If set to True and datasource exists it will be removed and created again. However, if there are deployments that depend on the datasource, it will not me possible to remove it.
profile  [None] The profile name for this datasource (domain mode only)

Example:

```yaml
sampleDS:
  jboss7.datasource_exists:
    - recreate: False
    - datasource_properties:
      driver-name: mysql
      connection-url: 'jdbc:mysql://localhost:3306/sampleDatabase'
      jndi-name: 'java:jboss/datasources/sampleDS'
      user-name: sampleuser
      password: secret
      min-pool-size: 3
      use-java-context: True
    - jboss_config: {{ pillar['jboss'] }}
    - profile: full-ha
```

salt.states.jboss7.deployed(name, jboss_config, salt_source=None)

Ensures that the given application is deployed on server.

jboss_config: Dict with connection properties (see state description)
salt_source:

How to find the artifact to be deployed.

target_file: Where to look in the minion's file system for the artifact to be deployed (e.g. '/tmp/application-web-0.39.war'). When source is specified, also specifies where to save the retrieved file.
source: (optional) File on salt master (e.g. salt://application-web-0.39.war). If absent, no files will be retrieved and the artifact in target_file will be used for the deployment.
undeploy: (optional) Regular expression to match against existing deployments. When present, if there is a deployment that matches the regular expression, it will be undeployed before the new artifact is deployed.
undeploy_force: (optional) If True, the artifact will be undeployed although it has not changed.

Examples:

Deployment of a file from minion's local file system:

```yaml
application_deployed:
  jboss7.deployed:
    - salt_source:
      target_file: '/tmp/webapp.war'
    - jboss_config: {{ pillar['jboss'] }}
```
It is assumed that /tmp/webapp.war was made available by some other means. No applications will be undeployed; if an existing deployment that shares that name exists, then it will be replaced with the updated version.

Deployment of a file from the Salt master's file system:

```
application_deployed:
jboss7.deployed:
  salt_source:
    source: salt://application-web-0.39.war
    target_file: '/tmp/application-web-0.39.war'
    undeploy: 'application-web-.*'
  jboss_config: {{ pillar['jboss'] }}
```

Here, application-web-0.39.war file is downloaded from Salt file system to /tmp/application-web-0.39.war file on minion. Existing deployments are checked if any of them matches 'application-web-.*' regular expression, and if so then it is undeployed before deploying the application. This is useful to automate deployment of new application versions.

If the source parameter of salt_source is specified, it can use any protocol that the file states use. This includes not only downloading from the master but also HTTP, HTTPS, FTP, Amazon S3, and OpenStack Swift.

`salt.states.jboss7.reloaded(name, jboss_config, timeout=60, interval=5)`

Reloads configuration of jboss server.

- **jboss_config**: Dict with connection properties (see state description)
- **timeout**: Time to wait until jboss is back in running state. Default timeout is 60s.
- **interval**: Interval between state checks. Default interval is 5s. Decreasing the interval may slightly decrease waiting time but be aware that every status check is a call to jboss-cli which is a java process. If interval is smaller than process cleanup time it may easily lead to excessive resource consumption.

This step performs the following operations:
- Ensures that server is in running or reload-required state (by reading server-state attribute)
- Reloads configuration
- Waits for server to reload and be in running state

Example:

```
configuration_reloaded:
jboss7.reloaded:
  jboss_config: {{ pillar['jboss'] }}
```

23.19.79  `salt.states.junos`

State modules to interact with Junos devices.

- **maturity**: new
- **dependencies**: junos-eznc, jxmlease

Note: Those who wish to use junos-eznc (PyEZ) version >= 2.1.0, must use the latest salt code from github until the next release.

Refer to `junos` for information on connecting to junos proxy.
salt.states.junos.cli(name, **kwargs)
Executes the CLI commands and returns the text output.

```python
show version:
junos.cli:
  - format: xml

get software version of device:
junos.cli:
  - name: show version
  - format: text
  - dest: /home/user/show_version.log
```

Parameters

- **Required** --
  - name: The command that need to be executed on Junos CLI (default = None)

- **Optional** --
  - kwargs: Keyworded arguments which can be provided like-
    - format: Format in which to get the CLI output. (text or xml, default = 'text')
    - timeout: Set NETCONF RPC timeout. Can be used for commands which take a while to execute. (default = 30 seconds)
    - dest: The destination file where the CLI output can be stored. (default = None)

salt.states.junos.commit(name, **kwargs)
Commits the changes loaded into the candidate configuration.

```python
commit the changes:
junos.commit:
  - confirm: 10
```

Parameters **Optional** --

- kwargs: Keyworded arguments which can be provided like-
  - timeout: Set NETCONF RPC timeout. Can be used for commands which take a while to execute. (default = 30 seconds)
  - comment: Provide a comment to the commit. (default = None)
  - confirm: Provide time in minutes for commit confirmation. If this option is specified, the commit will be rollbacked in the given time unless the commit is confirmed.
  - sync: On dual control plane systems, requests that the candidate configuration on one control plane be copied to the other control plane, checked for correct syntax, and committed on both Routing Engines. (default = False)
  - force_sync: On dual control plane systems, force the candidate configuration on one control plane to be copied to the other control plane.
  - full: When set to True requires all the daemons to check and evaluate the new configuration.
  - detail: When true return commit detail.
salt.states.junos.commit_check(name)
Perform a commit check on the configuration.

```python
perform commit check:
    junos.commit_check
```

salt.states.junos.diff(name, d_id=0, **kwargs)
Changed in version 3001.

Gets the difference between the candidate and the current configuration.

```python
get the diff:
    junos.diff:
        - d_id: 10
```

Parameters Optional --
- d_id: The rollback diff id (d_id) value [0-49]. (default = 0)

salt.states.junos.file_copy(name, dest=None, **kwargs)
Copies the file from the local device to the junos device.

```python
/home/m2/info.txt:
    junos.file_copy:
        - dest: info_copy.txt
```

Parameters Required --
- name: The source path where the file is kept.
- dest: The destination path where the file will be copied.

salt.states.junos.get_table(name, table, table_file, **kwargs)
New in version 3001.

Retrieve data from a Junos device using Tables/Views

```python
get route details:
    junos.get_table:
        - table: RouteTable
        - table_file: routes.yml

get interface details:
    junos.get_table:
        - table: EthPortTable
        - table_file: ethport.yml
        - table_args:
            interface_name: ge-0/0/0
```

name (required) task definition
table (required) Name of PyEZ Table
file YAML file that has the table specified in table parameter
path: Path of location of the YAML file. defaults to op directory in jnpr.junos.op
target: if command need to run on FPC, can specify fpc target
key: To overwrite key provided in YAML
key_items: To select only given key items
filters: To select only filter for the dictionary from columns
template_args: key/value pair which should render Jinja template command

**salt.states.junos**.install_config(name, **kwargs)

Loads and commits the configuration provided.

```python
Install the mentioned config:
    junos.install_config:
        - name: salt://configs/interface.set
        - timeout: 100
        - diffs_file: '/var/log/diff'
```

```python
Install the mentioned config:
    junos.install_config:
        - path: salt://configs/interface.set
        - timeout: 100
        - template_vars:
            interface_name: lo0
            description: Creating interface via SaltStack.
```

name Path where the configuration/template file is present. If the file has a *.conf extension, the content is treated as text format. If the file has a *.xml extension, the content is treated as XML format. If the file has a *.set extension, the content is treated as Junos OS set commands

template_vars The dictionary of data for the jinja variables present in the jinja template

timeout [30] Set NETCONF RPC timeout. Can be used for commands which take a while to execute.
overwrite [False] Set to True if you want this file is to completely replace the configuration file. Sets action to override

Note: This option cannot be used if format is "set".

merge [False] If set to True will set the load-config action to merge. the default load-config action is 'replace' for xml/json/text config

confirm Provide a comment to the commit. (default = None)

Note: The file will be stored on the proxy minion. To push the files to the master use cp.push.

**salt.states.junos**.install_os(name, **kwargs)

Installs the given image on the device. After the installation is complete the device is rebooted, if reboot=True is given as a keyworded argument.

```python
salt://images/junos_image.tgz:
    junos.install_os:
```

(continues on next page)
Parameters

- **Required**
  - name: Path where the image file is present on the proxy minion.

- **Optional**
  - kwargs: keyworded arguments to be given such as timeout, reboot etc
    - timeout: Set NETCONF RPC timeout. Can be used to RPCs which take a while to execute. (default = 30 seconds)
    - reboot: Whether to reboot after installation (default = False)
    - no_copy: When True the software package will not be SCP’d to the device. (default = False)

```
salt.states.junos.load(name, **kwargs)
```

Loads the configuration provided onto the junos device.

**Install the mentioned config:**

```
junos.load:
  - name: salt://configs/interface.set
```

**Install the mentioned config:**

```
junos.load:
  - name: salt://configs/interface.set
  - template_vars:
    - interface_name: lo0
    - description: Creating interface via SaltStack.
```

Sample template:

```
set interfaces {{ interface_name }} unit 0
```

**name** Path where the configuration/template file is present. If the file has a *conf extension, the content is treated as text format. If the file has a *xml extension, the content is treated as XML format. If the file has a *set extension, the content is treated as Junos OS set commands.

**overwrite** [False] Set to True if you want this file is to completely replace the configuration file.

**Note:** This option cannot be used if format is "set".

**merge** [False] If set to True will set the load-config action to merge. the default load-config action is 'replace' for xml/json/text config

**update** [False] Compare a complete loaded configuration against the candidate configuration. For each hierarchy level or configuration object that is different in the two configurations, the version in the loaded configuration replaces the version in the candidate configuration. When the configuration is later committed, only system processes that are affected by the changed configuration elements parse the new configuration. This action is supported from PyEZ 2.1 (default = False)
**template_vars** Variables to be passed into the template processing engine in addition to those present in __pillar__, __opts__, __grains__, etc. You may reference these variables in your template like so: {{ template_vars["var_name"] }}

salt.states.junos.lock(name)
Attempts an exclusive lock on the candidate configuration. This is a non-blocking call.

**Note:** Any user who wishes to use lock, must necessarily unlock the configuration too. Ensure `unlock` is called in the same orchestration run in which the lock is called.

```
lock the config:
  junos.lock
```

salt.states.junos.resultdecorator(function)

salt.states.junos.rollback(name, d_id, **kwargs)
Rollbacks the committed changes.

```
rollback the changes:
  junos.rollback:
    - id: 5
```

Parameters **Optional** --

- id:
- d_id: The rollback id value [0-49]. (default = 0) (this variable cannot be named id, it conflicts with the state compiler's internal id)
- kwargs: Keyworded arguments which can be provided like-
  - timeout: Set NETCONF RPC timeout. Can be used for commands which take a while to execute. (default = 30 seconds)
  - comment: Provide a comment to the commit. (default = None)
  - confirm: Provide time in minutes for commit confirmation. If this option is specified, the commit will be rollbacked in the given time unless the commit is confirmed.
  - diffs_file: Path to the file where any diffs will be written. (default = None)

salt.states.junos.rpc(name, dest=None, format='xml', args=None, **kwargs)
Executes the given rpc. The returned data can be stored in a file by specifying the destination path with dest as an argument

```
get-interface-information:
  junos.rpc:
    - dest: /home/user/rpc.log
    - interface_name: lo0

get interface information with terse:
  junos.rpc:
    - name: get-interface-information
    - terse: True
```

Parameters
• **Required**
  - name: The rpc to be executed. (default = None)

• **Optional**
  - dest: Destination file where the rpc output is stored. (default = None) Note that the file will be stored on the proxy minion. To push the files to the master use the salt's following execution module: \texttt{cp.push}
  - format: The format in which the rpc reply must be stored in file specified in the dest (used only when dest is specified) (default = xml)
  - kwargs: Keyworded arguments taken by rpc call like-
    - timeout: 30 Set NETCONF RPC timeout. Can be used for commands which take a while to execute. (default= 30 seconds)
    - filter: Only to be used with 'get-config' rpc to get specific configuration.
    - terse: Amount of information you want.
    - interface_name: Name of the interface whose information you want.

\texttt{salt.states.junos.set_hostname(name, **kwargs)}
Changes the hostname of the device.

```python
device_name:
junos.set_hostname:
  - comment: "Host-name set via saltstack."
```

**Parameters**

• **Required**
  - name: The name to be set. (default = None)

• **Optional**
  - kwargs: Keyworded arguments which can be provided like-
    - timeout: Set NETCONF RPC timeout. Can be used for commands which take a while to execute. (default = 30 seconds)
    - comment: Provide a comment to the commit. (default = None)
    - confirm: Provide time in minutes for commit confirmation. If this option is specified, the commit will be rollbacked in the given time unless the commit is confirmed.

\texttt{salt.states.junos.shutdown(name, **kwargs)}
Shuts down the device.

```python
shut the device:
  junos.shutdown:
    - in_min: 10
```

**Parameters**

**Optional**

• kwargs:
  - reboot: Whether to reboot instead of shutdown. (default=False)
- **at**: Specify time for reboot. (To be used only if reboot=yes)
- **in_min**: Specify delay in minutes for shutdown

**salt.states.junos.unlock**(*name*)

Unlocks the candidate configuration.

```python
unlock the config:
    junos.unlock
```

**salt.states.junos.zeroize**(*name*)

Resets the device to default factory settings.

```python
reset my device:
    junos.zeroize
```

**name**: can be anything

---

### 23.19.80 salt.states.kernelpkg

Manage kernel packages and active kernel version

Example state to install the latest kernel from package repositories:

```python
install-latest-kernel:
    kernelpkg.latest_installed: []
```

Example state to boot the system if a new kernel has been installed:

```python
boot-latest-kernel:
    kernelpkg.latest_active:
        - at_time: 1
```

Example state chaining the install and reboot operations:

```python
install-latest-kernel:
    kernelpkg.latest_installed: []

boot-latest-kernel:
    kernelpkg.latest_active:
        - at_time: 1
        - onchanges:
            - kernelpkg: install-latest-kernel
```

Chaining can also be achieved using wait/listen requisites:

```python
install-latest-kernel:
    kernelpkg.latest_installed: []

boot-latest-kernel:
    kernelpkg.latest_wait:
        - at_time: 1
        - listen:
            - kernelpkg: install-latest-kernel
```

**salt.states.kernelpkg.latest_active**(*name*, **at_time=None, **kwargs)

Initiate a reboot if the running kernel is not the latest one installed.
Note: This state does not install any patches. It only compares the running kernel version number to other kernel versions also installed in the system. If the running version is not the latest one installed, this state will reboot the system.

See `kernelpkg.upgrade` and `latest_installed()` for ways to install new kernel packages.

This module does not attempt to understand or manage boot loader configurations it is possible to have a new kernel installed, but a boot loader configuration that will never activate it. For this reason, it would not be advisable to schedule this state to run automatically.

Because this state function may cause the system to reboot, it may be preferable to move it to the very end of the state run. See `latest_wait()` for a waitable state that can be called with the `listen` requisite.

**name**  Arbitrary name for the state. Does not affect behavior.

**at_time**  The wait time in minutes before the system will be rebooted.

```python
salt.states.kernelpkg.latest_installed(name, **kwargs)
```

Ensure that the latest version of the kernel available in the repositories is installed.

Note: This state only installs the kernel, but does not activate it. The new kernel should become active at the next reboot. See `kernelpkg.needs_reboot` for details on how to detect this condition, and `latest_active()` to initialize a reboot when needed.

**name**  Arbitrary name for the state. Does not affect behavior.

```python
salt.states.kernelpkg.latest_wait(name, at_time=None, **kwargs)
```

Initiate a reboot if the running kernel is not the latest one installed. This is the waitable version of `latest_active()` and will not take any action unless triggered by a watch or listen requisite.

Note: Because this state function may cause the system to reboot, it may be preferable to move it to the very end of the state run using `listen` or `listen_in` requisites.

```python
system-up-to-date:
  pkg.uptodate:
    - refresh: true

boot-latest-kernel:
  kernelpkg.latest_wait:
    - at_time: 1
    - listen:
      - pkg: system-up-to-date
```

**name**  Arbitrary name for the state. Does not affect behavior.

**at_time**  The wait time in minutes before the system will be rebooted.

```python
salt.states.kernelpkg.mod_watch(name, sfun, **kwargs)
```

Execute a kernelpkg state based on a watch or listen call.
### 23.19.81 salt.states.keyboard

**Management of keyboard layouts**

The keyboard layout can be managed for the system:

```
us:
  keyboard.system
```

Or it can be managed for XOrg:

```
us:
  keyboard.xorg
```

**salt.states.keyboard.system(name)**

Set the keyboard layout for the system

- **name** The keyboard layout to use

**salt.states.keyboard.xorg(name)**

Set the keyboard layout for XOrg

- **layout** The keyboard layout to use

### 23.19.82 salt.states.keystone

**Management of Keystone users**

**depends**

- keystoneclient Python module

**configuration** See `salt.modules.keystone` for setup instructions.

```
Keystone tenants:
  keystone.tenant_present:
    - names:
      - admin
      - demo
      - service

Keystone roles:
  keystone.role_present:
    - names:
      - admin
      - Member

admin:
  keystone.user_present:
    - password: R00T_4CC3SS
    - email: admin@domain.com
    - roles:
      admin: # tenants
      - admin  # roles
      service:
      - admin
      - Member
```

(continues on next page)
- require:
  - keystone: Keystone tenants
  - keystone: Keystone roles

nova:
  keystone.user_present:
    - password: '$up3rn0v4'
    - email: nova@domain.com
    - tenant: service
    - roles:
      - service:
        - admin
    - require:
      - keystone: Keystone tenants
      - keystone: Keystone roles

demo:
  keystone.user_present:
    - password: 'd3m0n$trati0n'
    - email: demo@domain.com
    - tenant: demo
    - roles:
      - demo:
        - Member
    - require:
      - keystone: Keystone tenants
      - keystone: Keystone roles

nova service:
  keystone.service_present:
    - name: nova
    - service_type: compute
    - description: OpenStack Compute Service

salt.states.keystone.endpoint_absent(name, region=None, profile=None, interface=None, **connection_args)

Ensure that the endpoint for a service doesn't exist in Keystone catalog

name The name of the service whose endpoints should not exist
region (optional) The region of the endpoint. Defaults to RegionOne.
interface The interface type, which describes the visibility of the endpoint. (for V3 API)

salt.states.keystone.endpoint_present(name, publicurl=None, internalurl=None, adminurl=None, region=None, profile=None, url=None, interface=None, **connection_args)

Ensure the specified endpoints exists for service

name The Service name
publicurl The public url of service endpoint (for V2 API)
internalurl The internal url of service endpoint (for V2 API)
adminurl The admin url of the service endpoint (for V2 API)
region The region of the endpoint
url The endpoint URL (for V3 API)
interface  The interface type, which describes the visibility of the endpoint. (for V3 API)

salt.states.keystone.project_absent(name, profile=None, **connection_args)
Ensure that the keystone project is absent. Alias for tenant_absent from V2 API to fulfill V3 API naming
convention.
New in version 2016.11.0.

name  The name of the project that should not exist

default_nova:
    keystone.project_absent:
      - name: nova

salt.states.keystone.project_present(name, description=None, enabled=True, profile=None, **connection_args)
Ensures that the keystone project exists Alias for tenant_present from V2 API to fulfill V3 API naming con-
vention.
New in version 2016.11.0.

name  The name of the project to manage

description  The description to use for this project

enabled  Availability state for this project

default:
    keystone.project_present:
      - enabled: True
      - description: 'Nova Compute Service'

salt.states.keystone.role_absent(name, profile=None, **connection_args)
Ensure that the keystone role is absent.

name  The name of the role that should not exist

salt.states.keystone.role_present(name, profile=None, **connection_args)
' Ensures that the keystone role exists

name  The name of the role that should be present

salt.states.keystone.service_absent(name, profile=None, **connection_args)
Ensure that the service doesn't exist in Keystone catalog

name  The name of the service that should not exist

salt.states.keystone.service_present(name, service_type, description=None, profile=None, **connection_args)
Ensure service present in Keystone catalog

name  The name of the service

service_type  The type of Openstack Service

description  (optional)  Description of the service

salt.states.keystone.tenant_absent(name, profile=None, **connection_args)
Ensure that the keystone tenant is absent.

name  The name of the tenant that should not exist

salt.states.keystone.tenant_present(name, description=None, enabled=True, profile=None, **connection_args)
Ensures that the keystone tenant exists
name The name of the tenant to manage

description The description to use for this tenant

enabled Availability state for this tenant

```
salt.states.keystone.user_absent(name, profile=None, **connection_args)
```
Ensure that the keystone user is absent.

name The name of the user that should not exist

```
salt.states.keystone.user_present(name, password, email, tenant=None, enabled=True, roles=None, profile=None, password_reset=True, project=None, **connection_args)
```
Ensure that the keystone user is present with the specified properties.

name The name of the user to manage

password The password to use for this user.

**Note:** If the user already exists and a different password was set for the user than the one specified here, the password for the user will be updated. Please set the `password_reset` option to `False` if this is not the desired behavior.

password_reset Whether or not to reset password after initial set. Defaults to `True`.

email The email address for this user

tenant The tenant (name) for this user

project The project (name) for this user (overrides tenant in api v3)

enabled Availability state for this user

roles The roles the user should have under given tenants. Passed as a dictionary mapping tenant names to a list of roles in this tenant, i.e.:

```
roles:
  admin:    # tenant
    - admin  # role
  service:
    - admin
    - Member
```

23.19.83 salt.states.keystone_domain

Management of OpenStack Keystone Domains

New in version 2018.3.0.

depends shade

configuration see `salt.modules.keystoneng` for setup instructions

Example States

```
create domain:
  keystone_domain.present:
    - name: domain1
```

(continues on next page)
create domain with optional params:
keystone_domain.present:
  - name: domain1
  - enabled: False
  - description: 'my domain'

delete domain:
keystone_domain.absent:
  - name: domain1

salt.states.keystone_domain.absent(name, auth=None)
   Ensure domain does not exist
    name  Name of the domain

salt.states.keystone_domain.present(name, auth=None, **kwargs)
   Ensure domain exists and is up-to-date
    name  Name of the domain
     enabled  Boolean to control if domain is enabled
      description  An arbitrary description of the domain

23.19.84  salt.states.keystone_endpoint

Management of OpenStack Keystone Endpoints

New in version 2018.3.0.

depends  shade

configuration  see salt.modules.keystoneng for setup instructions

Example States

create endpoint:
keystone_endpoint.present:
  - name: public
  - url: https://example.org:9292
  - region: RegionOne
  - service_name: glance

destroy endpoint:
keystone_endpoint.absent:
  - name: public
  - url: https://example.org:9292
  - region: RegionOne
  - service_name: glance

create multiple endpoints:
keystone_endpoint.absent:
  - names:
    - public
    - admin
    - internal
    - url: https://example.org:9292

(continues on next page)
- region: RegionOne
  - service_name: glance

salt.states.keystone_endpoint.absent(name, service_name, auth=None, **kwargs)
Ensure an endpoint does not exists

  name  Interface name
  url  URL of the endpoint
  service_name  Service name or ID
  region  The region name to assign the endpoint

salt.states.keystone_endpoint.present(name, service_name, auth=None, **kwargs)
Ensure an endpoint exists and is up-to-date

  name  Interface name
  url  URL of the endpoint
  service_name  Service name or ID
  region  The region name to assign the endpoint
  enabled  Boolean to control if endpoint is enabled

23.19.85  salt.states.keystone_group

Management of OpenStack Keystone Groups

New in version 2018.3.0.

  depends  shade
  configuration  see salt.modules.keystoneng for setup instructions

Example States

create group:
  keystone_group.present:
    - name: group1

delete group:
  keystone_group.absent:
    - name: group1

create group with optional params:
  keystone_group.present:
    - name: group1
    - domain: domain1
    - description: 'my group'

salt.states.keystone_group.absent(name, auth=None, **kwargs)
Ensure group does not exist

  name  Name of the group
  domain  The name or id of the domain
salt.states.keystone_group.present(name, auth=None, **kwargs)
   Ensure an group exists and is up-to-date
   name  Name of the group
   domain The name or id of the domain
   description An arbitrary description of the group

23.19.86 salt.states.keystone_project

Management of OpenStack Keystone Projects

New in version 2018.3.0.
   depends  shade
   configuration see salt.modules.keystoneng for setup instructions

Example States

```
create project:
   keystone_project.present:
      - name: project1

delete project:
   keystone_project.absent:
      - name: project1

create project with optional params:
   keystone_project.present:
      - name: project1
      - domain: domain1
      - enabled: False
      - description: 'my project'
```

salt.states.keystone_project.absent(name, auth=None, **kwargs)
   Ensure a project does not exists
   name  Name of the project
   domain The name or id of the domain

salt.states.keystone_project.present(name, auth=None, **kwargs)
   Ensure a project exists and is up-to-date
   name  Name of the project
   domain The name or id of the domain
   description An arbitrary description of the project
23.19.87 salt.states.keystone_role

Management of OpenStack Keystone Roles

New in version 2018.3.0.

depends shade

configuration see salt.modules.keystoneng for setup instructions

Example States

```yaml
create role:
  keystone_role.present:
    - name: role1

delete role:
  keystone_role.absent:
    - name: role1

create role with optional params:
  keystone_role.present:
    - name: role1
      description: 'my group'
```

salt.states.keystone_role.absent(name, auth=None, **kwargs)
Ensure role does not exist

  name Name of the role

salt.states.keystone_role.present(name, auth=None, **kwargs)
Ensure an role exists

  name Name of the role
  description An arbitrary description of the role

23.19.88 salt.states.keystone_role_grant

Management of OpenStack Keystone Role Grants

New in version 2018.3.0.

depends shade

configuration see salt.modules.keystoneng for setup instructions

Example States

```yaml
create group:
  keystone_group.present:
    - name: group1

delete group:
  keystone_group.absent:
    - name: group1

create group with optional params:
  keystone_group.present:
```

(continues on next page)
- name: group1
- domain: domain1
- description: 'my group'

salt.states.keystone_role_grant.absent(name, auth=None, ""kwargs)
salt.states.keystone_role_grant.present(name, auth=None, ""kwargs)

23.19.89 salt.states.keystone_service

Management of OpenStack Keystone Services

New in version 2018.3.0.

depends shade

configuration see salt.modules.keystoneng for setup instructions

Example States

create service:
  keystone_service.present:
    - name: glance
    - type: image

delete service:
  keystone_service.absent:
    - name: glance

create service with optional params:
  keystone_service.present:
    - name: glance
    - type: image
    - enabled: False
    - description: 'OpenStack Image'

salt.states.keystone_service.absent(name, auth=None)
   Ensure service does not exist

  name  Name of the service

salt.states.keystone_service.present(name, auth=None, ""kwargs)
   Ensure an service exists and is up-to-date

  name  Name of the service

  type  Service type

  enabled  Boolean to control if service is enabled

  description  An arbitrary description of the service
23.19.90  salt.states.keystone_user

Management of OpenStack Keystone Users

New in version 2018.3.0.

depends  shade

configuration  see salt.modules.keystoneng for setup instructions

Example States

```
create user:
    keystone_user.present:
        - name: user1

delete user:
    keystone_user.absent:
        - name: user1

create user with optional params:
    keystone_user.present:
        - name: user1
        - domain: domain1
        - enabled: False
        - password: password123
        - email: "user1@example.org"
        - description: 'my user'
```

salt.states.keystone_user.absent(name, auth=None, **kwargs)

Ensure user does not exists

name  Name of the user

domain  The name or id of the domain

salt.states.keystone_user.present(name, auth=None, **kwargs)

Ensure domain exists and is up-to-date

name  Name of the domain

domain  The name or id of the domain

enabled  Boolean to control if domain is enabled

description  An arbitrary description of the domain

password  The user password

e-mail  The users email address
23.19.91 salt.states.keystore

State management of a java keystore

```
salt.states.keystore.managed(name, passphrase, entries, force_remove=False)
```

- **name** The path to the keystore file
- **passphrase** The password to the keystore
- **entries** A list containing an alias, certificate, and optional private_key. The certificate and private_key can be a file or a string

```
- entries:
  - alias: hostname2
    certificate: /path/to/cert.crt
    private_key: /path/to/key.key
  - alias: stringhost
    certificate: |
    ------BEGIN CERTIFICATE-----
    MIICejCCAXsCAg36MA0GCSqGSIb3DQEBBQUAMIGbMQswCQYDVQQGEwJKUDEOMAwG...
    2VuKv4SwjFRorK1fILHx0qVviMhslNy2ioFLY7JcPZb+v3ftDGyWUqcBIveda0
    ------END CERTIFICATE------

  force_remove If True will cause the state to remove any entries found in the keystore which are not defined in the state. The default is False.
```

Example

```
define_keystore:
  keystore.managed:
    - name: /path/to/keystore
    - passphrase: changeit
    - force_remove: True
    - entries:
      - alias: hostname1
        certificate: /path/to/cert.crt
      - alias: remotehost
        certificate: /path/to/cert2.crt
        private_key: /path/to/key2.key
      - alias: pillarhost
        certificate: {{ salt.pillar.get('path:to:cert') }}
```

23.19.92 salt.states.kmod

Loading and unloading of kernel modules

The Kernel modules on a system can be managed cleanly with the kmod state module:

```
add_kvm:
  kmod.present:
    - name: kvm_amd
remove_beep:
  kmod.absent:
    - name: pcsprk
```
Multiple modules can be specified for both kmod.present and kmod.absent.

```yaml
add_sound:
  kmod.present:
    - mods:
      - snd_hda_codec_hdmi
      - snd_hda_codec
      - snd_hwdep
      - snd_hda_core
      - snd_pcm
      - snd_timer
      - snd
```

salt.states.kmod.absent(name, persist=False, comment=True, mods=None)
Verify that the named kernel module is not loaded

- **name** The name of the kernel module to verify is not loaded
- **persist** Remove module from /etc/modules
- **comment** Comment out module in /etc/modules rather than remove it
- **mods** A list of modules to verify are unloaded. If this argument is used, the `name` argument, although still required, is not used, and becomes a placeholder

New in version 2016.3.0.

salt.states.kmod.present(name, persist=False, mods=None)
Ensure that the specified kernel module is loaded

- **name** The name of the kernel module to verify is loaded
- **persist** Also add module to /etc/modules
- **mods** A list of modules to verify are loaded. If this argument is used, the `name` argument, although still required, is not used, and becomes a placeholder

New in version 2016.3.0.

23.19.93 salt.states.kubernetes

Manage kubernetes resources as salt states

NOTE: This module requires the proper pillar values set. See salt.modules.kubernetesmod for more information.

**Warning**: Configuration options will change in 2019.2.0.

The kubernetes module is used to manage different kubernetes resources.

```yaml
my-nginx:
  kubernetes.deployment_present:
    - namespace: default
      metadata:
        app: frontend
      spec:
        replicas: 1
        template:
          metadata:
```
labels:
  run: my-nginx
spec:
  containers:
  - name: my-nginx
    image: nginx
    ports:
      - containerPort: 80

my-mariadb:
  kubernetes.deployment_absent:
  - namespace: default

# kubernetes deployment as specified inside of
# a file containing the definition of the the
# deployment using the official kubernetes format
redis-master-deployment:
  kubernetes.deployment_present:
    - name: redis-master
    - source: salt://k8s/redis-master-deployment.yml
  require:
    - pip: kubernetes-python-module

# kubernetes service as specified inside of
# a file containing the definition of the the
# service using the official kubernetes format
redis-master-service:
  kubernetes.service_present:
    - name: redis-master
    - source: salt://k8s/redis-master-service.yml
  require:
    - kubernetes.deployment_present: redis-master

# kubernetes deployment as specified inside of
# a file containing the definition of the the
# deployment using the official kubernetes format
# plus some jinja directives
nginx-source-template:
  kubernetes.deployment_present:
    - source: salt://k8s/nginx.yml.jinja
    - template: jinja
  require:
    - pip: kubernetes-python-module

# Kubernetes secret
k8s-secret:
  kubernetes.secret_present:
    - name: top-secret
    - data:
      key1: value1
      key2: value2
      key3: value3

New in version 2017.7.0.

salt.states.kubernetes.configmap_absent(name, namespace='default', **kwargs)
Ensures that the named configmap is absent from the given namespace.
name  The name of the configmap
namespace  The namespace holding the configmap. The 'default' one is going to be used unless a different one is specified.
salt.states.kubernetes.configmap_present(name, namespace='default', data=None, source=None, template=None, **kwargs)
Ensures that the named configmap is present inside of the specified namespace with the given data. If the configmap exists it will be replaced.

name  The name of the configmap.
namespace  The namespace holding the configmap. The 'default' one is going to be used unless a different one is specified.
data  The dictionary holding the configmaps.
source  A file containing the data of the configmap in plain format.
template  Template engine to be used to render the source file.
salt.states.kubernetes.deployment_absent(name, namespace='default', **kwargs)
Ensures that the named deployment is absent from the given namespace.

name  The name of the deployment
namespace  The name of the namespace
salt.states.kubernetes.deployment_present(name, namespace='default', metadata=None, spec=None, source='', template='', **kwargs)
Ensures that the named deployment is present inside of the specified namespace with the given metadata and spec. If the deployment exists it will be replaced.

name  The name of the deployment.
namespace  The namespace holding the deployment. The 'default' one is going to be used unless a different one is specified.
metadata  The metadata of the deployment object.
spec  The spec of the deployment object.
source  A file containing the definition of the deployment (metadata and spec) in the official Kubernetes format.
template  Template engine to be used to render the source file.
salt.states.kubernetes.namespace_absent(name, **kwargs)
Ensures that the named namespace is absent.

name  The name of the namespace
salt.states.kubernetes.namespace_present(name, **kwargs)
Ensures that the named namespace is present.

name  The name of the namespace.
salt.states.kubernetes.node_label_absent(name, node, **kwargs)
Ensures that the named label is absent from the node.

name  The name of the label
node  The name of the node
salt.states.kubernetes.node_label_folder_absent(name, node, **kwargs)
Ensures the label folder doesn't exist on the specified node.

name  The name of label folder
node The name of the node

`salt.states.kubernetes.node_label_present(name, node, value, **kwargs)`
Ensures that the named label is set on the named node with the given value. If the label exists it will be replaced.

- **name** The name of the label.
- **value** Value of the label.
- **node** Node to change.

`salt.states.kubernetes.pod_absent(name, namespace='default', **kwargs)`
Ensures that the named pod is absent from the given namespace.

- **name** The name of the pod
- **namespace** The name of the namespace

`salt.states.kubernetes.pod_present(name, namespace='default', metadata=None, spec=None, source='', template='', **kwargs)`
Ensures that the named pod is present inside of the specified namespace with the given metadata and spec. If the pod exists it will be replaced.

- **name** The name of the pod.
- **namespace** The namespace holding the pod. The 'default' one is going to be used unless a different one is specified.
- **metadata** The metadata of the pod object.
- **spec** The spec of the pod object.
- **source** A file containing the definition of the pod (metadata and spec) in the official kubernetes format.
- **template** Template engine to be used to render the source file.

`salt.states.kubernetes.secret_absent(name, namespace='default', **kwargs)`
Ensures that the named secret is absent from the given namespace.

- **name** The name of the secret
- **namespace** The name of the namespace

`salt.states.kubernetes.secret_present(name, namespace='default', data=None, source=None, template=None, **kwargs)`
Ensures that the named secret is present inside of the specified namespace with the given data. If the secret exists it will be replaced.

- **name** The name of the secret.
- **namespace** The namespace holding the secret. The 'default' one is going to be used unless a different one is specified.
- **data** The dictionary holding the secrets.
- **source** A file containing the data of the secret in plain format.
- **template** Template engine to be used to render the source file.

`salt.states.kubernetes.service_absent(name, namespace='default', **kwargs)`
Ensures that the named service is absent from the given namespace.

- **name** The name of the service
- **namespace** The name of the namespace
salt.states.kubernetes.service_present(name, namespace='default', metadata=None, spec=None, source='', template='', **kwargs)

Ensures that the named service is present inside of the specified namespace with the given metadata and spec. If the deployment exists it will be replaced.

- **name** The name of the service.
- **namespace** The namespace holding the service. The 'default' one is going to be used unless a different one is specified.
- **metadata** The metadata of the service object.
- **spec** The spec of the service object.
- **source** A file containing the definition of the service (metadata and spec) in the official kubernetes format.
- **template** Template engine to be used to render the source file.

23.19.94 salt.states.layman

Management of Gentoo Overlays using layman

A state module to manage Gentoo package overlays via layman

```yaml
sunrise:
  layman.present
```

salt.states.layman.absent(name)

Verify that the overlay is absent

- **name** The name of the overlay to delete

salt.states.layman.present(name)

Verify that the overlay is present

- **name** The name of the overlay to add

23.19.95 salt.states.ldap

Manage entries in an LDAP database

New in version 2016.3.0.

The states.ldap state module allows you to manage LDAP entries and their attributes.

salt.states.ldap.managed(name, entries, connect_spec=None)

Ensure the existence (or not) of LDAP entries and their attributes

Example:

```yaml
ldap://://:
  ldap.managed:
    - connect_spec:
        bind:
          method: sasl
      - entries:
```

(continues on next page)
# make sure the entry doesn't exist
- cn=foo,ou=users,dc=example,dc=com:
  - delete_others: True

# make sure the entry exists with only the specified
# attribute values
- cn=admin,dc=example,dc=com:
  - delete_others: True
  - replace:
    - cn:
      - admin
description:
      - LDAP administrator
objectClass:
  - simpleSecurityObject
  - organizationalRole
userPassword:
  - {{ pillar.ldap_admin_password }}

# make sure the entry exists, its olcRootDN attribute
# has only the specified value, the olcRootDN attribute
# doesn't exist, and all other attributes are ignored
- olcDatabase={1}hdb,cn=config:
  - replace:
    - olcRootDN:
      - cn=admin,dc=example,dc=com
    - olcRootPW: []

# note the use of 'default'. also note how you don't
# have to use list syntax if there is only one attribute
# value
- cn=foo,ou=users,dc=example,dc=com:
  - delete_others: True
  - default:
    - userPassword: changeme
    - shadowLastChange: 0
    # keep sshPublicKey if present, but don't create
    # the attribute if it is missing
    - sshPublicKey: []
  - replace:
    - cn: foo
    - uid: foo
    - uidNumber: 1000
    - gidNumber: 1000
    - gecos: Foo Bar
    - givenName: Foo
    - sn: Bar
    - homeDirectory: /home/foo
    - loginShell: /bin/bash

    objectClass:
      - inetOrgPerson
      - posixAccount
      - top
      - ldapPublicKey
      - shadowAccount
Parameters

- **name** -- The URL of the LDAP server. This is ignored if `connect_spec` is either a connection object or a dict with a 'url' entry.

- **entries** -- A description of the desired state of zero or more LDAP entries.

  `entries` is an iterable of dicts. Each of these dict's keys are the distinguished names (DNs) of LDAP entries to manage. Each of these dicts is processed in order. A later dict can reference an LDAP entry that was already mentioned in an earlier dict, which makes it possible for later dicts to enhance or alter the desired state of an LDAP entry.

  The DNs are mapped to a description of the LDAP entry's desired state. These LDAP entry descriptions are themselves iterables of dicts. Each dict in the iterable is processed in order. They contain directives controlling the entry's state. The key names the directive type and the value is state information for the directive. The specific structure of the state information depends on the directive type.

  The structure of `entries` looks like this:

  ```
  [{dn1: [{directive1: directive1_state,
              directive2: directive2_state},
          {directive3: directive3_state}],
   dn2: [{directive4: directive4_state,
              directive5: directive5_state}],
   {dn3: [{directive6: directive6_state}]
  }
  ```

  These are the directives:

  - `'delete_others'` Boolean indicating whether to delete attributes not mentioned in this dict or any of the other directive dicts for this DN. Defaults to False.

    If you don't want to delete an attribute if present, but you also don't want to add it if it is missing or modify it if it is present, you can use either the 'default' directive or the 'add' directive with an empty value list.

  - `'default'` A dict mapping an attribute name to an iterable of default values for that attribute. If the attribute already exists, it is left alone. If not, it is created using the given list of values.

    An empty value list is useful when you don't want to create an attribute if it is missing but you do want to preserve it if the 'delete_others' key is True.

  - `'add'` Attribute values to add to the entry. This is a dict mapping an attribute name to an iterable of values to add.

    An empty value list is useful when you don't want to create an attribute if it is missing but you do want to preserve it if the 'delete_others' key is True.

  - `'delete'` Attribute values to remove from the entry. This is a dict mapping an attribute name to an iterable of values to delete from the attribute. If the iterable is empty, all of the attribute's values are deleted.

  - `'replace'` Attributes to replace. This is a dict mapping an attribute name to an iterable of values. Any existing values for the attribute are deleted, then the given values are added. The iterable may be empty.

  In the above directives, the iterables of attribute values may instead be `None`, in which case an empty list is used, or a scalar such as a string or number, in which case a new list containing the scalar is used.
Note that if all attribute values are removed from an entry, the entire entry is deleted.

- **connect_spec** -- See the description of the `connect_spec` parameter of the `ldap3.connect` function in the `ldap3` execution module. If this is a dict and the 'url' entry is not specified, the 'url' entry is set to the value of the `name` parameter.

**Returns**

A dict with the following keys:

- **'name'** This is the same object passed to the `name` parameter.

- **'changes'** This is a dict describing the changes made (or, in test mode, the changes that would have been attempted). If no changes were made (or no changes would have been attempted), then this dict is empty. Only successful changes are included.

  Each key is a DN of an entry that was changed (or would have been changed). Entries that were not changed (or would not have been changed) are not included.

  The value is a dict with two keys:

  - **'old'** The state of the entry before modification. If the entry did not previously exist, this key maps to `None`. Otherwise, the value is a dict mapping each of the old entry’s attributes to a list of its values before any modifications were made. Unchanged attributes are excluded from this dict.

  - **'new'** The state of the entry after modification. If the entry was deleted, this key maps to `None`. Otherwise, the value is a dict mapping each of the entry’s attributes to a list of its values after the modifications were made. Unchanged attributes are excluded from this dict.

Example 'changes' dict where a new entry was created with a single attribute containing two values:

```{"
'dn1': {'old': None,
        'new': {'attr1': ['val1', 'val2']}}}
```

Example 'changes' dict where a new attribute was added to an existing entry:

```{"
'dn1': {'old': {},
        'new': {'attr2': ['val3']}}}
```

- **'result'** One of the following values:

  - **True** if no changes were necessary or if all changes were applied successfully.
  - **False** if at least one change was unable to be applied.
  - **None** if changes would be applied but it is in test mode.

### 23.19.96 salt.states.libcloud_dns

Manage DNS records and zones using libcloud

**codeauthor** Anthony Shaw <anthonyshaw@apache.org>

New in version 2016.11.0.

Create and delete DNS records or zones through Libcloud. Libcloud’s DNS system supports over 20 DNS providers including Amazon, Google, GoDaddy, Softlayer

This module uses `libcloud`, which can be installed via package, or pip.
configuration  This module uses a configuration profile for one or multiple DNS providers

```yaml
libcloud_dns:
  profile1:
    driver: godaddy
    key: 2orgk34kgk34g
  profile2:
    driver: route53
    key: blah
    secret: blah
```

Example:

```yaml
my-zone:
  libcloud_dns.zone_present:
    - name: mywebsite.com
    - profile: profile1
my-website:
  libcloud_dns.record_present:
    - name: www
    - zone: mywebsite.com
    - type: A
    - data: 12.34.32.3
    - profile: profile1
    - require:
      - libcloud_dns: my-zone
```

```bash
depends  apache-libcloud

salt.states.libcloud_dns.record_absent(name, zone, type, data, profile)
Ensures a record is absent.

Parameters

- name (str) -- Record name without the domain name (e.g. www). Note: If you want to create a record for a base domain name, you should specify empty string ('') for this argument.
- zone (str) -- Zone where the requested record is created, the domain name
- type (str) -- DNS record type (A, AAAA, ...).
- data (str) -- Data for the record (depends on the record type).
- profile (str) -- The profile key

salt.states.libcloud_dns.record_present(name, zone, type, data, profile)
Ensures a record is present.

Parameters

- name (str) -- Record name without the domain name (e.g. www). Note: If you want to create a record for a base domain name, you should specify empty string ('') for this argument.
- zone (str) -- Zone where the requested record is created, the domain name
- type (str) -- DNS record type (A, AAAA, ...).
- data (str) -- Data for the record (depends on the record type).
- profile (str) -- The profile key

salt.states.libcloud_dns.state_result(result, message, name, changes=None)
```
salt.states.libcloud_dns.zone_absent(domain, profile)

Ensures a record is absent.

Parameters

- domain (str) -- Zone name, i.e. the domain name
- profile (str) -- The profile key

salt.states.libcloud_dns.zone_present(domain, type, profile)

Ensures a record is present.

Parameters

- domain (str) -- Zone name, i.e. the domain name
- type (str) -- Zone type (master / slave), defaults to master
- profile (str) -- The profile key

23.19.97  salt.states.libcloud_loadbalancer

Apache Libcloud Load Balancer State

Manage load balancers using libcloud

codeauthor Anthony Shaw <anthonyshaw@apache.org>

Apache Libcloud load balancer management for a full list of supported clouds, see http://libcloud.readthedocs.io/en/latest/loadbalancer/supported_providers.html

Clouds include Amazon ELB, ALB, Google, Aliyun, CloudStack, Softlayer

New in version 2018.3.0.

configuration This module uses a configuration profile for one or multiple Cloud providers

```
libcloud_loadbalancer:
  profile_test1:
    driver: gce
    key: G00G0123456789ABCXYZ
    secret: mysecret
  profile_test2:
    driver: alb
    key: 12345
    secret: mysecret
```

Example:

Using States to deploy a load balancer with extended arguments to specify region

```
lb_test:
  - libcloud_loadbalancer.balancer_present:
    - name: example
    - port: 80
    - protocol: http
    - profile: google
    - ex_region: us-east1
```

depends apache-libcloud
**salt.states.libcloud_loadbalancer**. **balancer_absent** *(name, profile, **libcloud_kwargs)*
Ensures a load balancer is absent.

**Parameters**
- **name** *(str)* -- Load Balancer name
- **profile** *(str)* -- The profile key

**salt.states.libcloud_loadbalancer**. **balancer_present** *(name, port, protocol, profile, algorithm=None, members=None, **libcloud_kwargs)*
Ensures a load balancer is present.

**Parameters**
- **name** *(str)* -- Load Balancer name
- **port** *(str)* -- Port the load balancer should listen on, defaults to 80
- **protocol** *(str)* -- Load balancer protocol, defaults to http.
- **profile** *(str)* -- The profile key
- **algorithm** *(str)* -- Load balancing algorithm, defaults to ROUND_ROBIN. See Algorithm type in Libcloud documentation for a full listing.
- **members** *(list of dict (ip, port))* -- An optional list of members to create on deployment

**salt.states.libcloud_loadbalancer**. **member_absent** *(ip, port, balancer_id, profile, **libcloud_kwargs)*
Ensure a load balancer member is absent, based on IP and Port

**Parameters**
- **ip** *(str)* -- IP address for the member
- **port** *(int)* -- Port for the member
- **balancer_id** *(str)* -- id of a load balancer you want to detach the member from
- **profile** *(str)* -- The profile key

**salt.states.libcloud_loadbalancer**. **member_present** *(ip, port, balancer_id, profile, **libcloud_kwargs)*
Ensure a load balancer member is present

**Parameters**
- **ip** *(str)* -- IP address for the new member
- **port** *(int)* -- Port for the new member
- **balancer_id** *(str)* -- id of a load balancer you want to attach the member to
- **profile** *(str)* -- The profile key

**salt.states.libcloud_loadbalancer**. **state_result** *(result, message, name, changes=None)*
23.19.98 salt.states.libcloud_storage

Apache Libcloud Storage State

Manage cloud storage using libcloud

codeauthor Anthony Shaw <anthonyshaw@apache.org>

Apache Libcloud Storage (object/blob) management for a full list of supported clouds, see http://libcloud.readthedocs.io/en/latest/storage/supported_providers.html

Clouds include Amazon S3, Google Storage, Aliyun, Azure Blobs, Ceph, OpenStack swift

New in version 2018.3.0.

configuration This module uses a configuration profile for one or multiple Storage providers

```yaml
libcloud_storage:
  profile_test1:
    driver: google_storage
    key: GOOG0123456789ABCXYZ
    secret: mysecret
  profile_test2:
    driver: s3
    key: 12345
    secret: mysecret
```

Examples

Creating a container and uploading a file

```yaml
web_things:
  libcloud_storage.container_present:
    name: my_container_name
    profile: profile1
  libcloud_storage.object_present:
    name: my_file.jpg
    container: my_container_name
    path: /path/to/local/file.jpg
    profile: profile1
```

Downloading a file

This example will download the file from the remote cloud and keep it locally

```yaml
web_things:
  libcloud_storage.file_present:
    name: my_file.jpg
    container: my_container_name
    path: /path/to/local/file.jpg
    profile: profile1

salt.states.libcloud_storage.container_absent(name, profile)
Ensures a container is absent.
```
Parameters

- **name** *(str)* -- Container name
- **profile** *(str)* -- The profile key

salt.states.libcloud_storage.container_present(name, profile)
Ensures a container is present.

Parameters

- **name** *(str)* -- Container name
- **profile** *(str)* -- The profile key

salt.states.libcloud_storage.file_present(container, name, path, profile, overwrite_existing=False)
Ensures a object is downloaded locally.

Parameters

- **container** *(str)* -- Container name
- **name** *(str)* -- Object name in cloud
- **path** *(str)* -- Local path to file
- **profile** *(str)* -- The profile key
- **overwrite_existing** *(bool)* -- Replace if already exists

salt.states.libcloud_storage.object_absent(container, name, profile)
Ensures a object is absent.

Parameters

- **container** *(str)* -- Container name
- **name** *(str)* -- Object name in cloud
- **profile** *(str)* -- The profile key

salt.states.libcloud_storage.object_present(container, name, path, profile)
Ensures a object is present.

Parameters

- **container** *(str)* -- Container name
- **name** *(str)* -- Object name in cloud
- **path** *(str)* -- Local path to file
- **profile** *(str)* -- The profile key

salt.states.libcloud_storage.state_result(result, message, name, changes)
23.19.99 salt.states.locale

Management of languages/locales

Manage the available locales and the system default:

us_locale:
  locale.present:
    - name: en_US.UTF-8

default_locale:
  locale.system:
    - name: en_US.UTF-8
    - require:
      - locale: us_locale

salt.states.locale.present(name)
  Generate a locale if it is not present
  New in version 2014.7.0.
  name The name of the locale to be present. Some distributions require the charmap to be specified as part of
  the locale at this point.

salt.states.locale.system(name)
  Set the locale for the system
  name The name of the locale to use

23.19.100 salt.states.logrotate

Module for managing logrotate.

New in version 2017.7.0.

salt.states.logrotate.set_(name, key, value, setting=None, conf_file='/etc/logrotate.conf')
  Set a new value for a specific configuration line.
  Parameters
  • key (str) -- The command or block to configure.
  • value (str) -- The command value or command of the block specified by the key parameter.
  • setting (str) -- The command value for the command specified by the value parameter.
  • conf_file (str) -- The logrotate configuration file.

Example of usage with only the required arguments:

logrotate-rotate:
  logrotate.set:
    - key: rotate
    - value: 2

Example of usage specifying all available arguments:
23.19.101 salt.states.loop

Loop state

Allows for looping over execution modules.

New in version 2017.7.0.

In both examples below, the execution module function `boto_elb.get_instance_health` returns a list of dicts. The condition checks the `state-key` of the first dict in the returned list and compares its value to the string `InService`.

```
wait_for_service_to_be_healthy:
  loop.until:
    - name: boto_elb.get_instance_health
    - condition: m_ret[0]['state'] == 'InService'
    - period: 5
    - timeout: 20
    - m_args:
      - {{ elb }}
    - m_kwargs:
      keyid: {{ access_key }}
      key: {{ secret_key }}
      instances: "{{ instance }}"
```

**Warning:** This state allows arbitrary python code to be executed through the condition parameter which is literally evaluated within the state. Please use caution.

Changed in version 3000.

A version that does not use eval is now available. It uses either the python `operator` to compare the result of the function called in `name`, which can be one of the following: lt, le, eq (default), ne, ge, gt. Alternatively, `compare_operator` can be filled with a function from an execution module in `__salt__` or `__utils__` like the example below. The function `data.subdict_match` checks if the `expected` expression matches the data returned by calling the `name` function (with passed `args` and `kwargs`).

```
Wait for service to be healthy:
  loop.until_no_eval:
    - name: boto_elb.get_instance_health
    - expected: '0:state:InService'
    - compare_operator: data.subdict_match
    - period: 5
    - timeout: 20
    - args:
      - {{ elb }}
    - kwargs:
      keyid: {{ access_key }}
```

(continues on next page)
key: {{ secret_key }}
instances: "{{ instance }}"

salt.states.loop.until(name, m_args=None, m_kwargs=None, condition=None, period=1, timeout=60)

Loop over an execution module until a condition is met.

Parameters

- **name (str)** -- The name of the execution module
- **m_args (list)** -- The execution module's positional arguments
- **m_kwargs (dict)** -- The execution module's keyword arguments
- **condition (str)** -- The condition which must be met for the loop to break. This should contain m_ret which is the return from the execution module.
- **period (int or float)** -- The number of seconds to wait between executions
- **timeout (int or float)** -- The timeout in seconds

salt.states.loop.until_no_eval(name, expected, compare_operator='eq', timeout=60, period=1, init_wait=0, args=None, kwargs=None)

Generic waiter state that waits for a specific salt function to produce an expected result. The state fails if the function does not exist or raises an exception, or does not produce the expected result within the allotted retries.

Parameters

- **name (str)** -- Name of the module.function to call
- **expected** -- Expected return value. This can be almost anything.
- **compare_operator (str)** -- Operator to use to compare the result of the module.function call with the expected value. This can be anything present in __salt__ or __utils__. Will be called with 2 args: result, expected.
- **timeout (int or float)** -- Abort after this amount of seconds (excluding init_wait).
- **period (int or float)** -- Time (in seconds) to wait between attempts.
- **init_wait (int or float)** -- Time (in seconds) to wait before trying anything.
- **args (list)** -- args to pass to the salt module.function.
- **kwargs (dict)** -- kwargs to pass to the salt module.function.

New in version 3000.

23.19.102 salt.states.lvs_server

Management of LVS (Linux Virtual Server) Real Server

salt.states.lvs_server.absent(name, protocol=None, service_address=None, server_address=None)

Ensure the LVS Real Server in specified service is absent.

name The name of the LVS server.
protocol The service protocol(only support tcp, udp and fwmark service).
service_address  The LVS service address.
server_address  The LVS real server address.
salt.states.lvs_server.present(name, protocol=None, service_address=None, server_address=None, packet_forward_method='dr', weight=1)
Ensure that the named service is present.
name  The LVS server name
protocol  The service protocol
service_address  The LVS service address
server_address  The real server address.
packet_forward_method  The LVS packet forwarding method (dr for direct routing, tunnel for tunneling, nat for network access translation).
weight  The capacity of a server relative to the others in the pool.

```
lvsrs:
  lvs_server.present:
    - protocol: tcp
    - service_address: 1.1.1.1:80
    - server_address: 192.168.0.11:8080
    - packet_forward_method: dr
    - weight: 10
```

23.19.103  salt.states.lvs_service

Management of LVS (Linux Virtual Server) Service

salt.states.lvs_service.absent(name, protocol=None, service_address=None)
Ensure the LVS service is absent.
name  The name of the LVS service
protocol  The service protocol
service_address  The LVS service address
salt.states.lvs_service.present(name, protocol=None, service_address=None, scheduler='wlc')
Ensure that the named service is present.
name  The LVS service name
protocol  The service protocol
service_address  The LVS service address
scheduler  Algorithm for allocating TCP connections and UDP datagrams to real servers.

```
lvstest:
  lvs_service.present:
    - service_address: 1.1.1.1:80
    - protocol: tcp
    - scheduler: rr
```
23.19.104 salt.states.lxc

Manage Linux Containers

salt.states.lxc.absent(name, stop=False, path=None)
Ensure a container is not present, destroying it if present

name  Name of the container to destroy
stop  stop before destroying default: false

New in version 2015.5.2.

path  path to the container parent default: /var/lib/lxc (system default)

New in version 2015.8.0.

web01:
lxc.absent

salt.states.lxc.edited_conf(name, lxc_conf=None, lxc_conf_unset=None)

Warning: This state is unsuitable for setting parameters that appear more than once in an LXC config file, or parameters which must appear in a certain order (such as when configuring more than one network interface).

Issue #35523 was opened to track the addition of a suitable replacement or fix.

Edit LXC configuration options

Deprecated since version 2015.5.0.

path  path to the container parent default: /var/lib/lxc (system default)

New in version 2015.8.0.

setconf:
lxc.edited_conf:
- name: ubuntu
- lxc_conf:
  - network.ipv4.ip: 10.0.3.6
- lxc_conf_unset:
  - lxc.utsname

salt.states.lxc.frozen(name, start=True, path=None)
New in version 2015.5.0.

Ensure that a container is frozen

Note: This state does not enforce the existence of the named container, it just freezes the container if it is running. To ensure that the named container exists, use lxc.present.

name  The name of the container
path  path to the container parent default: /var/lib/lxc (system default)

New in version 2015.8.0.
start  [True] Start container first, if necessary. If False, then this state will fail if the container is not running.

```
web01:
  lxc.frozen

web02:
  lxc.frozen:
    - start: False
```

```
salt.states.lxc.present(name, running=None, clone_from=None, snapshot=False, profile=None,
                       network_profile=None, template=None, options=None, image=None,
                       config=None, ftype=None, size=None, backing=None, vname=None, lvname=None,
                       thinpool=None, path=None)
```

Changed in version 2015.8.0: The lxc.created state has been renamed to lxc.present, and the lxc.cloned state has been merged into this state.

Create the named container if it does not exist

name  The name of the container to be created

path  path to the container parent default: /var/lib/lxc (system default)

   New in version 2015.8.0.

running  [False]

   • If True, ensure that the container is running
   • If False, ensure that the container is stopped
   • If None, do nothing with regards to the running state of the container

   New in version 2015.8.0.

clone_from  Create named container as a clone of the specified container

snapshot  [False] Use Copy On Write snapshots (LVM). Only supported with clone_from.

profile  Profile to use in container creation (see the LXC Tutorial for more information). Values in a profile will be overridden by the parameters listed below.

network_profile  Network Profile to use in container creation (see the LXC Tutorial for more information). Values in a profile will be overridden by the parameters listed below.

   New in version 2015.5.2.

Container Creation Arguments

template  The template to use. For example, ubuntu or fedora. For a full list of available templates, check out the lxc.templates function.

   Conflicts with the image argument.

   Note: The download template requires the following three parameters to be defined in options:

   • dist - The name of the distribution
   • release - Release name/version
   • arch - Architecture of the container

   The available images can be listed using the lxc.images function.
New in version 2015.5.0.

Template-specific options to pass to the lxc-create command. These correspond to the long options (ones beginning with two dashes) that the template script accepts. For example:

```
web01:
  lxc.present:
    - template: download
    - options:
      dist: centos
      release: 6
      arch: amd64
```

Remember to double-indent the options, due to how PyYAML works.

For available template options, refer to the lxc template scripts which are usually located under `/usr/share/lxc/templates`, or run `lxc-create -t <template> -h`.

- **image** A tar archive to use as the rootfs for the container. Conflicts with the `template` argument.
- **backing** The type of storage to use. Set to `lvm` to use an LVM group. Defaults to filesystem within `/var/lib/lxc`.
- **fstype** Filesystem type to use on LVM logical volume
- **size** Size of the volume to create. Only applicable if `backing` is set to `lvm`.
- **vgname** [lxc] Name of the LVM volume group in which to create the volume for this container. Only applicable if `backing` is set to `lvm`.
- **lvname** Name of the LVM logical volume in which to create the volume for this container. Only applicable if `backing` is set to `lvm`.
- **thinpool** Name of a pool volume that will be used for thin-provisioning this container. Only applicable if `backing` is set to `lvm`.

salt.states.lxc.running(**name**, **restart**=**False**, **path**=**None**)  
Changed in version 2015.5.0: The `lxc.started` state has been renamed to `lxc.running`  
Ensure that a container is running  

**Note:** This state does not enforce the existence of the named container, it just starts the container if it is not running. To ensure that the named container exists, use `lxc.present`.

- **name** The name of the container
- **path** path to the container parent default: `/var/lib/lxc` (system default)
  
  New in version 2015.8.0.
- **restart** [**False**] Restart container if it is already running

```
web01:
  lxc.running

web02:
  lxc.running:
    - restart: True
```
salt.states.lxc.set_pass(name, **kwargs)

Deprecated since version 2015.5.0.

This state function has been disabled, as it did not conform to design guidelines. Specifically, due to the fact that `lxc.set_password` uses `chpasswd(8)` to set the password, there was no method to make this action idempotent (in other words, the password would be changed every time). This makes this state redundant, since the following state will do the same thing:

```yaml
setpass:
  module.run:
    - name: set_pass
    - m_name: root
    - password: secret
```

salt.states.lxc.stopped(name, kill=False, path=None)

Ensure that a container is stopped

**Note:** This state does not enforce the existence of the named container, it just stops the container if it running or frozen. To ensure that the named container exists, use `lxc.present`, or use the `lxc.absent` state to ensure that the container does not exist.

- **name**  The name of the container
- **path**  path to the container parent default: `/var/lib/lxc` (system default)
- **kill** [False] Do not wait for the container to stop, kill all tasks in the container. Older LXC versions will stop containers like this irrespective of this argument.

**Examples:**
```
web01:
  lxc.stopped
```

### 23.19.105 salt.states.lxd

Manage LXD profiles.

New in version 2019.2.0.

- **maintainer**  René Jochum `<rene@jochums.at>`
- **maturity**  new
- **depends**  python-pylxd
- **platform**  Linux

salt.states.lxd.authenticate(name, remote_addr, password, cert, key, verify_cert=True)

Authenticate with a remote peer.

- **remote_addr**  An URL to a remote Server, you also have to give cert and key if you provide remote_addr!

  **Examples:**
  ```
  https://myserver.lan:8443 /var/lib/mysocket.sock
  ```

- **password**  The PaSsW0rD
- **cert**  PEM Formatted SSL Zertifikate.
Examples: /root/.config/lxc/client.crt
key : PEM Formatted SSL Key.
Examples: /root/.config/lxc/client.key
verify_cert [True] Wherever to verify the cert, this is by default True but in the most cases you want to set it off as LXD normally uses self-signed certificates.
name: Ignore this. This is just here for salt.
salt.states.lxd.config_managed(name, value, force_password=False)
Manage a LXD Server config setting.
name : The name of the config key.
value : Its value.
force_password [False] Set this to True if you want to set the password on every run.
As we can’t retrieve the password from LXD we can’t check if the current one is the same as the given one.
salt.states.lxd.init(name, storage_backend='dir', trust_password=None, network_address=None, network_port=None, storage_create_device=None, storage_create_loop=None, storage_pool=None, done_file='%SALT_CONFIG_DIR%/lxd_initialized')
Initializes the LXD Daemon, as LXD doesn’t tell if its initialized we touch the done_file and check if it exist.
This can only be called once per host unless you remove the done_file.
name : Ignore this. This is just here for salt.
storage_backend : Storage backend to use (zfs or dir, default: dir)
trust_password : Password required to add new clients
network_address [None] Address to bind LXD to (default: none)
network_port [None] Port to bind LXD to (Default: 8443)
storage_create_device [None] Setup device based storage using this DEVICE
storage_create_loop [None] Setup loop based storage with this SIZE in GB
storage_pool [None] Storage pool to use or create
done_file : Path where we check that this method has been called, as it can run only once and there’s currently no way to ask LXD if init has been called.

23.19.106 salt.states.lxd_container

Manage LXD containers.
New in version 2019.2.0.

maintainer René Jochum <rene@jochums.at>
maturity new
depends python-pylxd
platform Linux

salt.states.lxd_container.absent(name, stop=False, remote_addr=None, cert=None, key=None, verify_cert=True)
Ensure a LXD container is not present, destroying it if present
**name** : The name of the container to destroy

**stop** : stop before destroying default: false

**remote_addr** : An URL to a remote Server, you also have to give cert and key if you provide remote_addr!

Examples: https://myserver.lan:8443 /var/lib/mysocket.sock

cert : PEM Formatted SSL Zertifikate.

Examples: ~/.config/lxc/client.crt

key : PEM Formatted SSL Key.

Examples: ~/.config/lxc/client.key

**verify_cert** [True] Wherever to verify the cert, this is by default True but in the most cases you want to set it off as LXD normally uses self-signed certificates.

```
salt.states.lxd_container.frozen(name, start=True, remote_addr=None, cert=None, key=None, verify_cert=True)
```

Ensure a LXD container is frozen, start and freeze it if start is true

**name** : The name of the container to freeze

**start** : start and freeze it

**remote_addr** : An URL to a remote Server, you also have to give cert and key if you provide remote_addr!

Examples: https://myserver.lan:8443 /var/lib/mysocket.sock

cert : PEM Formatted SSL Zertifikate.

Examples: ~/.config/lxc/client.crt

key : PEM Formatted SSL Key.

Examples: ~/.config/lxc/client.key

**verify_cert** [True] Wherever to verify the cert, this is by default True but in the most cases you want to set it off as LXD normally uses self-signed certificates.

```
salt.states.lxd_container.migrated(name, remote_addr, cert, key, verify_cert, src_remote_addr, stop_and_start=False, src_cert=None, src_key=None, src_verify_cert=None)
```

Ensure a container is migrated to another host

If the container is running, it either must be shut down first (use stop_and_start=True) or criu must be installed on the source and destination machines.

For this operation both certs need to be authenticated, use lxd.authenticate <salt.states.lxd.authenticate to authenticate your cert(s).

**name** : The container to migrate

**remote_addr** : An URL to the destination remote Server

Examples: https://myserver.lan:8443 /var/lib/mysocket.sock

cert : PEM Formatted SSL Zertifikate.

Examples: ~/.config/lxc/client.crt

key : PEM Formatted SSL Key.

Examples: ~/.config/lxc/client.key

**verify_cert** [True] Wherever to verify the cert, this is by default True but in the most cases you want to set it off as LXD normally uses self-signed certificates.
src_remote_addr: An URL to the source remote Server
   Examples: https://myserver.lan:8443 /var/lib/mysocket.sock

stop_and_start: Stop before migrating and start after

src_cert: PEM Formatted SSL Zertifikate, if None we copy "cert"
   Examples: ~/.config/lxc/client.crt

src_key: PEM Formatted SSL Key, if None we copy "key"
   Examples: ~/.config/lxc/client.key

src_verify_cert: Wherever to verify the cert, if None we copy "verify_cert"

salt.states.lxd_container.present(name, running=None, source=None, profiles=None, config=None, devices=None, architecture='x86_64', ephemeral=False, restart_on_change=False, remote_addr=None, cert=None, key=None, verify_cert=True)

Create the named container if it does not exist

name The name of the container to be created

running [None]
   • If True, ensure that the container is running
   • If False, ensure that the container is stopped
   • If None, do nothing with regards to the running state of the container

source [None] Can be either a string containing an image alias:

"xenial/amd64"

or an dict with type "image" with alias:

{"type": "image",
 "alias": "xenial/amd64"}

or image with "fingerprint":

{"type": "image",
 "fingerprint": "SHA-256"}

or image with "properties":

{"type": "image",
 "properties": {
 "os": "ubuntu",
 "release": "14.04",
 "architecture": "x86_64"
 }}

or none:

{"type": "none"}

or copy:

{"type": "copy",
 "source": "my-old-container"}
profiles  [['default']] List of profiles to apply on this container

config : A config dict or None (None = unset).

Can also be a list:

```
[{'key': 'boot.autostart', 'value': 1},
 {'key': 'security.privileged', 'value': '1'}]
```

devices : A device dict or None (None = unset).

architecture  ['x86_64'] Can be one of the following:

- unknown
- i686
- x86_64
- armv7l
- aarch64
- ppc
- ppc64
- ppc64le
- s390x

ephemeral [False] Destroy this container after stop?

restart_on_change  [False] Restart the container when we detect changes on the config or its devices?

remote_addr : An URL to a remote Server, you also have to give cert and key if you provide remote_addr!

Examples: https://myserver.lan:8443 /var/lib/mysocket.sock
cert : PEM Formatted SSL Zertifikate.

Examples: ~/.config/lxc/client.crt
cert : PEM Formatted SSL Key.

Examples: ~/.config/lxc/client.key

verify_cert [True] Wherever to verify the cert, this is by default True but in the most cases you want to set it off as LXD normally uses self-signed certificates.

salt.states.lxd_container.running(name, restart=False, remote_addr=None, cert=None,
    key=None, verify_cert=True)

Ensure a LXD container is running and restart it if restart is True

name : The name of the container to start/restart.

restart : restart the container if it is already started.

remote_addr : An URL to a remote Server, you also have to give cert and key if you provide remote_addr!

Examples: https://myserver.lan:8443 /var/lib/mysocket.sock
cert : PEM Formatted SSL Zertifikate.

Examples: ~/.config/lxc/client.crt
cert : PEM Formatted SSL Key.

Examples: ~/.config/lxc/client.key
**verify_cert** [True] Wherever to verify the cert, this is by default True but in the most cases you want to set it off as LXD normally uses self-signed certificates.

```python
salt.states.lxd_container.stopped(name, kill=False, remote_addr=None, cert=None, key=None, verify_cert=True)
```

Ensure a LXD container is stopped, kill it if kill is true else stop it

- **name**: The name of the container to stop
- **kill**: kill if true
- **remote_addr**: An URL to a remote Server, you also have to give cert and key if you provide remote_addr!
  - Examples: https://myserver.lan:8443 /var/lib/mysocket.sock
- **cert**: PEM Formatted SSL Zertifikate.
  - Examples: ~/.config/lxc/client.crt
- **key**: PEM Formatted SSL Key.
  - Examples: ~/.config/lxc/client.key
- **verify_cert** [True] Wherever to verify the cert, this is by default True but in the most cases you want to set it off as LXD normally uses self-signed certificates.

### 23.19.107 salt.states.lxd_image

Manage LXD images.

New in version 2019.2.0.

- **maintainer** René Jochum <rene@jochums.at>
- **maturity** new
- **depends** python-pylxd
- **platform** Linux

```python
salt.states.lxd_image.absent(name, remote_addr=None, cert=None, key=None, verify_cert=True)
```

- **name**: An alias or fingerprint of the image to check and delete.
- **remote_addr**: An URL to a remote Server, you also have to give cert and key if you provide remote_addr!
  - Examples: https://myserver.lan:8443 /var/lib/mysocket.sock
- **cert**: PEM Formatted SSL Zertifikate.
  - Examples: ~/.config/lxc/client.crt
- **key**: PEM Formatted SSL Key.
  - Examples: ~/.config/lxc/client.key
- **verify_cert** [True] Wherever to verify the cert, this is by default True but in the most cases you want to set it off as LXD normally uses self-signed certificates.

```python
salt.states.lxd_image.present(name, source, aliases=None, public=None, auto_update=None, remote_addr=None, cert=None, key=None, verify_cert=True)
```

Ensure an image exists, copy it else from source

- **name**: An alias of the image, this is used to check if the image exists and it will be added as alias to the image on copy/create.
source : Source dict.

For an LXD to LXD copy:

```python
source:
  type: lxd
  name: ubuntu/xenial/amd64  # This can also be a fingerprint.
  remote_addr: https://images.linuxcontainers.org:8443
  cert: ~/.config/lxd/client.crt
  key: ~/.config/lxd/client.key
  verify_cert: False
```

From file:

```python
source:
  type: file
  filename: salt://lxd/files/busybox.tar.xz
  saltenv: base
```

From simplestreams:

```python
source:
  type: simplestreams
  server: https://cloud-images.ubuntu.com/releases
  name: xenial/amd64
```

From an URL:

```python
source:
  type: url
  url: https://dl.stgraber.org/lxd
```

class : List of aliases to append, can be empty.

public :

  Make this image public available on this instance? None on source_type LXD means copy source

  None on source_type file means False

auto_update :

  Try to auto-update from the original source? None on source_type LXD means copy source

  source_type file does not have auto-update.

remote_addr : An URL to a remote Server, you also have to give cert and key if you provide remote_addr!

  Examples: https://myserver.lan:8443 /var/lib/mysocket.sock

cert : PEM Formatted SSL Zertifikate.

  Examples: ~/.config/lxc/client.crt

deprecated : PEM Formatted SSL Key.

  Examples: ~/.config/lxc/client.key

verify_cert  [True] Wherever to verify the cert, this is by default True but in the most cases you want to set it

  off as LXD normally uses self-signed certificates.
23.19.108 salt.states.lxd_profile

Manage LXD profiles.
New in version 2019.2.0.

maintainer René Jochum <rene@jochums.at>
maturity new
depends python-pylxd
platform Linux

salt.states.lxd_profile.absent(name, remote_addr=None, cert=None, key=None, verify_cert=True)
Ensure a LXD profile is not present, removing it if present.

name : The name of the profile to remove.
remote_addr : An URL to a remote Server, you also have to give cert and key if you provide remote_addr!
Examples: https://myserver.lan:8443 /var/lib/mysocket.sock
cert : PEM Formatted SSL Zertifikate.
Examples: ~/.config/lxc/client.crt
key : PEM Formatted SSL Key.
Examples: ~/.config/lxc/client.key
verify_cert [True] Wherever to verify the cert, this is by default True but in the most cases you want to set it off as LXD normally uses self-signed certificates.
See the requests-docs for the SSL stuff.

salt.states.lxd_profile.present(name, description=None, config=None, devices=None, remote_addr=None, cert=None, key=None, verify_cert=True)
Creates or updates LXD profiles

name : The name of the profile to create/update
description : A description string
config : A config dict or None (None = unset).
Can also be a list:
"[['key': 'boot.autostart', 'value': 1], ['key': 'security.privileged', 'value': 1]]"
devices : A device dict or None (None = unset).
remote_addr : An URL to a remote Server, you also have to give cert and key if you provide remote_addr!
Examples: https://myserver.lan:8443 /var/lib/mysocket.sock
cert : PEM Formatted SSL Zertifikate.
Examples: ~/.config/lxc/client.crt
key : PEM Formatted SSL Key.
Examples: ~/.config/lxc/client.key
verify_cert [True] Wherever to verify the cert, this is by default True but in the most cases you want to set it off as LXD normally uses self-signed certificates.
See the lxd-docs for the details about the config and devices dicts. See the requests-docs for the SSL stuff.
23.19.109 **salt.states.mac_xattr**

Allows you to manage extended attributes on files or directories

Install, enable and disable assistive access on macOS minions

```
/path/to/file:
 xattr.exists:
   - attributes:
     - com.file.attr=test
     - com.apple.quarantine=0x0000111
```

**salt.states.mac_xattr.delete**(*name, attributes*)

Make sure the given attributes are deleted from the file/directory

- **name** The path to the file/directory
- **attributes** The attributes that should be removed from the file/directory, this is accepted as an array.

**salt.states.mac_xattr.exists**(*name, attributes*)

Make sure the given attributes exist on the file/directory

- **name** The path to the file/directory
- **attributes** The attributes that should exist on the file/directory, this is accepted as an array, with key and value split with an equals sign, if you want to specify a hex value then add 0x to the beginning of the value.

23.19.110 **salt.states.makeconf**

Management of Gentoo make.conf

A state module to manage Gentoo’s `make.conf` file

```
makeopts:
  makeconf.present:
    - value: '-j3'
```

**salt.states.makeconf.absent**(*name*)

Verify that the variable is not in the `make.conf`.

- **name** The variable name. This will automatically be converted to upper case since variables in `make.conf` are in upper case

**salt.states.makeconf.present**(*name, value=None, contains=None, excludes=None*)

Verify that the variable is in the `make.conf` and has the provided settings. If value is set, contains and excludes will be ignored.

- **name** The variable name. This will automatically be converted to upper case since variables in `make.conf` are in upper case
- **value** Enforce that the value of the variable is set to the provided value
- **contains** Enforce that the value of the variable contains the provided value
- **excludes** Enforce that the value of the variable does not contain the provided value.
23.19.111 salt.states.marathon_app

Configure Marathon apps via a salt proxy.

```yaml
my_app:
  marathon_app.config:
    - config:
        cmd: "while [ true ] ; do echo 'Hello Marathon' ; sleep 5 ; done"
        cpus: 0.1
        mem: 10
        instances: 3
```

New in version 2015.8.2.

salt.states.marathon_app.absent(name)

Ensure that the marathon app with the given id is not present.

Parameters

- **name** -- The app name/id

Returns

A standard Salt changes dictionary

salt.states.marathon_app.config(name, config)

Ensure that the marathon app with the given id is present and is configured to match the given config values.

Parameters

- **name** -- The app name/id
- **config** -- The configuration to apply (dict)

Returns

A standard Salt changes dictionary

salt.states.marathon_app.running(name, restart=False, force=True)

Ensure that the marathon app with the given id is present and restart if set.

Parameters

- **name** -- The app name/id
- **restart** -- Restart the app
- **force** -- Override the current deployment

Returns

A standard Salt changes dictionary

23.19.112 salt.states.modjk

State to control Apache modjk

salt.states.modjk.worker_activated(name, workers=None, profile='default')

Activate all the workers in the modjk load balancer

Example:

```yaml
loadbalancer:
  modjk.worker_activated:
    - workers:
      - app1
      - app2
```

salt.states.modjk.worker_disabled(name, workers=None, profile='default')

Disable all the workers in the modjk load balancer
Example:

```yaml
loadbalancer:
    modjk.worker_disabled:
        - workers:
            - app1
            - app2
```

salt.states.modjk.worker_recover(name, workers=None, profile='default')
Recover all the workers in the modjk load balancer

Example:

```yaml
loadbalancer:
    modjk.worker_recover:
        - workers:
            - app1
            - app2
```

salt.states.modjk.worker_stopped(name, workers=None, profile='default')
Stop all the workers in the modjk load balancer

Example:

```yaml
loadbalancer:
    modjk.worker_stopped:
        - workers:
            - app1
            - app2
```

23.19.113 salt.states.modjk_worker

Manage modjk workers

Send commands to a modjk load balancer via the peer system.

This module can be used with the `prereq` requisite to remove/add the worker from the load balancer before deploying/restarting service.

Mandatory Settings:

- The minion needs to have permission to publish the `modjk.*` functions (see here for information on configuring peer publishing permissions)
- The modjk load balancer must be configured as stated in the modjk execution module documentation

salt.states.modjk_worker.activate(name, lbn, target, profile='default', tgt_type='glob')

Changed in version 2017.7.0: The `expr_form` argument has been renamed to `tgt_type`, earlier releases must use `expr_form`.

Activate the named worker from the lbn load balancers at the targeted minions

Example:

```yaml
disable-before-deploy:
    modjk_worker.activate:
        - name: {{ grains['id'] }}
        - lbn: application
```

(continues on next page)
- **target**: 'roles:balancer'
- **tgt_type**: grain

salt.states.modjk_worker.**disable**(name, lbn, target, profile='default', tgt_type='glob')

Changed in version 2017.7.0: The *expr_form* argument has been renamed to *tgt_type*, earlier releases must use *expr_form*.

Disable the named worker from the lbn load balancers at the targeted minions. The worker will get traffic only for current sessions and won't get new ones.

Example:

```python
disable-before-deploy:
  modjk_worker.disable:
    - name: {{ grains['id'] }}
    - lbn: application
    - target: 'roles:balancer'
    - tgt_type: grain
```

salt.states.modjk_worker.**stop**(name, lbn, target, profile='default', tgt_type='glob')

Changed in version 2017.7.0: The *expr_form* argument has been renamed to *tgt_type*, earlier releases must use *expr_form*.

Stop the named worker from the lbn load balancers at the targeted minions. The worker won't get any traffic from the lbn.

Example:

```python
disable-before-deploy:
  modjk_worker.stop:
    - name: {{ grains['id'] }}
    - lbn: application
    - target: 'roles:balancer'
    - tgt_type: grain
```

23.19.114 salt.states.mongodb_database

**Management of MongoDB Databases**

- **depends**
  - pymongo Python module

Only deletion is supported, creation doesn't make sense and can be done using *mongodb_user.present*.

salt.states.mongodb_database.**absent**(name, user=None, password=None, host=None, port=None, authdb=None)

Ensure that the named database is absent. Note that creation doesn't make sense in MongoDB.

- **name** The name of the database to remove
- **user** The user to connect as (must be able to create the user)
- **password** The password of the user
- **host** The host to connect to
- **port** The port to connect to
23.19.115 salt.states.mongodb_user

Management of MongoDB Users

depends

- pymongo Python module

salt.states.mongodb_user.absent(name, user=None, password=None, host=None, port=None, database='admin', authdb=None)

Ensure that the named user is absent

name The name of the user to remove

user MongoDB user with sufficient privilege to create the user

password Password for the admin user specified by the user parameter

host The hostname/IP address of the MongoDB server

port The port on which MongoDB is listening

database The database from which to remove the user specified by the name parameter

authdb The database in which to authenticate

salt.states.mongodb_user.present(name, passwd, database='admin', user=None, password=None, host='localhost', port=27017, authdb=None, roles=None)

Ensure that the user is present with the specified properties

name The name of the user to manage

passwd The password of the user to manage

user MongoDB user with sufficient privilege to create the user

password Password for the admin user specified with the user parameter

host The hostname/IP address of the MongoDB server

port The port on which MongoDB is listening

database The database in which to create the user

Note: If the database doesn't exist, it will be created.

authdb The database in which to authenticate

roles The roles assigned to user specified with the name parameter

Example:

```
mongouser-myapp:
   mongodb_user.present:
     name: myapp
     passwd: password-of-myapp
     database: admin
# Connect as admin:sekrit
     user: admin
     password: sekrit
```

(continues on next page)
- roles:
  - readWrite
  - userAdmin
  - dbOwner

23.19.116 salt.states.monit

Monit state

Manage monit states

```yaml
monit_enable_service_monitoring:
  monit.monitor:
    - name: service

monit_disable_service_monitoring:
  monit.unmonitor:
    - name: service
```

**Note:** Use of these states require that the `monit` execution module is available.

```plaintext
salt.states.monit.monitor(name)
Get the summary from module monit and try to see if service is being monitored. If not then monitor the service.

salt.states.monit.unmonitor(name)
Get the summary from module monit and try to see if service is being monitored. If it is then stop monitoring the service.
```

23.19.117 salt.states.mount

Mounting of filesystems

Mount any type of mountable filesystem with the mounted function:

```plaintext
/mnt/sdb:
  mount.mounted:
    - device: /dev/sdb1
    - fstype: ext4
    - mkmnt: True
    - opts:
      - defaults

/srv/bigdata:
  mount.mounted:
    - device: UUID=066e8200-2867-4ebe-b9e6-f30026ca2314
    - fstype: xfs
    - opts: nobootwait,noatime,nodiratime,nobarrier,logbufs=8
    - dump: 0
    - pass_num: 2
    - persist: True
```

(continues on next page)
- mkmnt: True

/var/lib/bigdata:
  mount.mounted:
    - device: /srv/bigdata
    - fstype: none
    - opts: bind
data: 
    - dump: 0
    - pass_num: 0
    - persist: True
    - mkmnt: True

salt.states.mount.fstab_absent(name, fs_file, mount_by=None, config='/etc/fstab')
Makes sure that a fstab mount point is absent.

name The name of block device. Can be any valid fs_spec value.

fs_file Mount point (target) for the filesystem.

mount_by Select the final value for fs_spec. Can be [None, device, label, uuid, partlabel, partuuid]. If None, the value for fs_spec will be the parameter name, in other case will search the correct value based on the device name. For example, for uuid, the value for fs_spec will be of type 'UUID=xxx' instead of the device name set in name.

config Place where the fstab file lives

salt.states.mount.fstab_present(name, fs_file, fs_vfstype, fs_mntops='defaults', fs_freq=0, fs_passno=0, mount_by=None, config='/etc/fstab', mount=True, match_on='auto', not_change=False, fs_mount=True)
Makes sure that a fstab mount point is present.

name The name of block device. Can be any valid fs_spec value.

fs_file Mount point (target) for the filesystem.

fs_vfstype The type of the filesystem (e.g. ext4, xfs, btrfs, ...)

fs_mntops The mount options associated with the filesystem. Default is defaults.

fs_freq Field is used by dump to determine which fs need to be dumped. Default is 0

fs_passno Field is used by fsck to determine the order in which filesystem checks are done at boot time. Default is 0

fs_mount Field is used only in AIX systems to determine if the filesystem will be mounted by mount_all

mount_by Select the final value for fs_spec. Can be [None, device, label, uuid, partlabel, partuuid]. If None, the value for fs_spec will be the parameter name, in other case will search the correct value based on the device name. For example, for uuid, the value for fs_spec will be of type 'UUID=xxx' instead of the device name set in name.

config Place where the fstab file lives. Default is /etc/fstab

mount Set if the mount should be mounted immediately. Default is True

match_on A name or list of fstab properties on which this state should be applied. Default is auto, a special value indicating to guess based on fstype. In general, auto matches on name for recognized special devices and device otherwise.

not_change By default, if the entry is found in the fstab file but is different from the expected content (like different options), the entry will be replaced with the correct content. If this parameter is set to True and the line is found, the original content will be preserved.
salt.states.mount.mod_watch(name, user=None, **kwargs)
The mounted watcher, called to invoke the watch command.

Note: This state exists to support special handling of the watch requisite. It should not be called directly.
Parameters for this function should be set by the state being triggered.

name The name of the mount point

class盐 states.mount.mounted(name, device, fstype, mkmnt=False, opts='defaults',
dump=0, pass_num=0, config='/etc/fstab', persist=True,
mount=True, user=None, match_on='auto', device_name_regex=None,
extra_mount_invisible_options=None, extra_mount_invisible_keys=None,
extra_mount_translate_options=None, hidden_opts=None, **kwargs)

Verify that a device is mounted

name The path to the location where the device is to be mounted
device The device name, typically the device node, such as /dev/sdb1 or
UUID=066e0200-2867-4ebe-b9e6-f30026ca2314 or LABEL=DATA
fstype The filesystem type, this will be xfs, ext2/3/4 in the case of classic filesystems, fuse in the case
of fuse mounts, and nfs in the case of nfs mounts
mkmnt If the mount point is not present then the state will fail, set mkmnt: True to create the mount point
if it is otherwise not present
opts A list object of options or a comma delimited list
dump The dump value to be passed into the fstab, Default is 0
pass_num The pass value to be passed into the fstab, Default is 0
config Set an alternative location for the fstab, Default is /etc/fstab
persist Set if the mount should be saved in the fstab, Default is True
mount Set if the mount should be mounted immediately, Default is True
user The account used to execute the mount; this defaults to the user salt is running as on the minion
match_on A name or list of fstab properties on which this state should be applied. Default is auto, a special
value indicating to guess based on fstype. In general, auto matches on name for recognized special
devices and device otherwise.
device_name_regex A list of device exact names or regular expressions which should not force a remount.
For example, glusterfs may be mounted with a comma-separated list of servers in fstab, but the
/proc/self/mountinfo will show only the first available server.

{% set glusterfs_ip_list = ['10.0.0.1', '10.0.0.2', '10.0.0.3'] %}

mount glusterfs volume:
  mount.mounted:
    - name: /mnt/glusterfs_mount_point
    - device: {{ glusterfs_ip_list|join(',') }}:/volume_name
    - fstype: glusterfs
    - opts: _netdev,rw,defaults,direct-io-mode=disable
    - mkmnt: True
    - persist: True

(continues on next page)
- dump: 0
- pass_num: 0
- device_name_regex:
  - {{ glusterfs_ip_list|join('|') }}:/volume_name

New in version 2016.11.0.

**extra_mount_invisible_options** A list of extra options that are not visible through the `/proc/self/mountinfo` interface.

If a option is not visible through this interface it will always remount the device. This option extends the builtin `mount_invisible_options` list.

**extra_mount_invisible_keys** A list of extra key options that are not visible through the `/proc/self/mountinfo` interface.

If a key option is not visible through this interface it will always remount the device. This option extends the builtin `mount_invisible_keys` list.

A good example for a key option is the password option:

```
password=badsecret
```

**extra_mount_ignore_fs_keys** A dict of filesystem options which should not force a remount. This will update the internal dictionary. The dict should look like this:

```
{
    'ramfs': ['size']
}
```

**extra_mount_translate_options** A dict of mount options that gets translated when mounted. To prevent a remount add additional options to the default dictionary. This will update the internal dictionary. The dictionary should look like this:

```
{
    'tcp': 'proto=tcp',
    'udp': 'proto=udp'
}
```

**hidden_opts** A list of mount options that will be ignored when considering a remount as part of the state application

New in version 2015.8.2.

**salt.states.mount.swap** *(name, persist=True, config='/etc/fstab')*

Activates a swap device

```
/root/swapfile:
  mount.swap
```

Note: swap does not currently support LABEL

**salt.states.mount.unmounted** *(name, device=None, config='/etc/fstab', persist=False, user=None, **kwargs)*

New in version 0.17.0.

Verify that a device is not mounted
name  The path to the location where the device is to be unmounted from
device  The device to be unmounted. This is optional because the device could be mounted in multiple places.

New in version 2015.5.0.
config  Set an alternative location for the fstab, Default is /etc/fstab
persist  Set if the mount should be purged from the fstab, Default is False
user  The user to own the mount; this defaults to the user salt is running as on the minion

23.19.118  salt.states.mssql_database

Management of Microsoft SQLServer Databases

The mssql_database module is used to create and manage SQL Server Databases

```python
yolo:
    mssql_database.present
```

salt.states.mssql_database.absent(name, **kwargs)
Ensure that the named database is absent

name  The name of the database to remove

salt.states.mssql_database.present(name, containment='NONE', options=None, **kwargs)
Ensure that the named database is present with the specified options

name  The name of the database to manage

containment  Defaults to NONE

options  Can be a list of strings, a dictionary, or a list of dictionaries

23.19.119  salt.states.mssql_login

Management of Microsoft SQLServer Logins

The mssql_login module is used to create and manage SQL Server Logins

```python
frank:
    mssql_login.present
    - domain: mydomain
```

salt.states.mssql_login.absent(name, **kwargs)
Ensure that the named login is absent

name  The name of the login to remove

salt.states.mssql_login.present(name, password=None, domain=None, server_roles=None, options=None, **kwargs)
Checks existence of the named login. If not present, creates the login with the specified roles and options.

name  The name of the login to manage

password  Creates a SQL Server authentication login Since hashed passwords are varbinary values, if the new_login_password is 'long', it will be considered to be HASHED.

domain  Creates a Windows authentication login. Needs to be NetBIOS domain or hostname
server_roles  Add this login to all the server roles in the list
options  Can be a list of strings, a dictionary, or a list of dictionaries

23.19.120  salt.states.mssql_role

Management of Microsoft SQLServer Databases

The mssql_role module is used to create and manage SQL Server Roles

```python
yolo:
    mssql_role.present
```

```
salt.states.mssql_role.absent(name, **kwargs)
    Ensure that the named database is absent
    name  The name of the database to remove

salt.states.mssql_role.present(name, owner=None, grants=None, **kwargs)
    Ensure that the named database is present with the specified options
    name  The name of the database to manage
    owner  Adds owner using AUTHORIZATION option
    Grants  Can only be a list of strings
```

23.19.121  salt.states.mssql_user

Management of Microsoft SQLServer Users

The mssql_user module is used to create and manage SQL Server Users

```python
frank:
    mssql_user.present:
        - database: yolo
```

```
salt.states.mssql_user.absent(name, **kwargs)
    Ensure that the named user is absent
    name  The username of the user to remove

salt.states.mssql_user.present(name, login=None, domain=None, database=None, roles=None, options=None, **kwargs)
    Checks existence of the named user. If not present, creates the user with the specified roles and options.
    name  The name of the user to manage
    login  If not specified, will be created WITHOUT LOGIN
    domain  Creates a Windows authentication user. Needs to be NetBIOS domain or hostname
    database  The database of the user (not the login)
    roles  Add this user to all the roles in the list
    options  Can be a list of strings, a dictionary, or a list of dictionaries
```
23.19.122 salt.states.msteams

Send a message card to Microsoft Teams

This state is useful for sending messages to Teams during state runs.

New in version 2017.7.0.

```
teams-message:
  msteams.post_card:
    - message: 'This state was executed successfully.'
    - hook_url: https://outlook.office.com/webhook/837
```

The hook_url can be specified in the master or minion configuration like below:

```
msteams:
  hook_url: https://outlook.office.com/webhook/837
```

```
salt.states.msteams.post_card(name, message, hook_url=None, title=None, theme_color=None)
  Send a message to a Microsoft Teams channel
```

```
send-msteams-message:
  msteams.post_card:
    - message: 'This state was executed successfully.'
    - hook_url: https://outlook.office.com/webhook/837
```

The following parameters are required:

- **message** The message that is to be sent to the MS Teams channel.

The following parameters are optional:

- **hook_url** The webhook URL given configured in Teams interface, if not specified in the configuration options of master or minion.
- **title** The title for the card posted to the channel
- **theme_color** A hex code for the desired highlight color

23.19.123 salt.states.mysql_database

Management of MySQL databases (schemas)

```
frank:
  mysql_database.present
```

```
salt.states.mysql_database.absent(name, **connection_args)
  Ensure that the named database is absent
```

name The name of the database to remove
salt.states.mysql_database.present(name, character_set=None, collate=None, **connection_args)

Ensure that the named database is present with the specified properties

name The name of the database to manage

23.19.124 salt.states.mysql_grants

Management of MySQL grants (user permissions)

depends

- MySQLdb Python module

configuration See salt.modules.mysql for setup instructions.

The mysql_grants module is used to grant and revoke MySQL permissions.

The name you pass in purely symbolic and does not have anything to do with the grant itself.

The database parameter needs to specify a 'priv_level' in the same specification as defined in the MySQL documentation:

- *
- **
- db_name.*
- db_name.tbl_name
- etc...

This state is not able to set password for the permission from the specified host. See salt.states.mysql_user for further instructions.

```
frank_exampledb:
  mysql_grants.present:
    - grant: select,insert,update
    - database: exampledb.*
    - user: frank
    - host: localhost

frank_otherdb:
  mysql_grants.present:
    - grant: all privileges
    - database: otherdb.*
    - user: frank

restricted_singletable:
  mysql_grants.present:
    - grant: select
    - database: somedb.sometable
    - user: joe
```

salt.states.mysql_grants.absent(name, grant=None, database=None, user=None, host='localhost',
grant_option=False, escape=True, **connection_args)

Ensure that the grant is absent

name The name (key) of the grant to add

grant The grant priv_type (i.e. select,insert,update OR all privileges)
**database**  The database priv_level (i.e. db.tbl OR db.*)

**user**  The user to apply the grant to

**host**  The network/host that the grant should apply to

**salt.states.mysql_grants.present**(*name*, **grant=**None, **database=**None, **user=**None, **host=**'localhost', **grant_option=**False, **escape=**True, **revoke_first=**False, **ssl_option=**False, **connection_args*)

Ensure that the grant is present with the specified properties

**name**  The name (key) of the grant to add

**grant**  The grant priv_type (i.e. select, insert, update OR all privileges)

**database**  The database priv_level (i.e. db.tbl OR db.*)

**user**  The user to apply the grant to

**host**  The network/host that the grant should apply to

**grant_option**  Adds the WITH GRANT OPTION to the defined grant. Default is False

**escape**  Defines if the database value gets escaped or not. Default is True

**revoke_first**  By default, MySQL will not do anything if you issue a command to grant privileges that are more restrictive than what’s already in place. This effectively means that you cannot downgrade permissions without first revoking permissions applied to a db.table/user pair first.

To have Salt forcibly revoke perms before applying a new grant, enable the 'revoke_first options.

WARNING: This will remove permissions for a database before attempting to apply new permissions. There is no guarantee that new permissions will be applied correctly which can leave your database security in an unknown and potentially dangerous state. Use with caution!

Default is False

**ssl_option**  Adds the specified ssl options for the connecting user as requirements for this grant. Value is a list of single-element dicts corresponding to the list of ssl options to use.

Possible key/value pairings for the dicts in the value:

- SSL: True
- X509: True
- SUBJECT: <subject>
- ISSUER: <issuer>
- CIPHER: <cipher>

The non-boolean ssl options take a string as their values, which should be an appropriate value as specified by the MySQL documentation for these options.

Default is False (no ssl options will be used)
23.19.125 salt.states.neutron_network

Management of OpenStack Neutron Networks

New in version 2018.3.0.

depends shade

classification see salt.modules.neutronng for setup instructions

Example States

```python
create network:
    neutron_network.present:
        - name: network1

delete network:
    neutron_network.absent:
        - name: network1

create network with optional params:
    neutron_network.present:
        - name: network1
        - vlan: 200
        - shared: False
        - external: False
        - project: project1
```

```
salt.states.neutron_network.absent(name, auth=None, **kwargs)
    Ensure a network does not exists

    name  Name of the network

salt.states.neutron_network.present(name, auth=None, **kwargs)
    Ensure a network exists and is up-to-date

    name  Name of the network

    provider  A dict of network provider options.

    shared  Set the network as shared.

    external  Whether this network is externally accessible.

    admin_state_up  Set the network administrative state to up.

    vlan  Vlan ID. Alias for provider

    • physical_network: provider
    • network_type: vlan
    • segmentation_id: (vlan id)
```

23.19. state modules 1541
23.19.126 salt.states.neutron_secgroup

Management of OpenStack Neutron Security Groups

New in version 2018.3.0.

depends shade

configuration see salt.modules.neutronng for setup instructions

Example States

```python
create security group;
neutron_secgroup.present:
  - name: security_group1
  - description: "Very Secure Security Group"

delete security group:
neutron_secgroup.absent:
  - name_or_id: security_group1
  - project_name: Project1

create security group with optional params:
neutron_secgroup.present:
  - name: security_group1
  - description: "Very Secure Security Group"
  - project_id: 1dcac318a83b4610b7a7f7ba01465548

create security group with optional params:
neutron_secgroup.present:
  - name: security_group1
  - description: "Very Secure Security Group"
  - project_name: Project1

salt.states.neutron_secgroup.absent(name, auth=None, **kwargs)
  Ensure a security group does not exist
  name Name of the security group

salt.states.neutron_secgroup.present(name, auth=None, **kwargs)
  Ensure a security group exists.
  You can supply either project_name or project_id.
  Creating a default security group will not show up as a change; it gets created through the lookup process.
  name Name of the security group
  description Description of the security group
  project_name Name of Project
  project_id ID of Project
```
23.19.127  salt.states.neutron_secgroup_rule

Management of OpenStack Neutron Security Group Rules

New in version 2018.3.0.

depends  shade

collection  see salt.modules.neutronng for setup instructions

Example States

```python
create security group rule:
neutron_secgroup_rule.present:
 - name: security_group1
   project_name: Project1
   protocol: icmp

delete security group:
neutron_secgroup_rule.absent:
 - name_or_id: security_group1

create security group with optional params:
neutron_secgroup_rule.present:
 - name: security_group1
   description: "Very Secure Security Group"
   project_id: 1dcac318a83b4610b7a7f7ba01465548
```

salt.states.neutron_secgroup_rule.absent(name, auth=None, **kwargs)
Ensure a security group rule does not exist

- name  name or id of the security group rule to delete
- rule_id  uuid of the rule to delete
- project_id  id of project to delete rule from

salt.states.neutron_secgroup_rule.present(name, auth=None, **kwargs)
Ensure a security group rule exists

- defaults: port_range_min=None, port_range_max=None, protocol=None,
  remote_ip_prefix=None, remote_group_id=None, direction='ingress',
  ethertype='IPv4', project_id=None
- name  Name of the security group to associate with this rule
- project_name  Name of the project associated with the security group
- protocol  The protocol that is matched by the security group rule. Valid values are None, tcp, udp, and icmp.

23.19.128  salt.states.neutron_subnet

Management of OpenStack Neutron Subnets

New in version 2018.3.0.

depends  shade

collection  see salt.modules.neutronng for setup instructions

Example States
**create subnet:**
```yaml
neutron_subnet.present:
  - name: subnet1
  - network_name_or_id: network1
  - cidr: 192.168.199.0/24
```

**delete subnet:**
```yaml
neutron_subnet.absent:
  - name: subnet2
```

**create subnet with optional params:**
```yaml
neutron_subnet.present:
  - name: subnet1
  - network_name_or_id: network1
  - enable_dhcp: True
  - cidr: 192.168.199.0/24
  - allocation_pools:
    - start: 192.168.199.5
    - end: 192.168.199.250
  - host_routes:
    - destination: 192.168..0.0/24
      nexthop: 192.168.0.1
    - gateway_ip: 192.168.199.1
    - dns_nameservers:
      - 8.8.8.8
      - 8.8.8.7
```

**create ipv6 subnet:**
```yaml
neutron_subnet.present:
  - name: v6subnet1
  - network_name_or_id: network1
  - ip_version: 6
```

```
salt.states.neutron_subnet.absent(name, auth=None)
  Ensure a subnet does not exists
  name   Name of the subnet

salt.states.neutron_subnet.present(name, auth=None, **kwargs)
  Ensure a subnet exists and is up-to-date
  name   Name of the subnet
  network_name_or_id   The unique name or ID of the attached network. If a non-unique name is supplied, an exception is raised.
  allocation_pools   A list of dictionaries of the start and end addresses for the allocation pools
  gateway_ip   The gateway IP address.
  dns_nameservers   A list of DNS name servers for the subnet.
  host_routes   A list of host route dictionaries for the subnet.
  ipv6_ra_mode   IPv6 Router Advertisement mode. Valid values are: ‘dhcpv6-stateful’, ‘dhcpv6-stateless’, or ‘slaac’.
  ipv6_address_mode   IPv6 address mode. Valid values are: ‘dhcpv6-stateful’, ‘dhcpv6-stateless’, or ‘slaac’.
```
23.19.129 salt.states.nexus

This state downloads artifacts from Nexus 3.x.
New in version 2018.3.0.

salt.states.nexus.downloaded(name, artifact, target_dir='/tmp', target_file=None)

Ensures that the artifact from nexus exists at given location. If it doesn't exist, then it will be downloaded. If it already exists then the checksum of existing file is checked against checksum in nexus. If it is different then the step will fail.

artifact Details of the artifact to be downloaded from nexus. Various options are:
- nexus_url: URL of the nexus instance
- repository: Repository in nexus
- artifact_id: Artifact ID
- group_id: Group ID
- packaging: Packaging
- classifier: Classifier
- version: Version One of the following: - Version to download - latest - Download the latest release of this artifact - latest_snapshot - Download the latest snapshot for this artifact
- username: nexus username
- password: nexus password

target_dir Directory where the artifact should be downloaded. By default it is downloaded to /tmp directory.
target_file Target file to download artifact to. By default file name is resolved by nexus.

An example to download an artifact to a specific file:

```yaml
jboss_module_downloaded:
  nexus.downloaded:
    - artifact:
      nexus_url: http://nexus.intranet.example.com/repository
      repository: 'libs-release-local'
      artifact_id: 'module'
      group_id: 'com.company.module'
      packaging: 'jar'
      classifier: 'sources'
      version: '1.0'
    - target_file: /opt/jboss7/modules/com/company/lib/module.jar
```

Download artifact to the folder (automatically resolves file name):

```yaml
maven_artifact_downloaded:
  nexus.downloaded:
    - artifact:
      nexus_url: http://nexus.intranet.example.com/repository
      repository: 'maven-releases'
      artifact_id: 'module'
      group_id: 'com.company.module'
      packaging: 'zip'
      classifier: 'dist'
      version: '1.0'
    - target_dir: /opt/maven/modules/com/company/release
```
23.19.130 salt.states.npm

Installation of NPM Packages

These states manage the installed packages for node.js using the Node Package Manager (npm). Note that npm must be installed for these states to be available, so npm states should include a requisite to a pkg.installed state for the package which provides npm (simply npm in most cases). Example:

```

```n

salt.states.npm.bootstrap(name, user=None, silent=True)

Bootstraps a node.js application.

- user The user to run NPM with

  New in version 0.17.0.

salt.states.npm.cache_cleaned(name=None, user=None, force=False)

Ensure that the given package is not cached.

- name The name of the package to remove from the cache, or None for all packages

- user The user to run NPM with

- force Force cleaning of cache. Required for npm@5 and greater

  New in version 2016.11.6.

salt.states.npm.installed(name, pkgs=None, dir=None, user=None, force_reinstall=False, registry=None, env=None)

Verify that the given package is installed and is at the correct version (if specified).

```

```

```n

name The package to install

  Changed in version 2014.7.2: This parameter is no longer lowercased by salt so that case-sensitive NPM package names will work.

pkgs A list of packages to install with a single npm invocation; specifying this argument will ignore the name argument

  New in version 2014.7.0.

dir The target directory in which to install the package, or None for global installation
user  The user to run NPM with
  New in version 0.17.0.

registry  The NPM registry from which to install the package
  New in version 2014.7.0.

e  A list of environment variables to be set prior to execution. The format is the same as the cmd.run.
      state function.
  New in version 2014.7.0.

force reinstall  Install the package even if it is already installed

salt.states.npm.removed(name, dir=None, user=None)
  Verify that the given package is not installed.

dir  The target directory in which to install the package, or None for global installation

user  The user to run NPM with
  New in version 0.17.0.

23.19.131  salt.states.nxos

State module for Cisco NX-OS Switch Proxy and Native minions
New in version 2016.11.0.

For documentation on setting up the nxos proxy minion look in the documentation for salt.proxy.nxos.

salt.states.nxos.config_absent(name)
  Ensure a specific configuration line does not exist in the running config

name  config line to remove

Examples:

add snmp group:
  nxos.config_absent:
    - names:
      - snmp-server community randoSNMPstringHERE group network-operator
      - snmp-server community AnotherRandomSNMPString group network-admin

Note:  For certain cases extra lines could be removed based on dependencies. In this example, included after
the example for config_present, the ACLs would be removed because they depend on the existence of the
group.

salt.states.nxos.config_present(name)
  Ensure a specific configuration line exists in the running config

name  config line to set

Examples:

add snmp group:
  nxos.config_present:
    - names:
      - snmp-server community randoSNMPstringHERE group network-operator

(continues on next page)
add snmp acl:

```
nxos.config_present:
  - names:
    - snmp-server community AnotherRandomSNMPSTring group network-admin
```

```
add snmp acl:

- snmp-server community randoSNMPstringHERE use-acl snmp-acl-ro
- snmp-server community AnotherRandomSNMPSTring use-acl snmp-acl-rw
```

salt.states.nxos.replace(name, repl, full_match=False)

Replace all instances of a string or full line in the running config

**name**  String to replace

**repl**  The replacement text

**full_match**  Whether name will match the full line or only a subset of the line. Defaults to False. When False, ‘* is added around name for matching in the show run config.

Examples:

```
replace snmp string:

nxos.replace:
  - name: randoSNMPstringHERE
  - repl: NEWrandoSNMPstringHERE

replace full snmp string:

nxos.replace:
  - name: ^snmp-server community randoSNMPstringHERE group network-operator$
  - repl: snmp-server community NEWrandoSNMPstringHERE group network-operator
  - full_match: True
```

**Note:** The first example will replace the SNMP string on both the group and the ACL, so you will not lose the ACL setting. Because the second is an exact match of the line, when the group is removed, the ACL is removed, but not readded, because it was not matched.

salt.states.nxos.user_absent(name)

Ensure a user is not present

**name**  username to remove if it exists

Examples:

```
delete:

nxos.user_absent:
  - name: daniel
```

salt.states.nxos.user_present(name, password=None, roles=None, encrypted=False, crypt_salt=None, algorithm='sha256')

Ensure a user is present with the specified groups

**name**  Name of user

**password**  Encrypted or Plain Text password for user

**roles**  List of roles the user should be assigned. Any roles not in this list will be removed

**encrypted**  Whether the password is encrypted already or not. Defaults to False
crypt_salt  Salt to use when encrypting the password. Default is None (salt is randomly generated for unhashed passwords)

algorithm  Algorithm to use for hashing password. Defaults to sha256. Accepts md5, blowfish, sha256, sha512

Examples:

```
crypt_salt
algorithm

create:
  nxos.user_present:
    - name: daniel
    - roles:
      - vdc-admin

set_password:
  nxos.user_present:
    - name: daniel
    - password: admin
    - roles:
      - network-admin

update:
  nxos.user_present:
    - name: daniel
    - password: AiN9jaoP
    - roles:
      - network-admin
      - vdc-admin
```

23.19.132  salt.states.nxos_upgrade

Manage NX-OS System Image Upgrades.

New in version 3001.

maturity new

platform nxos

codeauthor Michael G Wiebe

For documentation on setting up the nxos proxy minion look in the documentation for salt.proxy.nxos.

```
salt.states.nxos_upgrade.image_running(name, system_image, kickstart_image=None, issu=True, **kwargs)
```

Ensure the NX-OS system image is running on the device.

name  Name of the salt state task

system_image  Name of the system image file on bootflash:

kickstart_image  Name of the kickstart image file on bootflash: This is not needed if the system_image is a combined system and kickstart image Default: None

issu  Ensure the correct system is running on the device using an in service software upgrade, or force a disruptive upgrade by setting the option to False. Default: False

timeout  Timeout in seconds for long running 'install all' upgrade command. Default: 900

Examples:
upgrade_software_image_n9k:
  nxos.image_running:
    - name: Ensure nxos.7.0.3.I7.5a.bin is running
    - system_image: nxos.7.0.3.I7.5a.bin
    - issu: True

upgrade_software_image_n7k:
  nxos.image_running:
    - name: Ensure n7000-s2-kickstart.8.0.1.bin is running
    - kickstart_image: n7000-s2-kickstart.8.0.1.bin
    - system_image: n7000-s2-dk9.8.0.1.bin
    - issu: False

23.19.133 salt.states.openstack_config

Manage OpenStack configuration file settings.

maintainer Jeffrey C. Ollie <jeff@ocjtech.us>
maturity new
depends
platform linux

salt.states.openstack_config.absent(name, filename, section, parameter=None)
Ensure a value is not set in an OpenStack configuration file.

filename The full path to the configuration file
section The section in which the parameter will be set
parameter (optional) The parameter to change. If the parameter is not supplied, the name will be used as the parameter.

salt.states.openstack_config.present(name, filename, section, value, parameter=None)
Ensure a value is set in an OpenStack configuration file.

filename The full path to the configuration file
section The section in which the parameter will be set
parameter (optional) The parameter to change. If the parameter is not supplied, the name will be used as the parameter.
value The value to set

23.19.134 salt.states.openvswitch_bridge

Management of Open vSwitch bridges.

salt.states.openvswitch_bridge.absent(name)
Ensures that the named bridge does not exist, eventually deletes it.

Parameters name -- The name of the bridge.

salt.states.openvswitch_bridge.present(name)
Ensures that the named bridge exists, eventually creates it.

Parameters name -- The name of the bridge.
23.19.135 salt.states.openvswitch_port

Management of Open vSwitch ports.

salt.states.openvswitch_port.absent(name, bridge=None)

Ensures that the named port exists on bridge, eventually deletes it. If bridge is not set, port is removed from whatever bridge contains it.

Parameters

- **name** -- The name of the port.
- **bridge** -- The name of the bridge.

salt.states.openvswitch_port.present(name, bridge, tunnel_type=None, id=None, remote=None, dst_port=None, internal=False)

Ensures that the named port exists on bridge, eventually creates it.

Parameters

- **name** -- The name of the port.
- **bridge** -- The name of the bridge.
- **tunnel_type** -- Optional type of interface to create, currently supports: vlan, vxlan and gre.
- **id** -- Optional tunnel's key.
- **remote** -- Remote endpoint's IP address.
- **dst_port** -- Port to use when creating tunnelport in the switch.
- **internal** -- Create an internal port if one does not exist

23.19.136 salt.states.opsgenie

Create/Close an alert in OpsGenie

New in version 2018.3.0.

This state is useful for creating or closing alerts in OpsGenie during state runs.

| used_space: |
| disk.status: |
| - name: / |
| - maximum: 79% |
| - minimum: 20% |

| opsgenie_create_action_sender: |
| opsgenie.create_alert: |
| - api_key: XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX |
| - reason: 'Disk capacity is out of designated range.' |
| - name: disk.status |
| - onfail: |
| - disk: used_space |

| opsgenie_close_action_sender: |
| opsgenie.close_alert: |
| - api_key: XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX |
| - name: disk.status |

(continues on next page)
- **require:**
  - **disk:** used_space

```
salt.states.opsgenie.close_alert(name=None, api_key=None, reason='Conditions are met.', action_type='Close')
```

Close an alert in OpsGenie. It’s a wrapper function for create_alert. Example usage with Salt’s requisites and other global state arguments could be found above.

**Required Parameters:**

- **name** It will be used as alert’s alias. If you want to use the close functionality you must provide name field for both states like in above case.

**Optional Parameters:**

- **api_key** It’s the API Key you’ve copied while adding integration in OpsGenie.
- **reason** It will be used as alert’s default message in OpsGenie.
- **action_type** OpsGenie supports the default values Create/Close for action_type. You can customize this field with OpsGenie’s custom actions for other purposes like adding notes or acknowledging alerts.

```
salt.states.opsgenie.create_alert(name=None, api_key=None, reason=None, action_type='Create')
```

Create an alert in OpsGenie. Example usage with Salt’s requisites and other global state arguments could be found above.

**Required Parameters:**

- **api_key** It’s the API Key you’ve copied while adding integration in OpsGenie.
- **reason** It will be used as alert’s default message in OpsGenie.

**Optional Parameters:**

- **name** It will be used as alert’s alias. If you want to use the close functionality you must provide name field for both states like in above case.
- **action_type** OpsGenie supports the default values Create/Close for action_type. You can customize this field with OpsGenie’s custom actions for other purposes like adding notes or acknowledging alerts.

### 23.19.137 salt.states.pagerduty

Create an Event in PagerDuty

New in version 2014.1.0.

This state is useful for creating events on the PagerDuty service during state runs.

```
salt.states.pagerduty.create_event(name, details, service_key, profile)
```

Create an event on the PagerDuty service

**server-warning-message:**

```
pagerduty.create_event:
  - name: 'This is a server warning message'
  - details: 'This is a much more detailed message'
  - service_key: 9abcd123456789efabcde362783cdbaf
  - profile: my-pagerduty-account
```
The following parameters are required:

- **name**  This is a short description of the event.
- **details**  This can be a more detailed description of the event.
- **service_key**  This key can be found by using pagerduty.list_services.
- **profile**  This refers to the configuration profile to use to connect to the PagerDuty service.

23.19.138  salt.states.pagerduty_escalation_policy

Manage PagerDuty escalation policies.

Schedules and users can be referenced by pagerduty ID, or by name, or by email address.

For example:

```python
ensure test escalation policy:
  pagerduty_escalation_policy.present:
    - name: bruce test escalation policy
    - escalation_rules:
      - type: schedule
        id: 'bruce test schedule level1'
      - type: user
        id: 'Bruce Sherrod'
        escalation_delay_in_minutes: 15
      - type: schedule
        id: 'bruce test schedule level2'
        escalation_delay_in_minutes: 15
      - type: user
        id: 'Bruce TestUser1'
      - type: user
        id: 'Bruce TestUser2'
        escalation_delay_in_minutes: 15
      - type: user
        id: 'Bruce TestUser3'
        escalation_delay_in_minutes: 15
        id: 'bruce+test4@lyft.com'
```

salt.states.pagerduty_escalation_policy.absent( profile='pagerduty',  subdomain=None,  api_key=None, **kwargs)

Ensure that a PagerDuty escalation policy does not exist.  Accepts all the arguments that pagerduty_escalation_policy.present accepts; but ignores all arguments except the name.

Name can be the escalation policy id or the escalation policy name.

salt.states.pagerduty_escalation_policy.present( profile='pagerduty',  subdomain=None,  api_key=None, **kwargs)

Ensure that a pagerduty escalation policy exists.  Will create or update as needed.
This method accepts as args everything defined in https://developer.pagerduty.com/documentation/rest/escalation_policies/create. In addition, user and schedule id's will be translated from name (or email address) into PagerDuty unique ids. For example:

```
pagerduty_escalation_policy.present:
  - name: bruce test escalation policy
  - escalation_rules:
    - targets:
      * type: schedule id: 'bruce test schedule level1'
      * type: user id: 'Bruce Sherrod'
```

In this example, 'Bruce Sherrod' will be looked up and replaced with the PagerDuty id (usually a 7 digit all-caps string, e.g. PX6GQL7)

### 23.19.139 salt.states.pagerduty_schedule

Manage PagerDuty schedules.

Example:

```
ensure test schedule:
  pagerduty_schedule.present:
    - name: 'bruce test schedule level1'
    - schedule:
        name: 'bruce test schedule level1'
        time_zone: 'Pacific Time (US & Canada)'
        schedule_layers:
          - name: 'Schedule Layer 1'
            start: '2015-01-01T00:00:00'
            users:
              - user:
                  'id': 'Bruce TestUser1'
                  member_order: 1
              - user:
                  'id': 'Bruce TestUser2'
                  member_order: 2
              - user:
                  'id': 'bruce@test3@lyft.com'
                  member_order: 3
              - user:
                  'id': 'bruce@test4@lyft.com'
                  member_order: 4
        rotation_virtual_start: '2015-01-01T00:00:00'
        priority: 1
        rotation_turn_length_seconds: 604800
```

`salt.states.pagerduty_schedule.absent(profile='pagerduty', subdomain=None, api_key=None, **kwargs)`

Ensure that a pagerduty schedule does not exist. Name can be pagerduty schedule id or pagerduty schedule name.
salt.states.pagerduty_schedule.present

Ensure that a pagerduty schedule exists. This method accepts as args everything defined in https://developer.pagerduty.com/documentation/rest/schedules/create. This means that most arguments are in a dict called "schedule."

User id's can be pagerduty id, or name, or email address.

23.19.140 salt.states.pagerduty_service

Manage PagerDuty services

Escalation policies can be referenced by pagerduty ID or by namea.

For example:

```python
salt.states.pagerduty_service.present:
- name: 'my service'
- escalation_policy_id: 'my escalation policy'
- type: nagios
```

salt.states.pagerduty_service.absent

Ensure a pagerduty service does not exist. Name can be the service name or pagerduty service id.

salt.states.pagerduty_service.present

Ensure pagerduty service exists. This method accepts as arguments everything defined in https://developer.pagerduty.com/documentation/rest/services/create

Note that many arguments are mutually exclusive, depending on the "type" argument.

Examples:

```python
# create a PagerDuty email service at test-email@DOMAIN.pagerduty.com
ensure generic email service exists:
pagerduty_service.present:
  - name: my email service
  - service:
    description: "email service controlled by salt"
    escalation_policy_id: "my escalation policy"
    type: "generic_email"
    service_key: "test-email"

# create a pagerduty service using cloudwatch integration
ensure my cloudwatch service exists:
pagerduty_service.present:
  - name: my cloudwatch service
  - service:
    escalation_policy_id: "my escalation policy"
    type: aws_cloudwatch
    description: "my cloudwatch service controlled by salt"
```
23.19.141 salt.states.pagerduty_user

Manage PagerDuty users.

Example

```yaml
ensure bruce test user 1:
  pagerduty.user_present:
    - name: 'Bruce TestUser1'
    - email: bruce+test1@lyft.com
    - requester_id: P1GV5NT

salt.states.pagerduty_user.absent(profile='pagerduty', subdomain=None, api_key=None, **kwargs)

Ensure pagerduty user does not exist. Name can be pagerduty id, email address, or user name.

salt.states.pagerduty_user.present(profile='pagerduty', subdomain=None, api_key=None, **kwargs)

```

23.19.142 salt.states.pbm

Manages VMware storage policies (called pbm because the vCenter endpoint is /pbm)

Examples

Storage policy

```json
{
  "name": "salt_storage_policy",
  "description": "Managed by Salt. Random capability values.",
  "resource_type": "STORAGE",
  "subprofiles": [
    {
      "capabilities": [
        {
          "setting": {
            "type": "scalar",
            "value": 2
          },
          "namespace": "VSAN",
          "id": "hostFailuresToTolerate"
        },
        {"setting": {
            "type": "scalar",
            "value": 2
          }
        }
      ]
    }
  ]
}
```

(continues on next page)
"namespace": "VSAN",
"id": "stripeWidth"
},
{
"setting": {
"type": "scalar",
"value": true
},
"namespace": "VSAN",
"id": "forceProvisioning"
},
{
"setting": {
"type": "scalar",
"value": 50
},
"namespace": "VSAN",
"id": "proportionalCapacity"
},
{
"setting": {
"type": "scalar",
"value": 0
},
"namespace": "VSAN",
"id": "cacheReservation"
}],
"name": "Rule-Set 1: VSAN",
"force_provision": null
},
"

Dependencies

- pyVmomi Python Module

**pyVmomi**

PyVmomi can be installed via pip:

```
pip install pyVmomi
```

**Note:** Version 6.0 of pyVmomi has some problems with SSL error handling on certain versions of Python. If using version 6.0 of pyVmomi, Python 2.6, Python 2.7.9, or newer must be present. This is due to an upstream dependency in pyVmomi 6.0 that is not supported in Python versions 2.7 to 2.7.8. If the version of Python is not in the supported range, you will need to install an earlier version of pyVmomi. See Issue #29537 <https://github.com/saltstack/salt/issues/29537> for more information.

**salt.states.pbm.default_storage_policy_assigned**(name, policy, datastore)

Assigns a default storage policy to a datastore
policy  Name of storage policy
datastore  Name of datastore

salt.states.pbm.default_vsan_policy_configured(name, policy)
Configures the default VSAN policy on a vCenter. The state assumes there is only one default VSAN policy on a vCenter.
policy  Dict representation of a policy

salt.states.pbm.storage_policies_configured(name, policies)
Configures storage policies on a vCenter.
policies  List of dict representation of the required storage policies

23.19.143  salt.states.pecl

Installation of PHP Extensions Using pecl

These states manage the installed pecl extensions. Note that php-pear must be installed for these states to be available, so pecl states should include a requisite to a pkg.installed state for the package which provides pecl (php-pear in most cases). Example:

```yaml
php-pear:
  pkg.installed

mongo:
  pecl.installed:
    - require:
      - pkg: php-pear
```

salt.states.pecl.installed(name, version=None, defaults=False, force=False, preferred_state='stable')
New in version 0.17.0.

Make sure that a pecl extension is installed.
name  The pecl extension name to install
version  The pecl extension version to install. This option may be ignored to install the latest stable version.
defaults  Use default answers for extensions such as pecl_http which ask questions before installation. Without this option, the pecl.installed state will hang indefinitely when trying to install these extensions.
force  Whether to force the installed version or not
preferred_state  The pecl extension state to install

salt.states.pecl.removed(name)
Make sure that a pecl extension is not installed.
name  The pecl extension name to uninstall
23.19.144 salt.states.pkgbuild

The pkgbuild state is the front of Salt package building backend. It automatically builds DEB and RPM packages from specified sources

New in version 2015.8.0.

```
salt_2015.5.2:
  pkgbuild.built:
  - runas: thatch
  - results:
    - salt-2015.5.2-2.el7.centos.noarch.rpm
    - salt-api-2015.5.2-2.el7.centos.noarch.rpm
    - salt-cloud-2015.5.2-2.el7.centos.noarch.rpm
    - salt-master-2015.5.2-2.el7.centos.noarch.rpm
    - salt-minion-2015.5.2-2.el7.centos.noarch.rpm
    - salt-ssh-2015.5.2-2.el7.centos.noarch.rpm
    - salt-syndic-2015.5.2-2.el7.centos.noarch.rpm
  - dest_dir: /tmp/pkg
  - spec: salt://pkg/salt/spec/salt.spec
  - template: jinja
  - deps:
    - salt://pkg/salt/sources/required_dependency.rpm
  - tgt: epel-7-x86_64
  - sources:
    - salt://pkg/salt/sources/logrotate.salt
    - salt://pkg/salt/sources/README.fedora
    - salt://pkg/salt/sources/salt-2015.5.2.tar.gz
    - salt://pkg/salt/sources/salt-2015.5.2-tests.patch
    - salt://pkg/salt/sources/salt-api
    - salt://pkg/salt/sources/salt-api.service
    - salt://pkg/salt/sources/salt-master
    - salt://pkg/salt/sources/salt-master.service
    - salt://pkg/salt/sources/salt-minion
    - salt://pkg/salt/sources/salt-minion.service
    - salt://pkg/salt/sources/saltpkg.sls
    - salt://pkg/salt/sources/salt-syndic
    - salt://pkg/salt/sources/salt-syndic.service
    - salt://pkg/salt/sources/SaltTesting-2015.5.8.tar.gz

/tmp/pkg:
  pkgbuild.repo
```

salt.states.pkgbuild.built(name, runas, dest_dir, spec, sources, tgt, template=None, deps=None, env=None, results=None, force=False, saltenv='base', log_dir='/var/log/salt/pkgbuild')

Ensure that the named package is built and exists in the named directory

**name** The name to track the build, the name value is otherwise unused

**runas** The user to run the build process as

**dest_dir** The directory on the minion to place the built package(s)

**spec** The location of the spec file (used for rpms)

**sources** The list of package sources

**tgt** The target platform to run the build on

**template** Run the spec file through a templating engine
Changed in version 2015.8.2: This argument is now optional, allowing for no templating engine to be used if none is desired.

**deps** Packages required to ensure that the named package is built can be hosted on either the salt master server or on an HTTP or FTP server. Both HTTPS and HTTP are supported as well as downloading directly from Amazon S3 compatible URLs with both pre-configured and automatic IAM credentials.

**env** A dictionary of environment variables to be set prior to execution. Example:

```yaml
- env:
  DEB_BUILD_OPTIONS: 'nocheck'
```

**Warning:** The above illustrates a common PyYAML pitfall, that `yes`, `no`, `on`, `off`, `true`, and `false` are all loaded as boolean `True` and `False` values, and must be enclosed in quotes to be used as strings. More info on this (and other) PyYAML idiosyncrasies can be found [here](#).

**results** The names of the expected rpms that will be built

**force** [False] If `True`, packages will be built even if they already exist in the `dest_dir`. This is useful when building a package for continuous or nightly package builds.

New in version 2015.8.2.

**saltenv** The saltenv to use for files downloaded from the salt fileserver

**log_dir** `[/var/log/salt/rpmbuild]` Root directory for log files created from the build. Logs will be organized by package name, version, OS release, and CPU architecture under this directory.

New in version 2015.8.2.

```python
salt.states.pkgbuild.repo(name, keyid=None, env=None, use_passphrase=False, gnupghome='/etc/salt/gpgkeys', runas='builder', timeout=15.0)
```

Make a package repository and optionally sign it and packages present

The name is directory to turn into a repo. This state is best used with onchanges linked to your package building states.

**name** The directory to find packages that will be in the repository

**keyid** Changed in version 2016.3.0.

Optional Key ID to use in signing packages and repository. Utilizes Public and Private keys associated with keyid which have been loaded into the minion's Pillar data.

For example, contents from a Pillar data file with named Public and Private keys as follows:

```plaintext
---BEGIN PGP PRIVATE KEY BLOCK-----
Version: GnuPG v1

lQO+BFeiFQCADCAPtHz7I5Rl32escCMZsPzaEKWe7bIX1em4KCKkBQx47l6c54bo
82PCE8Y1jF/9Uk2m3RKWp3Yccc7Ap3gj6Q0ysvVz28UbnhPxsIkwol2c8qof
... 
Ebe+8JQTwqSXPRTzXmy/b5WXDeM79CKLWvuGpXFor76D+ECMRPy/rawukEcNp
R50mgHqvydEn0pWbn8Jq09YX/UssSMHBVzLC8ei5ZIopzalvX
=7vW8
---END PGP PRIVATE KEY BLOCK-----
```

**gpg_pckg_priv_keyname:** `gpg_pckg_key.pem`

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gpg_pkg_pub_key: |
-----BEGIN PGP PUBLIC KEY BLOCK-----
Version: GnuPG v1

mQENBFciIfQBCADAPc7tx7I5Rl32escCMZsPzaEKWe7bIX1em4KCKkBoX47IG54b
w82PCE8Y1jF/9Uk2m3RKWwp3YcLlc7Ap3gj6V04ysvVz28UbnhPxsIk0lf2cq8qc
.
.
bYP7t5iw3MqzRMyFIr77wK3BPCpJc9FPNebL9vlZcN4zv0KQta+4alCWivvoP
4QixE+/+trC6QRw2m2dHk6aAeq/J8Sc7ilZufwnNA71hf9SzRIwcFXMsLx4iLki
inNqW9c=
=sICX
-----END PGP PUBLIC KEY BLOCK-----
gpg_pkg_pub_keyname: gpg_pkg_key.pub

env  Changed in version 2016.3.0.

A dictionary of environment variables to be utilized in creating the repository. Example:

```
- env:
  OPTIONS: 'ask-passphrase'
```

**Warning:** The above illustrates a common PyYAML pitfall, that yes, no, on, off, true, and false are all loaded as boolean True and False values, and must be enclosed in quotes to be used as strings. More info on this (and other) PyYAML idiosyncrasies can be found [here](#).

Use of OPTIONS on some platforms, for example: ask-passphrase, will require gpg-agent or similar to cache passphrases.

---

**Note:** This parameter is not used for making yum repositories.

use_passphrase  [False] New in version 2016.3.0.

Use a passphrase with the signing key presented in keyid. Passphrase is received from Pillar data which could be passed on the command line with pillar parameter. For example:

```
pillar='{"gpg_passphrase" : "my_passphrase" }'
```

gnupghome  [/etc/salt/gpgkeys] New in version 2016.3.0.

Location where GPG related files are stored, used with 'keyid'

runas  [builder] New in version 2016.3.0.

User to create the repository as, and optionally sign packages.

**Note:** Ensure the user has correct permissions to any files and directories which are to be utilized.

timeout  [15.0] New in version 2016.3.4.

Timeout in seconds to wait for the prompt for inputting the passphrase.
23.19.145 salt.states.pkgng

Manage package remote repo using FreeBSD pkgng

Salt can manage the URL pkgng pulls packages from. ATM the state and module are small so use cases are typically rather simple:

```
pkgng_clients:
    pkgng.update_packaging_site:
    - name: "http://192.168.0.2"
```

\texttt{salt.states.pkgng.update\_packaging\_site(name)}

23.19.146 salt.states.portage_config

Management of Portage package configuration on Gentoo

A state module to manage Portage configuration on Gentoo

```
salt:
    portage_config.flags:
    - use:
      - openssl
```

\texttt{salt.states.portage\_config.flags(name, use=None, accept\_keywords=None, env=None, license=None, properties=None, unmask=False, mask=False)}

Enforce the given flags on the given package or DEPEND atom.

**Warning:** In most cases, the affected package(s) need to be rebuilt in order to apply the changes.

- **name**  The name of the package or its DEPEND atom
- **use**  A list of USE flags
- **accept\_keywords**  A list of keywords to accept. \texttt{~ARCH} means current host arch, and will be translated into a line without keywords
- **env**  A list of environment files
- **license**  A list of accepted licenses
- **properties**  A list of additional properties
- **unmask**  A boolean to unmask the package
- **mask**  A boolean to mask the package
23.19.147 salt.states.postgres_cluster

Management of PostgreSQL clusters

The postgres_cluster state module is used to manage PostgreSQL clusters. Clusters can be set as either absent or present

```
create cluster 9.3 main:
  postgres_cluster.present:
    - name: 'main'
    - version: '9.3'
```

```
salt.states.postgres_cluster.absent(version, name)
  Ensure that the named cluster is absent
  version  Version of the postgresql server of the cluster to remove
  name    The name of the cluster to remove
  New in version 2016.3.0.
```

```
salt.states.postgres_cluster.present(version, name, port=None, encoding=None, locale=None, datadir=None, allow_group_access=None, data_checksums=None, wal_segsize=None)
  Ensure that the named cluster is present with the specified properties. For more information about all of these options see man pg_createcluster(1)
  version  Version of the postgresql cluster
  name    The name of the cluster
  port    Cluster port
  encoding  The character encoding scheme to be used in this database
  locale  Locale with which to create cluster
  datadir  Where the cluster is stored
  allow_group_access  Allows users in the same group as the cluster owner to read all cluster files created by initdb
  data_checksums  Use checksums on data pages
  wal_segsize  Set the WAL segment size, in megabytes
  New in version 2016.3.0.
```

23.19.148 salt.states.postgres_database

Management of PostgreSQL databases

The postgres_database module is used to create and manage Postgres databases. Databases can be set as either absent or present

```
frank:
  postgres_database.present
```

23.19. state modules
salt.states.postgres_database.absent(name, user=None, maintenance_db=None, db_password=None, db_host=None, db_port=None, db_user=None)

Ensure that the named database is absent

name The name of the database to remove
db_user database username if different from config or default
db_password user password if any password for a specified user
db_host Database host if different from config or default
db_port Database port if different from config or default
user System user all operations should be performed on behalf of

New in version 0.17.0.

salt.states.postgres_database.present(name, tablespace=None, encoding=None, lc_collate=None, lc_ctype=None, owner=None, owner_recurse=False, template=None, user=None, maintenance_db=None, db_password=None, db_host=None, db_port=None, db_user=None)

Ensure that the named database is present with the specified properties. For more information about all of these options see man createdb(1)

name The name of the database to manage
tablespace Default tablespace for the database
encoding The character encoding scheme to be used in this database
lc_collate The LC_COLLATE setting to be used in this database
lc_ctype The LC_CTYPE setting to be used in this database
owner The username of the database owner
owner_recurse Recurse owner change to all relations in the database
template The template database from which to build this database
user System user all operations should be performed on behalf of
db_user database username if different from config or default
db_password user password if any password for a specified user
db_host Database host if different from config or default
db_port Database port if different from config or default

New in version 0.17.0.
23.19.149  salt.states.postgres_initdb

Initialization of PostgreSQL data directory

The postgres_initdb module is used to initialize the postgresql data directory.

New in version 2016.3.0.

```yaml
pgsql-data-dir:
  postgres_initdb.present:
    - name: /var/lib/pgsql/data
    - auth: password
    - user: postgres
    - password: strong_password
    - encoding: UTF8
    - locale: C
    - runas: postgres
    - checksums: True
    - waldir: /var/postgresql/wal
```

**salt.states.postgres_initdb.present** *(name, user=None, password=None, auth='password', encoding='UTF8', locale=None, runas=None, waldir=None, checksums=False)*

Initialize the PostgreSQL data directory

**name**  The name of the directory to initialize

**user**  The database superuser name

**password**  The password to set for the postgres user

**auth**  The default authentication method for local connections

**encoding**  The default encoding for new databases

**locale**  The default locale for new databases

**waldir**  The transaction log (WAL) directory (default is to keep WAL inside the data directory)

New in version 2019.2.0.

**checksums**  If True, the cluster will be created with data page checksums.

---

**Note:**  Data page checksums are supported since PostgreSQL 9.3.

New in version 2019.2.0.

**runas**  The system user the operation should be performed on behalf of
23.19.150  salt.states.postgres_language

Management of PostgreSQL languages

The postgres_language module is used to create and manage Postgres languages. Languages can be set as either absent or present

New in version 2016.3.0.

```plaintext
plpgsql:
  postgres_language.present:
    - maintenance_db: testdb

plpgsql:
  postgres_language.absent:
    - maintenance_db: testdb
```

**salt.states.postgres_language.absent** *(name, maintenance_db, user=None, db_password=None, db_host=None, db_port=None, db_user=None)*

Ensure that a named language is absent in the specified database.

- **name** The name of the language to remove
- **maintenance_db** The name of the database in which the language is to be installed
- **user** System user all operations should be performed on behalf of
- **db_user** Database username if different from config or default
- **db_password** User password if any password for a specified user
- **db_host** Database host if different from config or default
- **db_port** Database port if different from config or default

**salt.states.postgres_language.present** *(name, maintenance_db, user=None, db_password=None, db_host=None, db_port=None, db_user=None)*

Ensure that a named language is present in the specified database.

- **name** The name of the language to install
- **maintenance_db** The name of the database in which the language is to be installed
- **user** System user all operations should be performed on behalf of
- **db_user** Database username if different from config or default
- **db_password** User password if any password for a specified user
- **db_host** Database host if different from config or default
- **db_port** Database port if different from config or default
23.19.151 salt.states.postgres_privileges

Management of PostgreSQL Privileges

The postgres_privileges module is used to manage Postgres privileges. Privileges can be set as either absent or present.

Privileges can be set on the following database object types:

- database
- schema
- tablespace
- table
- sequence
- language
- group

Setting the grant option is supported as well.

New in version 2016.3.0.

baruwa:

```yaml
postgres_privileges.present:
  object_name: awl
  object_type: table
  privileges:
    - SELECT
    - INSERT
    - DELETE
  grant_option: False
  prepend: public
  maintenance_db: testdb
```

andrew:

```yaml
postgres_privileges.present:
  object_name: admins
  object_type: group
  grant_option: False
  maintenance_db: testdb
```

baruwa:

```yaml
postgres_privileges.absent:
  object_name: awl
  object_type: table
  privileges:
    - SELECT
    - INSERT
    - DELETE
  prepend: public
  maintenance_db: testdb
```

andrew:

```yaml
postgres_privileges.absent:
  object_name: admins
```

(continues on next page)
salt.states.postgres_privileges.absent(name, object_name, object_type, privileges=None, prepend='public', maintenance_db=None, user=None, db_password=None, db_host=None, db_port=None, db_user=None)

Revoke the requested privilege(s) on the specified object(s)

**name** Name of the role whose privileges should be revoked

**object_name** Name of the object on which the revoke is to be performed

**object_type** The object type, which can be one of the following:

- table
- sequence
- schema
- tablespace
- language
- database
- group
- function

View permissions should specify `object_type: table`.

**privileges** Comma separated list of privileges to revoke, from the list below:

- INSERT
- CREATE
- TRUNCATE
- CONNECT
- TRIGGER
- SELECT
- USAGE
- TEMPORARY
- UPDATE
- EXECUTE
- REFERENCES
- DELETE
- ALL

**note** privileges should not be set when revoking group membership

**prepend** Table and Sequence object types live under a schema so this should be provided if the object is not under the default *public* schema
maintenance_db  The name of the database in which the language is to be installed

user  System user all operations should be performed on behalf of

db_user  database username if different from config or default

db_password  user password if any password for a specified user

db_host  Database host if different from config or default

db_port  Database port if different from config or default

salt.states.postgres_privileges.present(name, object_name, object_type, privileges=None, grant_option=None, prepend='public', maintenance_db=None, user=None, db_password=None, db_host=None, db_port=None, db_user=None)

Grant the requested privilege(s) on the specified object to a role

name  Name of the role to which privileges should be granted

object_name  Name of the object on which the grant is to be performed. 'ALL' may be used for objects of type 'table' or 'sequence'.

object_type  The object type, which can be one of the following:

  - table
  - sequence
  - schema
  - tablespace
  - language
  - database
  - group
  - function

View permissions should specify object_type: table.

privileges  List of privileges to grant, from the list below:

  - INSERT
  - CREATE
  - TRUNCATE
  - CONNECT
  - TRIGGER
  - SELECT
  - USAGE
  - TEMPORARY
  - UPDATE
  - EXECUTE
  - REFERENCES
  - DELETE
  - ALL
note  privileges should not be set when granting group membership

grant_option  If grant_option is set to True, the recipient of the privilege can in turn grant it to others

prepend  Table and Sequence object types live under a schema so this should be provided if the object is not
under the default public schema

maintenance_db  The name of the database in which the language is to be installed

user  System user all operations should be performed on behalf of

db_user  database username if different from config or default

db_password  user password if any password for a specified user

db_host  Database host if different from config or default

db_port  Database port if different from config or default

23.19.152  salt.states.postgres_schema

Management of PostgreSQL schemas

The postgres_schemas module is used to create and manage Postgres schemas.

```
public:
    postgres_schema.present 'dbname' 'name'
```

salt.states.postgres_schema.absent(dbname, name, user=None, db_user=None, 
                    db_password=None, db_host=None, db_port=None)

Ensure that the named schema is absent.

dbname  The database's name will work on
name  The name of the schema to remove
user  system user all operations should be performed on behalf of
db_user  database username if different from config or default
db_password  user password if any password for a specified user
db_host  Database host if different from config or default
db_port  Database port if different from config or default

salt.states.postgres_schema.present(dbname, name, owner=None, user=None, db_user=None, 
                           db_password=None, db_host=None, db_port=None)

Ensure that the named schema is present in the database.

dbname  The database's name will work on
name  The name of the schema to manage
user  system user all operations should be performed on behalf of
db_user  database username if different from config or default
db_password  user password if any password for a specified user
db_host  Database host if different from config or default
db_port  Database port if different from config or default
23.19.153 salt.states.postgres_tablespace

Management of PostgreSQL tablespace

A module used to create and manage PostgreSQL tablespaces.

```yaml
ssd-tablespace:
  postgres_tablespace.present:
    - name: indexes
    - directory: /mnt/ssd-data
```

New in version 2015.8.0.

`salt.states.postgres_tablespace.absent(name, user=None, maintenance_db=None, db_user=None, db_password=None, db_host=None, db_port=None)`

Ensure that the named tablespace is absent.

- **name**: The name of the tablespace to remove
- **user**: System user all operations should be performed on behalf of
- **maintenance_db**: Database to act on
- **db_user**: Database username if different from config or default
- **db_password**: User password if any password for a specified user
- **db_host**: Database host if different from config or default
- **db_port**: Database port if different from config or default

`salt.states.postgres_tablespace.present(name, directory, options=None, owner=None, user=None, maintenance_db=None, db_password=None, db_host=None, db_port=None, db_user=None)`

Ensure that the named tablespace is present with the specified properties. For more information about all of these options run `man 7 create_tablespace`.

- **name**: The name of the tablespace to create/manage.
- **directory**: The directory where the tablespace will be located, must already exist
- **options**: A dictionary of options to specify for the tablespace. Currently, the only tablespace options supported are `seq_page_cost` and `random_page_cost`. Default values are shown in the example below:

```yaml
my_space:
  postgres_tablespace.present:
    - directory: /srv/my_tablespace
    - options:
      seq_page_cost: 1.0
      random_page_cost: 4.0
```

- **owner**: The database user that will be the owner of the tablespace. Defaults to the user executing the command (i.e. the `user` option)
- **user**: System user all operations should be performed on behalf of
- **maintenance_db**: Database to act on
- **db_user**: Database username if different from config or default
- **db_password**: User password if any password for a specified user
db_host  Database host if different from config or default
db_port  Database port if different from config or default

### 23.19.154 salt.states.powerpath

Powerpath configuration support

Allows configuration of EMC Powerpath. Currently only addition/deletion of licenses is supported.

```
key:
  powerpath.license_present: []
```

- `salt.states.powerpath.license_absent(name)`
  Ensures that the specified PowerPath license key is absent on the host.
  name  The license key to ensure is absent

- `salt.states.powerpath.license_present(name)`
  Ensures that the specified PowerPath license key is present on the host.
  name  The license key to ensure is present

### 23.19.155 salt.states.process

Process Management

Ensure a process matching a given pattern is absent.

```
httpd-absent:
  process.absent:
    - name: apache2
```

- `salt.states.process.absent(name, user=None, signal=None)`
  Ensures that the named command is not running.
  name  The pattern to match.
  user  The user to which the process belongs
  signal  Signal to send to the process(es).

### 23.19.156 salt.states.pushover

Send a message to PushOver

This state is useful for sending messages to PushOver during state runs.

New in version 2015.5.0.

```
pushover-message:
  pushover.post_message:
    - user: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
    - token: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
    - title: Salt Returner
```

(continues on next page)
The api key can be specified in the master or minion configuration like below:

```yaml
pushover:
  token: peWcBiMOS9HrZG15peWcBiMOS9HrZG15
```

The following parameters are required:

- **name**: The unique name for this event.
- **user**: The user or group of users to send the message to. Must be ID of user, not name or email address.
- **message**: The message that is to be sent to the PushOver channel.

The following parameters are optional:

- **title**: The title to use for the message.
- **device**: The device for the user to send the message to.
- **priority**: The priority for the message.
- **expire**: The message should expire after specified amount of seconds.
- **retry**: The message should be resent this many times.
- **token**: The token for PushOver to use for authentication, if not specified in the configuration options of master or minion.

### 23.19.157 salt.states.pyenv

**Managing python installations with pyenv**

This module is used to install and manage python installations with pyenv. Different versions of python can be installed, and uninstalled. pyenv will be installed automatically the first time it is needed and can be updated later. This module will not automatically install packages which pyenv will need to compile the versions of python.

If pyenv is run as the root user then it will be installed to `/usr/local/pyenv`, otherwise it will be installed to the users `~/.pyenv` directory. To make pyenv available in the shell you may need to add the pyenv/shims and pyenv/bin directories to the users PATH. If you are installing as root and want other users to be able to access pyenv then you will need to add pyenv_ROOT to their environment.
This is how a state configuration could look like:

```
pyenv-deps:
  pkg.installed:
    - pkgs:
      - make
      - build-essential
      - libssl-dev
      - zlib1g-dev
      - libbz2-dev
      - libreadline-dev
      - libsqlite3-dev
      - wget
      - curl
      - llvm
  python-2.6:
    pyenv.absent:
      - require:
        - pkg: pyenv-deps

python-2.7.6:
  pyenv.installed:
    - default: True
    - require:
      - pkg: pyenv-deps
```

Note: Git needs to be installed and available via PATH if pyenv is to be installed automatically by the module.

```
salt.states.pyenv.absent(name, user=None)
    Verify that the specified python is not installed with pyenv. pyenv is installed if necessary.
    name  The version of python to uninstall
    user: None  The user to run pyenv as.
            New in version 0.17.0.
            New in version 0.16.0.

salt.states.pyenv.install_pyenv(name, user=None)
    Install pyenv if not installed. Allows you to require pyenv be installed prior to installing the plugins. Useful
    if you want to install pyenv plugins via the git or file modules and need them installed before installing any
    rubies.
    Use the pyenv.root configuration option to set the path for pyenv if you want a system wide install that is not
    in a user home dir.
    user: None  The user to run pyenv as.

salt.states.pyenv.installed(name, default=False, user=None)
    Verify that the specified python is installed with pyenv. pyenv is installed if necessary.
    name  The version of python to install
    default  [False] Whether to make this python the default.
    user: None  The user to run pyenv as.
            New in version 0.17.0.
            New in version 0.16.0.
```
23.19.158 salt.states.pyrax_queues

Manage Rackspace Queues

New in version 2015.5.0.

Create and destroy Rackspace queues. Be aware that this interacts with Rackspace's services, and so may incur charges.

This module uses pyrax, which can be installed via package, or pip. This module is greatly inspired by boto_* modules from SaltStack code source.

```yaml
myqueue:
  ppyrax_queues.present:
    - provider: my-pyrax
myqueue:
  ppyrax_queues.absent:
    - provider: my-pyrax
```

salt.states.pyrax_queues.absent(name, provider)
Ensure the named Rackspace queue is deleted.

  name  Name of the Rackspace queue.
  provider  Salt Cloud provider

salt.states.pyrax_queues.present(name, provider)
Ensure the RackSpace queue exists.

  name  Name of the Rackspace queue.
  provider  Salt Cloud Provider

23.19.159 salt.states.quota

Management of POSIX Quotas

The quota can be managed for the system:

```yaml
/:  
  quota.mode:
    mode: off
    quotatype: user
```

salt.states.quota.mode(name, mode, quotatype)
Set the quota for the system

  name  The filesystem to set the quota mode on
  mode  Whether the quota system is on or off
  quotatype  Must be user or group
23.19.160 salt.states.rabbitmq_plugin

Manage RabbitMQ Plugins

New in version 2014.1.0.

Example:

```yaml
some_plugin:
  rabbitmq_plugin.enabled: []
```

`salt.states.rabbitmq_plugin.disabled(name, runas=None)`
Ensure the RabbitMQ plugin is disabled.

- **name**  The name of the plugin
- **runas** The user to run the rabbitmq-plugin command as

`salt.states.rabbitmq_plugin.enabled(name, runas=None)`
Ensure the RabbitMQ plugin is enabled.

- **name**  The name of the plugin
- **runas** The user to run the rabbitmq-plugin command as

23.19.161 salt.states.rbac_solaris

Management of Solaris RBAC

- **maintainer** Jorge Schrauwen <sjorge@blackdot.be>
- **maturity** new
- **depends** rbac_solaris,solaris_user
- **platform** solaris,illumos

New in version 2016.11.0.

```yaml
sjorge:
  rbac.managed:
    - roles:
      - netcfg
    - profiles:
      - System Power
    - authorizations:
      - solaris.audit.*
```

`salt.states.rbac_solaris.managed(name, roles=None, profiles=None, authorizations=None)`
Manage RBAC properties for user

- **name**  [string] username
- **roles**  [list] list of roles for user
- **profiles**  [list] list of profiles for user
- **authorizations**  [list] list of authorizations for user
Warning: All existing roles, profiles and authorizations will be replaced! An empty list will remove everything.
Set the property to None to not manage it.

23.19.162 salt.states.rbenv

Managing Ruby installations with rbenv

This module is used to install and manage ruby installations with rbenv and the ruby-build plugin. Different versions of ruby can be installed, and uninstalled. Rbenv will be installed automatically the first time it is needed and can be updated later. This module will not automatically install packages which rbenv will need to compile the versions of ruby. If your version of ruby fails to install, refer to the ruby-build documentation to verify you are not missing any dependencies: https://github.com/rbenv/ruby-build/wiki

If rbenv is run as the root user then it will be installed to /usr/local/rbenv, otherwise it will be installed to the users ~/.rbenv directory. To make rbenv available in the shell you may need to add the rbenv/shims and rbenv/bin directories to the users PATH. If you are installing as root and want other users to be able to access rbenv then you will need to add RBENV_ROOT to their environment.

The following state configuration demonstrates how to install Ruby 1.9.x and 2.x using rbenv on Ubuntu/Debian:

```yaml
rbenv-deps:
  pkg.installed:
    - names:
      - bash
      - git
      - openssl
      - libssl-dev
      - make
      - curl
      - autoconf
      - bison
      - build-essential
      - libffi-dev
      - libyaml-dev
      - libreadline6-dev
      - zlib1g-dev
      - libncurses5-dev

ruby-1.9.3-p429:
  rbenv.absent:
    - require:
      - pkg: rbenv-deps

ruby-2.0.0-p598:
  rbenv.installed:
    - default: True
    - require:
      - pkg: rbenv-deps

salt.states.rbenv.absent(name, user=None)
Verify that the specified ruby is not installed with rbenv. Rbenv is installed if necessary.

    name  The version of ruby to uninstall
```
user: None  The user to run rbenv as.

New in version 0.17.0.
New in version 0.16.0.

salt.states.rbenv.install_rbenv(name, user=None)
Install rbenv if not installed. Allows you to require rbenv be installed prior to installing the plugins. Useful if you want to install rbenv plugins via the git or file modules and need them installed before installing any rubies.

Use the rbenv.root configuration option to set the path for rbenv if you want a system wide install that is not in a user home dir.

user: None  The user to run rbenv as.

salt.states.rbenv.installed(name, default=False, user=None)
Verify that the specified ruby is installed with rbenv. Rbenv is installed if necessary.

name  The version of ruby to install

default  [False]  Whether to make this ruby the default.

user: None  The user to run rbenv as.

New in version 0.17.0.
New in version 0.16.0.

23.19.163  salt.states.rdp

Manage RDP Service on Windows servers

salt.states.rdp.disabled(name)
Disable the RDP service

salt.states.rdp.enabled(name)
Enable the RDP service and make sure access to the RDP port is allowed in the firewall configuration

23.19.164  salt.states.redismod

Management of Redis server

New in version 2014.7.0.

depends

•  redis Python module

count

configuration  See salt.modules.redis for setup instructions.

| key_in_redis: |
| redis.string: |
| -  value:  string data |

The redis server information specified in the minion config file can be overridden in states using the following arguments: host, port, db, password.
key_in_redis:
redis.string:
  - value: string data
  - host: localhost
  - port: 6379
  - db: 0
  - password: somuchkittycat

salt.states.redismod.absent(name, keys=None, **connection_args)
Ensure key absent from redis

  name  Key to ensure absent from redis
  keys  list of keys to ensure absent, name will be ignored if this is used

salt.states.redismod.slaveof(name, sentinel_host=None, sentinel_port=None, sentinel_password=None, **connection_args)
Set this redis instance as a slave.
New in version 2016.3.0.

  name  Master to make this a slave of
  sentinel_host  Ip of the sentinel to check for the master
  sentinel_port  Port of the sentinel to check for the master

salt.states.redismod.string(name, value, expire=None, expireat=None, **connection_args)
Ensure that the key exists in redis with the value specified

  name  Redis key to manage
  value  Data to persist in key
  expire  Sets time to live for key in seconds
  expireat  Sets expiration time for key via UNIX timestamp, overrides expire

23.19.165 salt.states.reg

Manage the Windows registry

Many python developers think of registry keys as if they were python keys in a dictionary which is not the case. The windows registry is broken down into the following components:

Hives

This is the top level of the registry. They all begin with HKEY.

  - HKEY_CLASSES_ROOT (HKCR)
  - HKEY_CURRENT_USER(HKCU)
  - HKEY_LOCAL_MACHINE (HKLM)
  - HKEY_USER (HKU)
  - HKEY_CURRENT_CONFIG
Keys

Hives contain keys. These are basically the folders beneath the hives. They can contain any number of subkeys.

When passing the hivekey values they must be quoted correctly depending on the backslashes being used (\ vs \\). The way backslashes are handled in the state file is different from the way they are handled when working on the CLI. The following are valid methods of passing the hivekey:

**Using single backslashes:** HKLMSOFTWAREPython ’HKLMSOFTWAREPython’

**Using double backslashes:** "HKLM\SOFTWARE\Python"

Values or Entries

Values or Entries are the name/data pairs beneath the keys and subkeys. All keys have a default name/data pair. The name is (Default) with a displayed value of (value not set). The actual value is Null.

Example

The following example is taken from the windows startup portion of the registry:

```plaintext
[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Run]
"RTHDVCPL"=""C:\Program Files\Realtek\HDA\RtkNGUI64.exe" -s"
"NvBackend"=""C:\Program Files (x86)\NVIDIA Corporation\Update Core\NvBackend.exe"
"BTMTrayAgent"="rundll32.exe "C:\Program Files (x86)\Intel\Bluetooth\btmshellex.dll",TrayApp"
```

In this example these are the values for each:

**Hive:** HKEY_LOCAL_MACHINE

**Key and subkeys:** SOFTWARE\Microsoft\Windows\CurrentVersion\Run

**Value:**

- There are 3 value names: RTHDVCPL, NvBackend, and BTMTrayAgent
- Each value name has a corresponding value

```python
salt.states.reg.absent(name, vname=None, use_32bit_registry=False)
```

Ensure a registry value is removed. To remove a key use key_absent.

**Parameters**

- **name (str)** -- A string value representing the full path of the key to include the HIVE, Key, and all Subkeys. For example:
  
  ```python
  HKEY_LOCAL_MACHINE\SOFTWARE\Salt
  ```

  Valid hive values include:

  ```
  - HKEY_CURRENT_USER or HKCU
  - HKEY_LOCAL_MACHINE or HKLM
  - HKEY_USERS or HKU
  ```

- **vname (str)** -- The name of the value you'd like to create beneath the Key. If this parameter is not passed it will assume you want to set the (Default) value
- **use_32bit_registry** *(bool)* -- Use the 32bit portion of the registry. Applies only to 64bit windows. 32bit Windows will ignore this parameter. Default is False.

**Returns** A dictionary showing the results of the registry operation.

**Return type** `dict`

**CLI Example:**

```
'HKEY_CURRENT_USER\SOFTWARE\Salt':
  reg.absent
    - vname: version
```

In the above example the value named `version` will be removed from the SOFTWARE\Salt key in the HKEY_CURRENT_USER hive. If `vname` was not passed, the (Default) value would be deleted.

**salt.states.reg.key_absent** *(name, use_32bit_registry=False)*

New in version 2015.5.4.

Ensure a registry key is removed. This will remove the key, subkeys, and all value entries.

**Parameters**

- **name** *(str)* -- A string representing the full path to the key to be removed to include the hive and the keypath. The hive can be any of the following:
  - HKEY_LOCAL_MACHINE or HKLM
  - HKEY_CURRENT_USER or HKCU
  - HKEY_USER or HKU

- **use_32bit_registry** *(bool)* -- Use the 32bit portion of the registry. Applies only to 64bit windows. 32bit Windows will ignore this parameter. Default is False.

**Returns** A dictionary showing the results of the registry operation.

**Return type** `dict`

**CLI Example:**

The following example will delete the SOFTWARE\DeleteMe key in the HKEY_LOCAL_MACHINE hive including all its subkeys and value pairs.

```
remove_key_demo:
  reg.key_absent:
    - name: HKEY_CURRENT_USER\SOFTWARE\DeleteMe
```

In the above example the path is interpreted as follows:

- HKEY_CURRENT_USER is the hive
- SOFTWARE\DeleteMe is the key

**salt.states.reg.present** *(name, vname=None, vdata=None, vtype='REG_SZ', use_32bit_registry=False, win_owner=None, win_perms=None, win_deny_perms=None, win_inheritance=True, win_perms_reset=False)*

Ensure a registry key or value is present.

**Parameters**

- **name** *(str)* -- A string value representing the full path of the key to include the HIVE, Key, and all Subkeys. For example:
HKEY_LOCAL_MACHINE\SOFTWARE\Salt

Valid hive values include:
- HKEY_CURRENT_USER or HKCU
- HKEY_LOCAL_MACHINE or HKLM
- HKEY_USERS or HKU

- **vname (str)** -- The name of the value you’d like to create beneath the Key. If this parameter is not passed it will assume you want to set the (Default) value.

- **vdata (str, int, list, bytes)** -- The value you’d like to set. If a value name (vname) is passed, this will be the data for that value name. If not, this will be the (Default) value for the key.

The type of data this parameter expects is determined by the value type specified in vtype. The correspondence is as follows:
- REG_BINARY: Binary data (str in Py2, bytes in Py3)
- REG_DWORD: int
- REG_EXPAND_SZ: str
- REG_MULTI_SZ: list of str
- REG_QWORD: int
- REG_SZ: str

**Note:** When setting REG_BINARY, string data will be converted to binary automatically. To pass binary data, use the built-in yaml tag `!!binary` to denote the actual binary characters. For example, the following lines will both set the same data in the registry:
- vdata: Salty Test
- vdata: `!!binary U2FsdHkgVGVzdA==

For more information about the `!!binary` tag see [here](#).

**Note:** The type for the (Default) value is always REG_SZ and cannot be changed. This parameter is optional. If not passed, the Key will be created with no associated item/value pairs.

- **vtype (str)** -- The value type for the data you wish to store in the registry. Valid values are:
  - REG_BINARY
  - REG_DWORD
  - REG_EXPAND_SZ
  - REG_MULTI_SZ
  - REG_QWORD
  - REG_SZ (Default)
- **use_32bit_registry** *(bool)* — Use the 32bit portion of the registry. Applies only to 64bit windows. 32bit Windows will ignore this parameter. Default is False.

- **win_owner** *(str)* — The owner of the registry key. If this is not passed, the account under which Salt is running will be used.

  **Note:** Owner is set for the key that contains the value/data pair. You cannot set ownership on value/data pairs themselves.

  New in version 2019.2.0.

- **win_perms** *(dict)* — A dictionary containing permissions to grant and their propagation. If not passed the ‘Grant’ permissions will not be modified.

  **Note:** Permissions are set for the key that contains the value/data pair. You cannot set permissions on value/data pairs themselves.

  For each user specify the account name, with a sub dict for the permissions to grant and the ‘Applies to’ setting. For example: 

  ```
  {'Administrators': {'perms': 'full_control', 'applies_to': 'this_key_subkeys'}}
  ```

  perms must be specified.

  Registry permissions are specified using the `perms` key. You can specify a single basic permission or a list of advanced perms. The following are valid perms:

  **Basic (passed as a string):**
  - full_control
  - read
  - write

  **Advanced (passed as a list):**
  - delete
  - query_value
  - set_value
  - create_subkey
  - enum_subkeys
  - notify
  - create_link
  - read_control
  - write_dac
  - write_owner

  The ‘Applies to’ setting is optional. It is specified using the `applies_to` key. If not specified this_key_subkeys is used. Valid options are:

  **Applies to settings:**
  - this_key_only
  - this_key_subkeys
- `subkeys_only`

New in version 2019.2.0.

- **`win_deny_perms (dict)`** -- A dictionary containing permissions to deny and their propagation. If not passed the *Deny* permissions will not be modified.

  **Note:** Permissions are set for the key that contains the value/data pair. You cannot set permissions on value/data pairs themselves.

Valid options are the same as those specified in `win_perms`

  **Note:** 'Deny' permissions always take precedence over 'grant' permissions.

New in version 2019.2.0.

- **`win_inheritance (bool)`** -- *True* to inherit permissions from the parent key. *False* to disable inheritance. Default is *True*.

  **Note:** Inheritance is set for the key that contains the value/data pair. You cannot set inheritance on value/data pairs themselves.

New in version 2019.2.0.

- **`win_perms_reset (bool)`** -- If *True* the existing DACL will be cleared and replaced with the settings defined in this function. If *False*, new entries will be appended to the existing DACL. Default is *False*.

  **Note:** Perms are reset for the key that contains the value/data pair. You cannot set permissions on value/data pairs themselves.

New in version 2019.2.0.

**Returns** A dictionary showing the results of the registry operation.

**Return type** dict

Example:

The following example will set the *(Default)* value for the `SOFTWARE\Salt` key in the `HKEY_CURRENT_USER` hive to 2016.3.1:

```
HKEY_CURRENT_USER\SOFTWARE\Salt:
  reg.present:
    - vdata: 2016.3.1
```

Example:

The following example will set the value for the `version` entry under the `SOFTWARE\Salt` key in the `HKEY_CURRENT_USER` hive to 2016.3.1. The value will be reflected in `Wow6432Node`:
In the above example the path is interpreted as follows:

- **HKEY_CURRENT_USER** is the hive
- **SOFTWARE\Salt** is the key
- **vname** is the value name ('version') that will be created under the key
- **vdata** is the data that will be assigned to 'version'

Example:

Binary data can be set in two ways. The following two examples will set a binary value of **Salty Test**

<table>
<thead>
<tr>
<th>no_conversion:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>reg.present:</strong></td>
</tr>
<tr>
<td>- name: HKLM\SOFTWARE\SaltTesting</td>
</tr>
<tr>
<td>- vname: test_reg_binary_state</td>
</tr>
<tr>
<td>- vdata: Salty Test</td>
</tr>
<tr>
<td>- vtype: REG_BINARY</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>conversion:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>reg.present:</strong></td>
</tr>
<tr>
<td>- name: HKLM\SOFTWARE\SaltTesting</td>
</tr>
<tr>
<td>- vname: test_reg_binary_state_with_tag</td>
</tr>
<tr>
<td>- vdata: !!binary U2FsdHkgVGVzdA==\n</td>
</tr>
<tr>
<td>- vtype: REG_BINARY</td>
</tr>
</tbody>
</table>

Example:

To set a **REG_MULTI_SZ** value:

<table>
<thead>
<tr>
<th>reg_multi_sz:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>reg.present:</strong></td>
</tr>
<tr>
<td>- name: HKLM\SOFTWARE\Salt</td>
</tr>
<tr>
<td>- vname: reg_multi_sz</td>
</tr>
<tr>
<td>- vdata:</td>
</tr>
<tr>
<td>- list item 1</td>
</tr>
<tr>
<td>- list item 2</td>
</tr>
</tbody>
</table>

Example:

To ensure a key is present and has permissions:

<table>
<thead>
<tr>
<th>set_key_permissions:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>reg.present:</strong></td>
</tr>
<tr>
<td>- name: HKLM\SOFTWARE\Salt</td>
</tr>
<tr>
<td>- vname: version</td>
</tr>
<tr>
<td>- vdata: 2016.3.1</td>
</tr>
<tr>
<td>- win_owner: Administrators</td>
</tr>
<tr>
<td>- win_perms:</td>
</tr>
<tr>
<td>jsnuffy:</td>
</tr>
<tr>
<td>perms: full_control</td>
</tr>
<tr>
<td>sjones:</td>
</tr>
<tr>
<td>perms:</td>
</tr>
<tr>
<td>(continues on next page)</td>
</tr>
</tbody>
</table>
- read_control
- enum_subkeys
- query_value

**applies_to:**
- this_key_only

- **win_deny_perms:**
  - **bsimpson:**
    - **perms:** full_control
    - **applies_to:** this_key_subkeys
  - **win_inheritance:** True
  - **win_perms_reset:** True

---

### 23.19.166 salt.states.rvm

**Managing Ruby installations and gemsets with Ruby Version Manager (RVM)**

This module is used to install and manage ruby installations and gemsets with RVM, the Ruby Version Manager. Different versions of ruby can be installed and gemsets created. RVM itself will be installed automatically if it's not present. This module will not automatically install packages that RVM depends on or ones that are needed to build ruby. If you want to run RVM as an unprivileged user (recommended) you will have to create this user yourself.

This is how a state configuration could look like:

```yaml
rvm:
  group.present: []
  user.present:
    - gid: rvm
    - home: /home/rvm
    - require:
      - group: rvm

rvm-deps:
  pkg.installed:
    - packages:
      - bash
      - coreutils
      - gzip
      - bzip2
      - gawk
      - sed
      - curl
      - git-core
      - subversion

mri-deps:
  pkg.installed:
    - packages:
      - build-essential
      - openssl
      - libreadline6
      - libreadline6-dev
      - curl
      - git-core
      - zlib1g
      - zlib1g-dev
```

(continues on next page)
- libssl-dev
- libyaml-dev
- libsqlite3-0
- libsqlite3-dev
- sqlite3
- libxml2-dev
- libxslt1-dev
- autoconf
- libc6-dev
- libncurses5-dev
- automake
- libtool
- bison
- subversion
- ruby


gemset

```yaml
jruby-deps:
  pkg.installed:
  - pkgs:
    - curl
    - g++
    - openjdk-6-jre-headless

ruby-1.9.2:
  rvm.installed:
  - default: True
  - user: rvm
  - require:
    - pkg: rvm-deps
    - pkg: mri-deps
    - user: rvm

jruby:
  rvm.installed:
  - user: rvm
  - require:
    - pkg: rvm-deps
    - pkg: jruby-deps
    - user: rvm

jgemset:
  rvm.gemset_present:
  - ruby: jruby
  - user: rvm
  - require:
    - rvm: jruby

mygemset:
  rvm.gemset_present:
  - ruby: ruby-1.9.2
  - user: rvm
  - require:
    - rvm: ruby-1.9.2
```

```
salt.states.rvm.gemset_present(name, ruby='default', user=None)

Verify that the gemset is present.

name  The name of the gemset.
```
ruby: default  The ruby version this gemset belongs to.
user: None  The user to run rvm as.

New in version 0.17.0.

salt.states.rvm.installed(name, default=False, user=None, opts=None, env=None)
Verify that the specified ruby is installed with RVM. RVM is installed when necessary.

name  The version of ruby to install
default  [False] Whether to make this ruby the default.
user: None  The user to run rvm as.
env: None  A list of environment variables to set (ie, RUBY_CONFIGURE_OPTS)
opts: None  A list of option flags to pass to RVM (ie -C, --patch)

New in version 0.17.0.

23.19.167  salt.states.salt_proxy
Salt proxy state
New in version 2015.8.2.
State to deploy and run salt-proxy processes on a minion.
Set up pillar data for your proxies per the documentation.
Run the state as below

```
salt-proxy-configure:
  salt_proxy.configure_proxy:
    - proxynames: p8000
    - start: True
```

This state will configure the salt proxy settings within /etc/salt/proxy (if /etc/salt/proxy doesn't exists) and start the salt-proxy process (default true), if it isn't already running.

salt.states.salt_proxy.configure_proxy(name, proxynames='p8000', start=True)
Create the salt proxy file and start the proxy process if required

Parameters

- name -- The name of this state
- proxynames -- Name to be used for this proxy (should match entries in pillar)
- start -- Boolean indicating if the process should be started

Example:

```
salt-proxy-configure:
  salt_proxy.configure_proxy:
    - proxynames: p8000
    - start: True
```
23.19.168 salt.states.saltutil

Saltutil State

This state wraps the saltutil execution modules to make them easier to run from a states. Rather than needing to use module.run this state allows for improved change detection.

New in version 3000.

salt.states.saltutil.sync_all(name, **kwargs)
Performs the same task as saltutil.sync_all module See saltutil module for full list of options

```
sync_everything:
    saltutil.sync_all:
        - refresh: True
```

salt.states.saltutil.sync_beacons(name, **kwargs)
Performs the same task as saltutil.sync_beacons module See saltutil module for full list of options

```
sync_everything:
    saltutil.sync_beacons:
        - refresh: True
```

salt.states.saltutil.sync_clouds(name, **kwargs)
Performs the same task as saltutil.sync_clouds module See saltutil module for full list of options

```
sync_everything:
    saltutil.sync_clouds:
        - refresh: True
```

salt.states.saltutil.sync_engines(name, **kwargs)
Performs the same task as saltutil.sync_engines module See saltutil module for full list of options

```
sync_everything:
    saltutil.sync_engines:
        - refresh: True
```

salt.states.saltutil.sync_executors(name, **kwargs)
Performs the same task as saltutil.sync_executors module See saltutil module for full list of options

```
sync_everything:
    saltutil.sync_executors:
        - refresh: True
```

salt.states.saltutil.sync_grains(name, **kwargs)
Performs the same task as saltutil.sync_grains module See saltutil module for full list of options

```
sync_everything:
    saltutil.sync_grains:
        - refresh: True
```
salt.states.saltutil.sync_log_handlers(name, **kwargs)
    Performs the same task as saltutil.sync_log_handlers module See saltutil module for full list of options
    
    sync_everything:
    saltutil.sync_log_handlers:
    - refresh: True

salt.states.saltutil.sync_matchers(name, **kwargs)
    Performs the same task as saltutil.sync_matchers module See saltutil module for full list of options
    
    sync_everything:
    saltutil.sync_matchers:
    - refresh: True

salt.states.saltutil.sync_modules(name, **kwargs)
    Performs the same task as saltutil.sync_modules module See saltutil module for full list of options
    
    sync_everything:
    saltutil.sync_modules:
    - refresh: True

salt.states.saltutil.sync_output(name, **kwargs)
    Performs the same task as saltutil.sync_output module See saltutil module for full list of options
    
    sync_everything:
    saltutil.sync_output:
    - refresh: True

salt.states.saltutil.sync_outputters(name, **kwargs)
    Performs the same task as saltutil.sync_outputters module See saltutil module for full list of options
    
    sync_everything:
    saltutil.sync_outputters:
    - refresh: True

salt.states.saltutil.sync_pillar(name, **kwargs)
    Performs the same task as saltutil.sync_pillar module See saltutil module for full list of options
    
    sync_everything:
    saltutil.sync_pillar:
    - refresh: True

salt.states.saltutil.sync_proxymodules(name, **kwargs)
    Performs the same task as saltutil.sync_proxymodules module See saltutil module for full list of options
    
    sync_everything:
    saltutil.sync_proxymodules:
    - refresh: True
salt.states.saltutil.sync_renderers(name, **kwargs)
    Performs the same task as saltutil.sync_renderers module See saltutil module for full list of options

    ```
    sync_everything:
    saltutil.sync_renderers:
    - refresh: True
    ```

salt.states.saltutil.sync_returners(name, **kwargs)
    Performs the same task as saltutil.sync_returners module See saltutil module for full list of options

    ```
    sync_everything:
    saltutil.sync_returners:
    - refresh: True
    ```

salt.states.saltutil.sync_sdb(name, **kwargs)
    Performs the same task as saltutil.sync_sdb module See saltutil module for full list of options

    ```
    sync_everything:
    saltutil.sync_sdb:
    - refresh: True
    ```

salt.states.saltutil.sync_serializers(name, **kwargs)
    Performs the same task as saltutil.sync_serializers module See saltutil module for full list of options

    ```
    sync_everything:
    saltutil.sync_serializers:
    - refresh: True
    ```

salt.states.saltutil.sync_states(name, **kwargs)
    Performs the same task as saltutil.sync_states module See saltutil module for full list of options

    ```
    sync_everything:
    saltutil.sync_states:
    - refresh: True
    ```

salt.states.saltutil.sync_thorium(name, **kwargs)
    Performs the same task as saltutil.sync_thorium module See saltutil module for full list of options

    ```
    sync_everything:
    saltutil.sync_thorium:
    - refresh: True
    ```

salt.states.saltutil.sync_utils(name, **kwargs)
    Performs the same task as saltutil.sync_utils module See saltutil module for full list of options

    ```
    sync_everything:
    saltutil.sync_utils:
    - refresh: True
    ```
23.19.169 salt.states.schedule

Management of the Salt scheduler

```
job3:
schedule.present:
  - function: test.ping
  - seconds: 3600
  - splay: 10

This will schedule the command: test.ping every 3600 seconds (every hour) splaying the time between 0 and 10 seconds

job2:
schedule.present:
  - function: test.ping
  - seconds: 15
  - splay:
    start: 10
    end: 20

This will schedule the command: test.ping every 15 seconds splaying the time between 10 and 20 seconds

job1:
schedule.present:
  - function: state.sls
  - job_args:
    - httpd
  - job_kwargs:
    test: True
  - when:
    - Monday 5:00pm
    - Tuesday 3:00pm
    - Wednesday 5:00pm
    - Thursday 3:00pm
    - Friday 5:00pm

This will schedule the command: state.sls httpd test=True at 5pm on Monday, Wednesday and Friday, and 3pm on Tuesday and Thursday. Requires that python-dateutil is installed on the minion.

job1:
schedule.present:
  - function: state.sls
  - job_args:
    - httpd
  - job_kwargs:
    test: True
  - cron: '*/5 * * * *'

Scheduled jobs can also be specified using the format used by cron. This will schedule the command: state.sls httpd test=True to run every 5 minutes. Requires that python-croniter is installed on the minion.
```

(continues on next page)
- function: state.sls
- job_args:
  - httpd
- job_kwargs:
  - test: True
- when:
  - Monday 5:00pm
  - Tuesday 3:00pm
  - Wednesday 5:00pm
  - Thursday 3:00pm
  - Friday 5:00pm
- returner: xmpp
- return_config: xmpp_state_run
- return_kwargs:
  - recipient: user@domain.com

This will schedule the command: state.sls httpd test=True at 5pm on Monday, Wednesday and Friday, and 3pm on Tuesday and Thursday. Using the xmpp returner to return the results of the scheduled job, with the alternative configuration options found in the xmpp_state_run section.

job1:
  schedule.present:
    - function: state.sls
    - job_args:
      - httpd
    - job_kwargs:
      - test: True
    - hours: 1
    - skip_during_range:
      - start: 2pm
      - end: 3pm
    - run_after_skip_range: True

This will schedule the command: state.sls httpd test=True at 5pm on Monday, Wednesday and Friday, and 3pm on Tuesday and Thursday. Requires that python-dateutil is installed on the minion.

salt.states.schedule.absent(name, **kwargs)
Ensure a job is absent from the schedule

  name The unique name that is given to the scheduled job.

  persist Whether the job should persist between minion restarts, defaults to True.

salt.states.schedule.disabled(name, **kwargs)
Ensure a job is disabled in the schedule

  name The unique name that is given to the scheduled job.

  persist Whether the job should persist between minion restarts, defaults to True.

salt.states.schedule.enabled(name, **kwargs)
Ensure a job is enabled in the schedule

  name The unique name that is given to the scheduled job.

  persist Whether the job should persist between minion restarts, defaults to True.
salt.states.schedule.present(name, **kwargs)

Ensure a job is present in the schedule

name The unique name that is given to the scheduled job.
seconds The scheduled job will be executed after the specified number of seconds have passed.
minutes The scheduled job will be executed after the specified number of minutes have passed.
days The scheduled job will be executed after the specified number of days have passed.
when This will schedule the job at the specified time(s). The when parameter must be a single value or a
dictionary with the date string(s) using the dateutil format. Requires python-dateutil.
cron This will schedule the job at the specified time(s) using the crontab format. Requires python-croniter.
run_on_start Whether the job will run when Salt minion starts, or the job will be skipped once and run at
the next scheduled run. Value should be a boolean.
function The function that should be executed by the scheduled job.
job_args The arguments that will be used by the scheduled job.
job_kwargs The keyword arguments that will be used by the scheduled job.
maxrunning Ensure that there are no more than N copies of a particular job running.
jid_include Include the job into the job cache.
splay The amount of time in seconds to splay a scheduled job. Can be specified as a single value in seconds
or as a dictionary range with 'start' and 'end' values.
range This will schedule the command within the range specified. The range parameter must be a dictionary
with the date strings using the dateutil format. Requires python-dateutil.
once This will schedule a job to run once on the specified date.
once_fmt The default date format is ISO 8601 but can be overridden by also specifying the once_fmt option.
enabled Whether the job should be enabled or disabled. Value should be a boolean.
return_job Whether to return information to the Salt master upon job completion.
metadata Using the metadata parameter special values can be associated with a scheduled job. These values
are not used in the execution of the job, but can be used to search for specific jobs later if combined with
the return_job parameter. The metadata parameter must be specified as a dictionary, otherwise it will be
ignored.
returner The returner to use to return the results of the scheduled job.
return_config The alternative configuration to use for returner configuration options.
return_kwargs Any individual returner configuration items to override. Should be passed as a dictionary.
persist Whether the job should persist between minion restarts, defaults to True.
skip_during_range This will ensure that the scheduled command does not run within the range specified.
The range parameter must be a dictionary with the date strings using the dateutil format. Requires
python-dateutil.
run_after_skip_range Whether the job should run immediately after the skip_during_range time period ends.
23.19.170  salt.states.selinux

Management of SELinux rules

If SELinux is available for the running system, the mode can be managed and booleans can be set.

```
<table>
<thead>
<tr>
<th>enforcing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>selinux.mode</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>samba_create_home_dirs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>selinux.boolean:</td>
</tr>
<tr>
<td>- value: True</td>
</tr>
<tr>
<td>- persist: True</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>nginx:</th>
</tr>
</thead>
<tbody>
<tr>
<td>selinux.module:</td>
</tr>
<tr>
<td>- enabled: False</td>
</tr>
</tbody>
</table>
```

Note: Use of these states require that the selinux execution module is available.

salt.states.selinux.boolean(name, value, persist=False)

Set up an SELinux boolean

- name: The name of the boolean to set
- value: The value to set on the boolean
- persist: Defaults to False, set persist to true to make the boolean apply on a reboot

salt.states.selinux.fcontext_policy_absent(name, filetype='a', sel_type=None, sel_user=None, sel_level=None)

New in version 2017.7.0.

Makes sure an SELinux file context policy for a given filespec (name), filetype and SELinux context type is absent.

- name: filespec of the file or directory. Regex syntax is allowed.
- filetype: The SELinux filetype specification. Use one of [a, f, d, c, b, s, l, p]. See also man semanage-fcontext. Defaults to 'a' (all files).
- sel_type: The SELinux context type. There are many.
- sel_user: The SELinux user.
- sel_level: The SELinux MLS range.

salt.states.selinux.fcontext_policy_applied(name, recursive=False)

New in version 2017.7.0.

Checks and makes sure the SELinux policies for a given filespec are applied.

salt.states.selinux.fcontext_policy_present(name, sel_type, filetype='a', sel_user=None, sel_level=None)

New in version 2017.7.0.

Makes sure a SELinux policy for a given filespec (name), filetype and SELinux context type is present.

- name: filespec of the file or directory. Regex syntax is allowed.
- sel_type: SELinux context type. There are many.
```
filetype  The SELinux filetype specification. Use one of [a, f, d, c, b, s, l, p]. See also man semanage-fcontext. Defaults to ‘a’ (all files).

sel_user  The SELinux user.

sel_level  The SELinux MLS range.

salt.states.selinux.mode(name)
Verifies the mode SELinux is running in, can be set to enforcing, permissive, or disabled

Note: A change to or from disabled mode requires a system reboot. You will need to perform this yourself.

name  The mode to run SELinux in, permissive, enforcing, or disabled.

salt.states.selinux.module(name, module_state='Enabled', version='any', **opts)
Enable/Disable and optionally force a specific version for an SELinux module

name  The name of the module to control

module_state  Should the module be enabled or disabled?

version  Defaults to no preference, set to a specified value if required. Currently can only alert if the version is incorrect.

install  Setting to True installs module

source  Points to module source file, used only when install is True

remove  Setting to True removes module

New in version 2016.3.0.

salt.states.selinux.module_install(name)
Installs custom SELinux module from given file

name  Path to file with module to install

New in version 2016.11.6.

salt.states.selinux.module_remove(name)
Removes SELinux module

name  The name of the module to remove

New in version 2016.11.6.

salt.states.selinux.port_policy_absent(name, sel_type=None, protocol=None, port=None)
New in version 2019.2.0.

Makes sure an SELinux port policy for a given port, protocol and SELinux context type is absent.

name  The protocol and port spec. Can be formatted as (tcp|udp)/(port|port-range).

sel_type  The SELinux Type. Optional; can be used in determining if policy is present, ignored by semanage port --delete.

protocol  The protocol for the port, tcp or udp. Required if name is not formatted.

port  The port or port range. Required if name is not formatted.

salt.states.selinux.port_policy_present(name, sel_type, protocol=None, port=None, sel_range=None)
New in version 2019.2.0.

Makes sure an SELinux port policy for a given port, protocol and SELinux context type is present.
```
**name**  The protocol and port spec. Can be formatted as (tcp|udp)/(port|port-range).

**sel_type**  The SELinux Type.

**protocol**  The protocol for the port, tcp or udp. Required if name is not formatted.

**port**  The port or port range. Required if name is not formatted.

**sel_range**  The SELinux MLS/MCS Security Range.

---

### 23.19.171 salt.states.slack

**Send a message to Slack**

This state is useful for sending messages to Slack during state runs.

New in version 2015.5.0.

```python
slack-message:
  slack.post_message:
    - channel: '#general'
    - from_name: SuperAdmin
    - message: 'This state was executed successfully.'
    - api_key: peWcBiMOS9HRzG15peWcBiMOS9HRzG15
```

The api key can be specified in the master or minion configuration like below:

```python
slack:
  api_key: peWcBiMOS9HRzG15peWcBiMOS9HRzG15
```

```python
class slack.post_message(name, **kwargs):
  Send a message to a Slack channel.
```

```python
slack-message:
  slack.post_message:
    - channel: '#general'
    - from_name: SuperAdmin
    - message: 'This state was executed successfully.'
    - api_key: peWcBiMOS9HRzG15peWcBiMOS9HRzG15
```

The following parameters are required:

- **api_key**  The unique name for this event.
- **channel**  The channel to send the message to. Can either be the ID or the name.
- **from_name**  The name of that is to be shown in the "from" field.
- **message**  The message that is to be sent to the Slack channel.

The following parameters are optional:

- **api_key**  The api key for Slack to use for authentication, if not specified in the configuration options of master or minion.
- **icon**  URL to an image to use as the icon for this message

**webhook parameters:**

- **name**  The unique name for this event.
message  The message that is to be sent to the Slack channel.
color  The color of border of left side
short  An optional flag indicating whether the value is short enough to be displayed side-by-side with other values.
webhook  The identifier of WebHook (URL or token).
channel The channel to use instead of the WebHook default.
username  Username to use instead of WebHook default.
icon_emoji  Icon to use instead of WebHook default.

23.19.172  salt.states.smtp

Sending Messages via SMTP

New in version 2014.7.0.

This state is useful for firing messages during state runs, using the SMTP protocol

```
server-warning-message:
smtpt.send_msg:
   - name: 'This is a server warning message'
   - profile: my-smtp-account
   - recipient: admins@example.com
```

```
salt.states.smtp.send_msg(name, recipient, subject, sender=None, profile=None, use_ssl='True', attachments=None)
```

Send a message via SMTP

```
server-warning-message:
smtpt.send_msg:
   - name: 'This is a server warning message'
   - profile: my-smtp-account
   - subject: 'Message from Salt'
   - recipient: admin@example.com
   - sender: admin@example.com
   - use_ssl: True
   - attachments:
      - /var/log/syslog
      - /var/log/messages
```

name  The message to send via SMTP

23.19.173  salt.states.snapper

Managing implicit state and baselines using snapshots

New in version 2016.11.0.

Salt can manage state against explicitly defined state, for example if your minion state is defined by:
If someone modifies this file, the next application of the highstate will allow the admin to correct this deviation and the file will be corrected.

Now, what happens if somebody creates a file `/etc/new_config_file` and deletes `/etc/important_config_file`? Unless you have a explicit rule, this change will go unnoticed.

The snapper state module allows you to manage state implicitly, in addition to explicit rules, in order to define a baseline and iterate with explicit rules as they show that they work in production.

The workflow is: once you have a working and audited system, you would create your baseline snapshot (eg. with `salt tgt snapper.create_snapshot`) and define in your state this baseline using the identifier of the snapshot (in this case: `20`):

```
/my_baseline:
    snapper.baseline_snapshot:
        - number: 20
        - include_diff: False
        - ignore:
          - /var/log
          - /var/cache
```

Baseline snapshots can be also referenced by tag. Most recent baseline snapshot is used in case of multiple snapshots with the same tag:

```
/my_baseline_external_storage:
    snapper.baseline_snapshot:
        • tag: my_custom_baseline_tag
        • config: external
        • ignore: - /mnt/tmp_files/
```

If you have this state, and you haven’t done changes to the system since the snapshot, and you add a user, the state will show you the changes (including full diffs) to `/etc/passwd`, `/etc/shadow`, etc if you call it with `test=True` and will undo all changes if you call it without.

This allows you to add more explicit state knowing that you are starting from a very well defined state, and that you can audit any change that is not part of your explicit configuration.

So after you made this your state, you decided to introduce a change in your configuration:

```
/my_baseline:
    snapper.baseline_snapshot:
        - number: 20
        - ignore:
          - /var/log
          - /var/cache

/hosts_entry:
    file.blockreplace:
        - name: /etc/hosts
        - content: 'First line of content'
        - append_if_not_found: True
```
The change in /etc/hosts will be done after any other change that deviates from the specified snapshot are reverted. This could be for example, modifications to the /etc/passwd file or changes in the /etc/hosts that could render your the hosts_entry rule void or dangerous.

Once you take a new snapshot and you update the baseline snapshot number to include the change in /etc/hosts the hosts_entry rule will basically do nothing. You are free to leave it there for documentation, to ensure that the change is made in case the snapshot is wrong, but if you remove anything that comes after the snapper.baseline_snapshot as it will have no effect; by the moment the state is evaluated, the baseline state was already applied and include this change.

**Warning:** Make sure you specify the baseline state before other rules, otherwise the baseline state will revert all changes if they are not present in the snapshot.

**Warning:** Do not specify more than one baseline rule as only the last one will affect the result.

- **codeauthor** Duncan Mac-Vicar P. (<dmacvicar@suse.de>)
- **codeauthor** Pablo Suárez Hernández (<psuarezhernandez@suse.de>)
- **maturity** new
- **platform** Linux

```python
salt.states.snapper.baseline_snapshot(name, number=None, tag=None, include_diff=True, config='root', ignore=None)
```

Enforces that no file is modified comparing against a previously defined snapshot identified by number.

- **number** Number of selected baseline snapshot.
- **tag** Tag of the selected baseline snapshot. Most recent baseline baseline snapshot is used in case of multiple snapshots with the same tag. (tag and number cannot be used at the same time)
- **include_diff** Include a diff in the response (Default: True)
- **config** Snapper config name (Default: root)
- **ignore** List of files to ignore. (Default: None)

### 23.19.174 salt.states.splunk

Splunk User State Module

New in version 2016.3.0.

This state is used to ensure presence of users in splunk.

```python
ensure example test user 1:
    splunk.present:
        - name: 'Example TestUser1'
        - email: example@domain.com

salt.states.splunk.absent(email, profile='splunk', **kwargs)
```

Ensure a splunk user is absent
The following parameters are required:

- **email** This is the email of the user in splunk
- **name** This is the splunk username used to identify the user.

```python
salt.states.splunk.present(email, profile='splunk', **kwargs)

Ensure a user is present
```

```python
ensure example test user 1:
    splunk.absent:
        - email: 'example@domain.com'
        - name: 'exampleuser'
```

The following parameters are required:

- **email** This is the email of the user in splunk

```python
salt.states.splunk.present(email, profile='splunk', **kwargs)

Ensure a user is present
```

```python
ensure example test user 1:
    splunk.user_present:
        - realname: 'Example TestUser1'
        - name: 'exampleuser'
        - email: 'example@domain.com'
        - roles: ['user']
```

The following parameters are required:

- **email** This is the email of the user in splunk

---

**23.19.175 salt.states.splunk_search**

Splunk Search State Module

New in version 2015.5.0.

This state is used to ensure presence of splunk searches.

```python
server-warning-message:
    splunk_search.present:
        - name: This is the splunk search name
        - search: index=main sourcetype=
```

```python
salt.states.splunk_search.absent(name, profile='splunk')

Ensure a search is absent
```

**API Error Search:**

```
splunk_search.absent
```

The following parameters are required:

- **name** This is the name of the search in splunk

```python
salt.states.splunk_search.present(name, profile='splunk', **kwargs)

Ensure a search is present
```

**API Error Search:**

```
splunk_search.present:
    search: index=main sourcetype=blah
template: alert_5min
```

The following parameters are required:

- **name** This is the name of the search in splunk

---

23.19. state modules
23.19.176 salt.states.sqlite3

Management of SQLite3 databases

New in version 2016.3.0.

depends

• SQLite3 Python Module

configuration See salt.modules.sqlite3 for setup instructions

The sqlite3 module is used to create and manage sqlite3 databases and execute queries

Here is an example of creating a table using sql statements:

```
users:
  sqlite3.table_present:
    - db: /var/www/data/app.sqlite
    - schema: CREATE TABLE `users` (`username` TEXT COLLATE NOCASE UNIQUE NOT NULL,
    →`password` BLOB NOT NULL, `salt` BLOB NOT NULL, `last_login` INT)
```

Here is an example of creating a table using yaml/jinja instead of sql:

```
users:
  sqlite3.table_present:
    - db: /var/www/app.sqlite
    - schema:
    - email TEXT COLLATE NOCASE UNIQUE NOT NULL
    - firstname TEXT NOT NULL
    - lastname TEXT NOT NULL
    - company TEXT NOT NULL
    - password BLOB NOT NULL
    - salt BLOB NOT NULL
```

Here is an example of making sure a table is absent:

```
badservers:
  sqlite3.table_absent:
    - db: /var/www/data/users.sqlite
```

Sometimes you would to have specific data in tables to be used by other services Here is an example of making sure rows with specific data exist:

```
user_john_doe_xyz:
  sqlite3.row_present:
    - db: /var/www/app.sqlite
    - table: users
    - where_sql: email='john.doe@companyxyz.com'
    - data:
      - email: john.doe@companyxyz.com
      - lastname: doe
      - firstname: john
      - company: companyxyz.com
      - password: abcdef012934125
      - salt: abcdef012934125
    - require:
      - sqlite3: users
```

Here is an example of removing a row from a table:
user_john_doe_abc:
salt3.row_absent:
  - db: /var/www/app.sqlite
  - table: users
  - where_sql: email="john.doe@companyabc.com"
  - require:
    - sqlite3: users

Note that there is no explicit state to perform random queries, however, this can be approximated with sqlite3's module functions and module.run:

zone-delete:
  module.run:
    - name: sqlite3.modify
    - db: {{ db }}
    - sql: "DELETE FROM records WHERE id > {{ count[0] }} AND domain_id = {{ domain_ id }}"
    - watch:
      - sqlite3: zone-insert-12

salt.states.sqlite3.row_absent(name, db, table, where_sql, where_args=None)

Makes sure the specified row is absent in db. If multiple rows match where_sql, then the state will fail.

  name Only used as the unique ID
  db The database file name
  table The table name to check
  where_sql The sql to select the row to check
  where_args The list parameters to substitute in where_sql

salt.states.sqlite3.row_present(name, db, table, data, where_sql, where_args=None, update=False)

Checks to make sure the given row exists. If row exists and update is True then row will be updated with data.
Otherwise it will leave existing row unmodified and check it against data. If the existing data doesn't match
data_check the state will fail. If the row doesn't exist then it will insert data into the table. If more than one
row matches, then the state will fail.

  name Only used as the unique ID
  db The database file name
  table The table name to check the data
  data The dictionary of key/value pairs to check against if row exists, insert into the table if it doesn't
  where_sql The sql to select the row to check
  where_args The list parameters to substitute in where_sql
  update True will replace the existing row with data When False and the row exists and data does not equal
   the row data then the state will fail

salt.states.sqlite3.table_absent(name, db)

Make sure the specified table does not exist

  name The name of the table
  db The name of the database file
salt.states.sqlite3.table_present(name, db, schema, force=False)

- **name** The name of the table
- **db** The name of the database file
- **schema** The dictionary containing the schema information
- **force** If the name of the table exists and force is set to False, the state will fail. If force is set to True, the existing table will be replaced with the new table

### 23.19.177 salt.states.ssh_auth

Control of entries in SSH authorized_key files

The information stored in a user’s SSH authorized key file can be easily controlled via the ssh_auth state. Defaults can be set by the enc, options, and comment keys. These defaults can be overridden by including them in the name.

Since the YAML specification limits the length of simple keys to 1024 characters, and since SSH keys are often longer than that, you may have to use a YAML `explicit key`, as demonstrated in the second example below.

```
AAAAB3NzaC1kc3MAAAACBAL0sQ9fJ5bYTEyY==:
  ssh_auth.present:
    - user: root
    - enc: ssh-dss

thatch:
  ssh_auth.present:
    - user: root
    - source: salt://ssh_keys/thatch.id_rsa.pub
    - config: '%h/.ssh/authorized_keys'

sshkeys:
  ssh_auth.present:
    - user: root
    - enc: ssh-rsa
    - options:
      - option1="value1"
      - option2="value2 flag2"
    - comment: myuser
    - names:
      - AAAAB3NzaC1kc3MAAAACBAL0sQ9fJ5bYTEyY==
      - ssh-dss AAAAB3NzaCL0sQ9fJ5bYTEyY== user@domain
      - option3="value3" ssh-dss AAAAB3NzaC1kcQ9J5bYTEyY== other@testdomain
      - AAAAB3NzaC1kcQ9fJFF435bYTEyY== newcomment

sshkeys:
  ssh_auth.manage:
    - user: root
    - enc: ssh-rsa
    - options:
```

(continues on next page)
salt.states.ssh_auth.absent(name, user, enc='ssh-rsa', comment='', source='', options=None, config='.ssh/authorized_keys', fingerprint_hash_type=None)

Verifies that the specified SSH key is absent

name The SSH key to manage
user The user who owns the SSH authorized keys file to modify
enc Defines what type of key is being used; can be ed25519, ecdsa, ssh-rsa or ssh-dss
comment The comment to be placed with the SSH public key
options The options passed to the key, pass a list object
source The source file for the key(s). Can contain any number of public keys, in standard "authorized_keys" format. If this is set, comment, enc and options will be ignored.

New in version 2015.8.0.

config The location of the authorized keys file relative to the user's home directory, defaults to ".ssh/authorized_keys". Token expansion %u and %h for username and home path supported.

fingerprint_hash_type The public key fingerprint hash type that the public key fingerprint was originally hashed with. This defaults to sha256 if not specified.

New in version 2016.11.7.

salt.states.ssh_auth.manage(name, ssh_keys, user, enc='ssh-rsa', comment='', source='', options=None, config='.ssh/authorized_keys', fingerprint_hash_type=None, **kwargs)

New in version 3000.

Ensures that only the specified ssh_keys are present for the specified user

ssh_keys The SSH key to manage
user The user who owns the SSH authorized keys file to modify
enc Defines what type of key is being used; can be ed25519, ecdsa, ssh-rsa or ssh-dss
comment The comment to be placed with the SSH public key
source The source file for the key(s). Can contain any number of public keys, in standard "authorized_keys" format. If this is set, comment and enc will be ignored.

Note: The source file must contain keys in the format <enc> <key> <comment>. If you have generated a keypair using PuTTYgen, then you will need to do the following to retrieve an OpenSSH-compatible public key.

1. In PuTTYgen, click Load, and select the private key file (not the public key), and click Open.
2. Copy the public key from the box labeled Public key for pasting into OpenSSH authorized_keys file.

23.19. state modules 1605
3. Paste it into a new file.

**options** The options passed to the keys, pass a list object

**config** The location of the authorized keys file relative to the user’s home directory, defaults to ".ssh/authorized_keys". Token expansion %u and %h for username and home path supported.

**fingerprint_hash_type** The public key fingerprint hash type that the public key fingerprint was originally hashed with. This defaults to sha256 if not specified.

```python
salt.states.ssh_auth.present(name, user, enc='ssh-rsa', comment='', source='', options=None, config='.ssh/authorized_keys', fingerprint_hash_type=None, **kwargs)
```

Verifies that the specified SSH key is present for the specified user

- **name** The SSH key to manage
- **user** The user who owns the SSH authorized keys file to modify
- **enc** Defines what type of key is being used; can be ed25519, ecdsa, ssh-rsa or ssh-dss
- **comment** The comment to be placed with the SSH public key
- **source** The source file for the key(s). Can contain any number of public keys, in standard "authorized_keys" format. If this is set, comment and enc will be ignored.

**Note:** The source file must contain keys in the format `<enc> <key> <comment>`. If you have generated a keypair using PuTTYgen, then you will need to do the following to retrieve an OpenSSH-compatible public key.

1. In PuTTYgen, click Load, and select the private key file (not the public key), and click Open.
2. Copy the public key from the box labeled Public key for pasting into OpenSSH authorized_keys file.
3. Paste it into a new file.

**options** The options passed to the key, pass a list object

**config** The location of the authorized keys file relative to the user’s home directory, defaults to ".ssh/authorized_keys". Token expansion %u and %h for username and home path supported.

**fingerprint_hash_type** The public key fingerprint hash type that the public key fingerprint was originally hashed with. This defaults to sha256 if not specified.

### 23.19.178 salt.states.stateconf

**Stateconf System**

The stateconf system is intended for use only with the stateconf renderer. This State module presents the set function. This function does not execute any functionality, but is used to interact with the stateconf renderer.

```python
salt.states.stateconf.context(name, **kwargs)
    No-op state to support state config via the stateconf renderer.
```

```python
salt.states.stateconf.set(name, **kwargs)
    No-op state to support state config via the stateconf renderer.
```
23.19.179  salt.states.status

Minion status monitoring
Maps to the status execution module.

salt.states.status.loadavg(name, maximum=None, minimum=None)

Return the current load average for the specified minion. Available values for name are 1-min, 5-min and 15-min. minimum and maximum values should be passed in as strings.

salt.states.status.process(name)

Return whether the specified signature is found in the process tree. This differs slightly from the services states, in that it may refer to a process that is not managed via the init system.

23.19.180  salt.states.statuspage

StatusPage

Manage the StatusPage configuration.

In the minion configuration file, the following block is required:

```
statuspage:
  api_key: <API_KEY>
  page_id: <PAGE_ID>
```

New in version 2017.7.0.

salt.states.statuspage.create(name, endpoint='incidents', api_url=None, page_id=None, api_key=None, api_version=None, **kwargs)

Insert a new entry under a specific endpoint.

endpoint: incidents  Insert under this specific endpoint.
page_id  Page ID. Can also be specified in the config file.
api_key  API key. Can also be specified in the config file.
api_version: 1  API version. Can also be specified in the config file.
api_url  Custom API URL in case the user has a StatusPage service running in a custom environment.
kwargs  Other params.

SLS Example:

```
create-my-component:
  statuspage.create:
    - endpoint: components
    - name: my component
    - group_id: 993vgplshj12
```

salt.states.statuspage.delete(name, endpoint='incidents', id=None, api_url=None, page_id=None, api_key=None, api_version=None)

Remove an entry from an endpoint.

depthpoint: incidents  Request a specific endpoint.
page_id  Page ID. Can also be specified in the config file.
api_key  API key. Can also be specified in the config file.
api_version: 1  API version. Can also be specified in the config file.

api_url  Custom API URL in case the user has a StatusPage service running in a custom environment.

SLS Example:

```
delete-my-component:
  statuspage.delete:
    - endpoint: components
    - id: ftgks51sfs2d
```

salt.states.statuspage.managed(name, config, api_url=None, page_id=None, api_key=None, api_version=None, pace=1, allow_empty=False)

Manage the StatusPage configuration.

cfg  Dictionary with the expected configuration of the StatusPage. The main level keys of this dictionary represent the endpoint name. If a certain endpoint does not exist in this structure, it will be ignored / not configured.

page_id  Page ID. Can also be specified in the config file.

api_key  API key. Can also be specified in the config file.

api_version: 1  API version. Can also be specified in the config file.

api_url  Custom API URL in case the user has a StatusPage service running in a custom environment.

pace: 1  Max requests per second allowed by the API.

allow_empty: False  Allow empty config.

SLS example:

```
my-statuspage-config:
  statuspage.managed:
    - config:
      components:
        - name: component1
          group_id: uy4g37rf
        - name: component2
          group_id: 3n4uyu4gf
      incidents:
        - name: incident1
          status: resolved
          impact: major
          backfilled: false
        - name: incident2
          status: investigating
          impact: minor
```

salt.states.statuspage.update(name, endpoint='incidents', id=None, api_url=None, page_id=None, api_key=None, api_version=None, **kwargs)

Update attribute(s) of a specific endpoint.

id  The unique ID of the endpoint entry.

endpoint: incidents  Endpoint name.

page_id  Page ID. Can also be specified in the config file.

api_key  API key. Can also be specified in the config file.

api_version: 1  API version. Can also be specified in the config file.
api_url Custom API URL in case the user has a StatusPage service running in a custom environment.

SLS Example:

```yaml
update-my-incident:
  statuspage.update:
    - id: dz959yz2nd4l
    - status: resolved
```

23.19.181 `salt.states.supervisord`

Interaction with the Supervisor daemon

```yaml
wsgi_server:
  supervisord.running:
    - require:
      - pkg: supervisor
    - watch:
      - file: /etc/nginx/sites-enabled/wsgi_server.conf
```

**salt.states.supervisord.dead**(name, user=None, conf_file=None, bin_env=None, **kwargs)

Ensure the named service is dead (not running).

- **name** Service name as defined in the supervisor configuration file
- **user** Name of the user to run the supervisorctl command

New in version 0.17.0.

- **conf_file** path to supervisorctl config file
- **bin_env** path to supervisorctl bin or path to virtualenv with supervisor installed

**salt.states.supervisord.mod_watch**(name, restart=True, update=False, user=None, conf_file=None, bin_env=None, **kwargs)

The supervisord watcher, called to invoke the watch command. Always restart on watch

**Note:** This state exists to support special handling of the *watch* requisite. It should not be called directly.

Parameters for this function should be set by the state being triggered.

**salt.states.supervisord.running**(name, restart=False, update=False, user=None, conf_file=None, bin_env=None, **kwargs)

Ensure the named service is running.

- **name** Service name as defined in the supervisor configuration file
- **restart** Whether to force a restart
- **update** Whether to update the supervisor configuration.
- **user** Name of the user to run the supervisorctl command

New in version 0.17.0.

- **conf_file** path to supervisorctl config file
- **bin_env** path to supervisorctl bin or path to virtualenv with supervisor installed
23.19.182 salt.states.sysctl

Configuration of the kernel using sysctl

Control the kernel sysctl system.

```
vm.swappiness:
  sysctl.present:
    - value: 20
```

salt.states.sysctl.present(name, value, config=None)

Ensure that the named sysctl value is set in memory and persisted to the named configuration file. The default sysctl configuration file is /etc/sysctl.conf

- **name** The name of the sysctl value to edit
- **value** The sysctl value to apply
- **config** The location of the sysctl configuration file. If not specified, the proper location will be detected based on platform.

23.19.183 salt.states.syslog_ng

State module for syslog_ng

- **maintainer** Tibor Benke `<btibi@sch.bme.hu>`
- **maturity** new
- **depends** cmd, ps, syslog_ng
- **platform** all

Users can generate syslog-ng configuration files from YAML format or use plain ones and reload, start, or stop their syslog-ng by using this module.

**Details**

The service module is not available on all systems, so this module includes `syslog_ng.reloaded`, `syslog_ng.stopped`, and `syslog_ng.started` functions. If the service module is available on the computers, users should use that.

Users can generate syslog-ng configuration with `syslog_ng.config` function. For more information see `syslog-ng state usage`.

**Syslog-ng configuration file format**

The syntax of a configuration snippet in syslog-ng.conf:

```
object_type object_id {<options>};
```

These constructions are also called statements. There are options inside of them:

```
option(parameter1, parameter2); option2(parameter1, parameter2);
```

salt.states.syslog_ng.config(name, config, write=True)

Builds syslog-ng configuration.

- **name**: the id of the Salt document
- **config**: the parsed YAML code
- **write**: if True, it writes the config into the configuration file, otherwise just returns it

salt.states.syslog_ng.reloaded(name)

Reloads syslog-ng.

salt.states.syslog_ng.started(name=None, user=None, group=None, chroot=None, caps=None, no_caps=False, pidfile=None, enable_core=False, fd_limit=None, verbose=False, debug=False, trace=False, yydebug=False, persist_file=None, control=None, worker_threads=None, *args, **kwargs)

Ensures that syslog-ng is started via the given parameters.

Users shouldn't use this function, if the service module is available on their system.

salt.states.syslog_ng.stopped(name=None)

Kills syslog-ng.

23.19.184 salt.states.sysrc

State to work with sysrc

salt.states.sysrc.absent(name, **kwargs)

Ensure a sysrc variable is absent.

- **name**: The variable name to set
- **file**: (optional) The rc file to add the variable to.
- **jail**: (option) the name or JID of the jail to set the value in.

salt.states.sysrc.managed(name, value, **kwargs)

Ensure a sysrc variable is set to a specific value.

- **name**: The variable name to set
- **value**: Value to set the variable to
- **file**: (optional) The rc file to add the variable to.
- **jail**: (option) the name or JID of the jail to set the value in.

Example:

```yaml
syslogd:
  sysrc.managed:
    - name: syslogd_flags
    - value: -ss
```

23.19. state modules

1611
23.19.185 salt.states.telemetry_alert

Manage Telemetry alert configurations

New in version 2016.3.0.

Create, Update and destroy Mongo Telemetry alert configurations.

This module uses requests, which can be installed via package, or pip.

This module accepts explicit credential (telemetry api key) or can also read api key credentials from a pillar. Example:

```yaml
ensure telemetry alert X is defined on deployment Y:
  telemetry_alert.present:
    - deployment_id: "rs-XXXXXX"
    - metric_name: "testMetric"
    - alert_config:
      - max: 1
        filter: SERVER_ROLE_MONGOD_PRIMARY
        escalate_to: "example@pagerduty.com"
      - name: "**MANAGED BY ORCA DO NOT EDIT BY HAND** manages alarm on testMetric"
```

salt.states.telemetry_alert.absent(name, deployment_id, metric_name, api_key=None, profile='telemetry')

Ensure the telemetry alert config is deleted

- **name** An optional description of the alarms (not currently supported by telemetry API)
- **deployment_id** Specifies the ID of the root deployment resource (replica set cluster or sharded cluster) to which this alert definition is attached
- **metric_name** Specifies the unique ID of the metric to whose values these thresholds will be applied
- **api_key** Telemetry api key for the user
- **profile** A dict with telemetry config data. If present, will be used instead of api_key.

salt.states.telemetry_alert.present(name, deployment_id, metric_name, alert_config, api_key=None, profile='telemetry')

Ensure the telemetry alert exists.

- **name** An optional description of the alarm (not currently supported by telemetry API)
- **deployment_id** Specifies the ID of the root deployment resource (replica set cluster or sharded cluster) to which this alert definition is attached
- **metric_name** Specifies the unique ID of the metric to whose values these thresholds will be applied
- **alert_config** Is a list of dictionaries where each dict contains the following fields:
  - **filter** By default the alert will apply to the deployment and all its constituent resources. If the alert only applies to a subset of those resources, a filter may be specified to narrow this scope.
  - **min** the smallest "ok" value the metric may take on; if missing or null, no minimum is enforced.
  - **max** the largest "ok" value the metric may take on; if missing or null, no maximum is enforced.
  - **notify_all** Used to indicate if you want to alert both onCallEngineer and apiNotifications
- **api_key** Telemetry api key for the user
- **profile** A dict of telemetry config information. If present, will be used instead of api_key.
Management of timezones

The timezone can be managed for the system:

```yaml
America/Denver:
  timezone.system
```

The system and the hardware clock are not necessarily set to the same time. By default, the hardware clock is set to localtime, meaning it is set to the same time as the system clock. If `utc` is set to True, then the hardware clock will be set to UTC, and the system clock will be an offset of that.

```yaml
America/Denver:
  timezone.system:
    - utc: True
```

The Ubuntu community documentation contains an explanation of this setting, as it applies to systems that dual-boot with Windows. This is explained in greater detail here.

```python
salt.states.timezone.system(name, utc=True)
```

Set the timezone for the system.

- `name` The name of the timezone to use (e.g.: America/Denver)
- `utc` Whether or not to set the hardware clock to UTC (default is True)

---

23.19.188 salt.states.tls

Enforce state for SSL/TLS

```python
salt.states.tls.valid_certificate(name, weeks=0, days=0, hours=0, minutes=0, seconds=0)
```

Verify that a TLS certificate is valid now and (optionally) will be valid for the time specified through weeks, days, hours, minutes, and seconds.

---

23.19.189 salt.states.tomcat

Manage Apache Tomcat web applications

Note: This state requires the Tomcat Manager webapp to be installed and running.

The following grains/pillars must be set for communication with Tomcat Manager to work:

```yaml
tomcat-manager:
  user: 'tomcat-manager'
  passwd: 'Passw0rd'
```
Configuring Tomcat Manager

To manage webapps via the Tomcat Manager, you'll need to configure a valid user in the file `conf/tomcat-users.xml`.

```
<?xml version='1.0' encoding='utf-8'?>
<tomcat-users>
    <role rolename="manager-script"/>
    <user username="tomcat-manager" password="Passw0rd" roles="manager-script"/>
</tomcat-users>
```

### Notes

- Using multiple versions (aka. parallel deployments) on the same context path is not supported.
- If you use only this module for deployments you might want to restrict access to the manager so it's only accessible via localhost. For more info: [http://tomcat.apache.org/tomcat-7.0-doc/manager-howto.html#Configuring_Manager_Application_Access](http://tomcat.apache.org/tomcat-7.0-doc/manager-howto.html#Configuring_Manager_Application_Access)

### Last tested on:

- **Tomcat Version**: Apache Tomcat/7.0.54
- **JVM Vendor**: Oracle Corporation
- **JVM Version**: 1.8.0_101-b13
- **OS Architecture**: amd64
- **OS Name**: Linux
- **OS Version**: 3.10.0-327.22.2.el7.x86_64

salt.states.tomcat.mod_watch(name, url='http://localhost:8080/manager', timeout=180)

The tomcat watcher, called to invoke the watch command. When called, it will reload the webapp in question

**Note:** This state exists to support special handling of the watch requisite. It should not be called directly. Parameters for this function should be set by the state being triggered.

salt.states.tomcat.undeployed(name, url='http://localhost:8080/manager', timeout=180)

Enforce that the WAR will be undeployed from the server

**name** The context path to undeploy.

**url** The URL of the server with the Tomcat Manager webapp.

**timeout** [180] Timeout for HTTP request to the Tomcat Manager.

Example:

```
jenkins:
    tomcat.undeployed:
        - name: /ran
        - require:
            - service: application-service
```
salt.states.tomcat.wait(name, url='http://localhost:8080/manager', timeout=180)

Wait for the Tomcat Manager to load.

Notice that if tomcat is not running we won't wait for it start and the state will fail. This state can be required in the tomcat.war_deployed state to make sure tomcat is running and that the manager is running as well and ready for deployment.


timeout [180] Timeout for HTTP request to the Tomcat Manager.

Example:

```
tomcat-service:
  service.running:
    - name: tomcat
    - enable: True

wait-for-tomcatmanager:
  tomcat.wait:
    - timeout: 300
    - require:
      - service: tomcat-service

jenkins:
  tomcat.war_deployed:
    - name: /ran
    - war: salt://jenkins-1.2.4.war
    - require:
      - tomcat: wait-for-tomcatmanager
```

salt.states.tomcat.war_deployed(name, war, force=False, url='http://localhost:8080/manager',
timeout=180, temp_war_location=None, version=True)

Enforce that the WAR will be deployed and started in the context path, while making use of WAR versions in the filename.

**Note:** For more info about Tomcats file paths and context naming, please see [http://tomcat.apache.org/tomcat-7.0-doc/config/context.html#Naming](http://tomcat.apache.org/tomcat-7.0-doc/config/context.html#Naming)

name The context path to deploy (incl. forward slash) the WAR to.

war Absolute path to WAR file (should be accessible by the user running Tomcat) or a path supported by the `salt.modules.cp.get_url` function.

force [False] Force deployment even if the version strings are the same. Disabled by default.


timeout [180] Timeout for HTTP requests to the Tomcat Manager.

temp_war_location [None] Use another location to temporarily copy the WAR file to. By default the system's temp directory is used.

version [''] Specify the WAR version. If this argument is provided, it overrides the version encoded in the WAR file name, if one is present.


Use False or blank value to prevent guessing the version and keeping it blank.

New in version 2016.11.0.
Example:

```
jenkins:
    tomcat.war_deployed:
        - name: /salt-powered-jenkins
        - war: salt://jenkins-1.2.4.war
        - require:
            - service: application-service
```

Note: Be aware that in the above example the WAR `jenkins-1.2.4.war` will be deployed to the context path `salt-powered-jenkins##1.2.4`. To avoid this either specify a version yourself, or set version to `False`.

### 23.19.190 salt.states.trafficserver

Control Apache Traffic Server

New in version 2015.8.0.

**salt.states.trafficserver.bounce_cluster(name)**

```
bounce_ats_cluster:
    trafficserver.bounce_cluster
```

**salt.states.trafficserver.bounce_local(name, drain=False)**

This option modifies the behavior of `traffic_line -b` and `traffic_line -L` such that `traffic_server` is not shut down until the number of active client connections drops to the number given by the `proxy.config.restart.active_client_threshold` configuration variable.

```
bounce_ats_local:
    trafficserver.bounce_local

bounce_ats_local:
    trafficserver.bounce_local
    - drain: True
```

**salt.states.trafficserver.clear_cluster(name)**
Clears accumulated statistics on all nodes in the cluster.

```
clear_ats_cluster:
    trafficserver.clear_cluster
```

**salt.states.trafficserver.clear_node(name)**
Clears accumulated statistics on the local node.

```
clear_ats_node:
    trafficserver.clear_node
```

**salt.states.trafficserver.config(name, value)**
Set Traffic Server configuration variable values.
proxy.config.proxy_name:
  trafficserver.config:
    - value: cdn.site.domain.tld

OR

traffic_server_setting:
  trafficserver.config:
    - name: proxy.config.proxy_name
    - value: cdn.site.domain.tld

salt.states.trafficserver.offline(name, path)
Mark a cache storage device as offline. The storage is identified by a path which must match exactly a path
specified in storage.config. This removes the storage from the cache and redirects requests that would have
used this storage to other storage. This has exactly the same effect as a disk failure for that storage. This does
not persist across restarts of the traffic_server process.

offline_ats_path:
  trafficserver.offline:
    - path: /path/to/cache

salt.states.trafficserver.refresh(name)
Initiate a Traffic Server configuration file reread. Use this command to update the running configuration after
any configuration file modification.

The timestamp of the last reconfiguration event (in seconds since epoch) is published in the
proxy.node.config.reconfigure_time metric.

refresh_ats:
  trafficserver.refresh

salt.states.trafficserver.restart_cluster(name)
Restart the traffic_manager process and the traffic_server process on all the nodes in a cluster.

restart_ats_cluster:
  trafficserver.restart_cluster

salt.states.trafficserver.restart_local(name, drain=False)
Restart the traffic_manager and traffic_server processes on the local node.

This option modifies the behavior of traffic_line -b and traffic_line -L such that traffic_server is
not shut down until the number of active client connections drops to the number given by the
proxy.config.restart.active_client_threshold configuration variable.

restart_ats_local:
  trafficserver.restart_local
restart_ats_local_drain:
  trafficserver.restart_local
    - drain: True

salt.states.trafficserver.shutdown(name)
Shut down Traffic Server on the local node.

shutdown_ats:
  trafficserver.shutdown
salt.states.trafficserver.startup(name)
Start Traffic Server on the local node.

```
startup_ats:
  trafficserver.startup
```

salt.states.trafficserver.zero_cluster(name)
Reset performance statistics to zero across the cluster.

```
zero_ats_cluster:
  trafficserver.zero_cluster
```

salt.states.trafficserver.zero_node(name)
Reset performance statistics to zero on the local node.

```
zero_ats_node:
  trafficserver.zero_node
```

## 23.19.191 salt.states.tuned

Interface to Red Hat tuned-adm module

```
maintainer  Syed Ali <alicsyed@gmail.com>
maturity   new
depends    cmd.run
platform   Linux
```

salt.states.tuned.off(name=None)
Turns 'tuned' off. Example tuned.sls file for turning tuned off:

```
tuned: tuned.off: []
```
To see a valid list of states call execution module: tuned.list

salt.states.tuned.profile(name)
This state module allows you to modify system tuned parameters

Example tuned.sls file to set profile to virtual-guest
tuned:

```
tuned:
  • profile
  • name: virtual-guest
```

name tuned profile name to set the system to
To see a valid list of states call execution module: tuned.list
23.19.192  **salt.states.uptime**

**Monitor Web Server with Uptime**

**Uptime** is an open source remote monitoring application using Node.js, MongoDB, and Twitter Bootstrap.

**Warning:** This state module is beta. It might be changed later to include more or less automation.

**Note:** This state module requires a pillar to specify the location of your uptime install

```yaml
uptime:
  application_url: "http://uptime-url.example.org"
```

Example:

```yaml
url:
  uptime.monitored
url/sitemap.xml:
  uptime.monitored:
    polling: 600 # every hour
```

**salt.states.uptime.monitored**(*name, **params*)

Makes sure an URL is monitored by uptime. Checks if URL is already monitored, and if not, adds it.

23.19.193  **salt.states.vault**

States for managing Hashicorp Vault. Currently handles policies. Configuration instructions are documented in the execution module docs.

**maintainer**  SaltStack

**maturity**  new

**platform**  all

New in version 2017.7.0.

**salt.states.vault.policy_present**(*name, rules*)

Ensure a Vault policy with the given name and rules is present.

**name**  The name of the policy

**rules**  Rules formatted as in-line HCL

```
don-demo-policy:
  vault.policy_present:
    - name: foo/bar
    - rules: |
      path "secret/top-secret/*/" {
        policy = "deny"
      }
      path "secret/not-very-secret/*/" {
        policy = "write"
      }
```
23.19.194 salt.states.vbox_guest

VirtualBox Guest Additions installer state

salt.states.vbox_guest.additions_installed(name, reboot=False, upgrade_os=False)
Ensure that the VirtualBox Guest Additions are installed. Uses the CD, connected by VirtualBox.

name The name has no functional value and is only used as a tracking reference.
reboot [False] Restart OS to complete installation.
upgrade_os [False] Upgrade OS (to ensure the latests version of kernel and developer tools installed).

salt.states.vbox_guest.additions_removed(name, force=False)
Ensure that the VirtualBox Guest Additions are removed. Uses the CD, connected by VirtualBox.

name The name has no functional value and is only used as a tracking reference.
force Force VirtualBox Guest Additions removing.

salt.states.vbox_guest.grant_access_to_shared_folders_to(name, users=None)
Grant access to auto-mounted shared folders to the users.

name Name of the user to grant access to auto-mounted shared folders to.
users List of names of users to grant access to auto-mounted shared folders to. If specified, name will not be taken into account.

23.19.195 salt.states.victorops

Create an Event in VictorOps

New in version 2015.8.0.
This state is useful for creating events on the VictorOps service during state runs.

webserver-warning-message:
victorops.create_event:
  - message_type: 'CRITICAL'
  - entity_id: 'webserver/diskspace'
  - state_message: 'Webserver diskspace is low.'

salt.states.victorops.create_event(name, message_type, routing_key='everyone', **kwargs)
Create an event on the VictorOps service

webserver-warning-message:
victorops.create_event:
  - message_type: 'CRITICAL'
  - entity_id: 'webserver/diskspace'
  - state_message: 'Webserver diskspace is low.'

database-server-warning-message:
victorops.create_event:
  - message_type: 'WARNING'
  - entity_id: 'db_server/load'

(continues on next page)
- **state_message**: 'Database Server load is high.'
- **entity_is_host**: True
- **entity_display_name**: 'dbdserver.example.com'

The following parameters are required:

**name**  This is a short description of the event.

**message_type**  One of the following values: INFO, WARNING, ACKNOWLEDGEMENT, CRITICAL, RECOVERY.

The following parameters are optional:

- **routing_key**  The key for where messages should be routed. By default, sent to 'everyone' route.
- **entity_id**  The name of alerting entity. If not provided, a random name will be assigned.
- **timestamp**  Timestamp of the alert in seconds since epoch. Defaults to the time the alert is received at VictorOps.
- **timestamp_fmt**  The date format for the timestamp parameter. Defaults to '%Y-%m-%dT%H:%M:%S'.
- **state_start_time**  The time this entity entered its current state (seconds since epoch). Defaults to the time alert is received.
- **state_start_time_fmt**  The date format for the timestamp parameter. Defaults to '%Y-%m-%dT%H:%M:%S'.
- **state_message**  Any additional status information from the alert item.
- **entity_is_host**  Used within VictorOps to select the appropriate display format for the incident.
- **entity_display_name**  Used within VictorOps to display a human-readable name for the entity.
- **ack_message**  A user entered comment for the acknowledgment.
- **ack_author**  The user that acknowledged the incident.

---

23.19.196 **salt.states.win_dacl**

Windows Object Access Control Lists

Ensure an ACL is present

**parameters**: name - the path of the object objectType - Registry/File/Directory user - user account or SID for the ace permission - permission for the ace (see module win_acl for available permissions for each objectType) acetype - Allow/Deny propagation - how the ACL should apply to child objects (see module win_acl for available propagation types)

```
addAcl:
  win_dacl.present:
    - name: HKEY_LOCAL_MACHINE\SOFTWARE\mykey
    - objectType: Registry
    - user: FakeUser
    - permission: FullControl
    - acetype: ALLOW
    - propagation: KEY&SUBKEYS
```

Ensure an ACL does not exist

---

23.19. **state modules**
parameters: name - the path of the object objectType - Registry/File/Directory user - user account or SID for the ace permission - permission for the ace (see module win_acl for available permissions for each objectType) acetype - Allow/Deny propagation - how the ACL should apply to child objects (see module win_acl for available propagation types)

```python
removeAcl:
win_dacl.absent:
  - name: HKEY_LOCAL_MACHINE\SOFTWARE\mykey
  - objectType: Registry
  - user: FakeUser
  - permission: FullControl
  - acetype: ALLOW
  - propagation: KEY&SUBKEYS

Ensure an object is inheriting permissions
parameters: name - the path of the object objectType - Registry/File/Directory clear_existing_acl - True/False - when inheritance is enabled, should the existing ACL be kept or cleared out

```python
eInherit:
win_dacl.enableinheritance:
  - name: HKEY_LOCAL_MACHINE\SOFTWARE\mykey
  - objectType: Registry
  - clear_existing_acl: True

Ensure an object is not inheriting permissions
parameters: name - the path of the object objectType - Registry/File/Directory copy_inherited_acl - True/False - if inheritance is enabled, should the inherited permissions be copied to the ACL when inheritance is disabled

```python
dInherit:
win_dacl.disableinheritance:
  - name: HKEY_LOCAL_MACHINE\SOFTWARE\mykey
  - objectType: Registry
  - copy_inherited_acl: False
```

salt.states.win_dacl.absent(name, objectType, user, permission, acetype, propagation)
Ensure an ACL does not exist

salt.states.win_dacl.disinherit(name, objectType, copy_inherited_acl=True)
Ensure an object is not inheriting ACLs from its parent

salt.states.win_dacl.inherit(name, objectType, clear_existing_acl=False)
Ensure an object is inheriting ACLs from its parent

salt.states.win_dacl.present(name, objectType, user, permission, acetype, propagation)
Ensure an ACE is present
23.19.197 salt.states.win_dns_client

Module for configuring DNS Client on Windows systems

salt.states.win_dns_client.dns_dhcp(name, interface='Local Area Connection')
Configure the DNS server list from DHCP Server

salt.states.win_dns_client.dns_exists(name, servers=None, interface='Local Area Connection', replace=False)
Configure the DNS server list in the specified interface

Example:

```yaml
config_dns_servers:
  win_dns_client.dns_exists:
    - replace: True  # remove any servers not in the "servers" list, default is False
    - servers:
      - 8.8.8.8
      - 8.8.8.9
```

salt.states.win_dns_client.primary_suffix(name, suffix=None, updates=False)
New in version 2014.7.0.
Configure the global primary DNS suffix of a DHCP client.

suffix [None] The suffix which is advertised for this client when acquiring a DHCP lease When none is set, the explicitly configured DNS suffix will be removed.

updates [False] Allow syncing the DNS suffix with the AD domain when the client's AD domain membership changes

```yaml
primary_dns_suffix:
  win_dns_client.primary_suffix:
    - suffix: sub.domain.tld
    - updates: True
```

23.19.198 salt.states.win_firewall

State for configuring Windows Firewall

salt.states.win_firewall.add_rule(name, localport, protocol='tcp', action='allow', dir='in', remoteip='any')
Add a new inbound or outbound rule to the firewall policy

Parameters

- **name** *(str)* -- The name of the rule. Must be unique and cannot be "all". Required.
- **localport** *(int)* -- The port the rule applies to. Must be a number between 0 and 65535. Can be a range. Can specify multiple ports separated by commas. Required.
- **protocol** *(Optional[str])* -- The protocol. Can be any of the following:
  - A number between 0 and 255
  - icmpv4
  - icmpv6
  - tcp
- udp
- any

- **action** *(Optional)* -- The action the rule performs. Can be any of the following:
  - allow
  - block
  - bypass

- **dir** *(Optional)* -- The direction. Can be in or out.

- **remoteip** *(Optional)* -- The remote IP. Can be any of the following:
  - any
  - localsubnet
  - dns
  - dhcp
  - wins
  - defaultgateway
  - Any valid IPv4 address (192.168.0.12)
  - Any valid subnet (192.168.1.0/24)
  - Any valid range of IP addresses (192.168.0.1-192.168.0.12)
  - A list of valid IP addresses

Can be combinations of the above separated by commas.

New in version 2016.11.6.

Example:

```python
open_smb_port:
    win_firewall.add_rule:
        - name: SMB (445)
        - localport: 445
        - protocol: tcp
        - action: allow
```

salt.states.win_firewall.disabled(name='allprofiles')

Disable all the firewall profiles (Windows only)

**Parameters**

- **profile** *(Optional)* -- The name of the profile to disable. Default is allprofiles. Valid options are:
  - allprofiles
  - domainprofile
  - privateprofile
  - publicprofile

Example:
salt.states.win_firewall.enabled(name='allprofiles')

Enable all the firewall profiles (Windows only)

Parameters profile (Optional[str]) -- The name of the profile to enable. Default is allprofiles. Valid options are:

- allprofiles
- domainprofile
- privateprofile
- publicprofile

Example:

# To enable the domain profile
enable_domain:
  win_firewall.enabled:
    - name: domainprofile

# To enable all profiles
enable_all:
  win_firewall.enabled:
    - name: allprofiles

23.19.199 salt.states.win_iis

Microsoft IIS site management

This module provides the ability to add/remove websites and application pools from Microsoft IIS.

New in version 2016.3.0.

salt.states.win_iis.container_setting(name, container, settings=None)

Set the value of the setting for an IIS container.

Parameters

- name (str) -- The name of the IIS container.
- container (str) -- The type of IIS container. The container types are: AppPools, Sites, SslBindings
- settings (str) -- A dictionary of the setting names and their values. Example of usage for the AppPools container:

  site0-apppool-setting:
    win_iis.container_setting:
      - name: site0

(continues on next page)
- **container**: AppPools
- **settings**:
  - `managedPipelineMode`: Integrated
  - `processModel.maxProcesses`: 1
  - `processModel.userName`: TestUser
  - `processModel.password`: TestPassword
  - `processModel.identityType`: SpecificUser

Example of usage for the `Sites` container:

```yaml
site0-site-setting:
  win_iis.container_setting:
  - name: site0
  - container: Sites
  - settings:
    logFile.logFormat: W3C
    logFile.period: Daily
    limits.maxUrlSegments: 32
```

`salt.states.win_iis.create_app(name, site, sourcepath, apppool=None)`

Create an IIS application.

Parameters

- **name** *(str)* -- The IIS application.
- **site** *(str)* -- The IIS site name.
- **sourcepath** *(str)* -- The physical path.
- **apppool** *(str)* -- The name of the IIS application pool.

Example of usage with only the required arguments:

```yaml
site0-v1-app:
  win_iis.create_app:
  - name: v1
  - site: site0
  - sourcepath: C:\inetpub\site0\v1
```

Example of usage specifying all available arguments:

```yaml
site0-v1-app:
  win_iis.create_app:
  - name: v1
  - site: site0
  - sourcepath: C:\inetpub\site0\v1
  - apppool: site0
```

`salt.states.win_iis.create_apppool(name)`

Create an IIS application pool.

Parameters **name** *(str)* -- The name of the IIS application pool.

Usage:

```yaml
site0-apppool:
  win_iis.create_apppool:
  - name: site0
```
salt.states.win_iis.create_binding(name, site, hostheader='', ipaddress='*', port=80, protocol='http', sslflags=0)

Create an IIS binding.

Parameters

- **site**(str) -- The IIS site name.
- **hostheader**(str) -- The host header of the binding.
- **ipaddress**(str) -- The IP address of the binding.
- **port**(str) -- The TCP port of the binding.
- **protocol**(str) -- The application protocol of the binding.
- **sslflags**(str) -- The flags representing certificate type and storage of the binding.

Example of usage with only the required arguments:

```
site0-https-binding:
    win_iis.create_binding:
        - site: site0
```

Example of usage specifying all available arguments:

```
site0-https-binding:
    win_iis.create_binding:
        - site: site0
        - hostheader: site0.local
        - ipaddress: '*'
        - port: 443
        - protocol: https
        - sslflags: 0
```

salt.states.win_iis.create_cert_binding(name, site, hostheader='', ipaddress='*', port=443, sslflags=0)

Assign a certificate to an IIS binding.

Parameters

- **name**(str) -- The thumbprint of the certificate.
- **site**(str) -- The IIS site name.
- **hostheader**(str) -- The host header of the binding.
- **ipaddress**(str) -- The IP address of the binding.
- **port**(str) -- The TCP port of the binding.
- **sslflags**(str) -- Flags representing certificate type and certificate storage of the binding.

Example of usage with only the required arguments:

```
site0-cert-binding:
    win_iis.create_cert_binding:
        - name: 9988776655443322111000AAABBBCCCDDDEEEFFF
        - site: site0
```

Example of usage specifying all available arguments:
site0-cert-binding:
  win_iis.create_cert_binding:
    - name: 9988776655443322111000AAABBBCCCDDEEEFFF
    - site: site0
    - hostheader: site0.local
    - ipaddress: 192.168.1.199
    - port: 443
    - sslflags: 1

New in version 2016.11.0.

salt.states.win_iis.create_vdir(name, site, sourcepath, app='/')
Create an IIS virtual directory.

Parameters

- **name** *(str)* -- The virtual directory name.
- **site** *(str)* -- The IIS site name.
- **sourcepath** *(str)* -- The physical path.
- **app** *(str)* -- The IIS application.

Example of usage with only the required arguments:

```
site0-foo-vdir:
  win_iis.create_vdir:
    - name: foo
    - site: site0
    - sourcepath: C:\inetpub\vdirs\foo
```

Example of usage specifying all available arguments:

```
site0-foo-vdir:
  win_iis.create_vdir:
    - name: foo
    - site: site0
    - sourcepath: C:\inetpub\vdirs\foo
    - app: v1
```

salt.states.win_iis.deployed(name, sourcepath, apppool='', hostheader='', ipaddress='', port=80, protocol='http')
Ensure the website has been deployed.

Parameters

- **name** *(str)* -- The IIS site name.
- **sourcepath** *(str)* -- The physical path of the IIS site.
- **apppool** *(str)* -- The name of the IIS application pool.
- **hostheader** *(str)* -- The host header of the binding.
- **ipaddress** *(str)* -- The IP address of the binding.
- **port** *(str)* -- The TCP port of the binding.
- **protocol** *(str)* -- The application protocol of the binding.

Example of usage with only the required arguments. This will default to using the default application pool assigned by IIS:
Example of usage specifying all available arguments:

```
site0-deployed:
  win_iis.deployed:
    - name: site0
    - sourcopath: C:\inetpub\site0
```

salt.states.win_iis.remove_app(name, site)
Remove an IIS application.

Parameters

- **name** *(str)* -- The application name.
- **site** *(str)* -- The IIS site name.

Usage:

```
site0-v1-app-remove:
  win_iis.remove_app:
    - name: v1
    - site: site0
```

salt.states.win_iis.remove_apppool(name)
Remove an IIS application pool.

Parameters **name** *(str)* -- The name of the IIS application pool.

Usage:

```
defaultapppool-remove:
  win_iis.remove_apppool:
    - name: DefaultAppPool
```

salt.states.win_iis.remove_binding(name, site, hostheader='', ipaddress='*', port=80)
Remove an IIS binding.

Parameters

- **site** *(str)* -- The IIS site name.
- **hostheader** *(str)* -- The host header of the binding.
- **ipaddress** *(str)* -- The IP address of the binding.
- **port** *(str)* -- The TCP port of the binding.

Example of usage with only the required arguments:

```
site0-https-binding-remove:
  win_iis.remove_binding:
    - site: site0
```
Example of usage specifying all available arguments:

```yaml
site0-https-binding-remove:
    win_iis.remove_binding:
        - site: site0
        - hostheader: site0.local
        - ipaddress: '*'
        - port: 443
```

```
salt.states.win_iis.remove_cert_binding(name, site, hostheader='', ipaddress='', port=443)
Remove a certificate from an IIS binding.
```

Parameters

- **name** *(str)* -- The thumbprint of the certificate.
- **site** *(str)* -- The IIS site name.
- **hostheader** *(str)* -- The host header of the binding.
- **ipaddress** *(str)* -- The IP address of the binding.
- **port** *(str)* -- The TCP port of the binding.

Example of usage with only the required arguments:

```
site0-cert-binding-remove:
    win_iis.remove_cert_binding:
        - name: 9988776655443322111000AAABBBCCCDDDEEEFFF
        - site: site0
```

Example of usage specifying all available arguments:

```
site0-cert-binding-remove:
    win_iis.remove_cert_binding:
        - name: 9988776655443322111000AAABBBCCCDDDEEEFFF
        - site: site0
        - hostheader: site0.local
        - ipaddress: 192.168.1.199
        - port: 443
```

New in version 2016.11.0.

```
salt.states.win_iis.remove_site(name)
Delete a website from IIS.
```

Parameters **name** *(str)* -- The IIS site name.

Usage:

```
defaultwebsite-remove:
    win_iis.remove_site:
        - name: Default Web Site
```

```
salt.states.win_iis.remove_vdir(name, site, app='')
Remove an IIS virtual directory.
```

Parameters

- **name** *(str)* -- The virtual directory name.
- **site** *(str)* -- The IIS site name.
- **app** *(str)* -- The IIS application.

Example of usage with only the required arguments:

```yaml
site0-foo-vdir-remove:
  win_iis.remove_vdir:
    - name: foo
    - site: site0
```

Example of usage specifying all available arguments:

```yaml
site0-foo-vdir-remove:
  win_iis.remove_vdir:
    - name: foo
    - site: site0
    - app: v1
```

**salt.states.win_iis.set_app(name, site, settings=None)**

New in version 2017.7.0.

Set the value of the setting for an IIS web application.

**Note:** This function only configures existing app. Params are case sensitive.

**Parameters**

- **name** *(str)* -- The IIS application.
- **site** *(str)* -- The IIS site name.
- **settings** *(str)* -- A dictionary of the setting names and their values.

Available settings:

- **physicalPath** - The physical path of the webapp
- **applicationPool** - The application pool for the webapp
- **userName** "connectAs" user
- **password** "connectAs" password for user

**Return type**  *bool*

Example of usage:

```yaml
site0-webapp-setting:
  win_iis.set_app:
    - name: app0
    - site: Default Web Site
    - settings:
      userName: domain\user
      password: pass
      physicalPath: c:\inetpub\wwwroot
      applicationPool: appPool0
```

**salt.states.win_iis.webconfiguration_settings(name, settings=None)**

Set the value of webconfiguration settings.

**Parameters**
- **name (str)** -- The name of the IIS PSPath containing the settings. Possible PSPaths are: MACHINE, MACHINE/WEBROOT, IIS:, IIS:Sitessitename, ...

- **settings (dict)** -- Dictionaries of dictionaries. You can match a specific item in a collection with this syntax inside a key: 'Collection[{name: site0}].logFile.directory'

Example of usage for the MACHINE/WEBROOT PSPath:

```
MACHINE-WEBROOT-level-security:
    win_iis.webconfiguration_settings:
        - name: 'MACHINE/WEBROOT'
        - settings:
            system.web/authentication/forms:
                requireSSL: True
                protection: "All"
            credentials.passwordFormat: "SHA1"
            system.web/httpCookies:
                httpOnlyCookies: True
```

Example of usage for the IIS:\Sites\site0 PSPath:

```
site0-IIS-Sites-level-security:
    win_iis.webconfiguration_settings:
        - name: 'IIS:\Sites\site0'
        - settings:
            system.webServer/httpErrors:
                errorMode: "DetailedLocalOnly"
            system.webServer/security/requestFiltering:
                allowDoubleEscaping: False
                verbs.Collection:
                    - verb: TRACE
                      allowed: False
            fileExtensions.allowUnlisted: False
```

Example of usage for the IIS:\ PSPath with a collection matching:

```
site0-IIS-level-security:
    win_iis.webconfiguration_settings:
        - name: 'IIS:\'
        - settings:
            system.applicationHost/sites:
                'Collection[{name: site0}].logFile.directory': 'C:\logs\iis\site0'
```

### 23.19.200 salt.states.win_path

Manage the Windows System PATH

**salt.states.win_path.absent**(*name*)

Remove the directory from the SYSTEM path

Example:

```
'C:\sysinternals':
    win_path.absent
```

**salt.states.win_path.exists**(*name*, *index=*

Add the directory to the system PATH at index location
index  Position where the directory should be placed in the PATH. This is 0-indexed, so 0 means to prepend at
the very start of the PATH.

Note: If the index is not specified, and the directory needs to be added to the PATH, then the directory
will be appended to the PATH, and this state will not enforce its location within the PATH.

Examples:

<table>
<thead>
<tr>
<th>Path</th>
<th>win_path.exists</th>
<th>index</th>
</tr>
</thead>
<tbody>
<tr>
<td>C:\python27</td>
<td>win_path.exists</td>
<td></td>
</tr>
<tr>
<td>C:\sysinternals</td>
<td>win_path.exists</td>
<td>index: 0</td>
</tr>
<tr>
<td>C:\mystuff</td>
<td>win_path.exists</td>
<td>index: -1</td>
</tr>
</tbody>
</table>

23.19.201 salt.states.win_pki

Microsoft certificate management via the Pki PowerShell module.

platform  Windows

New in version 2016.11.0.

salt.states.win_pki.import_cert(name, cert_format='cer', context='LocalMachine', store='My', exportable=True, password='', saltenv='base')

Import the certificate file into the given certificate store.

Parameters

• **name**(str) -- The path of the certificate file to import.
• **cert_format**(str) -- The certificate format. Specify 'cer' for X.509, or 'pfx' for PKCS #12.
• **context**(str) -- The name of the certificate store location context.
• **store**(str) -- The name of the certificate store.
• **exportable**(bool) -- Mark the certificate as exportable. Only applicable to pfx format.
• **password**(str) -- The password of the certificate. Only applicable to pfx format.
• **saltenv**(str) -- The environment the file resides in.

Example of usage with only the required arguments:

<table>
<thead>
<tr>
<th>site0-cert-imported</th>
<th>win_pki.import_cert</th>
</tr>
</thead>
<tbody>
<tr>
<td>name: salt://win/webserver/certs/site0.cer</td>
<td></td>
</tr>
</tbody>
</table>

Example of usage specifying all available arguments:
site0-cert-imported:
  win_pki.import_cert:
    - name: salt://win/webserver/certs/site0.pfx
    - cert_format: pfx
    - context: LocalMachine
    - store: My
    - exportable: True
    - password: TestPassword
    - saltenv: base

salt.states.win_pki.remove_cert(name, thumbprint, context='LocalMachine', store='My')
Remove the certificate from the given certificate store.

Parameters

- thumbprint (str) -- The thumbprint value of the target certificate.
- context (str) -- The name of the certificate store location context.
- store (str) -- The name of the certificate store.

Example of usage with only the required arguments:

site0-cert-removed:
  win_pki.remove_cert:
    - thumbprint: 998877665544332211100AAABBBCCCDDDEEEFFF

Example of usage specifying all available arguments:

site0-cert-removed:
  win_pki.remove_cert:
    - thumbprint: 998877665544332211100AAABBBCCCDDDEEEFFF
    - context: LocalMachine
    - store: My

23.19.202 salt.states.win_snmp

Module for managing SNMP service settings on Windows servers.

salt.states.win_snmp.agent_settings(name, contact, location, services=none)
Manage the SNMP sysContact, sysLocation, and sysServices settings.

Parameters

- contact (str) -- The SNMP contact.
- location (str) -- The SNMP location.
- services (str) -- A list of selected services.

Example of usage:

snmp-agent-settings:
  win_snmp.agent_settings:
    - contact: Test Contact
    - location: Test Location
    - services:
      - Physical
      - Internet
salt.states.win_snmp.auth_traps_enabled(name, status=True)

Manage the sending of authentication traps.

Parameters status (bool) -- The enabled status.

Example of usage:

```
snmp-auth-traps:
    win_snmp.auth_traps_enabled:
        - status: True
```

cali Documentation, Release 3002.5

salt.states.win_snmp.community_names(name, communities=None)

Manage the SNMP accepted community names and their permissions.

Parameters communities (str) -- A dictionary of SNMP communities and permissions.

Example of usage:

```
snmp-community-names:
    win_snmp.community_names:
        - communities:
            TestCommunity: Read Only
            OtherCommunity: Read Write
```

23.19.203 salt.states.wordpress

This state module is used to manage Wordpress installations

depends wp binary from http://wp-cli.org/

salt.states.wordpress.activated(name, path, user)

Activate wordpress plugins

name name of plugin to activate
path path to wordpress installation
user user who should own the files in the wordpress installation

```
HyperDB:
    wordpress.activated:
        - path: /var/www/html
        - user: apache
```

salt.states.wordpress.deactivated(name, path, user)

Deactivate wordpress plugins

name name of plugin to deactivate
path path to wordpress installation
user user who should own the files in the wordpress installation

```
HyperDB:
    wordpress.deactivated:
        - path: /var/www/html
        - user: apache
```

salt.states.wordpress.installed(name, user, admin_user, admin_password, admin_email, title, url)

Run the initial setup of wordpress
name path to the wordpress installation
user user that owns the files for the wordpress installation
admin_user username for wordpress website administrator user
admin_password password for wordpress website administrator user
admin_email email for wordpress website administrator user
title title for the wordpress website
url url for the wordpress website

```
/var/www/html:
  wordpress.installed:
    - title: Daniel's Awesome Blog
    - user: apache
    - admin_user: dwallace
    - admin_email: dwallace@example.com
    - admin_password: password123
    - url: https://blog.dwallace.com
```

23.19.204 salt.states.x509

Manage X509 Certificates
New in version 2015.8.0.

depends M2Crypto

This module can enable managing a complete PKI infrastructure including creating private keys, CAs, certificates and CRLs. It includes the ability to generate a private key on a server, and have the corresponding public key sent to a remote CA to create a CA signed certificate. This can be done in a secure manner, where private keys are always generated locally and never moved across the network.

Here is a simple example scenario. In this example ca is the ca server, and www is a web server that needs a certificate signed by ca.

For remote signing, peers must be permitted to remotely call the sign_remote_certificate function.

/etc/salt/master.d/peer.conf

```
peer:
  .*:
    - x509.sign_remote_certificate
```

/srv/salt/top.sls

```
base:
  '*':
    - cert
  'ca':
    - ca
  'www':
    - www
```

This state creates the CA key, certificate and signing policy. It also publishes the certificate to the mine where it can be easily retrieved by other minions.

/srv/salt/ca.sls
The signing policy defines properties that override any property requested or included in a CRL. It also can define a restricted list of minions which are allowed to remotely invoke this signing policy.

/srv/salt/x509.conf

mine_functions:
  x509.get_pem_entries: [/etc/pki/ca.crt]

x509_signing_policies:
  www:
    - minions: 'www'
    - signing_private_key: /etc/pki/ca.key
    - signing_cert: /etc/pki/ca.crt
    - C: US
    - ST: Utah
    - L: Salt Lake City
    - basicConstraints: "critical CA:false"
    - keyUsage: "critical keyEncipherment"
    - subjectKeyIdentifier: hash
    - authorityKeyIdentifier: keyid,issuer:always
    - days_valid: 3650
    - days_remaining: 0
    - backup: True
    - require:
      - file: /etc/pki
- `authorityKeyIdentifier`: keyid,issuer:always
- `days_valid`: 90
- `copypath`: /etc/pki/issued_certs/

This state will instruct all minions to trust certificates signed by our new CA. Using Jinja to strip newlines from the text avoids dealing with newlines in the rendered YAML, and the `sign_remote_certificate` state will handle properly formatting the text before writing the output.

/srv/salt/cert.sls

```yaml
/usr/local/share/ca-certificates:
  file.directory

/usr/local/share/ca-certificates/intca.crt:
  x509.pemManaged:
    - text: {{ salt['mine.get']('ca', 'x509.get_pem_entries')['ca']['/etc/pki/ca.crt'] | replace('
', '') }}

This state creates a private key then requests a certificate signed by ca according to the www policy.

/srv/salt/www.sls

/etc/pki/www.crt:
  x509.private_key_managed:
    - name: /etc/pki/www.key
    - bits: 4096
    - backup: True

/etc/pki/www.crt:
  x509.certificate_managed:
    - ca_server: ca
    - signing_policy: www
    - public_key: /etc/pki/www.key
    - CN: www.example.com
    - days_remaining: 30
    - backup: True

This other state creates a private key then requests a certificate signed by ca according to the www policy but adds a strict date range for the certificate to be considered valid.

/srv/salt/www-time-limited.sls

/etc/pki/www-time-limited.crt:
  x509.certificate_managed:
    - ca_server: ca
    - signing_policy: www
    - public_key: /etc/pki/www-time-limited.key
    - CN: www.example.com
    - not_before: 2019-05-05 00:00:00
    - not_after: 2020-05-05 14:30:00
    - backup: True

```
salt.states.x509.certificate_managed(name, days_remaining=90, append_certs=None, managed_private_key=None, **kwargs)

Manage a Certificate

name  Path to the certificate
**days_remaining** [90] Recreate the certificate if the number of days remaining on it are less than this number. The value should be less than **days_valid**, otherwise the certificate will be recreated every time the state is run. A value of 0 disables automatic renewal.

**append_certs**: A list of certificates to be appended to the managed file. They must be valid PEM files, otherwise an error will be thrown.

**managed_private_key**: Has no effect since v2016.11 and will be removed in Salt Aluminium. Use a separate `x509.private_key_managed` call instead.

**kwargs**: Any arguments supported by `x509.create_certificate` or `file.managed` are supported.

**not_before**: Initial validity date for the certificate. This date must be specified in the format '%Y-%m-%d %H:%M:%S'.

New in version 3001.

**not_after**: Final validity date for the certificate. This date must be specified in the format '%Y-%m-%d %H:%M:%S'.

New in version 3001.

Examples:

```
/etc/pki/ca.crt:
 x509.certificate_managed:
   - signing_private_key: /etc/pki/ca.key
   - CN: ca.example.com
   - C: US
   - ST: Utah
   - L: Salt Lake City
   - basicConstraints: "critical CA:true"
   - keyUsage: "critical cRLSign, keyCertSign"
   - subjectKeyIdentifier: hash
   - authorityKeyIdentifier: keyid,issuer:always
   - days_valid: 3650
   - days_remaining: 0
   - backup: True

/etc/ssl/www.crt:
 x509.certificate_managed:
   - ca_server: pki
   - signing_policy: www
   - public_key: /etc/ssl/www.key
   - CN: www.example.com
   - days_valid: 90
   - days_remaining: 30
   - backup: True
```

**salt.states.x509.crl_managed** *(name, signing_private_key, signing_private_key_passphrase=None, signing_cert=None, revoked=None, days_valid=100, digest='', days_remaining=30, include_expired=False, **kwargs)*

Manage a Certificate Revocation List

**name** Path to the certificate

**signing_private_key** The private key that will be used to sign the CRL. This is usually your CA’s private key.

**signing_private_key_passphrase** Passphrase to decrypt the private key.

**signing_cert** The certificate of the authority that will be used to sign the CRL. This is usually your CA’s certificate.
revoked A list of certificates to revoke. Must include either a serial number or a the certificate itself. Can optionally include the revocation date and notAfter date from the certificate. See example below for details.

days_valid [100] The number of days the certificate should be valid for.

digest The digest to use for signing the CRL. This has no effect on versions of pyOpenSSL less than 0.14.

days_remaining [30] The CRL should be automatically recreated if there are less than days_remaining days until the CRL expires. Set to 0 to disable automatic renewal.

include_expired [False] If True, include expired certificates in the CRL.

kwargs Any arguments supported by file.managed are supported.

Example:

```yaml
/etc/pki/ca.crl:
 x509.crl_managed:
   signing_private_key: /etc/pki/myca.key
   signing_cert: /etc/pki/myca.crt
   revoked:
     compromised_Web_key:
       certificate: /etc/pki/certs/badweb.crt
       revocation_date: 2015-03-01 00:00:00
       reason: keyCompromise
     terminated_vpn_user:
       serial_number: D6:D2:DC:D8:4D:5C:C0:F4
       not_after: 2016-01-01 00:00:00
       revocation_date: 2015-02-25 00:00:00
       reason: cessationOfOperation
```

salt.states.x509.csr_managed(name, **kwargs)
Manage a Certificate Signing Request

name: Path to the CSR

properties: The properties to be added to the certificate request, including items like subject, extensions and public key. See above for valid properties.

kwargs: Any arguments supported by file.managed are supported.

Example:

```yaml
/etc/pki/mycert.csr:
 x509.csr_managed:
   private_key: /etc/pki/mycert.key
   CN: www.example.com
   C: US
   ST: Utah
   L: Salt Lake City
   keyUsage: 'critical dataEncipherment'
```

salt.states.x509.pem_managed(name, text, backup=False, **kwargs)
Manage the contents of a PEM file directly with the content in text, ensuring correct formatting.

name: The path to the file to manage

text: The PEM formatted text to write.

kwargs: Any arguments supported by file.managed are supported.
salt.states.x509.private_key_managed(name, bits=2048, passphrase=None, cipher='aes_128_cbc', new=False, overwrite=False, verbose=True, **kwargs)

Manage a private key's existence.

**name**: Path to the private key

**bits**: Key length in bits. Default 2048.

**passphrase**: Passphrase for encrypting the private key.

**cipher**: Cipher for encrypting the private key.

**new**: Always create a new key. Defaults to False. Combining new with prereq can allow key rotation whenever a new certificate is generated.

**overwrite**: Overwrite an existing private key if the provided passphrase cannot decrypt it.

**verbose**: Provide visual feedback on stdout, dots while key is generated. Default is True.

New in version 2016.11.0.

**kwargs**: Any kwargs supported by file.managed are supported.

Example:

The JINJA templating in this example ensures a private key is generated if the file doesn't exist and that a new private key is generated whenever the certificate that uses it is to be renewed.

```
/etc/pki/www.key:
   x509.private_key_managed:
     - bits: 4096
     - new: True
   {% if salt['file.file_exists']('/etc/pki/www.key') -%}
     - prereq:
       - x509: /etc/pki/www.crt
   {%- endif %}
```

23.19.205 salt.states.xml

XML Manager

State management of XML files

salt.states.xml.value_present(name, xpath, value, **kwargs)

New in version 3000.

Manages a given XML file

**name** [string] The location of the XML file to manage, as an absolute path.

**xpath** [string] xpath location to manage

**value** [string] value to ensure present

```
ensure_value_true:
   xml.value_present:
     - name: /tmp/test.xml
     - xpath: ./playwright[@id='1']
     - value: William Shakespeare
```
23.19.206  salt.states.xmpp

Sending Messages over XMPP

New in version 2014.1.0.

This state is useful for firing messages during state runs, using the XMPP protocol.

```yaml
server-warning-message:
  xmpp.send_msg:
    - name: 'This is a server warning message'
    - profile: my-xmpp-account
    - recipient: admins@xmpp.example.com/salt
```

```python
salt.states.xmpp.send_msg(name, recipient, profile)

Send a message to an XMPP user
```

```yaml
server-warning-message:
  xmpp.send_msg:
    - name: 'This is a server warning message'
    - profile: my-xmpp-account
    - recipient: admins@xmpp.example.com/salt
```

```python
name The message to send to the XMPP user
```

```python
salt.states.xmpp.send_msg_multi(name, profile, recipients=None, rooms=None)

Send a message to a list of recipients or rooms
```

```yaml
server-warning-message:
  xmpp.send_msg:
    - name: 'This is a server warning message'
    - profile: my-xmpp-account
    - recipients:
      - admins@xmpp.example.com/salt
    - rooms:
      - qa@conference.xmpp.example.com
```

```python
name The message to send to the XMPP user
```

23.19.207  salt.states.zabbix_action

New in version 2017.7.

Management of Zabbix Action object over Zabbix API.

```python
codeauthor Jakub Sliva <jakub.sliva@ultimum.io>
```

```python
salt.states.zabbix_action.absent(name, **kwargs)

Makes the Zabbix Action to be absent (either does not exist or delete it).

Parameters

- **name** -- Zabbix Action name
- **connection_user** -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)
```
- _connection_password -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)
- _connection_url -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

```
zabbix-action-absent:
zabbix_action.absent:
  - name: Action name
```

salt.states.zabbix_action.present(name, params, **kwargs)
Creates Zabbix Action object or if differs update it according defined parameters

Parameters
- name -- Zabbix Action name
- params -- Definition of the Zabbix Action
- _connection_user -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)
- _connection_password -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)
- _connection_url -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

If there is a need to get a value from current zabbix online (e.g. id of a hostgroup you want to put a discovered system into), put a dictionary with two keys "query_object" and "query_name" instead of the value. In this example we want to get object id of hostgroup named "Virtual machines" and "Databases".

```
zabbix-action-present:
zabbix_action.present:
  - name: VMs
    - params:
      eventsource: 2
      status: 0
      filter:
        evaltype: 2
        conditions:
          - conditiontype: 24
            operator: 2
            value: 'virtual'
          - conditiontype: 24
            operator: 2
            value: 'kvm'
        operations:
          - operationtype: 2
          - operationtype: 4
          - opgroup:
            - groupid:
              query_object: hostgroup
              query_name: Virtual machines
            - groupid:
              query_object: hostgroup
              query_name: Databases
```
23.19.208 salt.states.zabbix_hostgroup

Management of Zabbix host groups.

codeauthor Jiri Kotlin <jiri.kotlin@ultimum.io>

salt.states.zabbix_hostgroup.absent(name, **kwargs)

Ensures that the host group does not exist, eventually delete host group.

New in version 2016.3.0.

Parameters

- **name** -- name of the host group
- **_connection_user** -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)
- **_connection_password** -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)
- **_connection_url** -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

```
def delete_testing_host_group:
debux_hostgroup.absent:
    - name: 'My hostgroup name'
```

salt.states.zabbix_hostgroup.present(name, **kwargs)

Ensures that the host group exists, eventually creates new host group.

New in version 2016.3.0.

Parameters

- **name** -- name of the host group
- **_connection_user** -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)
- **_connection_password** -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)
- **_connection_url** -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

```
def create_testing_host_group:
debux_hostgroup.present:
    - name: 'My hostgroup name'
```

23.19.209 salt.states.zabbix_mediatype

Management of Zabbix mediatypes.

codeauthor Raymond Kuiper <qix@the-wired.net>

salt.states.zabbix_mediatype.absent(name, **kwargs)

Ensures that the mediatype does not exist, eventually deletes the mediatype.

Parameters

- **name** -- name of the mediatype
• _connection_user -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)
• _connection_password -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)
• _connection_url -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

```
delete_mediatype:
    zabbix_mediatype.absent:
      - name: 'Email'
```

salt.states.zabbix_mediatype.present(name, mediatype, **kwargs)
Creates new mediatype. NOTE: This function accepts all standard mediatype properties: keyword argument names differ depending on your zabbix version, see: https://www.zabbix.com/documentation/3.0/manual/api/reference/host/object#host_inventory

Parameters

• name -- name of the mediatype
• _connection_user -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)
• _connection_password -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)
• _connection_url -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

```
make_new_mediatype:
    zabbix_mediatype.present:
        - name: 'Email'
        - mediatype: 0
        - smtp_server: smtp.example.com
        - smtp_hello: zabbix.example.com
        - smtp_email: zabbix@example.com
```

23.19.210 salt.states.zabbix_template

New in version 2017.7.
Management of Zabbix Template object over Zabbix API.

codeauthor Jakub Sliva <jakub.sliva@ultimum.io>

salt.states.zabbix_template.absent(name, **kwargs)
Makes the Zabbix Template to be absent (either does not exist or delete it).

Parameters

• name -- Zabbix Template name
• _connection_user -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)
• _connection_password -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)
• _connection_url -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

```
zabbix-template-absent:
    zabbix_template.absent:
      - name: Ceph OSD
```

salt.states.zabbix_template.is_present(name, **kwargs)
Check if Zabbix Template already exists.

Parameters

• name -- Zabbix Template name

• _connection_user -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)

• _connection_password -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)

• _connection_url -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

```
does_zabbix-template-exist:
    zabbix_template.is_present:
      - name: Template OS Linux
```

salt.states.zabbix_template.present(name, params, static_host_list=True, **kwargs)
Creates Zabbix Template object or if differs update it according defined parameters. See Zabbix API documentation.

Zabbix API version: >3.0

Parameters

• name -- Zabbix Template name

• params -- Additional parameters according to Zabbix API documentation

• static_host_list -- If hosts assigned to the template are controlled only by this state or can be also assigned externally

• _connection_user -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)

• _connection_password -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)

• _connection_url -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

---

Note: If there is a need to get a value from current zabbix online (e.g. ids of host groups you want the template to be associated with), put a dictionary with two keys "query_object" and "query_name" instead of the value. In this example we want to create template named "Testing Template", assign it to hostgroup Templates, link it to two ceph nodes and create a macro.

---

Note: IMPORTANT NOTE: Objects (except for template name) are identified by name (or by other key in some exceptional cases) so changing name of object means deleting old one and creating new one with new
Note:

NOT SUPPORTED FEATURES:

- linked templates
- trigger dependencies
- groups and group prototypes for host prototypes

SLS Example:

```
zabbix-template-present:
  zabbix_template.present:
    - name: Testing Template
      # Do not touch existing assigned hosts
      # True will detach all other hosts than defined here
      - static_host_list: False
      - params:
        description: Template for Ceph nodes
        groups:
          # groups must already exist
          # template must be at least in one hostgroup
          - groupid:
            query_object: hostgroup
            query_name: Templates
        macros:
          - macro: "${CEPH_CLUSTER_NAME}"
            value: ceph
        hosts:
          # hosts must already exist
          - hostid:
            query_object: host
            query_name: ceph-osd-01
          - hostid:
            query_object: host
            query_name: ceph-osd-02
        # templates:
        # Linked templates - not supported by state module but can be linked
        # manually (will not be touched)
        applications:
          - name: Ceph OSD
            items:
              - name: Ceph OSD avg fill item
                key_: ceph.osd_avg_fill
                type: 2
                value_type: 0
                delay: 60
                units: '%'
                description: 'Average fill of OSD'
                applications:
                  - applicationid:
                    query_object: application
                    query_name: Ceph OSD
```

(continues on next page)
triggers:
  - description: "Ceph OSD filled more that 90%"
    expression: "{{'{'}}Testing Template:ceph.osd_avg_fill.last(){{'}'}}>90"
    priority: 4

discoveries:
  - name: Mounted filesystem discovery
    key_: vfs.fs.discovery
    type: 0
    delay: 60
    itemprototypes:
      - name: Free disk space on {{'{'}}FSNAME{{'}'}}
        key_: vfs.fs.size[{{'{'}}FSNAME},free]
        type: 0
        value_type: 3
        delay: 60
        applications:
          - applicationid:
            query_object: application
            query_name: Ceph OSD

    triggerprototypes:
      - description: "Free disk space is less than 20% on volume {{'{'}}FSNAME{{'}'}}"
        expression: "{{'{'}}Testing Template:vfs.fs.size[{{'{'}}FSNAME},free].last(){{'}'}}<20"

graphs:
  - name: Ceph OSD avg fill graph
    width: 900
    height: 200
    graphtype: 0
    gitems:
      - color: F63100
        itemid:
          query_object: item
          query_name: Ceph OSD avg fill item

screens:
  - name: Ceph
    hsize: 1
    vsize: 1
    screenitems:
      - x: 0
        y: 0
        resourcetype: 0
        resourceid:
          query_object: graph
          query_name: Ceph OSD avg fill graph
23.19.211 salt.states.zabbix_usergroup

Management of Zabbix user groups.

codeauthor Jiri Kotlin <jiri.kotlin@ultimum.io>

salt.states.zabbix_usergroup.absent(name, **kwargs)
Ensures that the user group does not exist, eventually delete user group.

New in version 2016.3.0.

Parameters

- **name** -- name of the user group
- **_connection_user** -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)
- **_connection_password** -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)
- **_connection_url** -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

```
def delete_thai_monks_usrgrp:
    zabbix_usergroup.absent:
        - name: 'Thai monks'
```

salt.states.zabbix_usergroup.present(name, **kwargs)
Creates new user group. NOTE: This function accepts all standard user group properties: keyword argument names differ depending on your zabbix version, see: https://www.zabbix.com/documentation/2.0/manual/appendix/api/usergroup/definitions#user_group

New in version 2016.3.0.

Parameters

- **name** -- name of the user group
- **_connection_user** -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)
- **_connection_password** -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)
- **_connection_url** -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

```
def make_new_thai_monks_usergroup:
    zabbix_usergroup.present:
        - name: 'Thai monks'
        - gui_access: 1
        - debug_mode: 0
        - users_status: 0
```
23.19.212 salt.states.zabbix_usermacro

Management of Zabbix usermacros. :codeauthor: Raymond Kuiper <qix@the-wired.net>
salt.states.zabbix_usermacro.absent(name, hostid=None, **kwargs)
Ensures that the mediatype does not exist, eventually deletes the mediatype.

Parameters

- **name** -- name of the usermacro
- **hostid** -- id's of the hosts to apply the usermacro on, if missing a global usermacro is assumed.
- **_connection_user** -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)
- **_connection_password** -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)
- **_connection_url** -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

```
def delete_usermacro:
    zabbix_usermacro.absent:
        - name: '{SNMP_COMMUNITY}'
```

salt.states.zabbix_usermacro.present(name, value, hostid=None, **kwargs)
Creates a new usermacro.

Parameters

- **name** -- name of the usermacro
- **value** -- value of the usermacro
- **hostid** -- id's of the hosts to apply the usermacro on, if missing a global usermacro is assumed.
- **_connection_user** -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)
- **_connection_password** -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)
- **_connection_url** -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

```
override host usermacro:
    zabbix_usermacro.present:
        - name: '{SNMP_COMMUNITY}''
        - value: 'public'
        - hostid: 21
```
23.19.213  salt.states.zabbix_valuemap

New in version 2017.7.
Management of Zabbix Valuemap object over Zabbix API.

codeauthor  Jakub Sliva <jakub.sliva@ultimum.io>

salt.states.zabbix_valuemap.absent(name, **kwargs)
Makes the Zabbix Value map to be absent (either does not exist or delete it).

Parameters

• name -- Zabbix Value map name

• _connection_user -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)

• _connection_password -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)

• _connection_url -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

  zabbix-valuemap-absent:
  zabbix_valuemap.absent:
  - name: Value map name

salt.states.zabbix_valuemap.present(name, params, **kwargs)
Creates Zabbix Value map object or if differs update it according defined parameters

Parameters

• name -- Zabbix Value map name

• params -- Definition of the Zabbix Value map

• _connection_user -- Optional - zabbix user (can also be set in opts or pillar, see module's docstring)

• _connection_password -- Optional - zabbix password (can also be set in opts or pillar, see module's docstring)

• _connection_url -- Optional - url of zabbix frontend (can also be set in opts, pillar, see module's docstring)

  zabbix-valuemap-present:
  zabbix_valuemap.present:
  - name: Number mapping
    - params:
      mappings:
        - value: 1
          newvalue: one
        - value: 2
          newvalue: two
23.19.214 salt.states.zcbuildout

Management of zc.buildout

This module is inspired from minitage's buildout maker (https://github.com/minitage/minitage/blob/master/src/minitage/core/makers/buildout.py)

New in version 2016.3.0.

Note: This state module is beta; the API is subject to change and no promise as to performance or functionality is yet present.

Available Functions

- built

```python
salt.states.zcbuildout.installed(name, config='buildout.cfg', quiet=False, parts=None, user=None, env=(), buildout_ver=None, test_release=False, distribute=None, new_st=None, offline=False, newest=False, python='/builds/saltstack/open/docs/builddocs/venv/bin/python', debug=False, verbose=False, unless=None, onlyif=None, use_vt=False, loglevel='debug', **kwargs)
```

Install buildout in a specific directory

It is a thin wrapper to modules.buildout.buildout

- **name** directory to execute in
- **quiet** do not output console & logs
- **config** buildout config to use (default: buildout.cfg)
- **parts** specific buildout parts to run
- **user** user used to run buildout as

New in version 2014.1.4.

- **env** environment variables to set when running
- **buildout_ver** force a specific buildout version (1 | 2)
test_release  buildout accept test release
new_st Forcing use of setuptools >= 0.7
distribute use distribute over setuptools if possible
offline does buildout run offline
python python to use
debug run buildout with -D debug flag
onlyif Only execute cmd if statement on the host return 0
unless Do not execute cmd if statement on the host return 0
newest run buildout in newest mode
verbose run buildout in verbose mode (-vvvvv)
use_vt Use the new salt VT to stream output [experimental]
loglevel loglevel for buildout commands

23.19.215 salt.states.zenoss
State to manage monitoring in Zenoss.
New in version 2016.3.0.
This state module depends on the 'zenoss' Salt execution module.
Allows for setting a state of minions in Zenoss using the Zenoss API. Currently Zenoss 4.x and 5.x are supported.

enable_monitoring:
  zenoss_monitored:
    - name: web01.example.com
    - device_class: /Servers/Linux
    - collector: localhost
    - prod_state: 1000

salt.states.zenoss.monitored(name, device_class=None, collector='localhost', prod_state=None)
Ensure a device is monitored. The 'name' given will be used for Zenoss device name and should be resolvable.

enable_monitoring:
  zenoss_monitored:
    - name: web01.example.com
    - device_class: /Servers/Linux
    - collector: localhost
    - prod_state: 1000
23.19.216  salt.states.zfs

States for managing zfs datasets

maintainer  Jorge Schrauwen <sjorge@blackdot.be>
maturity  new
depends  salt.utils.zfs, salt.modules.zfs
platform  smartos, illumos, solaris, freebsd, linux

New in version 2016.3.0.
Changed in version 2018.3.1: Big refactor to remove duplicate code, better type conversions and improved consistency in output.

test/shares/yuki:
zfs.filesystem_present:
  - create_parent: true
  - properties:
    quota: 16G

test/iscsi/haruhi:
zfs.volume_present:
  - create_parent: true
  - volume_size: 16M
  - sparse: true
  - properties:
    readonly: on

test/shares/yuki@frozen:
zfs.snapshot_present

moka_origin:
zfs.hold_present:
  - snapshot: test/shares/yuki@frozen

test/shares/moka:
zfs.filesystem_present:
  - cloned_from: test/shares/yuki@frozen

test/shares/moka@tsukune:
zfs.snapshot_absent

salt.states.zfs.bookmark_absent(name, force=False, recursive=False)
ensure bookmark is absent on the system

name  [string] name of snapshot
force  [boolean] try harder to destroy the dataset (zfs destroy -f)
recursive  [boolean] also destroy all the child datasets (zfs destroy -r)

salt.states.zfs.bookmark_present(name, snapshot)
ensure bookmark exists

name  [string] name of bookmark
snapshot  [string] name of snapshot

salt.states.zfs.filesystem_absent(name, force=False, recursive=False)
ensure filesystem is absent on the system
name  [string] name of filesystem
force  [boolean] try harder to destroy the dataset (zfs destroy -f)
recursive  [boolean] also destroy all the child datasets (zfs destroy -r)

Warning: If a volume with name exists, this state will succeed without destroying the volume specified by name. This module is dataset type sensitive.

salt.states.zfs.filesystem_present(name, create_parent=False, properties=None, cloned_from=None)
ensure filesystem exists and has properties set
name  [string] name of filesystem
create_parent  [boolean] creates all the non-existing parent datasets. any property specified on the command line using the -o option is ignored.
cloned_from  [string] name of snapshot to clone
properties  [dict] additional zfs properties (-o)

Note: cloned_from is only use if the filesystem does not exist yet, when cloned_from is set after the filesystem exists it will be ignored.

Note: Properties do not get cloned, if you specify the properties in the state file they will be applied on a subsequent run.

salt.states.zfs.hold_absent(name, snapshot, recursive=False)
ensure hold is absent on the system
name  [string] name of hold
snapshot  [string] name of snapshot
recursive  [boolean] recursively releases a hold with the given tag on the snapshots of all descendent file systems.

salt.states.zfs.hold_present(name, snapshot, recursive=False)
ensure hold is present on the system
name  [string] name of holdt
snapshot  [string] name of snapshot
recursive  [boolean] recursively add hold with the given tag on the snapshots of all descendent file systems.

salt.states.zfs.promoted(name)
ensure a dataset is not a clone
name  [string] name of fileset or volume

Warning: only one dataset can be the origin, if you promote a clone the original will now point to the promoted dataset
salt.states.zfs.scheduled_snapshot(name, prefix, recursive=True, schedule=None)

Maintain a set of snapshots based on a schedule.

- **name**: string - name of filesystem or volume
- **prefix**: string - prefix for the snapshots e.g. 'test' will result in snapshots being named 'test-yyyymmdd_hhmm'
- **recursive**: boolean - create snapshots for all children also
- **schedule**: dict - dict holding the schedule, the following keys are available (minute, hour, day, month, and year) by default all are set to 0 the value indicated the number of snapshots of that type to keep around.

**Warning**: snapshots will only be created and pruned every time the state runs. a schedule must be setup to automatically run the state. this means that if you run the state daily the hourly snapshot will only be made once per day!

Changed in version 2018.3.0: switched to localtime from gmtime so times now take into account timezones.

salt.states.zfs.snapshot_absent(name, force=False, recursive=False)

Ensure snapshot is absent on the system.

- **name**: string - name of snapshot
- **force**: boolean - try harder to destroy the dataset (zfs destroy -f)
- **recursive**: boolean - also destroy all the child datasets (zfs destroy -r)

salt.states.zfs.snapshot_present(name, recursive=False, properties=None)

Ensure snapshot exists and has properties set.

- **name**: string - name of snapshot
- **recursive**: boolean - recursively create snapshots of all descendent datasets
- **properties**: dict - additional zfs properties (-o)

salt.states.zfs.volume_absent(name, force=False, recursive=False)

Ensure volume is absent on the system.

- **name**: string - name of volume
- **force**: boolean - try harder to destroy the dataset (zfs destroy -f)
- **recursive**: boolean - also destroy all the child datasets (zfs destroy -r)

**Warning**: If a filesystem with name exists, this state will succeed without destroying the filesystem specified by name. This module is dataset type sensitive.

salt.states.zfs.volume_present(name, volume_size, sparse=False, create_parent=False, properties=None, cloned_from=None)

Ensure volume exists and has properties set.

- **name**: string - name of volume
- **volume_size**: string - size of volume
- **sparse**: boolean - create sparse volume
- **create_parent**: boolean - creates all the non-existing parent datasets. any property specified on the command line using the -o option is ignored.
- **cloned_from**: string - name of snapshot to clone
properties [dict] additional zfs properties (-o)

Note: cloned_from is only used if the volume does not exist yet, when cloned_from is set after the volume exists it will be ignored.

Note: Properties do not get cloned, if you specify the properties in the state file they will be applied on a subsequent run.

volume_size is considered a property, so the volume's size will be corrected when the properties get updated if it differs from the original volume.

The sparse parameter is ignored when using cloned_from.

23.19.217 salt.states.zk_concurrency

Control concurrency of steps within state execution using zookeeper

depends kazoo

configuration See salt.modules.zookeeper for setup instructions.

This module allows you to "wrap" a state's execution with concurrency control. This is useful to protect against all hosts executing highstate simultaneously if your services don't all HUP restart. The common way of protecting against this is to run in batch mode, but that doesn't protect from another person running the same batch command (and thereby having 2x the number of nodes deploying at once).

This module will block while acquiring a slot, meaning that however the command gets called it will coordinate with zookeeper to ensure that no more than max_concurrency steps are executing with a single path.

```
acquire_lock:
  zk_concurrency.lock:
    - name: /trafficeserver
    - zk_hosts: 'zookeeper:2181'
    - max_concurrency: 4
    - prereq:
      - service: trafficeserver

trafficeserver:
  service.running:
    - watch:
      - file: /etc/trafficserver/records.config

/etc/trafficserver/records.config:
  file.managed:
    - source: salt://records.config

release_lock:
  zk_concurrency.unlock:
    - name: /trafficserver
    - require:
      - service: trafficeserver
```

This example would allow the file state to change, but would limit the concurrency of the trafficeserver service restart to 4.
salt.states.zk_concurrency.lock(name, zk_hosts=None, identifier=None, max_concurrency=1, timeout=None, ephemeral_lease=False, profile=None, scheme=None, username=None, password=None, default_acl=None)

Block state execution until you are able to get the lock (or hit the timeout)

salt.states.zk_concurrency.min_party(name, zk_hosts, min_nodes, blocking=False, profile=None, scheme=None, username=None, password=None, default_acl=None)

Ensure that there are min_nodes in the party at name, optionally blocking if not available.

salt.states.zk_concurrency.unlock(name, zk_hosts=None, identifier=None, max_concurrency=1, ephemeral_lease=False, profile=None, scheme=None, username=None, password=None, default_acl=None)

Remove lease from semaphore.

23.19.218 salt.states.zookeeper

depends kazoo

configuration See salt.modules.zookeeper for setup instructions.

ACLS

For more information about acls, please checkout the kazoo documentation.

http://kazoo.readthedocs.io/en/latest/api/security.html#kazoo.security.make_digest_acl

The following options can be included in the acl dictionary:

  param username Username to use for the ACL.
  param password A plain-text password to hash.
  param write Write permission.
    type write bool
  param create Create permission.
    type create bool
  param delete Delete permission.
    type delete bool
  param admin Admin permission.
    type admin bool
  param all All permissions.
    type all bool

salt.states.zookeeper.absent(name, version=-1, recursive=False, profile=None, hosts=None, scheme=None, username=None, password=None, default_acl=None)

Make sure znode is absent

  name path to znode
  version Specify the version which should be deleted Default: -1 (always match)
  recursive Boolean to indicate if children should be recursively deleted Default: False
profile Configured Zookeeper profile to authenticate with (Default: None)
hosts Lists of Zookeeper Hosts (Default: '127.0.0.1:2181)
scheme Scheme to authenticate with (Default: 'digest')
username Username to authenticate (Default: None)
password Password to authenticate (Default: None)
default_acl Default acls to assign if a node is created in this connection (Default: None)
delete znode:  
  - name: /test
  - recursive: True

salt.states.zookeeper.acls(name, acls, version=- 1, profile=None, hosts=None, scheme=None, username=None, password=None, default_acl=None)

Update acls on a znode
name path to znode
acls list of acl dictionaries to set on znode
version Specify the version which should be deleted Default: -1 (always match)
profile Configured Zookeeper profile to authenticate with (Default: None)
hosts Lists of Zookeeper Hosts (Default: '127.0.0.1:2181)
scheme Scheme to authenticate with (Default: 'digest')
username Username to authenticate (Default: None)
password Password to authenticate (Default: None)
default_acl Default acls to assign if a node is created in this connection (Default: None)

update acls:
zookeeper.acls:
  - name: /test/name
  - acls:
    - username: daniel
      password: test
      all: True
    - username: gtmanfred
      password: test
      all: True

salt.states.zookeeper.present(name, value, acls=None, ephemeral=False, sequence=False, makepath=False, version=- 1, profile=None, hosts=None, scheme=None, username=None, password=None, default_acl=None)

Make sure znode is present in the correct state with the correct acls
name path to znode
value value znode should be set to
acls list of acl dictionaries to set on znode (make sure the ones salt is connected with are included) Default: None
ephemeral Boolean to indicate if ephemeral znode should be created Default: False
sequence Boolean to indicate if znode path is suffixed with a unique index Default: False
makepath Boolean to indicate if the parent paths should be created Default: False
version For updating, specify the version which should be updated Default: -1 (always match)
profile Configured Zookeeper profile to authenticate with (Default: None)
hosts Lists of Zookeeper Hosts (Default: ’127.0.0.1:2181)
scheme Scheme to authenticate with (Default: ’digest’)
username Username to authenticate (Default: None)
password Password to authenticate (Default: None)
default_acl Default acls to assign if a node is created in this connection (Default: None)

```
add znode:
  zookeeper.present:
    - name: /test/name
    - value: gtmanfred
    - makepath: True

update znode:
  zookeeper.present:
    - name: /test/name
    - value: daniel
    - acls:
      - username: daniel
        password: test
        read: true
      - username: gtmanfred
        password: test
        read: true
        write: true
        create: true
        delete: true
        admin: true
    - makepath: True
```

23.19.219 salt.states.zpool

States for managing zpools

maintainer Jorge Schrauwen <sjorge@blackdot.be>
maturity new
depends salt.utils.zfs, salt.modules.zpool
platform smartos, illumos, solaris, freebsd, linux

New in version 2016.3.0.
Changed in version 2018.3.1: Big refactor to remove duplicate code, better type conversions and improved consistency in output.

```
oldpool:
  zpool.absent:
    - export: true
```
newpool:
  zpool.present:
    - config:
      import: false
      force: true
    - properties:
      comment: salty storage pool
    - layout:
      - mirror:
        - /dev/disk0
        - /dev/disk1
      - mirror:
        - /dev/disk2
        - /dev/disk3

partitionpool:
  zpool.present:
    - config:
      import: false
      force: true
    - properties:
      comment: disk partition salty storage pool
      ashift: 12
      feature@lz4_compress: enabled
    - filesystem_properties:
      compression: lz4
      atime: on
      relatime: on
    - layout:
      - /dev/disk/by-uuid/3e43ce94-77af-4f52-a91b-6cdbb0b0f41b

simplepool:
  zpool.present:
    - config:
      import: false
      force: true
    - properties:
      comment: another salty storage pool
    - layout:
      - /dev/disk0
      - /dev/disk1

**Warning:** The layout will never be updated, it will only be used at time of creation. It's a whole lot of work to figure out if a devices needs to be detached, removed, etc. This is best done by the sysadmin on a case per case basis.

Filesystem properties are also not updated, this should be managed by the zfs state module.

**salt.states.zpool.absent**(name, export=False, force=False)

ensure storage pool is absent on the system

  name [string] name of storage pool
  export [boolean] export instead of destroy the zpool if present
force [boolean] force destroy or export

salt.states.zpool.present(name, properties=None, filesystem_properties=None, layout=None, config=None)

ensure storage pool is present on the system

name [string] name of storage pool

properties [dict] optional set of properties to set for the storage pool

filesystem_properties [dict] optional set of filesystem properties to set for the storage pool (creation only)

layout: dict disk layout to use if the pool does not exist (creation only)

config [dict] fine grain control over this state

---

Note:

The following configuration properties can be toggled in the config parameter.

- import (true) - try to import the pool before creating it if absent
- import_dirs (None) - specify additional locations to scan for devices on import (comma-separated)
- device_dir (None, SunOS=/dev/dsk, Linux=/dev) - specify device directory to prepend for none absolute device paths
- force (false) - try to force the import or creation

---

Note: It is no longer needed to give a unique name to each top-level vdev, the old layout format is still supported but no longer recommended.

- mirror:
  - /tmp/vdisk3
  - /tmp/vdisk2

- mirror:
  - /tmp/vdisk0
  - /tmp/vdisk1

The above yaml will always result in the following zpool create:

```
zpool create mypool mirror /tmp/vdisk3 /tmp/vdisk2 mirror /tmp/vdisk0 /tmp/vdisk1
```

---

Warning: The legacy format is also still supported but not recommended, because ID's inside the layout dict must be unique they need to have a suffix.

```
mirror-0:  
  /tmp/vdisk3
  /tmp/vdisk2

mirror-1:  
  /tmp/vdisk0
  /tmp/vdisk1
```

---

Warning: Pay attention to the order of your dict!
The above will result in the following `zpool create`:

```
zpool create mypool mirror /tmp/vdisk0 /tmp/vdisk1 /tmp/vdisk2
```

Creating a 3-way mirror! While you probably expect it to be mirror root vdev with 2 devices + a root vdev of 1 device!

### 23.20 thorium modules

- `calc`
- `check`
- `file`
- `key`
- `local`
- `reg`
- `runner`
- `status`
- `timer`
- `wheel`

### 23.21 token modules

- `localfs`
- `rediscluster`

### 23.22 master tops modules

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>cobbler</code></td>
<td>Cobbler Tops</td>
</tr>
<tr>
<td><code>ext_nodes</code></td>
<td></td>
</tr>
<tr>
<td><code>mongo</code></td>
<td>Read tops data from a mongodb collection</td>
</tr>
<tr>
<td><code>reclass_adapter</code></td>
<td>Read tops data from a reclass database</td>
</tr>
<tr>
<td><code>saltclass</code></td>
<td></td>
</tr>
<tr>
<td><code>varstack_top</code></td>
<td>Use Varstack to provide tops data</td>
</tr>
</tbody>
</table>
23.22.1 salt.tops.cobbler

Cobbler Tops

Cobbler Tops is a master tops subsystem used to look up mapping information from Cobbler via its API. The same cobbler.* parameters are used for both the Cobbler tops and Cobbler pillar modules.

```
master_tops:
  cobbler: {}
cobbler.url: https://example.com/cobbler_api  # default is http://localhost/cobbler_api
cobbler.user: username  # default is no username
cobbler.password: password  # default is no password
```

Module Documentation

salt.tops.cobbler.top(**kwargs)

Look up top data in Cobbler for a minion.

23.22.2 salt.tops.mongo

Read tops data from a mongodb collection

This module will load tops data from a mongo collection. It uses the node’s id for lookups.

Salt Master Mongo Configuration

The module shares the same base mongo connection variables as salt.returners.mongo_return. These variables go in your master config file.

- **mongo.db** - The mongo database to connect to. Defaults to 'salt'.
- **mongo.host** - The mongo host to connect to. Supports replica sets by specifying all hosts in the set, comma-delimited. Defaults to 'salt'.
- **mongo.port** - The port that the mongo database is running on. Defaults to 27017.
- **mongo.user** - The username for connecting to mongo. Only required if you are using mongo authentication. Defaults to ''.  
- **mongo.password** - The password for connecting to mongo. Only required if you are using mongo authentication. Defaults to ''.  

Configuring the Mongo Tops Subsystem

```
master_tops:
  mongo:
    collection: tops
    id_field: _id
    re_replace: ''
    re_pattern: \.example\.com
    states_field: states
    environment_field: environment
```
Module Documentation

salt.tops.mongo.top(**kwargs)
Connect to a mongo database and read per-node tops data.

Parameters

- **collection** (*) -- The mongodb collection to read data from. Defaults to 'tops'.
- **id_field** (*) -- The field in the collection that represents an individual minion id. Defaults to '_id'.
- **re_pattern** (*) -- If your naming convention in the collection is shorter than the minion id, you can use this to trim the name. re_pattern will be used to match the name, and re_replace will be used to replace it. Backrefs are supported as they are in the Python standard library. If None, no mangling of the name will be performed - the collection will be searched with the entire minion id. Defaults to None.
- **re_replace** (*) -- Use as the replacement value in node ids matched with re_pattern. Defaults to ''. Feel free to use backreferences here.
- **states_field** (*) -- The name of the field providing a list of states.
- **environment_field** (*) -- The name of the field providing the environment. Defaults to environment.

23.22.3 salt.tops.reclass_adapter

Read tops data from a reclass database

This master_tops plugin provides access to the reclass database, such that state information (top data) are retrieved from reclass.

You can find more information about reclass at http://reclass.pantsfullofunix.net.

To use the plugin, add it to the master_tops list in the Salt master config and tell reclass by way of a few options how and where to find the inventory:

```
master_tops:
  reclass:
    storage_type: yaml_fs
    inventory_base_uri: /srv/salt
```

This would cause reclass to read the inventory from YAML files in /srv/salt/nodes and /srv/salt/classes.

If you are also using reclass as ext_pillar plugin, and you want to avoid having to specify the same information for both, use YAML anchors (take note of the differing data types for ext_pillar and master_tops):

```
reclass: &reclass
  storage_type: yaml_fs
  inventory_base_uri: /srv/salt
  reclass_source_path: ~/code/reclass

ext_pillar:
  - reclass: *reclass

master_tops:
  reclass: *reclass
```
If you want to run reclass from source, rather than installing it, you can either let the master know via the `PYTHONPATH` environment variable, or by setting the configuration option, like in the example above.

```
salt.tops.reclass_adapter.top(**kwargs)
    Query reclass for the top data (states of the minions).
```

## 23.22.4 salt.tops.varstack_top

Use Varstack to provide tops data

This `master_tops` plugin provides access to the varstack hierarchical yaml files, so you can use varstack as a full external node classifier and store state information (top data) in it.

### Configuring Varstack

To use varstack as a master top external node classifier, install varstack as documented. Then, add to your master's configuration:

```
master_tops:
  varstack: /path/to/the/config/file/varstack.yaml
```

Varstack will then use `/path/to/the/config/file/varstack.yaml` (usually `/etc/varstack.yaml`) to determine which configuration data to return as adapter information. From there you can take a look at the README of varstack to learn how this file is evaluated. The ENC part will just return the `states` dictionary for the node.

Ie, if my.fqdn.yaml file contains:

```
---
states:
  - sudo
  - openssh
  - apache
  - salt.minion
```

these will be returned as `{base: ['sudo', 'openssh', 'apache', 'salt.minion']}` and managed by salt as if given from a top.sls file.

```
salt.tops.varstack_top.top(**kwargs)
    Query varstack for the top data (states of the minions).
```

## 23.23 wheel modules

```
config
error
file_roots
key
minions
pillar_roots
```
24.1 Python client API

Salt provides several entry points for interfacing with Python applications. These entry points are often referred to as *Client() APIs. Each client accesses different parts of Salt, either from the master or from a minion. Each client is detailed below.

See also:
There are many ways to access Salt programmatically.
Salt can be used from CLI scripts as well as via a REST interface.
See Salt’s outputter system to retrieve structured data from Salt as JSON, or as shell-friendly text, or many other formats.
See the state.event runner to utilize Salt’s event bus from shell scripts.
Salt’s netapi module provides access to Salt externally via a REST interface. Review the netapi module documentation for more information.

24.1.1 Salt’s opts dictionary

Some clients require access to Salt’s opts dictionary. (The dictionary representation of the master or minion config files.)
A common pattern for fetching the opts dictionary is to defer to environment variables if they exist or otherwise fetch the config from the default location.

24.1.2 Salt’s Loader Interface

Modules in the Salt ecosystem are loaded into memory using a custom loader system. This allows modules to have conditional requirements (OS, OS version, installed libraries, etc) and allows Salt to inject special variables (__salt__, __opts__, etc).
Most modules can be manually loaded. This is often useful in third-party Python apps or when writing tests. However some modules require and expect a full, running Salt system underneath. Notably modules that facilitate master-to-minion communication such as the mine, publish, and peer execution modules. The error KeyError: 'master_uri' is a likely indicator for this situation. In those instances use the Caller class to execute those modules instead.
Each module type has a corresponding loader function.
24.3 Salt’s Client Interfaces

LocalStorage
Salt Caller
Salt Proxy Caller
RunnerClient
WheelClient
CloudClient
SSHClient

24.2 netapi modules

24.2.1 Introduction to netapi modules

Netapi modules provide API-centric access to Salt. Usually externally-facing services such as REST or WebSockets, XMPP, XMLRPC, etc.

In general netapi modules bind to a port and start a service. They are purposefully open-ended. A single module can be configured to run as well as multiple modules simultaneously.

Netapi modules are enabled by adding configuration to your Salt Master config file and then starting the salt-api daemon. Check the docs for each module to see external requirements and configuration settings.

Communication with Salt and Salt satellite projects is done using Salt’s own Python API. A list of available client interfaces is below.

salt-api

Prior to Salt’s 2014.7.0 release, netapi modules lived in the separate sister projected salt-api. That project has been merged into the main Salt project.

See also:

The full list of netapi modules

24.2.2 Client interfaces

Salt’s client interfaces expose executing functions by crafting a dictionary of values that are mapped to function arguments. This allows calling functions simply by creating a data structure. (And this is exactly how much of Salt’s own internals work!)
Writing netapi modules

Netapi modules, put simply, bind a port and start a service. They are purposefully open-ended and can be used to present a variety of external interfaces to Salt, and even present multiple interfaces at once.

See also:

The full list of netapi modules

Configuration

All netapi configuration is done in the Salt master config and takes a form similar to the following:

```
rest_cherrypy:
  port: 8000
  debug: True
  ssl_crt: /etc/pki/tls/certs/localhost.crt
  ssl_key: /etc/pki/tls/certs/localhost.key
```

The `__virtual__` function

Like all module types in Salt, netapi modules go through Salt’s loader interface to determine if they should be loaded into memory and then executed.

The `__virtual__` function in the module makes this determination and should return `False` or a string that will serve as the name of the module. If the module raises an `ImportError` or any other errors, it will not be loaded.

The `start` function

The `start()` function will be called for each netapi module that is loaded. This function should contain the server loop that actually starts the service. This is started in a multiprocess.

Multiple instances

New in version 2016.11.0.

Rest_cherrypy and rest_tornado support running multiple instances by copying and renaming entire directory of those. To start the copied multiple netapi modules, add configuration blocks for the copied netapi modules in the Salt Master config. The name of each added configuration block must match with the name of each directory of the copied netapi module.

Inline documentation

As with the rest of Salt, it is a best-practice to include liberal inline documentation in the form of a module docstring and docstrings on any classes, methods, and functions in your netapi module.
Loader “magic” methods

The loader makes the \_\_opts\_\_ data structure available to any function in a netapi module.
If you are used to configuration management tools that require you to plan down to the last detail before you install anything, you are probably wondering why this section doesn’t appear before the installation instructions. With Salt, you can switch to a high availability architecture at any time, and add additional components to scale your deployment as you go.

Since a single Salt master can manage thousands of systems, we usually recommend that you start by deploying a single Salt master, and then modifying your deployment as needed for redundancy, geographical distribution, and scale.

### 25.1 High Availability Features in Salt

Salt supports several features for high availability and fault tolerance. Brief documentation for these features is listed alongside their configuration parameters in *Configuration file examples*.

#### 25.1.1 Multimaster

Salt minions can connect to multiple masters at one time by configuring the `master` configuration parameter as a YAML list of all the available masters. By default, all masters are "hot", meaning that any master can direct commands to the Salt infrastructure.

In a multimaster configuration, each master must have the same cryptographic keys, and minion keys must be accepted on all masters separately. The contents of file_roots and pillar_roots need to be kept in sync with processes external to Salt as well.

A tutorial on setting up multimaster with "hot" masters is here: *Multimaster Tutorial*

#### 25.1.2 Multimaster with Failover

Changing the `master_type` parameter from `str` to `failover` will cause minions to connect to the first responding master in the list of masters. Every `master_alive_interval` seconds the minions will check to make sure the current master is still responding. If the master does not respond, the minion will attempt to connect to the next master in the list. If the minion runs out of masters, the list will be recycled in case dead masters have been restored.

Note that `master_alive_interval` must be present in the minion configuration, or else the recurring job to check master status will not get scheduled.

Failover can be combined with PKI-style encrypted keys, but PKI is NOT REQUIRED to use failover.

Multimaster with PKI and Failover is discussed in *this tutorial*
master_type: failover can be combined with master_shuffle: True to spread minion connections across all masters (one master per minion, not each minion connecting to all masters). Adding Salt Syndics into the mix makes it possible to create a load-balanced Salt infrastructure. If a master fails, minions will notice and select another master from the available list.

### 25.1.3 Syndic

Salt's Syndic feature is a way to create differing infrastructure topologies. It is not strictly an HA feature, but can be treated as such.

With the syndic, a Salt infrastructure can be partitioned in such a way that certain masters control certain segments of the infrastructure, and "Master of Masters" nodes can control multiple segments underneath them.

Syndics are covered in depth in *Salt Syndic*.

### 25.1.4 Syndic with Multimaster

New in version 2015.5.0.

Syndic with Multimaster lets you connect a syndic to multiple masters to provide an additional layer of redundancy in a syndic configuration.

Syndics are covered in depth in *Salt Syndic*.

### 25.2 Salt Syndic

The most basic or typical Salt topology consists of a single Master node controlling a group of Minion nodes. An intermediate node type, called Syndic, when used offers greater structural flexibility and scalability in the construction of Salt topologies than topologies constructed only out of Master and Minion node types.

A Syndic node can be thought of as a special passthrough Minion node. A Syndic node consists of a salt-syndic daemon and a salt-master daemon running on the same system. The salt-master daemon running on the Syndic node controls a group of lower level Minion nodes and the salt-syndic daemon connects higher level Master node, sometimes called a Master of Masters.

The salt-syndic daemon relays publications and events between the Master node and the local salt-master daemon. This gives the Master node control over the Minion nodes attached to the salt-master daemon running on the Syndic node.

#### 25.2.1 Configuring the Syndic

To setup a Salt Syndic you need to tell the Syndic node and its Master node about each other. If your Master node is located at 10.10.0.1, then your configurations would be:

On the Syndic node:

```bash
# /etc/salt/master
syndic_master: 10.10.0.1  # may be either an IP address or a hostname

# /etc/salt/minion
# id is shared by the salt-syndic daemon and a possible salt-minion daemon
```

(continues on next page)
# on the Syndic node
id: my_syndic

On the Master node:

# /etc/salt/master
order_masters: True

The `syndic_master` option tells the Syndic node where to find the Master node in the same way that the `master` option tells a Minion node where to find a Master node.

The `id` option is used by the `salt-syndic` daemon to identify with the Master node and if unset will default to the hostname or IP address of the Syndic just as with a Minion.

The `order_masters` option configures the Master node to send extra information with its publications that is needed by Syndic nodes connected directly to it.

Note: Each Syndic must provide its own `file_roots` directory. Files will not be automatically transferred from the Master node.

## 25.2.2 Configuring the Syndic with Multimaster

New in version 2015.5.0.

Syndic with Multimaster lets you connect a syndic to multiple masters to provide an additional layer of redundancy in a syndic configuration.

Higher level masters should first be configured in a multimaster configuration. See [Multimaster Tutorial](#).

On the syndic, the `syndic_master` option is populated with a list of the higher level masters.

Since each syndic is connected to each master, jobs sent from any master are forwarded to minions that are connected to each syndic. If the `master_id` value is set in the master config on the higher level masters, job results are returned to the master that originated the request in a best effort fashion. Events/jobs without a `master_id` are returned to any available master.

## 25.2.3 Running the Syndic

The `salt-syndic` daemon is a separate process that needs to be started in addition to the `salt-master` daemon running on the Syndic node. Starting the `salt-syndic` daemon is the same as starting the other Salt daemons.

The Master node in many ways sees the Syndic as an ordinary Minion node. In particular, the Master will need to accept the Syndic’s Minion key as it would for any other Minion.

On the Syndic node:

```
# salt-syndic
or
# service salt-syndic start
```

On the Master node:

```
# salt-key -a my_syndic
```
The Master node will now be able to control the Minion nodes connected to the Syndic. Only the Syndic key will be listed in the Master node’s key registry but this also means that key activity between the Syndic’s Minions and the Syndic does not encumber the Master node. In this way, the Syndic’s key on the Master node can be thought of as a placeholder for the keys of all the Minion and Syndic nodes beneath it, giving the Master node a clear, high level structural view on the Salt cluster.

On the Master node:

```
# salt-key -L
Accepted Keys:
  my_syndic
Denied Keys:
Unaccepted Keys:
Rejected Keys:

# salt '*' test.version
minion_1:
  2018.3.4
minion_2:
  2018.3.4
minion_4:
  2018.3.4
minion_3:
  2018.3.4
```

### 25.2.4 Topology

A Master node (a node which is itself not a Syndic to another higher level Master node) must run a `salt-master` daemon and optionally a `salt-minion` daemon.

A Syndic node must run `salt-syndic` and `salt-master` daemons and optionally a `salt-minion` daemon.

A Minion node must run a `salt-minion` daemon.

When a `salt-master` daemon issues a command, it will be received by the Syndic and Minion nodes directly connected to it. A Minion node will process the command in the way it ordinarily would. On a Syndic node, the `salt-syndic` daemon will relay the command to the `salt-master` daemon running on the Syndic node, which then propagates the command to the Minions and Syndics connected to it.

When events and job return data are generated by `salt-minion` daemons, they are aggregated by the `salt-master` daemon they are connected to, which `salt-master` daemon then relays the data back through its `salt-syndic` daemon until the data reaches the Master or Syndic node that issued the command.

### 25.2.5 Syndic wait

`syndic_wait` is a master configuration file setting that specifies the number of seconds the Salt client should wait for additional syndics to check in with their lists of expected minions before giving up. This value defaults to 5 seconds.

The `syndic_wait` setting is necessary because the higher-level master does not have a way of knowing which minions are below the syndics. The higher-level master has its own list of expected minions and the masters below them have their own lists as well, so the Salt client does not how long to wait for all returns. The `syndic_wait` option allows time for all minions to return to the Salt client.
Note: To reduce the amount of time the CLI waits for Minions to respond, install a Minion on the Syndic or tune the value of the `syndic_wait` configuration.

While it is possible to run a Syndic without a Minion installed on the same system, it is recommended, for a faster CLI response time, to do so. Without a Minion installed on the Syndic node, the timeout value of `syndic_wait` increases significantly - about three-fold. With a Minion installed on the Syndic, the CLI timeout resides at the value defined in `syndic_wait`.

Note: If you have a very large infrastructure or many layers of Syndics, you may find that the CLI doesn't wait long enough for the Syndics to return their events. If you think this is the case, you can set the `syndic_wait` value in the Master configs on the Master or Syndic nodes from which commands are executed. The default value is 5, and should work for the majority of deployments.

In order for a Master or Syndic node to return information from Minions that are below their Syndics, the CLI requires a short wait time in order to allow the Syndics to gather responses from their Minions. This value is defined in the `syndic_wait` config option and has a default of five seconds.

### 25.2.6 Syndic config options

These are the options that can be used to configure a Syndic node. Note that other than `id`, Syndic config options are placed in the Master config on the Syndic node.

- **id**: Syndic id (shared by the `salt-syndic` daemon with a potential `salt-minion` daemon on the same system)
- **syndic_master**: Master node IP address or hostname
- **syndic_master_port**: Master node ret_port
- **syndic_log_file**: path to the logfile (absolute or not)
- **syndic_pidfile**: path to the pidfile (absolute or not)
- **syndic_wait**: time in seconds to wait on returns from this syndic

### 25.2.7 Minion Data Cache

Beginning with Salt 2016.11.0, the **Pluggable Minion Data Cache** was introduced. The minion data cache contains the Salt Mine data, minion grains, and minion pillar information cached on the Salt Master. By default, Salt uses the `localfs` cache module, but other external data stores can be used instead.

Using a pluggable minion cache modules allows for the data stored on a Salt Master about Salt Minions to be replicated on other Salt Masters the Minion is connected to. Please see the **Minion Data Cache** documentation for more information and configuration examples.
New in version 2016.11.0.

The Minion data cache contains the Salt Mine data, minion grains and minion pillar information cached on the Salt Master. By default, Salt uses the `localfs` cache module to save the data in a `msgpack` file on the Salt Master.

### 26.1 Pluggable Data Cache

While the default Minion data cache is the `localfs` cache, other external data stores can also be used to store this data such as the `consul` module. To configure a Salt Master to use a different data store, the `cache` setting needs to be established:

```yaml
cache: consul
```

The pluggable data cache streamlines using various Salt topologies such as a Multi-Master or Salt Syndics configuration by allowing the data stored on the Salt Master about a Salt Minion to be available to other Salt Syndics or Salt Masters that a Salt Minion is connected to.

Additional minion data cache modules can be easily created by modeling the custom data store after one of the existing cache modules.

See `cache modules` for a current list.

### 26.2 Configuring the Minion Data Cache

The default `localfs` Minion data cache module doesn't require any configuration. External data cache modules with external data stores such as Consul require a configuration setting in the master config.

Here's an example config for Consul:

```yaml
consul.host: 127.0.0.1
consul.port: 8500
consul.token: None
consul.scheme: http
consul.consistency: default
consul.dc: dc1
consul.verify: True

cache: consul
```
SLOTS

New in version 2018.3.0.
Changed in version 3000.

Note: This functionality is under development and could be changed in the future releases

Many times it is useful to store the results of a command during the course of an execution. Salt Slots are designed to allow you to store this information and use it later during the highstate or other job execution.

Slots extend the state syntax and allows you to do things right before the state function is executed. So you can make a decision in the last moment right before a state is executed.

27.1 Execution functions

Note: Using execution modules return data as a state values is a first step of Slots development. Other functionality is under development.

Slots allow you to use the return from a remote-execution function as an argument value in states.

Slot syntax looks close to the simple python function call.

```
__slot__:salt:<module>.<function>(<args>, ..., <kwargs...>, ...)
```

For the 3000 release, this syntax has been updated to support parsing functions which return dictionaries and for appending text to the slot result.

```
__slot__:salt:<module>.<function>(<args>..., <kwargs...>, ...).dictionary ~ append
```

There are some specifics in the syntax coming from the execution functions nature and a desire to simplify the user experience. First one is that you don’t need to quote the strings passed to the slots functions. The second one is that all arguments handled as strings.

Here is a simple example:

```
copy-some-file:
  file.copy:
    - name: __slot__:salt:test.echo(text=/tmp/some_file)
    - source: __slot__:salt:test.echo(/etc/hosts)
```
This will execute the `test.echo` execution functions right before calling the state. The functions in the example will return `/tmp/some_file` and `/etc/hosts` strings that will be used as a target and source arguments in the state function `file.copy`.

Here is an example of result parsing and appending:

```
file-in-user-home:
    file.copy:
    - name: __slot__:salt:user.info(someuser).home ~ /subdirectory
    - source: salt://somefile
```
This section contains details on the Windows Package Manager, and specific information you need to use Salt on Windows.

28.1 Windows Package Manager

28.1.1 Introduction

The Windows Package Manager provides a software repository and a package manager similar to what is provided by *yum* and *apt* on Linux. This tool enables the installation of software on remote Windows systems.

The repository contains a collection of software definition files. A software definition file is a YAML/JINJA file with an `.sls` file extension. It contains all the information Salt needs to install a software package on a Windows system, including the download location of the installer, required command-line switches for silent install, etc.

Software definition files can be hosted in one or more Git repositories. The default repository is hosted on GitHub by SaltStack. It is maintained by SaltStack and the Salt community and contains software definition files for many common Windows packages. Anyone is welcome to submit a pull request to this repo to add new software definitions. The default github repository is:

- salt-winrepo-ng

The Windows Package Manager is used the same way as other package managers Salt is aware of. For example:

- the `pkg.installed` and similar states work on Windows.
- the `pkg.install` and similar module functions work on Windows.

High level differences to *yum* and *apt* are:

- The repository metadata (SLS files) can be managed through either Salt or git
- Packages can be downloaded from within the Salt repository, a git repository or from HTTP(S) or FTP URLs
- No dependencies are managed. Dependencies between packages need to be managed manually
Requirements

If using the software definition files hosted on a Git repo, the following libraries are required:

- GitPython 0.3 or later
- pygit2 0.20.3 with libgit 0.20.0 or later

28.1.2 Quick Start

You can get up and running with winrepo pretty quickly just using the defaults. Assuming no changes to the default configuration (i.e., `file_roots`) run the following commands on the master:

```bash
salt-run winrepo.update_git_repos
salt * pkg.refresh_db
salt * pkg.install firefox_x64
```

On a masterless minion run the following:

```bash
salt-call --local winrepo.update_git_repos
salt-call --local pkg.refresh_db
salt-call --local pkg.install firefox_x64
```

These commands clone the default winrepo from github, update the winrepo database on the minion, and install the latest version of Firefox.

28.1.3 Configuration

The Github repository (winrepo) is synced to the `file_roots` in a location specified by the `winrepo_dir_ng` setting in the config. The default value of `winrepo_dir_ng` is as follows:

- Linux master: `/srv/salt/win/repo-ng` (`salt://win/repo-ng`)
- Masterless minion: `C:\salt\srv\salt\win\repo-ng` (`salt://win/repo-ng`)

Master Configuration

The following are settings available for configuring the winrepo on the master:

- `winrepo_dir`
- `winrepo_dir_ng`
- `winrepo_remotes`
- `winrepo_remotes_ng`
- `winrepo_branch`
- `winrepo_provider`
- `winrepo_ssl_verify`

See [here](#) for detailed information on all master config options for winrepo.
**winrepo_dir**

*winrepo_dir* (str)
This setting is maintained for backwards compatibility with legacy minions. It points to the location in the *file_roots* where the winrepo files are kept. The default is: `/srv/salt/win/repo`

**winrepo_dir_ng**

*winrepo_dir_ng* (str)
The location in the *file_roots* where the winrepo files are kept. The default is `/srv/salt/win/repo-ng`.

**Warning:** You can change the location of the winrepo directory. However, it must always be set to a path that is inside the *file_roots*. Otherwise the software definition files will be unreachable by the minion.

**Important:** A common mistake is to change the *file_roots* setting and fail to update the *winrepo_dir_ng* and *winrepo_dir* settings so that they are inside the *file_roots*.

**winrepo_remotes**

*winrepo_remotes* (list)
This setting is maintained for backwards compatibility with legacy minions. It points to the legacy git repo. The default is a list containing a single URL:

https://github.com/saltstack/salt-winrepo

The legacy repo can be disabled by setting it to an empty list in the master config.

**winrepo_remotes_ng**

*winrepo_remotes_ng* (list)
This setting tells the *winrepo.upgate_git_repos* command where the next generation winrepo is hosted. This a list of URLs to multiple git repos. The default is a list containing a single URL:

https://github.com/saltstack/salt-winrepo-ng
**winrepo_refspecs**

*winrepo_refspecs* (list)
Specify what references to fetch from remote repositories. The default is `['+refs/heads/*:refs/remotes/origin/*', '+refs/tags/*:refs/tags/*']`

**winrepo_branch**

*winrepo_branch* (str)
The branch of the git repo to checkout. The default is *master*

**winrepo_provider**

*winrepo_provider* (str)
The provider to be used for winrepo. Default is *pygit2*. Falls back to *gitpython* when *pygit2* is not available

**winrepo_ssl_verify**

*winrepo_ssl_verify* (bool)
Ignore SSL certificate errors when contacting remote repository. Default is *False*

**Master Configuration (pygit2)**

The following configuration options only apply when the *winrepo_provider* option is set to *pygit2*.

- *winrepo_insecure_auth*
- *winrepo_passphrase*
- *winrepo_password*
- *winrepo_privkey*
- *winrepo_pubkey*
- *winrepo_user*

**winrepo_insecure_auth**

*winrepo_insecure_auth* (bool)
Used only with *pygit2* provider. Whether or not to allow insecure auth. Default is *False*
**winrepo_passphrase**

*winrepo_passphrase* (str)  
Used only with *pygit2* provider. Used when the SSH key being used to authenticate is protected by a passphrase. Default is ''

**winrepo_privkey**

*winrepo_privkey* (str)  
Used only with *pygit2* provider. Used with *winrepo_pubkey* to authenticate to SSH remotes. Default is ''

**winrepo_pubkey**

*winrepo_pubkey* (str)  
Used only with *pygit2* provider. Used with *winrepo_privkey* to authenticate to SSH remotes. Default is ''

**winrepo_user**

*winrepo_user* (str)  
Used only with *pygit2* provider. Used with *winrepo_password* to authenticate to HTTPS remotes. Default is ''

**winrepo_password**

*winrepo_password* (str)  
Used only with *pygit2* provider. Used with *winrepo_user* to authenticate to HTTPS remotes. Default is ''

**Minion Configuration**

Refreshing the package definitions can take some time, these options were introduced to allow more control of when it occurs. These settings apply to all minions whether in masterless mode or not.

- *winrepo_cache_expire_max*
- *winrepo_cache_expire_min*
- *winrepo_cachefile*
- *winrepo_source_dir*
**winrepo_cache_expire_max**

*winrepo_cache_expire_max* (int)
Sets the maximum age in seconds of the winrepo metadata file to avoid it becoming stale. If the metadata file is older than this setting it will trigger a `pkg.refresh_db` on the next run of any `pkg` module function that requires the metadata file. Default is 604800 (1 week).

Software package definitions are automatically refreshed if stale after `winrepo_cache_expire_max`. Running a highstate normal forces the refresh of the package definition and generation of the metadata, unless the metadata is younger than `winrepo_cache_expire_max`.

**winrepo_cache_expire_min**

*winrepo_cache_expire_min* (int)
Sets the minimum age in seconds of the winrepo metadata file to avoid refreshing too often. If the metadata file is older than this setting the metadata will be refreshed unless you pass `refresh: False` in the state. Default is 1800 (30 min).

**winrepo_cachefile**

*winrepo_cachefile* (str)
The file name of the winrepo cache file. The file is placed at the root of `winrepo_dir_ng`. Default is `winrepo.p`.

**winrepo_source_dir**

*winrepo_source_dir* (str)
The location of the .sls files on the Salt file server. This allows for using different environments. Default is `salt:/win/repo-ng/`.

**Warning:** If the default for `winrepo_dir_ng` is changed, this setting may need to changed on each minion. The default setting for `winrepo_dir_ng` is `/srv/salt/win/repo-ng`. If that were changed to `/srv/salt/new/repo-ng` then the `winrepo_source_dir` would need to be changed to `salt://new/repo-ng`.

**Masterless Minion Configuration**

The following are settings available for configuring the winrepo on a masterless minion:

- `winrepo_dir`
- `winrepo_dir_ng`
- `winrepo_remotes`
- `winrepo_remotes_ng`

See [here](#) for detailed information on all minion config options for winrepo.
**winrepo_dir**

**winrepo_dir** (str)

This setting is maintained for backwards compatibility with legacy minions. It points to the location in the file_roots where the winrepo files are kept. The default is: `C:\salt\srv\salt\win\repo`

**winrepo_dir_ng**

**winrepo_dir_ng** (str)

The location in the file_roots where the winrepo files are kept. The default is `C:\salt\srv\salt\win\repo-ng`.

**Warning:** You can change the location of the winrepo directory. However, it must always be set to a path that is inside the file_roots. Otherwise the software definition files will be unreachable by the minion.

**Important:** A common mistake is to change the file_roots setting and fail to update the winrepo_dir_ng and winrepo_dir settings so that they are inside the file_roots. You might also want to verify winrepo_source_dir on the minion as well.

**winrepo_remotes**

**winrepo_remotes** (list)

This setting is maintained for backwards compatibility with legacy minions. It points to the legacy git repo. The default is a list containing a single URL:

https://github.com/saltstack/salt-winrepo

The legacy repo can be disabled by setting it to an empty list in the minion config.

```
winrepo_remotes: []
```

**winrepo_remotes_ng**

**winrepo_remotes_ng** (list)

This setting tells the winrepo.upgate_git_repos command where the next generation winrepo is hosted. This a list of URLs to multiple git repos. The default is a list containing a single URL:

https://github.com/saltstack/salt-winrepo-ng
28.1.4 Initialization

Populate the Local Repository

The SLS files used to install Windows packages are not distributed by default with Salt. Use the `winrepo.update_git_repos` runner to initialize the repository in the location specified by `winrepo_dir_ng` in the master config. This will pull the software definition files down from the git repository.

```
salt-run winrepo.update_git_repos
```

If running a minion in masterless mode, the same command can be run using `salt-call`. The repository will be initialized in the location specified by `winrepo_dir_ng` in the minion config.

```
salt-call --local winrepo.update_git_repos
```

These commands will also sync down the legacy repo to maintain backwards compatibility with legacy minions. See Legacy Minions.

The legacy repo can be disabled by setting it to an empty list in the master or minion config.

```
winrepo_remotes: []
```

Generate the Metadata File (Legacy)

This step is only required if you are supporting legacy minions. In current usage the metadata file is generated on the minion in the next step, Update the Minion Database. For legacy minions the metadata file is generated on the master using the `winrepo.genrepo` runner.

```
salt-run winrepo.genrepo
```

Update the Minion Database

Run `pkg.refresh_db` on each of your Windows minions to synchronize the package repository to the minion and build the package database.

```
# From the master
salt -G 'os:windows' pkg.refresh_db

# From the minion in masterless mode
salt-call --local pkg.refresh_db
```

The above command returns the following summary denoting the number of packages that succeeded or failed to compile:

```
local:  
        -------
    failed:  
            0
    success:  
            301
    total:   
            301
```
Note: This command can take a few minutes to complete as the software definition files are copied to the minion and the database is generated.

Note: Use pkg.refresh_db when developing new Windows package definitions to check for errors in the definitions against one or more Windows minions.

28.1.5 Usage

After completing the configuration and initialization steps, you are ready to manage software on your Windows minions.

Note: The following example commands can be run from the master using `salt` or on a masterless minion using `salt-call`.

List Installed Packages

You can get a list of packages installed on the system using `pkg.list_pkgs`.

```bash
# From the master
salt -G 'os:windows' pkg.list_pkgs

# From the minion in masterless mode
salt-call --local pkg.list_pkgs
```

This will return all software installed on the system whether it is managed by Salt or not as shown below:

```
local:
--------
Frhed 1.6.0:
   1.6.0
GNU Privacy Guard:
   2.2.16
Gpg4win (3.1.9):
   3.1.9
git:
   2.17.1.2
nsis:
   3.03
python3_x64:
   3.7.4150.0
salt-minion-py3:
   2019.2.3
```

You can tell by how the software name is displayed which software is managed by Salt and which software is not. When Salt finds a match in the winrepo database it displays the short name as defined in the software definition file. It is usually a single-word, lower-case name. All other software names will be displayed with the full name as they are shown in Add/Remove Programs. So, in the return above, you can see that Git (git), Nullsoft Installer (nsis), Python 3.7 (python3_x64) and Salt (salt-minion-py3) all have a corresponding software definition file. The others do not.
List Available Versions

You can query the available version of a package using `pkg.list_available` and passing the name of the software:

```sh
# From the master
salt winminion pkg.list_available firefox_x64

# From the minion in masterless mode
salt-call --local pkg.list_available firefox_x64
```

The above command will return the following:

```
winminion:
  - 69.0
    - 69.0.1
    - 69.0.2
    - 69.0.3
    - 70.0
    - 70.0.1
    - 71.0
    - 72.0
    - 72.0.1
    - 72.0.2
    - 73.0
    - 73.0.1
    - 74.0
```

As you can see, there are many versions of Firefox available for installation. You can refer to a software package by its name or its full_name surrounded by quotes.

**Note:** From a Linux master it is OK to use single-quotes. However, the cmd shell on Windows requires you to use double-quotes when wrapping strings that may contain spaces. Powershell seems to accept either one.

Install a Package

You can install a package using `pkg.install`:

```sh
# From the master
salt winminion pkg.install 'firefox_x64'

# From the minion in masterless mode
salt-call --local pkg.install "firefox_x64"
```

The above will install the latest version of Firefox.

```sh
# From the master
salt winminion pkg.install 'firefox_x64' version=74.0

# From the minion in masterless mode
salt-call --local pkg.install "firefox_x64" version=74.0
```

The above will install version 74.0 of Firefox.

If a different version of the package is already installed it will be replaced with the version in the winrepo (only if the package itself supports live updating).
You can also specify the full name:

```
# From the master
salt winminion pkg.install 'Mozilla Firefox 17.0.1 (x86 en-US)'

# From the minion in masterless mode
salt-call --local pkg.install "Mozilla Firefox 17.0.1 (x86 en-US)"
```

## Remove a Package

You can uninstall a package using `pkg.remove`:

```
# From the master
salt winminion pkg.remove firefox_x64

# From the minion in masterless mode
salt-call --local pkg.remove firefox_x64
```

### 28.1.6 Software Definition Files

A software definition file is a YAML/JINJA2 file that contains all the information needed to install a piece of software using Salt. It defines information about the package to include version, full name, flags required for the installer and uninstaller, whether or not to use the Windows task scheduler to install the package, where to download the installation package, etc.

### Directory Structure and Naming

The files are stored in the location designated by the `winrepo_dir_ng` setting. All files in this directory that have a `.sls` file extension are considered software definition files. The files are evaluated to create the metadata file on the minion.

You can maintain standalone software definition files that point to software on other servers or on the internet. In this case the file name would be the short name of the software with the `.sls` extension, ie `firefox.sls`.

You can also store the binaries for your software together with their software definition files in their own directory. In this scenario, the directory name would be the short name for the software and the software definition file would be inside that directory and named `init.sls`.

Look at the following example directory structure on a Linux master assuming default config settings:

```
srv/
 |---salt/
 |   |---win/
 |   |   |---repo-ng/
 |   |   |   |---custom_defs/
 |   |   |   |   |---ms_office_2013_x64/
 |   |   |   |   |   |---access.en-us/
 |   |   |   |   |   |---excel.en-us/
 |   |   |   |   |   |---outlook.en-us/
 |   |   |   |   |   |---powerpoint.en-us/
 |   |   |   |   |   |---word.en-us/
 |   |   |   |   |   |---init.sls
 |   |   |   |---setup.dll
 |   |   |---setup.exe
```

(continues on next page)
In the above directory structure, the user has created the **custom_defs** directory in which to store their custom software definition files. In that directory you see a folder for MS Office 2013 that contains all the installer files along with a software definition file named **init.sls**. The user has also created two more standalone software definition files: **openssl.sls** and **zoom.sls**.

The **salt-winrepo-ng** directory is created by the **winrepo.update_git_repos** command. This folder contains the clone of the git repo designated by the **winrepo_remotes_ng** config setting.

**Warning:** It is recommended that the user not modify the files in the **salt-winrepo-ng** directory as it will break future runs of **winrepo.update_git_repos**.

**Warning:** It is recommended that the user not place any custom software definition files in the **salt-winrepo-ng** directory. The **winrepo.update_git_repos** command wipes out the contents of the **salt-winrepo-ng** directory each time it is run. Any extra files stored there will be lost.

**Writing Software Definition Files**

A basic software definition file is really easy to write if you already know some basic things about your software:

- The full name as shown in Add/Remove Programs
- The exact version number as shown in Add/Remove Programs
- How to install your software silently from the command line

The software definition file itself is just a data structure written in YAML. The top level item is a short name that Salt will use to reference the software. There can be only one short name in the file and it must be unique across all software definition files in the repo. This is the name that will be used to install/remove the software. It is also the name that will appear when Salt finds a match in the repo when running **pkg.list_pkgs**.

The next indentation level is the version number. There can be many of these, but they must be unique within the file. This is also displayed in **pkg.list_pkgs**.

The last indentation level contains the information Salt needs to actually install the software. Available parameters are:
• **full_name**: The full name as displayed in Add/Remove Programs
• **installer**: The location of the installer binary
• **install_flags**: The flags required to install silently
• **uninstaller**: The location of the uninstaller binary
• **uninstall_flags**: The flags required to uninstall silently
• **msiexec**: Use msiexec to install this package
• **allusers**: If this is an MSI, install to all users
• **cache_dir**: Cache the entire directory in the installer URL (salt://)
• **cache_file**: Cache a single file in the installer URL (salt://)
• **use_scheduler**: Launch the installer using the task scheduler
• **source_hash**: The hash sum for the installer

Usage of these parameters is demonstrated in the following examples and discussed in more detail below. To understand these examples you'll need a basic understanding of Jinja. The following links have some basic tips and best practices for working with Jinja in Salt:

Understanding Jinja

Jinja

**Example: Basic**

Take a look at this basic, pure YAML example for a software definition file for Firefox:

```yaml
firefox_x64:
  '74.0':
    full_name: Mozilla Firefox 74.0 (x64 en-US)
    installer: 'https://download-installer.cdn.mozilla.net/pub/firefox/releases/74.0/win64/en-US/Firefox%20Setup%2074.0.exe'
    install_flags: '/S'
    uninstaller: '%ProgramFiles(x86)%/Mozilla Firefox/uninstall/helper.exe'
    uninstall_flags: '/S'
  '73.0.1':
    full_name: Mozilla Firefox 73.0.1 (x64 en-US)
    installer: 'https://download-installer.cdn.mozilla.net/pub/firefox/releases/73.0.1/win64/en-US/Firefox%20Setup%2073.0.1.exe'
    install_flags: '/S'
    uninstaller: '%ProgramFiles(x86)%/Mozilla Firefox/uninstall/helper.exe'
    uninstall_flags: '/S'
```

You can see the first item is the short name for the software, in this case `firefox_x64`. It is the first line in the definition. The next line is indented two spaces and contains the software version. The lines following the version are indented two more spaces and contain all the information needed to install the Firefox package.

**Important**: The package name must be unique to all other packages in the software repository. The full name combined with the version must also be unique. They must also match exactly what is shown in Add/Remove Programs (`appwiz.cpl`).
Important: The version number must be enclosed in quotes, otherwise the YAML parser will remove trailing zeros. For example, 74.0 will just become 74.

As you can see in the example above, a software definition file can define multiple versions for the same piece of software. These are denoted by putting the next version number at the same indentation level as the first with its software definition information indented below it.

Example: Jinja

When there are tens or hundreds of versions available for a piece of software definition file can become quite large. This is a scenario where Jinja can be helpful. Consider the following software definition file for Firefox using Jinja:

```yaml
{% set lang = salt['config.get']('firefox:pkg:lang', 'en-US') %}

firefox_x64:
  {% for version in ['74.0', '73.0', '72.0', '71.0', '70.0', '69.0'] %}
    '{{ version }}':
      full_name: 'Mozilla Firefox {{ version }} (x64 {{ lang }})'
      installer: 'https://download-installer.cdn.mozilla.net/pub/firefox/releases/{{ version }}/win64/{{ lang }}/Firefox%20Setup%20{{ version }}.exe'
      install_flags: '/S'
      uninstaller: '%ProgramFiles%\Mozilla Firefox\uninstall\helper.exe'
      uninstall_flags: '/S'
  {% endfor %}
```

In this example we are able to generate a software definition file that defines how to install 12 versions of Firefox. We use Jinja to create a list of available versions. That list is in a for loop where each version is placed in the `version` variable. The version is inserted everywhere there is a `{{ version }}` marker inside the for loop.

You’ll notice that there is a single variable (lang) defined at the top of the software definition. Because these files are going through the Salt renderer many Salt modules are exposed via the `salt` keyword. In this case it is calling the `config.get` function to get a language setting that can be placed in the minion config. If it is not there, it defaults to `en-US`.

Example: Latest

There are some software vendors that do not provide access to all versions of their software. Instead they provide a single URL to what is always the latest version. In some cases the software keeps itself up to date. One example of this is the Google Chrome web browser.

Chrome

To handle situations such as these, set the version to `latest`. Here’s an example:

```yaml
chrome:
  latest:
    full_name: 'Google Chrome'
    installer: 'https://dl.google.com/edgedl/chrome/install/GoogleChromeStandaloneEnterprise.msi'
    install_flags: '/qn /norestart'
```
The above example shows us two things. First it demonstrates the usage of `latest` as the version. In this case Salt will install the version of Chrome at the URL and report that version.

The second thing to note is that this is installing software using an MSL. You can see that `msiexec` is set to `True`.

### Example: MSI Patch

When the `msiexec` parameter is set to `True` it uses the `/i` option for installs and the `/x` option for uninstalls. This is problematic when trying to install an MSI patch which requires the `/p` option. You can't combine the `/i` and `/p` options. So how do you apply a patch to installed software in winrepo using an `.msp` file?

One wiley contributor came up with the following solution to this problem by using the `%cd%` environment variable. Consider the following software definition file:

```yaml
MyApp:
  '1.0':
    full_name: MyApp
    installer: 'salt://win/repo-ng/MyApp/MyApp.1.0.msi'
    install_flags: '/qn /norestart'
    uninstaller: '{B5B5868F-23BA-297A-917D-0DF345TF5764}'
    uninstall_flags: '/qn /norestart'
    msiexec: True
  '1.1':
    full_name: MyApp
    installer: 'salt://win/repo-ng/MyApp/MyApp.1.0.msi'
    install_flags: '/qn /norestart /update "%cd%\MyApp.1.1.msp"'
    uninstaller: '{B5B5868F-23BA-297A-917D-0DF345TF5764}'
    uninstall_flags: '/qn /norestart'
    msiexec: True
    cache_file: salt://win/repo/MyApp/MyApp.1.1.msp
```

There are a few things to note about this software definition file. First, is the solution we are trying to solve, that of applying a patch. Version 1.0 just installs the application using the 1.0 MSI defined in the `installer` parameter. There is nothing special in the `install_flags` and nothing is cached.

Version 1.1 uses the same installer, but uses the `cache_file` option to specify a single file to cache. In order for this to work the MSP file needs to be in the same directory as the MSI file on the `file_roots`.

The final step to getting this to work is to add the additional `/update` flag to the `install_flags` parameter. Add the path to the MSP file using the `%cd%` environment variable. `%cd%` resolves to the current working directory which is the location in the minion cache where the installer file is cached.

See issue #32780 for more details.

This same approach could be used for applying MST files for MSIs and answer files for other types of `.exe` based installers.
Parameters

These are the parameters that can be used to generate a software definition file. These parameters are all placed under the `version` in the software definition file:

Example usage can be found on the github repo

**full_name (str)**

This is the full name for the software as shown in "Programs and Features" in the control panel. You can also get this information by installing the package manually and then running `pkg.list_pkgs`. Here's an example of the output from `pkg.list_pkgs`:

```bash
salt 'test-2008' pkg.list_pkgs
```

```
test-2008
--------
7-Zip 9.20 (x64 edition):
  9.20.00.0
Mozilla Firefox 74.0 (x64 en-US)
  74.0
Mozilla Maintenance Service:
  74.0
salt-minion-py3:
  3001
```

Notice the Full Name for Firefox: Mozilla Firefox 74.0 (x64 en-US). That's exactly what should be in the `full_name` parameter in the software definition file.

If any of the software installed on the machine matches the full name defined in one of the software definition files in the repository the package name will be returned. The example below shows the `pkg.list_pkgs` for a machine that has Mozilla Firefox 74.0 installed and a software definition for that version of Firefox.

```bash
test-2008:
--------
7zip:
  9.20.00.0
Mozilla Maintenance Service:
  74.0
firefox_x64:
  74.0
salt-minion-py3:
  3001
```

**Important:** The version number and `full_name` need to match the output from `pkg.list_pkgs` exactly so that the installation status can be verified by the state system.

**Note:** It is still possible to successfully install packages using `pkg.install`, even if the `full_name` or the version number don’t match exactly. The module will complete successfully, but continue to display the full name in `pkg.list_pkgs`. If this is happening, verify that the `full_name` and the `version` match exactly what is displayed in Add/Remove Programs.

**Tip:** To force Salt to display the full name when there's already an existing package definition file on the system, you
can pass a bogus saltenv parameter to the command like so: pkg.list_pkgs saltenv=NotARealEnv

**Tip:** It's important use pkg.refresh_db to check for errors and ensure the latest package definition is on any minion you're testing new definitions on.

**installer (str)**

This is the path to the binary (.exe, .msi) that will install the package. This can be a local path or a URL. If it is a URL or a Salt path (salt://), the package will be cached locally and then executed. If it is a path to a file on disk or a file share, it will be executed directly.

**Note:** When storing software in the same location as the winrepo it is usually best practice to place each installer in its own directory rather than in the root of winrepo.

Best practice is to create a sub folder named after the package. That folder will contain the software definition file named init.sls. The binary installer should be stored in that directory as well if you're hosting those files on the file_roots.

pkg.refresh_db will process all .sls files in all sub directories in the winrepo_dir_ng directory.

**install_flags (str)**

This setting contains any flags that need to be passed to the installer to make it perform a silent install. These can often be found by adding /? or /h when running the installer from the command-line. A great resource for finding these silent install flags is the WPKG project [wiki](#):

**Warning:** Salt will appear to hang if the installer is expecting user input. So it is imperative that the software have the ability to install silently.

**uninstaller (str)**

This is the path to the program used to uninstall this software. This can be the path to the same exe or msi used to install the software. Exe uninstallers are pretty straight forward. MSIs, on the other hand, can be handled a couple different ways. You can use the GUID for the software to uninstall or you can use the same MSI used to install the software.

You can usually find uninstall information in the registry:

- Software\Microsoft\Windows\CurrentVersion\Uninstall
- Software\WOW6432Node\Microsoft\Windows\CurrentVersion\Uninstall

Here's an example using the GUID to uninstall software.

<table>
<thead>
<tr>
<th>7zip:</th>
</tr>
</thead>
<tbody>
<tr>
<td>'9.20.00.0':</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

(continues on next page)
install_flags: '/qn /norestart'
uninstaller: '{23170F69-40C1-2702-0920-000001000000}'
uninstall_flags: '/qn /norestart'
msiexec: True

Here's an example using the same MSI used to install the software:

7zip:
'9.20.00.0':
  full_name: 7-Zip 9.20 (x64 edition)
  installer: salt://win/repo-ng/7zip/7z920-x64.msi
  install_flags: '/qn /norestart'
  uninstaller: salt://win/repo-ng/7zip/7z920-x64.msi
  uninstall_flags: '/qn /norestart'
  msiexec: True

uninstall_flags (str)

This setting contains any flags that need to be passed to the uninstaller to make it perform a silent uninstall. These can often be found by adding /? or /h when running the uninstaller from the command-line. A great resource for finding these silent install flags the WPKG project wiki:

Warning: Salt will appear to hang if the uninstaller is expecting user input. So it is imperative that the software have the ability to uninstall silently.

msiexec (bool, str)

This tells Salt to use msiexec /i to install the package and msiexec /x to uninstall. This is for .msi installations only.

Possible options are:

- True
- False (default)
- the path to msiexec.exe on your system

7zip:
'9.20.00.0':
  full_name: 7-Zip 9.20 (x64 edition)
  installer: salt://win/repo/7zip/7z920-x64.msi
  install_flags: '/qn /norestart'
  uninstaller: salt://win/repo/7zip/7z920-x64.msi
  uninstall_flags: '/qn /norestart'
  msiexec: 'C:\Windows\System32\msiexec.exe'
allusers (bool)

This parameter is specific to .msi installations. It tells msiexec to install the software for all users. The default is True.

cache_dir (bool)

This setting requires the software to be stored on the file_roots and only applies to URLs that begin with salt:///. If True the entire directory where the installer resides will be recursively cached. This is useful for installers that depend on other files in the same directory for installation.

Warning: Be aware that all files and directories in the same location as the installer file will be copied down to the minion. If you place your software definition file in the root of winrepo (/srv/salt/win/repo-ng) and it contains cache_dir: True the entire contents of winrepo will be cached to the minion. Therefore, it is best practice to place your installer files in a subdirectory if they are to be stored in winrepo.

Here’s an example using cache_dir:

```yaml
sqlexpress:
  '12.0.2000.8':
    full_name: Microsoft SQL Server 2014 Setup (English)
    installer: 'salt://win/repo/sqlexpress/setup.exe'
    install_flags: '/ACTION=install /IACCEPTSQLSERVERLICENSETERMS /Q'
    cache_dir: True
```

cache_file (str)

This setting requires the file to be stored on the file_roots and only applies to URLs that begin with salt://. It indicates a single file to copy down for use with the installer. It is copied to the same location as the installer. Use this over cache_dir if there are many files in the directory and you only need a specific file and don’t want to cache additional files that may reside in the installer directory.

use_scheduler (bool)

If set to True, Windows will use the task scheduler to run the installation. A one-time task will be created in the task scheduler and launched. The return to the minion will be that the task was launched successfully, not that the software was installed successfully.

Note: This is used by the software definition for Salt itself. The first thing the Salt installer does is kill the Salt service, which then kills all child processes. If the Salt installer is launched via Salt, then the installer itself is killed leaving Salt on the machine but not running. Use of the task scheduler allows an external process to launch the Salt installation so its processes aren’t killed when the Salt service is stopped.
source_hash (str)

This tells Salt to compare a hash sum of the installer to the provided hash sum before execution. The value can be formatted as `<hash_algorithm>=<hash_sum>`, or it can be a URI to a file containing the hash sum.

For a list of supported algorithms, see the [hashlib documentation](#).

Here's an example using source_hash:

```
messageanalyzer:
  '4.0.7551.0':
    full_name: 'Microsoft Message Analyzer'
    installer: 'salt://win/repo/messageanalyzer/MessageAnalyzer64.msi'
    install_flags: '/quiet /norestart'
    uninstaller: '{1CC02C23-8FCD-487E-860C-311EC0A0C933}'
    uninstall_flags: '/quiet /norestart'
    msiexec: True
    source_hash: 'sha1=62875ff451f13b10a8ff988f2943e76a4735d3d4'
```

### Not Implemented

The following parameters are often seen in the software definition files hosted on the Git repo. However, they are not implemented and have no effect on the installation process.

- **bool reboot**  Not implemented
- **str locale**   Not implemented

### 28.1.7 Managing Windows Software on a Standalone Windows Minion

The Windows Software Repository functions similarly in a standalone environment, with a few differences in the configuration.

To replace the winrepo runner that is used on the Salt master, an execution module exists to provide the same functionality to standalone minions. The functions are named the same as the ones in the runner, and are used in the same way; the only difference is that `salt-call` is used instead of `salt-run`:

```
salt-call winrepo.update_git_repos
salt-call pkg.refresh_db
```

After executing the previous commands the repository on the standalone system is ready for use.

### 28.1.8 Troubleshooting

**My software installs correctly but pkg.installed says it failed**

If you have a package that seems to install properly, but Salt reports a failure then it is likely you have a version or full_name mismatch.

Check the exact full_name and version as shown in Add/Remove Programs (`appwiz.cpl`). Use `pkg.list_pkgs` to check that the full_name and version exactly match what is installed. Make sure the software definition file has the exact value for full_name and that the version matches exactly.

Also, make sure the version is wrapped in single quotes in the software definition file.
Changes to sls files not being picked up

You may have recently updated some of the software definition files on the repo. Ensure you have refreshed the database on the minion.

```
salt winminion pkg.refresh_db
```

How Success and Failure are Reported by pkg.installed

The install state/module function of the Windows package manager works roughly as follows:

1. Execute `pkg.list_pkgs` to get a list of software currently on the machine
2. Compare the requested version with the installed version
3. If versions are the same, report no changes needed
4. Install the software as described in the software definition file
5. Execute `pkg.list_pkgs` to get a new list of software currently on the machine
6. Compare the requested version with the new installed version
7. If versions are the same, report success
8. If versions are different, report failure

Winrepo Upgrade Issues

To minimize potential issues, it is a good idea to remove any winrepo git repositories that were checked out by the legacy (pre-2015.8.0) winrepo code when upgrading the master to 2015.8.0 or later. Run `winrepo.update_git_repos` to clone them anew after the master is started.

28.1.9 pygit2/GitPython Support for Maintaining Git Repos

The `winrepo.update_git_repos` runner now makes use of the same underlying code used by the `Git Fileserver Backend` and `Git External Pillar` to maintain and update its local clones of git repositories. If a compatible version of either `pygit2` (0.20.3 and later) or `GitPython` (0.3.0 or later) is installed, Salt will use it instead of the old method (which invokes the `git.latest` state).

Note: If compatible versions of both `pygit2` and `GitPython` are installed, then Salt will prefer `pygit2`. To override this behavior use the `winrepo_provider` configuration parameter:

```
winrepo_provider: gitpython
```

The `winrepo` execution module (discussed above in the Managing Windows Software on a Standalone Windows Minion section) does not yet officially support the new `pygit2/GitPython` functionality, but if either `pygit2` or `GitPython` is installed into Salt’s bundled Python then it should work. However, it should be considered experimental at this time.
28.1.10 Accessing Authenticated Git Repos (pygit2)

Support for pygit2 added the ability to access authenticated git repositories and to set per-remote config settings. An example of this would be the following:

```
winrepo_remotes:
  - https://github.com/saltstack/salt-winrepo.git
  - git@github.com:myuser/myrepo.git:
    - pubkey: /path/to/key.pub
    - privkey: /path/to/key
    - passphrase: myaw3s0m3pa$$phr4$3
  - https://github.com/myuser/privaterepo.git:
    - user: mygithubuser
    - password: CorrectHorseBatteryStaple
```

Note: Per-remote configuration settings work in the same fashion as they do in gitfs, with global parameters being overridden by their per-remote counterparts. For instance, setting `winrepo_passphrase` would set a global passphrase for winrepo that would apply to all SSH-based remotes, unless overridden by a `passphrase` per-remote parameter.

See here for more a more in-depth explanation of how per-remote configuration works in gitfs. The same principles apply to winrepo.

28.1.11 Maintaining Git Repos

A `clean` argument has been added to the `winrepo.update_git_repos` runner. When `clean` is `True` it will tell the runner to dispose of directories under the `winrepo_dir_ng`/`winrepo_dir_ng` which are not explicitly configured. This prevents the need to manually remove these directories when a repo is removed from the config file. To clean these old directories, just pass `clean=True`:

```
salt-run winrepo.update_git_repos clean=True
```

If a mix of git and non-git Windows Repo definition files are being used, then this should not be used, as it will remove the directories containing non-git definitions.

28.1.12 Name Collisions Between Repos

Collisions between repo names are now detected. The `winrepo.update_git_repos` runner will not proceed if any are detected. Consider the following configuration:

```
winrepo_remotes:
  - https://foo.com/bar/baz.git
  - https://mydomain.tld/baz.git
  - https://github.com/foobar/baz
```

The `winrepo.update_git_repos` runner will refuse to update repos here, as all three of these repos would be checked out to the same directory. To work around this, a per-remote parameter called `name` can be used to resolve these conflicts:

```
winrepo_remotes:
  - https://foo.com/bar/baz.git
  - https://mydomain.tld/baz.git:
```

(continues on next page)
28.1.13 Legacy Minions

The Windows Package Manager was upgraded with breaking changes starting with Salt 2015.8.0. To maintain backwards compatibility Salt continues to support older minions.

The breaking change was to generate the winrepo database on the minion instead of the master. This allowed for the use of Jinja in the software definition files. It enabled the use of pillar, grains, execution modules, etc. during compile time. To support this new functionality, a next-generation (ng) repo was created.

See the Changes in Version 2015.8.0 for details.

On prior versions of Salt, or legacy minions, the winrepo database was generated on the master and pushed down to the minions. Any grains exposed at compile time would have been those of the master and not the minion.

The repository for legacy minions is named `salt-winrepo` and is located at:

- [https://github.com/saltstack/salt-winrepo](https://github.com/saltstack/salt-winrepo)

Legacy Configuration

Winrepo settings were changed with the introduction of the Next Generation (ng) of winrepo.

Legacy Master Config Options

There were three options available for a legacy master to configure winrepo. Unless you're running a legacy master as well, you shouldn't need to configure any of these.

- `win_gitrepos`
- `win_repo`
- `win_repo_mastercachefile`

`win_gitrepos`: (list)

A list of URLs to github repos. Default is a list with a single URL:

- `https://github.com/saltstack/salt-winrepo.git`

`win_repo`: (str)

The location on the master to store the winrepo. The default is `/srv/salt/winrepo`.

`win_repo_mastercachefile`: (str) The location on the master to generate the winrepo database file. The default is `/srv/salt/winrepo/winrep.p`
Legacy Minion Config Options

There is only one option available to configure a legacy minion for winrepo.

- win_repo_cachefile

    win_repo_cachefile: (str)

    The location on the Salt file server to obtain the winrepo database file. The default is salt://win/repo/winrepo.p

    **Note:** If the location of the winrepo.p file is not in the default location on the master, the win_repo_cachefile setting will need to be updated to reflect the proper location on each minion.

Legacy Quick Start

You can get up and running with winrepo pretty quickly just using the defaults. Assuming no changes to the default configuration (ie, file_roots) run the following commands on the master:

```
salt-run winrepo.update_git_repos
salt-run winrepo.genrepo
salt * pkg.refresh_db
salt * pkg.install firefox
```

These commands clone the default winrepo from github, generate the metadata file, push the metadata file down to the legacy minion, and install the latest version of Firefox.

Legacy Initialization

Initializing the winrepo for a legacy minion is similar to that for a newer minion. There is an added step in that the metadata file needs to be generated on the master prior to refreshing the database on the minion.

Populate the Local Repository

The SLS files used to install Windows packages are not distributed by default with Salt. So, the first step is to clone the repo to the master. Use the winrepo.update_git_repos runner initialize the repository in the location specified by winrepo_dir in the master config. This will pull the software definition files down from the git repository.

```
salt-run winrepo.update_git_repos
```

Generate the Metadata File

The next step is to create the metadata file for the repo (winrepo.p). The metadata file is generated on the master using the winrepo.genrepo runner.

```
salt-run winrepo.genrepo
```

**Note:** You only need to do this if you need to support legacy minions.
Update the Minion Database

Run `pkg.refresh_db` on each of your Windows minions to copy the metadata file down to the minion.

```
# From the master
salt -G 'os:windows' pkg.refresh_db
```

Changes in Version 2015.8.0+

Git repository management for the Windows Software Repository changed in version 2015.8.0, and several master/minion config parameters were renamed for consistency.

For a complete list of the new winrepo config options, see `here` for master config options, and `here` for configuration options for masterless Windows minions.

pygit2/GitPython Support

On the master, the `winrepo.update_git_repos` runner was updated to use either `pygit2` or `GitPython` to checkout the git repositories containing repo data. If `pygit2` or `GitPython` is installed, existing winrepo git checkouts should be removed after upgrading to 2015.8.0. Then they should be cloned again by running `winrepo.update_git_repos`.

If neither `GitPython` nor `pygit2` are installed, Salt will fall back to pre-existing behavior for `winrepo.update_git_repos`, and a warning will be logged in the master log.

Note: Standalone Windows minions do not support the new `GitPython/pygit2` functionality, and will instead use the `git.latest` state to keep repositories up-to-date. More information on how to use the Windows Software Repo on a standalone minion can be found `here`.

Config Parameters Renamed

Many of the legacy winrepo configuration parameters changed in version 2015.8.0 to make them more consistent. Below are the parameters which changed for version 2015.8.0:

Master Config

<table>
<thead>
<tr>
<th>Old Name</th>
<th>New Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>win_repo</td>
<td><code>winrepo_dir</code></td>
</tr>
<tr>
<td>win_repo_mastercachefile</td>
<td>No longer used on master</td>
</tr>
<tr>
<td>win_gitrepos</td>
<td><code>winrepo_remotes</code></td>
</tr>
</tbody>
</table>

Note: The `winrepo_dir_ng` and `winrepo_remotes_ng` settings were introduced in 2015.8.0 for working with the next generation repo.

See `here` for detailed information on all master config options for the Windows Repo.

Minion Config
<table>
<thead>
<tr>
<th>Old Name</th>
<th>New Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>win_repo</td>
<td>winrepo_dir</td>
</tr>
<tr>
<td>win_repo_cachefile</td>
<td>winrepo_cachefile</td>
</tr>
<tr>
<td>win_gitrepos</td>
<td>winrepo_remotes</td>
</tr>
</tbody>
</table>

Note: The `winrepo_dir_ng` and `winrepo_remotes_ng` settings were introduced in 2015.8.0 for working with the next generation repo.

See [here](#) for detailed information on all minion config options for the Windows Repo.

## 28.2 Windows-specific Behaviour

Salt is capable of managing Windows systems, however due to various differences between the operating systems, there are some things you need to keep in mind.

This document will contain any quirks that apply across Salt or generally across multiple module functions. Any Windows-specific behavior for particular module functions will be documented in the module function documentation. Therefore this document should be read in conjunction with the module function documentation.

### 28.2.1 Group parameter for files

Salt was originally written for managing Unix-based systems, and therefore the file module functions were designed around that security model. Rather than trying to shoehorn that model on to Windows, Salt ignores these parameters and makes non-applicable module functions unavailable instead.

One of the commonly ignored parameters is the `group` parameter for managing files. Under Windows, while files do have a 'primary group' property, this is rarely used. It generally has no bearing on permissions unless intentionally configured and is most commonly used to provide Unix compatibility (e.g. Services For Unix, NFS services).

Because of this, any file module functions that typically require a group, do not under Windows. Attempts to directly use file module functions that operate on the group (e.g. `file.chgrp`) will return a pseudo-value and cause a log message to appear. No group parameters will be acted on.

If you do want to access and change the 'primary group' property and understand the implications, use the `file.get_pgid` or `file.get_pgroup` functions or the `pgroup` parameter on the `file.chown` module function.

### 28.2.2 Dealing with case-insensitive but case-preserving names

Windows is case-insensitive, but however preserves the case of names and it is this preserved form that is returned from system functions. This causes some issues with Salt because it assumes case-sensitive names. These issues generally occur in the state functions and can cause bizarre looking errors.

To avoid such issues, always pretend Windows is case-sensitive and use the right case for names, e.g. specify `user=Administrator` instead of `user=administrator`.

Follow [issue #11801](#) for any changes to this behavior.
28.2.3 Dealing with various username forms

Salt does not understand the various forms that Windows usernames can come in, e.g. username, mydomain\username, username@mydomain.tld can all refer to the same user. In fact, Salt generally only considers the raw username value, i.e. the username without the domain or host information.

Using these alternative forms will likely confuse Salt and cause odd errors to happen. Use only the raw username value in the correct case to avoid problems.

Follow issue #11801 for any changes to this behavior.

28.2.4 Specifying the None group

Each Windows system has built-in _None_ group. This is the default 'primary group' for files for users not on a domain environment.

Unfortunately, the word _None_ has special meaning in Python - it is a special value indicating 'nothing', similar to null or nil in other languages.

To specify the None group, it must be specified in quotes, e.g. ./salt '*' file.chgrp C:\path\to\ file  "'None'".

28.2.5 Symbolic link loops

Under Windows, if any symbolic link loops are detected or if there are too many levels of symlinks (defaults to 64), an error is always raised.

For some functions, this behavior is different to the behavior on Unix platforms. In general, avoid symlink loops on either platform.
29.1 Overview

In its most typical use, Salt is a software application in which clients, called "minions" can be commanded and controlled from a central command server called a "master".

Commands are normally issued to the minions (via the master) by calling a client script simply called, 'salt'. Salt features a pluggable transport system to issue commands from a master to minions. The default transport is ZeroMQ.

29.2 Salt Client

29.2.1 Overview

The salt client is run on the same machine as the Salt Master and communicates with the salt-master to issue commands and to receive the results and display them to the user.

The primary abstraction for the salt client is called 'LocalClient'.

When LocalClient wants to publish a command to minions, it connects to the master by issuing a request to the master's ReqServer (TCP: 4506)

The LocalClient system listens to responses for its requests by listening to the master event bus publisher (master_event_pub.ipc).

29.3 Salt Master

29.3.1 Overview

The salt-master daemon runs on the designated Salt master and performs functions such as authenticating minions, sending, and receiving requests from connected minions and sending and receiving requests and replies to the 'salt' CLI.
29.3.2 Moving Pieces

When a Salt master starts up, a number of processes are started, all of which are called `salt-master` in a process-list but have various role categories.

Among those categories are:

- Publisher
- EventPublisher
- MWorker

29.3.3 Publisher

The Publisher process is responsible for sending commands over the designated transport to connected minions. The Publisher is bound to the following:

- TCP: port 4505
- IPC: publish_pull.ipc

Each salt minion establishes a connection to the master Publisher.

29.3.4 EventPublisher

The EventPublisher publishes master events out to any event listeners. It is bound to the following:

- IPC: master_event_pull.ipc
- IPC: master_event_pub.ipc

29.3.5 MWorker

Worker processes manage the back-end operations for the Salt Master.

The number of workers is equivalent to the number of `worker_threads` specified in the master configuration and is always at least one.

Workers are bound to the following:

- IPC: workers.ipc

29.3.6 ReqServer

The Salt request server takes requests and distributes them to available MWorker processes for processing. It also receives replies back from minions.

The ReqServer is bound to the following:

- TCP: 4506
- IPC: workers.ipc

Each salt minion establishes a connection to the master ReqServer.
29.3.7 Job Flow

The Salt master works by always publishing commands to all connected minions and the minions decide if the command is meant for them by checking themselves against the command target.

The typical lifecycle of a salt job from the perspective of the master might be as follows:

1) A command is issued on the CLI. For example, 'salt my_minion test.version'.
2) The 'salt' command uses LocalClient to generate a request to the salt master by connecting to the ReqServer on TCP:4506 and issuing the job.
3) The salt-master ReqServer sees the request and passes it to an available MWorker over workers.ipc.
4) A worker picks up the request and handles it. First, it checks to ensure that the requested user has permissions to issue the command. Then, it sends the publish command to all connected minions. For the curious, this happens in ClearFuncs.publish().
5) The worker announces on the master event bus that it is about to publish a job to connected minions. This happens by placing the event on the master event bus (master_event_pull.ipc) where the EventPublisher picks it up and distributes it to all connected event listeners on master_event_pub.ipc.
6) The message to the minions is encrypted and sent to the Publisher via IPC on publish_pull.ipc.
7) Connected minions have a TCP session established with the Publisher on TCP port 4505 where they await commands. When the Publisher receives the job over publish_pull, it sends the jobs across the wire to the minions for processing.
8) After the minions receive the request, they decrypt it and perform any requested work, if they determine that they are targeted to do so.
9) When the minion is ready to respond, it publishes the result of its job back to the master by sending the encrypted result back to the master on TCP 4506 where it is again picked up by the ReqServer and forwarded to an available MWorker for processing. (Again, this happens by passing this message across workers.ipc to an available worker.)
10) When the MWorker receives the job it decrypts it and fires an event onto the master event bus (master_event_pull.ipc). (Again for the curious, this happens in AESFuncs._return().)
11) The EventPublisher sees this event and re-publishes it on the bus to all connected listeners of the master event bus (on master_event_pub.ipc). This is where the LocalClient has been waiting, listening to the event bus for minion replies. It gathers the job and stores the result.
12) When all targeted minions have replied or the timeout has been exceeded, the salt client displays the results of the job to the user on the CLI.

29.4 Salt Minion

29.4.1 Overview

The salt-minion is a single process that sits on machines to be managed by Salt. It can either operate as a stand-alone daemon which accepts commands locally via `salt-call` or it can connect back to a master and receive commands remotely.

When starting up, salt minions connect back to a master defined in the minion config file. They connect to two ports on the master:

- TCP: 4505 This is the connection to the master Publisher. It is on this port that the minion receives jobs from the master.
29.4.2 Event System

Similar to the master, a salt-minion has its own event system that operates over IPC by default. The minion event system operates on a push/pull system with IPC files at minion_event_<unique_id>_pub.ipc and minion_event_<unique_id>_pull.ipc.

The astute reader might ask why have an event bus at all with a single-process daemon. The answer is that the salt-minion may fork other processes as required to do the work without blocking the main salt-minion process and this necessitates a mechanism by which those processes can communicate with each other. Secondarily, this provides a bus by which any user with sufficient permissions can read or write to the bus as a common interface with the salt minion.

29.4.3 Minion Job Flow

When a salt minion starts up, it attempts to connect to the Publisher and the ReqServer on the salt master. It then attempts to authenticate and once the minion has successfully authenticated, it simply listens for jobs.

Jobs normally come either come from the 'salt-call' script run by a local user on the salt minion or they can come directly from a master.

The job flow on a minion, coming from the master via a 'salt' command is as follows:

1) A master publishes a job that is received by a minion as outlined by the master's job flow above. 2) The minion is polling its receive socket that's connected to the master Publisher (TCP 4505 on master). When it detects an incoming message, it picks it up from the socket and decrypts it. 3) A new minion process or thread is created and provided with the contents of the decrypted message. The _thread_return() method is provided with the contents of the received message. 4) The new minion thread is created. The _thread_return() function starts up and actually calls out to the requested function contained in the job. 5) The requested function runs and returns a result. [Still in thread.] 6) The result of the function that's run is encrypted and returned to the master's ReqServer (TCP 4506 on master). [Still in thread.] 7) Thread exits. Because the main thread was only blocked for the time that it took to initialize the worker thread, many other requests could have been received and processed during this time.

29.5 A Note on ClearFuncs vs. AESFuncs

A common source of confusion is determining when messages are passed in the clear and when they are passed using encryption. There are two rules governing this behaviour:

1) ClearFuncs is used for intra-master communication and during the initial authentication handshake between a minion and master during the key exchange. 2) AESFuncs is used everywhere else.
29.6 Changelog

With the addition of SEP 01 the keepachangelog format was introduced into our CHANGELOG.md file. The Salt project is using the towncrier tool to manage the CHANGELOG.md file. The reason this tool was added to manage the changelog was because we were previously managing the file manually and it would cause many merge conflicts. This tool allows us to add changelog entries into separate files and before a release we simply need to run towncrier --version=<version> for it to compile the changelog correctly.

29.6.1 How do I add a changelog entry

To add a changelog entry you will need to add a file in the changelog directory. The file name should follow the syntax <issue #>.<type>.

The types are in alignment with keepachangelog:
- removed: any features that have been removed
- deprecated: any features that will soon be removed
- changed: any changes in current existing features
- fixed: any bug fixes
- added: any new features added

For example if you are fixing a bug for issue number #1234 your filename would look like this: changelog/1234.fixed. The contents of the file should contain a summary of what you are fixing. If there is a legitimate reason to not include an issue number with a given contribution you can add the PR number as the file name (<PR #>.<type>).

If your PR does not align with any of the types, then you do not need to add a changelog entry.

29.6.2 How to generate the changelog

This step is only used when we need to generate the changelog right before releasing. You should NOT run towncrier on your PR, unless you are preparing the final PR to update the changelog before a release.

You can run the towncrier tool directly or you can use nox to help run the command and ensure towncrier is installed in a virtual environment. The instructions below will detail both approaches.

If you want to see what output towncrier will produce before generating the changelog you can run towncrier in draft mode:

towncrier --draft --version=3001

nox -e 'changelog(draft=True)' -- 3000.1

Version will need to be set to whichever version we are about to release. Once you are confident the draft output looks correct you can now generate the changelog by running:

towncrier --version=3001

nox -e 'changelog(draft=False)' -- 3000.1

After this is run towncrier will automatically remove all the files in the changelog directory.
29.7 Contributing

So you want to contribute to the Salt project? Excellent! You can help in a number of ways:

- Using Salt and opening well-written bug reports.
- Joining a working group.
- Answering questions on irc, the community Slack, the salt-users mailing list, Server Fault, or r/saltstack on Reddit.
- Fixing bugs.
- Enhancing the documentation.
- Providing workarounds, patches, or other code without tests.
- Telling other people about problems you solved using Salt.

If you’d like to update docs or fix an issue, you’re going to need the Salt repo. The best way to contribute is using Git.

29.7.1 Environment Setup

To hack on Salt or the docs you’re going to need to set up your development environment. If you already have a workflow that you’re comfortable with, you can use that, but otherwise this is an opinionated guide for setting up your dev environment. Follow these steps and you’ll end out with a functioning dev environment and be able to submit your first PR.

This guide assumes at least a passing familiarity with Git, a common version control tool used across many open source projects, and is necessary for contributing to Salt. For an introduction to Git, watch Salt Docs Clinic - Git For the True Beginner. Because of its widespread use, there are many resources for learning more about Git. One popular resource is the free online book Learn Git in a Month of Lunches.

29.7.2 pyenv, Virtual Environments, and You

We recommend pyenv, since it allows installing multiple different Python versions, which is important for testing Salt across all the versions of Python that we support.

On Linux

Install pyenv:

```
git clone https://github.com/pyenv/pyenv.git ~/.pyenv
echo 'export PATH=$HOME/.pyenv/bin:$PATH' >> ~/.profile
```

```
git clone https://github.com/pyenv/pyenv-virtualenv.git $(pyenv root)/plugins/pyenv-virtualenv
```
Salt Documentation, Release 3002.5

On Mac
Install pyenv using brew:
brew update
brew install pyenv
brew install pyenv-virtualenv

Now add pyenv to your .bashrc:
echo 'export PATH="$HOME/.pyenv/bin:$PATH"' >> ~/.bashrc
pyenv init 2>> ~/.bashrc
pyenv virtualenv-init 2>> ~/.bashrc

For other shells, see the pyenv instructions.
Go ahead and restart your shell. Now you should be able to install a new version of Python:
pyenv install 3.7.0

If that fails, don’t panic! You’re probably just missing some build dependencies. Check out pyenv common build
problems.
Now that you’ve got your version of Python installed, you can create a new virtual environment with this command:
pyenv virtualenv 3.7.0 salt

Then activate it:
pyenv activate salt

Sweet! Now you’re ready to clone Salt so you can start hacking away! If you get stuck at any point, check out the
resources at the beginning of this guide. IRC and Slack are particularly helpful places to go.
Get The Source!
Salt uses the fork and clone workflow for Git contributions. See Using the Fork-and-Branch Git Workflow for how
to implement it. But if you just want to hurry and get started you can go ahead and follow these steps:
Clones are so shallow. Well, this one is anyway:
git clone --depth=1 --origin salt https://github.com/saltstack/salt.git

This creates a shallow clone of Salt, which should be fast. Most of the time that’s all you’ll need, and you can
start building out other commits as you go. If you really want all 108,300+ commits you can just run git fetch
--unshallow. Then go make a sandwich because it’s gonna be a while.
You’re also going to want to head over to GitHub and create your own fork of Salt. Once you’ve got that set up you
can add it as a remote:
git remote add yourname <YOUR SALT REMOTE>

If you use your name to refer to your fork, and salt to refer to the official Salt repo you’ll never get upstream or
origin confused.
Note: Each time you start work on a new issue you should fetch the most recent changes from salt/upstream.

29.7. Contributing

1715


**pre-commit and nox Setup**

Here at Salt we use **pre-commit** and **nox** to make it easier for contributors to get quick feedback, for quality control, and to increase the chance that your merge request will get reviewed and merged. Nox enables us to run multiple different test configurations, as well as other common tasks. You can think of it as Make with superpowers. Pre-commit does what it sounds like: it configures some Git pre-commit hooks to run **black** for formatting, **isort** for keeping our imports sorted, and **pylint** to catch issues like unused imports, among others. You can easily install them in your virtualenv with:

```bash
python -m pip install pre-commit nox
pre-commit install
```

**Warning**: Currently there is an issue with the pip-tools-compile pre-commit hook on Windows. The details around this issue are included here: [https://github.com/saltstack/salt/issues/56642](https://github.com/saltstack/salt/issues/56642). Please ensure you export `SKIP=pip-tools-compile`.

Now before each commit, it will ensure that your code at least *looks* right before you open a pull request. And with that step, it’s time to start hacking on Salt!

### 29.7.3 Salt Issues

**Create Your Own**

Perhaps you’ve come to this guide because you found a problem in Salt, and you’ve diagnosed the cause. Maybe you need some help figuring out the problem. In any case, creating quality bug reports is a great way to contribute to Salt even if you lack the skills, time, or inclination to fix it yourself. If that’s the case, head on over to Salt’s issue tracker on GitHub.

Creating a **good** report can take a little bit of time - but every minute you invest in making it easier for others to reproduce and understand your issue is time well spent. The faster someone can understand your issue, the faster it will be able to get fixed correctly.

The thing that every issue needs goes by many names, but one at least as good as any other is **MCVE** - **M**inimum **C**omplete **V**erifiable **E**xample.

In a nutshell:

- **Minimum**: All of the **extra** information has been removed. Will 2 or 3 lines of master/minion config still exhibit the behavior?
- **Complete**: Minimum also means complete. If your example is missing information, then it’s not complete. Salt, Python, and OS versions are all bits of information that make your example complete. Have you provided the commands that you ran?
- **Verifiable**: Can someone take your report and reproduce it?

Slow is smooth, and smooth is fast - it may feel like you’re taking a long time to create your issue if you’re creating a proper MCVE, but a MCVE eliminates back and forth required to reproduce/verify the issue so someone can actually create a fix.
Pick An Issue

If you don’t already have an issue in mind, you can search for help wanted issues. If you also search for good first issue then you should be able to find some issues that are good for getting started contributing to Salt. Documentation issues are also good starter issues. When you find an issue that catches your eye (or one of your own), it’s a good idea to comment on the issue and mention that you’re working on it. Good communication is key to collaboration - so if you don’t have time to complete work on the issue, just leaving some information about when you expect to pick things up again is a great idea!

29.7.4 Hacking Away

Salt, Tests, Documentation, and You

Before approving code contributions, Salt requires:

- documentation
- meaningful passing tests
- correct code

Documentation fixes just require correct documentation.

What If I Don’t Write Tests or Docs?

If you aren’t into writing documentation or tests, we still welcome your contributions! But your PR will be labeled Needs Testcase and Help Wanted until someone can get to write the tests/documentation. Of course, if you have a desire but just lack the skill we are more than happy to collaborate and help out! There’s the documentation working group and the testing working group. We also regularly stream our test clinic live on Twitch every Tuesday afternoon and Thursday morning, Central Time. If you’d like specific help with tests, bring them to the clinic. If no community members need help, you can also just watch tests written in real time.

Documentation

Salt uses both docstrings, as well as normal reStructuredText files in the salt/doc folder for documentation. Since we use nox, you can build your docs and view them in your browser with this one-liner:

```
python -m nox -e 'docs-html(compress=False, clean=False)'; cd doc/_build/html; python -m webbrowser http://localhost:8000/contents.html; python -m http.server
```

The first time this will take a while because there are a lot of modules. Maybe you should go grab some dessert if you already finished that sandwich. But once Sphinx is done building the docs, python should launch your default browser with the URL http://localhost:8000/contents.html. Now you can navigate to your docs and ensure your changes exist. If you make changes, you can simply run this:

```
cd -; python -m nox -e 'docs-html(compress=False, clean=False)'; cd doc/_build/html; python -m http.server
```

And then refresh your browser to get your updated docs. This one should be quite a bit faster since Sphinx won’t need to rebuild everything.

If your change is a docs-only change, you can go ahead and commit/push your code and open a PR. You can indicate that it’s a docs-only change by adding [Documentation] to the title of your PR. Otherwise you’ll want to write some tests and code.
Running Development Salt

Note: If you run into any issues in this section, check the Troubleshooting section.

If you’re going to hack on the Salt codebase you’re going to want to be able to run Salt locally. The first thing you need to do is install Salt as an editable pip install:

```
python -m pip install -e .
```

This will let you make changes to Salt without having to re-install it.

After all of the dependencies and Salt are installed, it’s time to set up the config for development. Typically Salt runs as root, but you can specify which user to run as. To configure that, just copy the master and minion configs. We have .gitignore setup to ignore the local/ directory, so we can put all of our personal files there.

```
mkdir -p local/etc/salt/
```

Create a master config file as local/etc/salt/master:

```
cat <<EOF >local/etc/salt/master
user: $(whoami)
root_dir: $PWD/local/
publish_port: 55505
ret_port: 55506
EOF
```

And a minion config as local/etc/salt/minion:

```
cat <<EOF >local/etc/salt/minion
user: $(whoami)
root_dir: $PWD/local/
master: localhost
id: saltdev
master_port: 55506
EOF
```

Now you can start your Salt master and minion, specifying the config dir.

```
salt-master --config-dir=local/etc/salt/ --log-level=debug --daemon
salt-minion --config-dir=local/etc/salt/ --log-level=debug --daemon
```

Now you should be able to accept the minion key:

```
salt-key -c local/etc/salt -Ay
```

And check that your master/minion are communicating:

```
salt -c local/etc/salt \* test.version
```

Rather than running test.version from your master, you can run it from the minion instead:

```
salt-call -c local/etc/salt test.version
```

Note that you’re running salt-call instead of salt, and you’re not specifying the minion (\*), but if you’re running the dev version then you still will need to pass in the config dir. Now that you’ve got Salt running, you can hack away on the Salt codebase!

If you need to restart Salt for some reason, if you’ve made changes and they don’t appear to be reflected, this is one option:
If you’d rather not use `kill`, you can have a couple of terminals open with your salt virtualenv activated and omit the `--daemon` argument. Salt will run in the foreground, so you can just use `ctrl+c` to quit.

**Test First? Test Last? Test Meaningfully!**

You can write tests first or tests last, as long as your tests are meaningful and complete! *Typically* the best tests for Salt are going to be unit tests. Testing is a whole topic on its own, But you may also want to write functional or integration tests. You’ll find those in the `salt/tests` directory.

When you’re thinking about tests to write, the most important thing to keep in mind is, “What, exactly, am I testing?” When a test fails, you should know:

- What, specifically, failed?
- Why did it fail?
- As much as possible, what do I need to do to fix this failure?

If you can’t answer those questions then you might need to refactor your tests.

When you’re running tests locally, you should make sure that if you remove your code changes your tests are failing. If your tests aren’t failing when you haven’t yet made changes, then it’s possible that you’re testing the wrong thing. But whether you adhere to TDD/BDD, or you write your code first and your tests last, ensure that your tests are meaningful.

**Running Tests**

As previously mentioned, we use `nox`, and that’s how we run our tests. You should have it installed by this point but if not you can install it with this:

```bash
python -m pip install nox
```

Now you can run your tests:

```bash
python -m nox -e "pytest-3.7(coverage=False)" -- tests/unit/cli/test_batch.py
```

It’s a good idea to install `espeak` or use `say` on Mac if you’re running some long-running tests. You can do something like this:

```bash
python -m nox -e "pytest-3.7(coverage=False)" -- tests/unit/cli/test_batch.py; espeak -"Tests done, woohoo!"
```

That way you don’t have to keep monitoring the actual test run.
Changelog and Commit!

When you write your commit message you should use imperative style. Do this:

Add frobnosticate capability

Don’t do this:

Added frobnosticate capability

But that advice is backwards for the changelog. We follow the keepachangelog approach for our changelog, and use towncrier to generate it for each release. As a contributor, all that means is that you need to add a file to the salt/changelog directory, using the `<issue #>.<type>` format. For instance, if you fixed issue 123, you would do:

```
echo "Made sys.doc inform when no minions return" > changelog/123.fixed
```

And that’s all that would go into your file. When it comes to your commit message, it’s usually a good idea to add other information, such as

- What does a reviewer need to know about the change that you made?
- If someone isn’t an expert in this area, what will they need to know?

This will also help you out, because when you go to create the PR it will automatically insert the body of your commit messages.

29.7.5 PR Time!

Once you’ve done all your dev work and tested locally, you should check out our PR guidelines. After you read that page, it’s time to open a new PR. Fill out the PR template - you should have updated or created any necessary docs, and written tests if you’re providing a code change. When you submit your PR, we have a suite of tests that will run across different platforms to help ensure that no known bugs were introduced.

Now What?

You’ve made your changes, added documentation, opened your PR, and have passing tests... now what? When can you expect your code to be merged?

When you open your PR, a reviewer will get automatically assigned. If your PR is submitted during the week you should be able to expect some kind of communication within that business day. If your tests are passing and we’re not in a code freeze, ideally your code will be merged that day. If you haven’t heard from your assigned reviewer, ping them on GitHub, irc, or Community Slack.

It’s likely that your reviewer will leave some comments that need addressing - it may be a style change, or you forgot a changelog entry, or need to update the docs. Maybe it’s something more fundamental - perhaps you encountered the rare case where your PR has a much larger scope than initially assumed.

Whatever the case, simply make the requested changes (or discuss why the requests are incorrect), and push up your new commits. If your PR is open for a significant period of time it may be worth rebasing your changes on the most recent changes to Salt. If you need help, the previously linked Git resources will be valuable.

But if, for whatever reason, you’re not interested in driving your PR to completion then just note that in your PR. Something like, “I’m not interested in writing docs/tests, I just wanted to provide this fix - someone else will need to complete this PR.” If you do that then we’ll add a “Help Wanted” label and someone will be able to pick up the PR, make the required changes, and it can eventually get merged in.

In any case, now that you have a PR open, congrats! You’re a Salt developer! You rock!
29.7.6 Troubleshooting

zmq.core.error.ZMQError

Once the minion starts, you may see an error like the following:

```python
zmq.core.error.ZMQError: ipc path "/path/to/your/virtualenv/var/run/salt/minion/minion_event_7824dc4f7e79ac755af70b9" is longer than 107 characters (sizeof(sockaddr_un.sun_path)).
```

This means that the path to the socket the minion is using is too long. This is a system limitation, so the only workaround is to reduce the length of this path. This can be done in a couple different ways:

1. Create your virtualenv in a path that is short enough.
2. Edit the :conf_minion:sock_dir minion config variable and reduce its length. Remember that this path is relative to the value you set in :conf_minion:root_dir.

NOTE: The socket path is limited to 107 characters on Solaris and Linux, and 103 characters on BSD-based systems.

No permissions to access ...

If you forget to pass your config path to any of the salt* commands, you might see

```bash
No permissions to access "/var/log/salt/master", are you running as the correct user?
```

Just pass `-c local/etc/salt` (or whatever you named it)

File descriptor limit

You might need to raise your file descriptor limit. You can check it with:

```bash
ulimit -n
```

If the value is less than 3072, you should increase it with:

```bash
ulimit -n 3072
# For c-shell:
limit descriptors 3072
```

Pygit2 or other dependency install fails

You may see some failure messages when installing requirements. You can directly access your nox environment and possibly install pygit (or other dependency) that way. When you run nox, you’ll see a message like this:

```bash
nox > Re-using existing virtual environment at .nox/pytest-parametrized-3-crypto-none-transport-zeromq-coverage-false.
```

For this, you would be able to install with:

```bash
.nox/pytest-parametrized-3-crypto-none-transport-zeromq-coverage-false/bin/python -m pip install pygit2
```

29.7. Contributing
29.8 Deprecating Code

Salt should remain backwards compatible, though sometimes, this backwards compatibility needs to be broken because a specific feature and/or solution is no longer necessary or required. At first one might think, let me change this code, it seems that it’s not used anywhere else so it should be safe to remove. Then, once there’s a new release, users complain about functionality which was removed and they where using it, etc. This should, at all costs, be avoided, and, in these cases, that specific code should be deprecated.

In order to give users enough time to migrate from the old code behavior to the new behavior, the deprecation time frame should be carefully determined based on the significance and complexity of the changes required by the user.

Salt feature releases are based on the Periodic Table. Any new features going into the master branch will be named after the next element in the Periodic Table. For example, Magnesium was the feature release name associated with the v3002 tag. At that point in time, any new features going into the master branch, after v3002 was tagged, were part of the Aluminium feature release.

A deprecation warning should be in place for at least two major releases before the deprecated code and its accompanying deprecation warning are removed. More time should be given for more complex changes. For example, if the current release under development is 3001, the deprecated code and associated warnings should remain in place and warn for at least Aluminium.

To help in this deprecation task, salt provides salt.utils.versions.warn_until. The idea behind this helper function is to show the deprecation warning to the user until salt reaches the provided version. Once that provided version is equaled salt.utils.versions.warn_until will raise a RuntimeError making salt stop its execution. This stoppage is unpleasant and will remind the developer that the deprecation limit has been reached and that the code can then be safely removed.

Consider the following example:

```python
def some_function(bar=False, foo=None):
    if foo is not None:
        salt.utils.versions.warn_until("Aluminium",
            "The 'foo' argument has been deprecated and its "
            "functionality removed, as such, its usage is no longer "
            "required."
        )
```

Development begins on Aluminium, or v3003, after the v3002 tag is applied to the master branch. Once this occurs, all uses of the warn_until function targeting Aluminium, along with the code they are warning about should be removed from the code.

29.9 Python 2 Deprecation FAQ

FAQ

- Python 2 Deprecation FAQ
  - Why are we deprecating Python 2?
  - Was this announced/decided before making the change?
  - Can I contribute Python 2 code?
29.9.1 Why are we deprecating Python 2?

Python 2.7.18 was the final release of Python2, released in April 2020. At this point, Python 2 will no longer receive any unpaid support. The Python core developers are focusing their efforts on improving and enhancing Python 3. Additionally, many libraries that Salt depends on have also dropped Python 2 support.

To take advantage of continued support and improvements, Salt is joining the ranks of projects that are dropping legacy Python support in favor of Python 3.

29.9.2 Was this announced/decided before making the change?

SEP 5 was approved in April, 2019.

29.9.3 Can I contribute Python 2 code?

For several years, Salt has been a Python 2/3 codebase, requiring Python 3 support for all contributions. The only changes contributors can expect to this process is that we will now accept Python 3-only code changes.

While there is a significant subset of Python that is compatible with both Python 3 and legacy Python, changes requiring six or otherwise removing Python 3-only code will not be accepted.

29.9.4 What if my OS does not include Python 3 packages? Or, how do I upgrade from Salt on Python 2 to Salt on Python 3?

There are several options to upgrade to Python 3.
On Modern Platforms

At this point, most modern Linux distributions have Python 3 packages. Ubuntu 20.04 LTS has moved to Python 3.8 as its default system Python.

On Other Platforms

Build Your Own

If your current distribution does not have Python 3 it’s pretty simple to use Salt to build and distribute Python 3 on your own. Installing Python 3 and pip installing Salt gives you the most control over your distribution.

pop-build distributions

Another approach is to use the pop-build distribution of Salt. With the Sodium release we will begin releasing packages for Salt using pop-build, in tandem with our normal build process. The pop-build distribution will contain Salt, Python, and any necessary dependencies, which will make it trivial to have a completely supported version of Salt.

29.9.5 Will you support a Python 3 master with an older Python 2 minion?

Yes! Our policy of keeping newer masters backwards compatible with at least the most recent minion version is not changing. You should be able to run modern Salt Masters on Python 3 with slightly older minions running on legacy Python. Of course, if you want your minions to be able to take advantage of the newest features in Salt, upgrading to Python 3 will be necessary.

29.9.6 Will you support Python 2 master with a new Python 3 minion?

In keeping with our existing policy, we make no guarantees about older masters with newer minions. It may work, but breakages are common and should be expected.

29.9.7 How does this impact Salt-SSH support?

Salt-SSH will need Python 3 on the target minions. We will be upgrading Salt-SSH to provide instructions or recommendations on adding Python3 if it is not detected.

29.9.8 What is your plan for removing Python 2 code?

Legacy Python code will be gradually removed from the Salt codebase.

While we could remove most of it at once, that introduces a high level of risk. Instead, beginning with the Sodium (v3001) release, Salt will simply drop support for Python 2. PRs will no longer be required to support Python 2 before merging.

Over time, as modules are changed, six and other legacy Python syntax will be removed. It may be at some point in the future it becomes necessary to remove the last vestiges of legacy Python from Salt, but currently the plan is to take a more measured approach.
29.9.9 Will Salt continue to package for Python 2?

No. Beginning with Sodium (v3001), Salt will no longer release packages for, or support Python 2.

29.10 Installing Salt for development

Clone the repository using:

```bash
git clone https://github.com/saltstack/salt
```

**Note:** tags

Just cloning the repository is enough to work with Salt and make contributions. However, fetching additional tags from git is required to have Salt report the correct version for itself. To do this, first add the git repository as an upstream source:

```bash
git remote add upstream https://github.com/saltstack/salt
```

Fetching tags is done with the git 'fetch' utility:

```bash
git fetch --tags upstream
```

Create a new virtualenv:

```bash
virtualenv /path/to/your/virtualenv
```

Avoid making your `virtualenv path too long`.

On Arch Linux, where Python 3 is the default installation of Python, use the `virtualenv2` command instead of `virtualenv`.

On Gentoo you must use `--system-site-packages` to enable pkg and portage_config functionality

**Note:** Using system Python modules in the virtualenv

To use already-installed python modules in virtualenv (instead of having pip download and compile new ones), run `virtualenv --system-site-packages` Using this method eliminates the requirement to install the salt dependencies again, although it does assume that the listed modules are all installed in the system PYTHONPATH at the time of virtualenv creation.

**Note:** Python development package

Be sure to install python devel package in order to install required Python modules. In Debian/Ubuntu run `sudo apt-get install -y python-dev`. In RedHat based system install `python-devel`

Activate the virtualenv:

```bash
source /path/to/your/virtualenv/bin/activate
```

Install Salt (and dependencies) into the virtualenv:
pip install pyzmq PyYAML pycrypto msgpack jinja2 psutil futures tornado
pip install -e ./salt  # the path to the salt git clone from above

Note: Installing psutil

Python header files are required to build this module, otherwise the pip install will fail. If your distribution separates binaries and headers into separate packages, make sure that you have the headers installed. In most Linux distributions which split the headers into their own package, this can be done by installing the python-dev or python-devel package. For other platforms, the package will likely be similarly named.

Note: Installing dependencies on macOS.

You can install needed dependencies on macOS using homebrew or macports. See macOS Installation

Warning: Installing on RedHat-based Distros

If installing from pip (or from source using setup.py install), be advised that the yum-utils package is needed for Salt to manage packages on RedHat-based systems.

29.10.1 Running a self-contained development version

During development it is easiest to be able to run the Salt master and minion that are installed in the virtualenv you created above, and also to have all the configuration, log, and cache files contained in the virtualenv as well.

The /path/to/your/virtualenv referenced multiple times below is also available in the variable $VIRTUAL_ENV once the virtual environment is activated.

Copy the master and minion config files into your virtualenv:

```
mkdir -p /path/to/your/virtualenv/etc/salt/pki/{master,minion}
cp ./salt/conf/master ./salt/conf/minion /path/to/your/virtualenv/etc/salt/
```

Edit the master config file:

1. Uncomment and change the user: root value to your own user.
2. Uncomment and change the root_dir: / value to point to /path/to/your/virtualenv.
3. Uncomment and change the pki_dir: /etc/salt/pki/master value to point to /path/to/your/virtualenv/etc/salt/pki/master
4. If you are running version 0.11.1 or older, uncomment, and change the pidfile: /var/run/salt-master.pid value to point to /path/to/your/virtualenv/salt-master.pid.
5. If you are also running a non-development version of Salt you will have to change the publish_port and ret_port values as well.

Edit the minion config file:

1. Repeat the edits you made in the master config for the user and root_dir values as well as any port changes.
2. Uncomment and change the pki_dir: /etc/salt/pki/minion value to point to /path/to/your/virtualenv/etc/salt/pki/minion
3. If you are running version 0.11.1 or older, uncomment, and change the pidfile: `/var/run/salt-minion.pid` value to point to `/path/to/your/virtualenv/salt-minion.pid`.

4. Uncomment and change the `master: salt` value to point at localhost.

5. Uncomment and change the `id:` value to something descriptive like "saltdev". This isn't strictly necessary but it will serve as a reminder of which Salt installation you are working with.

6. If you changed the `ret_port` value in the master config because you are also running a non-development version of Salt, then you will have to change the `master_port` value in the minion config to match.

**Note:** Using `salt-call` with a Standalone Minion

If you plan to run `salt-call` with this self-contained development environment in a masterless setup, you should invoke `salt-call` with `-c /path/to/your/virtualenv/etc/salt` so that salt can find the minion config file. Without the `-c` option, Salt finds its config files in `/etc/salt`.

Start the master and minion, accept the minion’s key, and verify your local Salt installation is working:

```bash
cd /path/to/your/virtualenv
salt-master -c ./etc/salt -d
salt-minion -c ./etc/salt -d
salt-key -c ./etc/salt -L
salt-key -c ./etc/salt -A
salt -c ./etc/salt '*' test.version
```

Running the master and minion in debug mode can be helpful when developing. To do this, add `-l debug` to the calls to `salt-master` and `salt-minion`. If you would like to log to the console instead of to the log file, remove the `-d`.

**Note:** Too long socket path?

Once the minion starts, you may see an error like the following:

```
zmq.core.error.ZMQError: ipc path "/path/to/your/virtualenv/var/run/salt/minion/minion_event_7824dc9b7f89f6755939af70b96249f_pub.ipc" is longer than 107 characters (sizeof(sockaddr_un.sun_path)).
```

This means that the path to the socket the minion is using is too long. This is a system limitation, so the only workaround is to reduce the length of this path. This can be done in a couple different ways:

1. Create your virtualenv in a path that is short enough.

2. Edit the `sock_dir` minion config variable and reduce its length. Remember that this path is relative to the value you set in `root_dir`.

**NOTE:** The socket path is limited to 107 characters on Solaris and Linux, and 103 characters on BSD-based systems.

**Note:** File descriptor limits

Ensure that the system open file limit is raised to at least 2047:

```
# check your current limit
ulimit -n

# raise the limit. persists only until reboot
```

(continues on next page)
# use 'limit descriptors 2047' for c-shell
ulimit -n 2047

To set file descriptors on macOS, refer to the macOS Installation instructions.

## Changing Default Paths

Instead of updating your configuration files to point to the new root directory and having to pass the new configuration directory path to all of Salt's CLI tools, you can explicitly tweak the default system paths that Salt expects:

```bash
GENERATE_SALT_SYSPATHS=1 pip install --global-option='--salt-root-dir=/path/to/your/virtualenv/' -e ./salt # the path to the salt git clone from above
```

You can now call all of Salt's CLI tools without explicitly passing the configuration directory.

## Additional Options

If you want to distribute your virtualenv, you probably don't want to include Salt's clone .git/ directory, and, without it, Salt won't report the accurate version. You can tell setup.py to generate the hardcoded version information which is distributable:

```bash
GENERATE_SALT_SYSPATHS=1 WRITE_SALT_VERSION=1 pip install --global-option='--salt-root-dir=/path/to/your/virtualenv/' -e ./salt # the path to the salt git clone from above
```

Instead of passing those two environmental variables, you can just pass a single one which will trigger the other two:

```bash
MIMIC_SALT_INSTALL=1 pip install --global-option='--salt-root-dir=/path/to/your/virtualenv/' -e ./salt # the path to the salt git clone from above
```

This last one will grant you an editable salt installation with hardcoded system paths and version information.

## 29.10.2 Installing Salt from the Python Package Index

If you are installing using easy_install, you will need to define a USE_SETUPTOOLS environment variable, otherwise dependencies will not be installed:

```bash
USE_SETUPTOOLS=1 easy_install salt
```
29.10.3 Editing and previewing the documentation

You need the `sphinx-build` command to build the docs. In Debian/Ubuntu this is provided in the `python-sphinx` package. Sphinx can also be installed to a virtualenv using `pip`:

```
pip install Sphinx==1.3.1
```

Change to salt documentation directory, then:

```
cd doc; make html
```

- This will build the HTML docs. Run `make` without any arguments to see the available make targets, which include `html`, `man`, and `text`.
- The docs then are built within the `docs/_build/` folder. To update the docs after making changes, run `make` again.
- The help information on each module or state is culled from the python code that runs for that piece. Find them in `salt/modules/` or `salt/states/`.
- To build the docs on Arch Linux, the `python2-sphinx` package is required. Additionally, it is necessary to tell `make` where to find the proper `sphinx-build` binary, like so:

```
make SPHINXBUILD=sphinx-build2 html
```

- To build the docs on RHEL/CentOS 6, the `python-sphinx10` package must be installed from EPEL, and the following make command must be used:

```
make SPHINXBUILD=sphinx-build html
```

Once you've updated the documentation, you can run the following command to launch a simple Python HTTP server to see your changes:

```
cd _build/html; python -m SimpleHTTPServer
```

29.10.4 Running unit and integration tests

Run the test suite with the following command:

```
./setup.py test
```

See [here](#) for more information regarding the test suite.

29.10.5 Issue and Pull Request Labeling System

SaltStack uses several labeling schemes to help facilitate code contributions and bug resolution. See the *Labels and Milestones* documentation for more information.
29.11 GitHub Labels and Milestones

SaltStack uses several label categories, as well as milestones, to triage incoming issues and pull requests in the GitHub issue tracker. Labels are used to sort issues by type, priority, severity, status, functional area, functional group, and targeted release and pull requests by status, functional area, functional group, type of change, and test status. Milestones are used to indicate whether an issue is fully triaged or is scheduled to be fixed by SaltStack in an upcoming sprint.

29.11.1 Milestones

All issues are assigned to a milestone, whereas pull requests are almost never assigned to a milestone as the mean lifetime of pull requests is short enough that there is no need to track them temporally.

SaltStack uses milestones to indicate which issues are blocked on submitter or upstream actions, are approved, or are scheduled to be fixed or implemented in an upcoming sprint. If an issue is not attached to a sprint milestone, you are welcome to work on it at your own desire and convenience. If it is attached to a sprint milestone and you have already begun working on it or have a solution in mind or have other ideas related to the issue, you are encouraged to coordinate with the assignee via the GitHub issue tracker to create the best possible solution or implementation.

- **Approved** - The issue has been validated and has all necessary information.
- **Blocked** - The issue is waiting on actions by parties outside of SaltStack, such as receiving more information from the submitter or resolution of an upstream issue. This milestone is usually applied in conjunction with the labels `Info Needed`, `Question`, `Expected Behavior`, `Won't Fix For Now`, or `Upstream Bug`.

29.11.2 Labels

Labels are used to sort and describe issues and pull requests. Some labels are usually reserved for one or the other, though most labels may be applied to both.

New issues will receive at least one label and a milestone, and new pull requests will receive at least one label. Except for the `functional area` and `functional group` label categories, issues will generally receive only up to one label per category.

**Type**

Issues are categorized into one of several types. Type labels are almost never used for pull requests. GitHub treats pull requests like issues in many ways, so a pull request could be considered an issue with an implicit `Pull Request` type label applied.

- **Feature** - The issue is a request for new functionality including changes, enhancements, refactors, etc.
- **Bug** - The issue documents broken, incorrect, or confusing behavior. This label is always accompanied by a `severity label`.
- **Duplicate** - The issue is a duplicate of another feature request or bug report.
- **Upstream Bug** - The issue is a result of an upstream issue.
- **Question** - The issue is more of a question than a request for new features or a report of broken features, but can sometimes lead to further discussion or changes of confusing or incongruous behavior or documentation.
- **Expected Behavior** - The issue is a bug report of intended functionality.
Priority

An issue’s priority is relative to its functional area. If a bug report, for example, about gitfs indicates that all users of gitfs will encounter this bug, then a P1 label will be applied, even though users who are not using gitfs will not encounter the bug. If a feature is requested by many users, it may be given a high priority.

- **P1** - The issue will be seen by all users.
- **P2** - The issue will be seen by most users.
- **P3** - The issue will be seen by about half of users.
- **P4** - The issue will not be seen by most users. Usually the issue is a very specific use case or corner case.

Severity

Severity labels are almost always only applied to issues labeled Bug.

- **Blocker** - The issue is blocking an impending release.
- **Critical** - The issue causes data loss, crashes or hangs salt processes, makes the system unresponsive, etc.
- **High Severity** - The issue reports incorrect functionality, bad functionality, a confusing user experience, etc.
- **Medium Severity** - The issue reports cosmetic items, formatting, spelling, colors, etc.

Functional Area

Many major components of Salt have corresponding GitHub labels. These labels are applied to all issues and pull requests as is reasonably appropriate. They are useful in organizing issues and pull requests according to the source code relevant to issues or the source code changed by pull requests.

- **Execution Module**
- **File Servers**
- **Grains**
- **Multi-Master**
- **Packaging** - Related to packaging of Salt, not Salt’s support for package management.
- **Pillar**
- **RAET**
- **Returners**
- **Runners**
- **SPM**
- **Salt-API**
- **Salt-Cloud**
- **Salt-SSH**
- **Salt-Syndic**
- **State Module**
- **Tests**
Functional Group

These labels sort issues and pull requests according to the internal SaltStack engineering teams.

- **Core** - The issue or pull request relates to code that is central or existential to Salt itself.

- **Platform** - The issue or pull request relates to support and integration with various platforms like traditional operating systems as well as containers, platform-based utilities like filesystems, command schedulers, etc., and system-based applications like webservers, databases, etc.

- **RIoT** - The issue or pull request relates to support and integration with various abstract systems like cloud providers, hypervisors, API-based services, etc.

- **Console** - The issue or pull request relates to the SaltStack enterprise console.

- **Documentation** - The issue or pull request relates to documentation.

Status

Status labels are used to define and track the state of issues and pull requests. Not all potential statuses correspond to a label, but some statuses are common enough that labels have been created for them. If an issue has not been moved beyond the **Blocked** milestone, it is very likely that it will only have a status label.

- **Cannot Reproduce** - The issue is a bug and has been reviewed by a SaltStack engineer, but it cannot be replicated with the provided information and context. Those involved with the bug will need to work through additional ideas until the bug can be isolated and verified.

- **Confirmed** - The issue is a bug and has been confirmed by a SaltStack engineer, who often documents a minimal working example that reproduces the bug.

- **Fixed Pending Verification** - The issue is a bug and has been fixed by one or more pull requests, which should link to the issue. Closure of the issue is contingent upon confirmation of resolution from the submitter. If the submitter reports a negative confirmation, this label is removed. If no response is given after a few weeks, then the issue will be assumed fixed and closed.

- **Info Needed** - The issue needs more information before it can be verified and resolved. For a feature request this may include a description of the use cases. Almost all bug reports need to include at least the versions of salt and its dependencies, the system type and version, commands used, debug logs, error messages, and relevant configs.

- **Pending Changes** - The pull request needs additional changes before it can be merged.

- **Pending Discussion** - The issue or pull request needs more discussion before it can be closed or merged. The status of the issue or pull request is not clear or apparent enough for definite action to be taken, or additional input from SaltStack, the submitter, or another party has been requested.

  If the issue is not a pull request, once the discussion has arrived at a cogent conclusion, this label will be removed and the issue will be accepted. If it is a pull request, the results of the discussion may require additional changes and thus, a **Pending Changes** label.

- **won't-fix** - The issue is legitimate, but it is not something the Salt core team is currently able or willing to fix or implement. Issues having this label may be revisited in the future, or solved by a Salt community member.
Test Status

These labels relate to the status of the automated tests that run on pull requests.

- **has-failing-test** - The PR currently has one or more failing tests that prevent the PR from being merged.
- **Needs Testcase** - The PR has code changes, but lack any automated tests. These PRs need automated tests written before they may be merged.

Other

These labels indicate miscellaneous issue types or statuses that are common or important enough to be tracked and sorted with labels.

- **Awesome** - The pull request implements an especially well crafted solution, or a very difficult but necessary change.
- **Help Wanted** - The issue appears to have a simple solution. Issues having this label should be a good starting place for new contributors to Salt.
- **Regression** - The issue is a bug that breaks functionality known to work in previous releases.
- **Story** - The issue is used by a SaltStack engineer to track progress on multiple related issues in a single place.
- **Stretch** - The issue is an optional goal for the current sprint but may not be delivered.
- **ZD** - The issue is related to a Zendesk customer support ticket.
- **<Release>** - The issue is scheduled to be implemented by <Release>. See here for a discussion of Salt’s release codenames.

29.12 Logging Internals

TODO

29.13 Package Providers

This page contains guidelines for writing package providers.

29.13.1 Package Functions

One of the most important features of Salt is package management. There is no shortage of package managers, so in the interest of providing a consistent experience in pkg states, there are certain functions that should be present in a package provider. Note that these are subject to change as new features are added or existing features are enhanced.
list_pkgs

This function should declare an empty dict, and then add packages to it by calling pkg_resource.add_pkg, like so:

```python
__salt__['pkg_resource.add_pkg'](ret, name, version)
```

The last thing that should be done before returning is to execute pkg_resource.sort_pkglist. This function does not presently do anything to the return dict, but will be used in future versions of Salt.

```python
__salt__['pkg_resource.sort_pkglist'](ret)
```

list_pkgs returns a dictionary of installed packages, with the keys being the package names and the values being the version installed. Example return data:

```python
{"foo": "1.2.3-4", "bar": "5.6.7-8"}
```

latest_version

Accepts an arbitrary number of arguments. Each argument is a package name. The return value for a package will be an empty string if the package is not found or if the package is up-to-date. The only case in which a non-empty string is returned is if the package is available for new installation (i.e. not already installed) or if there is an upgrade available.

If only one argument was passed, this function return a string, otherwise a dict of name/version pairs is returned.

This function must also accept **kwargs, in order to receive the fromrepo and repo keyword arguments from pkg states. Where supported, these arguments should be used to find the install/upgrade candidate in the specified repository. The fromrepo kwarg takes precedence over repo, so if both of those kwargs are present, the repository specified in fromrepo should be used. However, if repo is used instead of fromrepo, it should still work, to preserve backwards compatibility with older versions of Salt.

version

Like latest_version, accepts an arbitrary number of arguments and returns a string if a single package name was passed, or a dict of name/value pairs if more than one was passed. The only difference is that the return values are the currently-installed versions of whatever packages are passed. If the package is not installed, an empty string is returned for that package.

upgrade_available

Deprecated and destined to be removed. For now, should just do the following:

```python
def myfunc():
    return __salt__['pkg.latest_version'](name) != ""
```
install

The following arguments are required and should default to None:

1. name (for single-package pkg states)
2. pkgs (for multiple-package pkg states)
3. sources (for binary package file installation)

The first thing that this function should do is call \texttt{pkg\_resource.parse\_targets} (see below). This function will convert the SLS input into a more easily parsed data structure. \texttt{pkg\_resource.parse\_targets} may need to be modified to support your new package provider, as it does things like parsing package metadata which cannot be done for every package management system.

\begin{verbatim}
pkg_params, pkg_type = __salt__['pkg\_resource.parse\_targets'](name, pkgs, sources)
\end{verbatim}

Two values will be returned to the \texttt{install} function. The first of them will be a dictionary. The keys of this dictionary will be package names, though the values will differ depending on what kind of installation is being done:

- If \texttt{name} was provided (and \texttt{pkgs} was not), then there will be a single key in the dictionary, and its value will be \texttt{None}. Once the data has been returned, if the \texttt{version} keyword argument was provided, then it should replace the \texttt{None} value in the dictionary.

- If \texttt{pkgs} was provided, then \texttt{name} is ignored, and the dictionary will contain one entry for each package in the \texttt{pkgs} list. The values in the dictionary will be \texttt{None} if a version was not specified for the package, and the desired version if specified. See the \texttt{Multiple Package Installation Options} section of the \texttt{pkg\_installed} state for more info.

- If \texttt{sources} was provided, then \texttt{name} is ignored, and the dictionary values will be the path/URI for the package.

The second return value will be a string with two possible values: \texttt{repository} or \texttt{file}. The \texttt{install} function can use this value (if necessary) to build the proper command to install the targeted package(s).

Both before and after the installing the target(s), you should run \texttt{list\_pkgs} to obtain a list of the installed packages. You should then return the output of \texttt{salt.utils.data.compare\_dicts()}:

\begin{verbatim}
def myfunc():
    return salt.utils.data.compare_dicts(old, new)
\end{verbatim}

remove

Removes the passed package and return a list of the packages removed.

\subsection*{29.13.2 Package Repo Functions}

There are some functions provided by \texttt{pkg} which are specific to package repositories, and not to packages themselves. When writing modules for new package managers, these functions should be made available as stated below, in order to provide compatibility with the \texttt{pkg\_repo} state.

All repo functions should accept a basedir option, which defines which directory repository configuration should be found in. The default for this is dictated by the repo manager that is being used, and rarely needs to be changed.

\begin{verbatim}
basedir = "/etc/yum.repos.d"
__salt__['pkg\_list\_repos'](basedir)
\end{verbatim}
list_repos

Lists the repositories that are currently configured on this system.

```python
__salt__['pkg.list_repos']()
```

Returns a dictionary, in the following format:

```python
{'reponame': 'config_key_1': 'config value 1',
 'config_key_2': 'config value 2',
 'config_key_3': ['list item 1 (when appropriate)',
                  'list item 2 (when appropriate)']}
```

get_repo

Displays all local configuration for a specific repository.

```python
__salt__['pkg.get_repo'](repo="myrepo")
```

The information is formatted in much the same way as list_repos, but is specific to only one repo.

```python
{'config_key_1': 'config value 1',
 'config_key_2': 'config value 2',
 'config_key_3': ['list item 1 (when appropriate)',
                  'list item 2 (when appropriate)']}
```

del_repo

Removes the local configuration for a specific repository. Requires a repo argument, which must match the locally configured name. This function returns a string, which informs the user as to whether or not the operation was a success.

```python
__salt__['pkg.del_repo'](repo="myrepo")
```

mod_repo

Modify the local configuration for one or more option for a configured repo. This is also the way to create new repository configuration on the local system; if a repo is specified which does not yet exist, it will be created.

The options specified for this function are specific to the system; please refer to the documentation for your specific repo manager for specifics.

```python
__salt__['pkg.mod_repo'](repo="myrepo", url="http://myurl.com/repo")
```
29.13.3 Low-Package Functions

In general, the standard package functions as describes above will meet your needs. These functions use the system’s native repo manager (for instance, yum or the apt tools). In most cases, the repo manager is actually separate from the package manager. For instance, yum is usually a front-end for rpm, and apt is usually a front-end for dpkg. When possible, the package functions that use those package managers directly should do so through the low package functions.

It is normal and sane for pkg to make calls to lowpkgs, but lowpkg must never make calls to pkg. This is affects functions which are required by both pkg and lowpkg, but the technique in pkg is more performant than what is available to lowpkg. When this is the case, the lowpkg function that requires that technique must still use the lowpkg version.

list_pkgs

Returns a dict of packages installed, including the package name and version. Can accept a list of packages; if none are specified, then all installed packages will be listed.

```
installed = __salt__['lowpkg.list_pkgs']('foo', 'bar')
```

Example output:

```
{"foo": "1.2.3-4", "bar": "5.6.7-8"}
```

verify

Many (but not all) package management systems provide a way to verify that the files installed by the package manager have or have not changed. This function accepts a list of packages; if none are specified, all packages will be included.

```
installed = __salt__['lowpkg.verify']('httpd')
```

Example output:

```
{
    "/etc/httpd/conf/httpd.conf": {
        "mismatch": ["size", "md5sum", "mtime"],
        "type": "config",
    }
}
```

file_list

Lists all of the files installed by all packages specified. If not packages are specified, then all files for all known packages are returned.

```
installed = __salt__['lowpkg.file_list']('httpd', 'apache')
```

This function does not return which files belong to which packages; all files are returned as one giant list (hence the file_list function name. However, This information is still returned inside of a dict, so that it can provide any errors to the user in a sane manner.
{  
  "errors": ["package apache is not installed"],  
  "files": ["/etc/httpd", "/etc/httpd/conf", "/etc/httpd/conf.d", "...SNIP..."],  
}

file_dict

Lists all of the files installed by all packages specified. If not packages are specified, then all files for all known packages are returned.

```
installed = __salt__['lowpkg.file_dict']("httpd", "apache", "kernel")
```

Unlike file_list, this function will break down which files belong to which packages. It will also return errors in the same manner as file_list.

```
{  
  "errors": ["package apache is not installed"],  
  "packages": {  
    "httpd": ["/etc/httpd", "/etc/httpd/conf", "...SNIP..."],  
    "kernel": [  
      "/boot/.vmlinuz-2.6.32-279.el6.x86_64.hmac",  
      "/boot/System.map-2.6.32-279.el6.x86_64",  
      "...SNIP...",  
    ],  
  },  
}
```

29.14 Pull Requests

Salt is a large software project with many developers working together. We encourage all Salt users to contribute new features, bug fixes and documentation fixes. For those who haven't contributed to a large software project before we encourage you to consider the following questions when preparing a pull request.

This isn't an exhaustive list and these aren't necessarily hard and fast rules, but these are things we consider when reviewing a pull request.

- Does this change work on all platforms? In cases where it does not, is an appropriate and easy-to-understand reason presented to the user? Is it documented as-such? Have we thought about all the possible ways this code might be used and accounted as best we can for them?
- Will this code work on versions of all Python we support? Will it work on future versions?
- Are Python reserved keywords used? Are variables named in a way that will make it easy for the next person to understand what's going on?
- Does this code present a security risk in any way? What is the worst possible thing that an attacker could do with this code? If dangerous cases are possible, is it appropriate to document them? If so, has this been done? Would this change pass muster with a professional security audit? Is it obvious to a person using this code what the risks are?
- Is it readable? Does it conform to our style guide? Is the code documented such that the next person who comes along will be able to read and understand it? Most especially, are edge-cases documented to avoid regressions? Will it be immediately evident to the next person who comes along why this change was made?
- If appropriate, has the person who wrote the code which is being modified been notified and included in the process?

- What are the performance implications of this change? Is there a more efficient way to structure the logic and if so, does making the change balance itself against readability in a sensible way? Do the performance characteristics of the code change based on the way it is being invoked (i.e., through an API or various command-line tools)? Will it be easy to profile this change if it might be a problem?

- Are caveats considered and documented in the change?

- Will the code scale? More critically, will it scale in both directions? Salt runs in data-centers and on Raspberry Pi installations in the Sahara. It needs to work on big servers and tiny devices.

- Is appropriate documentation written both in public-facing docs and in-line? How will the user know how to use this? What will they do if it doesn't work as expected? Is this something a new user will understand? Can a user know all they need to about this functionality by reading the public docs?

- Is this a change in behavior? If so, is it in the appropriate branch? Are deprecation warnings necessary? Have those changes been fully documented? Have we fully thought through what implications a change in behavior might have?

- How has the code been tested? If appropriate are there automated tests which cover this? Is it likely to regress? If so, how has the potential of that regression been mitigated? What is the plan for ensuring that this code works going forward?

- If it’s asynchronous code, what is the potential for a race condition?

- Is this code an original work? If it’s borrowed from another project or found online are the appropriate licensing/attribution considerations handled?

- Is the reason for the change fully explained in the PR? If not for review, this is necessary so that somebody in the future can go back and figure out why it was necessary.

- Is the intended behavior of the change clear? How will that behavior be known to future contributors and to users?

- Does this code handle errors in a reasonable way? Have we gone back through the stack as much as possible to make sure that an error cannot be raised that we do not account for? Are errors tested for as well as proper functionality?

- If the code relies on external libraries, do we properly handle old versions of them? Do we require a specific version and if so is this version check implemented? Is the library available on the same platforms that module in question claims to support? If the code was written and tested against a particular library, have we documented that fact?

- Can this code freeze/hang/crash a running daemon? Can it stall a state run? Are there infinite loops? Are appropriate timeouts implemented?

- Is the function interface well documented? If argument types can not be inferred by introspection, are they documented?

- Are resources such as file-handles cleaned-up after they are used?

- Is it possible that a reference-cycle exists between objects that will leak memory?

- Has the code been linted and does it pass all tests?

- Does the change fully address the problem or is it limited to a small surface area? By this, I mean that it should be clear that the submitter has looked for other cases in the function or module where the given case might also be addressed. If additional changes are necessary are they documented in the code as a FIXME or the PR and in Github as an issue to be tracked?

- Will the code throw errors/warnings/stacktraces to the console during normal operation?
• Has all the debugging been removed?

• Does the code log any sensitive data? Does it show sensitive data in process lists? Does it store sensitive data to disk and if so, does it do so in a secure manner? Are there potential race conditions in between writing the data to disk and setting the appropriate permissions?

• Is it clear from the solution that the problem is well-understood? How can somebody who has never seen the problem feel confident that this proposed change is the best one?

• What’s hard-coded that might not need to be? Are we making sensible decisions for the user and allowing them to tune and change things where appropriate?

• Are utility functions used where appropriate? Does this change re-implement something we already have code for?

• Is the right thing being fixed? There are cases where it’s appropriate to fix a test and cases where it’s appropriate to fix the code that’s under test. Which is best for the user? Is this change a shortcut or a solution that will be solid in the months and years to come?

• How will this code react to changes elsewhere in the code base? What is it coupled to and have we fully thought through how best to present a coherent interface to consumers of a given function or method?

• Does this PR try to fix too many bugs/problems at once?

• Should this be split into multiple PRs to make them easier to test and reason about?

### 29.15 Pull Request Requirements

The following outlines what is required before a pull request can be merged into the salt project. For each of these requirements, an exception can be made that requires 3 approvals before merge. The exceptions are detailed more below.

#### 29.15.1 All PR requirements

• Approval Required: approval review from core team member OR 1 approval review from captain of working group

• Cannot merge your own PR until 1 reviewer approves from defined list above that is not the author.

• All Tests Pass

#### 29.15.2 Bug Fix PR requirements

• Test Coverage: regression test written to cover bug fix. Contributors only need to write test coverage for their specific changes.

• Point to the issue the PR is resolving. If there is not an issue one will need to be created.
29.15.3 Feature PR requirements

- Test Coverage: tests written to cover new feature. Contributors only need to write test coverage for their specific changes.
- Add .. versionadded:: <release> to module's documentation. If you are not certain which release your fix will be included in you can include TBD and the PR reviewer will let you know the correct name of the release you need to update to the versionadded.

29.15.4 Exceptions to all requirements

As previously stated, all of the above requirements can be bypassed with 3 approvals. PR’s that do not require tests include:

- documentation
- cosmetic changes (for example changing from log.debug to log.trace)
- fixing tests
- pylint
- changes outside of the salt directory

29.16 Reporting Bugs

Salt uses GitHub to track open issues and feature requests.

To file a bug, please navigate to the new issue page for the Salt project.

In an issue report, please include the following information:

- The output of salt --versions-report from the relevant machines. This can also be gathered remotely by using salt <my_tgt> test.versions_report.
- A description of the problem including steps taken to cause the issue to occur and the expected behaviour.
- Any steps taken to attempt to remediate the problem.
- Any configuration options set in a configuration file that may be relevant.
- A reproduceable test case. This may be as simple as an SLS file that illustrates a problem or it may be a link to a repository that contains a number of SLS files that can be used together to re-produce a problem. If the problem is transitory, any information that can be used to try and reproduce the problem is helpful.
- [Optional] The output of each salt component (master/minion/CLI) running with the -ldebug flag set.

Note: Please be certain to scrub any logs or SLS files for sensitive data!
29.17 Salt Topology

Salt is based on a powerful, asynchronous, network topology using ZeroMQ. Many ZeroMQ systems are in place to enable communication. The central idea is to have the fastest communication possible.

29.17.1 Servers

The Salt Master runs 2 network services. First is the ZeroMQ PUB system. This service by default runs on port 4505 and can be configured via the publish_port option in the master configuration.

Second is the ZeroMQ REP system. This is a separate interface used for all bi-directional communication with minions. By default this system binds to port 4506 and can be configured via the ret_port option in the master.

29.17.2 PUB/SUB

The commands sent out via the salt client are broadcast out to the minions via ZeroMQ PUB/SUB. This is done by allowing the minions to maintain a connection back to the Salt Master and then all connections are informed to download the command data at once. The command data is kept extremely small (usually less than 1K) so it is not a burden on the network.

29.17.3 Return

The PUB/SUB system is a one way communication, so once a publish is sent out the PUB interface on the master has no further communication with the minion. The minion, after running the command, then sends the command's return data back to the master via the ret_port.

29.18 Developing Salt Tutorial

This tutorial assumes you have:

- a web browser
- a GitHub account (<my_account>)
- a command line (CLI)
- git
- a text editor

29.18.1 Fork

In your browser, navigate to the saltstack/salt GitHub repository. Click on Fork (https://github.com/saltstack/salt/#fork-destination-box).

Note: If you have more than one GitHub presence, for example if you are a member of a team, GitHub will ask you into which area to clone Salt. If you don't know where, then select your personal GitHub account.
29.18.2 Clone

In your CLI, navigate to the directory into which you want clone the Salt codebase and submit the following command:

```
$ git clone https://github.com/<my_account>/salt.git
```

where `<my_account>` is the name of your GitHub account. After the clone has completed, add SaltStack as a second remote and fetch any changes from upstream.

```
$ cd salt
$ git remote add upstream https://github.com/saltstack/salt.git
$ git fetch upstream
```

For this tutorial, we will be working off from the `master` branch, which is the default branch for the SaltStack GitHub project. This branch needs to track `upstream/master` so that we will get all upstream changes when they happen.

```
$ git checkout master
$ git branch --set-upstream-to upstream/master
```

29.18.3 Fetch

Fetch any upstream changes on the `master` branch and sync them to your local copy of the branch with a single command:

```
$ git pull --rebase
```

**Note:** For an explanation on `pull` vs `pull --rebase` and other excellent points, see this article by Mislav Marohnić.

29.18.4 Branch

Now we are ready to get to work. Consult the sprint beginner bug list and select an execution module whose `__virtual__` function needs to be updated. I'll select the `alternatives` module.

Create a new branch off from `master`. Be sure to name it something short and descriptive.

```
$ git checkout -b virt_ret
```

29.18.5 Edit

Edit the file you have selected, and verify that the changes are correct.

```
$ vim salt/modules/alternatives.py
$ git diff
```

```
diff --git a/salt/modules/alternatives.py b/salt/modules/alternatives.py
index 1653e5f..30c0a59 100644
--- a/salt/modules/alternatives.py
+++ b/salt/modules/alternatives.py
```

(continues on next page)
+++ b/salt/modules/alternatives.py
@@ -30,7 +30,7 @@ def __virtual__():
     ...
     if os.path.isdir('/etc/alternatives'):
         return True
-    return False
+    return (False, 'Cannot load alternatives module: /etc/alternatives dir not found')

def _get_cmd():

29.18.6 Commit

Stage and commit the changes. Write a descriptive commit summary, but try to keep it less than 50 characters. Review your commit.

```bash
$ git add salt/modules/alternatives.py
$ git commit -m 'modules.alternatives: __virtual__ return err msg'
$ git show
```

Note: If you need more room to describe the changes in your commit, run `git commit` (without the `-m`, message, option) and you will be presented with an editor. The first line is the commit summary and should still be 50 characters or less. The following paragraphs you create are free form and will be preserved as part of the commit.

29.18.7 Push

Push your branch to your GitHub account. You will likely need to enter your GitHub username and password.

```bash
$ git push origin virt_ret
Username for 'https://github.com': <my_account>
Password for 'https://<my_account>@github.com':
```

Note: If authentication over https does not work, you can alternatively setup ssh keys. Once you have done this, you may need add the keys to your git repository configuration

```bash
$ git config ssh.key ~/.ssh/<key_name>
```

where `<key_name>` is the file name of the private key you created.
29.18.8 Merge

In your browser, navigate to the new pull request page on the saltstack/salt GitHub repository and click on compare across forks. Select <my_account> from the list of head forks and the branch you are wanting to merge into master (virt_ret in this case).

When you have finished reviewing the changes, click Create pull request.

If your pull request contains only a single commit, the title and comment will be taken from that commit’s summary and message, otherwise the branch name is used for the title. Edit these fields as necessary and click Create pull request.

Note: Although these instructions seem to be the official pull request procedure on github’s website, here are two alternative methods that are simpler.

- If you navigate to your clone of salt, https://github.com/<my_account>/salt, depending on how old your branch is or how recently you pushed updates on it, you may be presented with a button to create a pull request with your branch.
- I find it easiest to edit the following URL:
  https://github.com/saltstack/salt/compare/master...<my_account>:virt_ret

29.18.9 Resources

GitHub offers many great tutorials on various aspects of the git- and GitHub-centric development workflow:

https://help.github.com/

There are many topics covered by the Salt Developer documentation:

https://docs.saltstack.com/en/latest/topics/development/index.html

The contributing documentation presents more details on specific contributing topics:

https://docs.saltstack.com/en/latest/topics/development/contributing.html

29.19 Modular Systems

When first working with Salt, it is not always clear where all of the modular components are and what they do. Salt comes loaded with more modular systems than many users are aware of, making Salt very easy to extend in many places.

The most commonly used modular systems are execution modules and states. But the modular systems extend well beyond the more easily exposed components and are often added to Salt to make the complete system more flexible.
29.19.1 Developing New Modules

Interactive Debugging

Sometimes debugging with `print()` and extra logs sprinkled everywhere is not the best strategy.

IPython is a helpful debug tool that has an interactive python environment which can be embedded in python programs.

First the system will require IPython to be installed.

```
# Debian
apt-get install ipython

# Arch Linux
pacman -Syu ipython2

# RHEL/CentOS (via EPEL)
yum install python-ipython
```

Now, in the troubling python module, add the following line at a location where the debugger should be started:

```
test = "test123"
import IPython
IPython.embed_kernel()
```

After running a Salt command that hits that line, the following will show up in the log file:

```
[CRITICAL] To connect another client to this kernel, use:
[IPKernelApp] --existing kernel-31271.json
```

Now on the system that invoked `embed_kernel`, run the following command from a shell:

```
# NOTE: use ipython2 instead of ipython for Arch Linux
ipython console --existing
```

This provides a console that has access to all the vars and functions, and even supports tab-completion.

```
print(test)
test123
```

To exit IPython and continue running Salt, press Ctrl-d to logout.

Special Module Contents

These are things that may be defined by the module to influence various things.
__virtual__

Called before __virtual__()  

__proxyenabled__

grains and proxy modules
__proxyenabled__ as a list containing the names of the proxy types that the module supports.

__load__

__func_alias__

__outputter__

Dunder Dictionaries

Salt provides several special "dunder" dictionaries as a convenience for Salt development. These include __opts__, __context__, __salt__, and others. This document will describe each dictionary and detail where they exist and what information and/or functionality they provide.

The following dunder dictionaries are always defined, but may be empty

- __context__
- __grains__
- __pillar__
- __opts__

__opts__

Defined in: All modules

The __opts__ dictionary contains all of the options passed in the configuration file for the master or minion.

Note: In many places in salt, instead of pulling raw data from the __opts__ dict, configuration data should be pulled from the salt get functions such as config.get, aka __salt__['config.get']('foo:bar') The get functions also allow for dict traversal via the : delimiter. Consider using get functions whenever using __opts__ or __pillar__ and __grains__ (when using grains for configuration data)

The configuration file data made available in the __opts__ dictionary is the configuration data relative to the running daemon. If the modules are loaded and executed by the master, then the master configuration data is
available, if the modules are executed by the minion, then the minion configuration is available. Any additional information passed into the respective configuration files is made available

__salt__

Defined in: Auth, Beacons, Engines, Execution, Executors, Outputters, Pillars, Proxies, Renderers, Returners, Runners, SDB, SSH Wrappers, State, Thorium

__salt__ contains the execution module functions. This allows for all functions to be called as they have been set up by the salt loader.

```python
__salt__['cmd.run']('fdisk -l')
__salt__['network.ip_addrs']()
```

Note: When used in runners or outputters, __salt__ references other runner/outputter modules, and not execution modules.

__grains__

Filled in for: Execution, Pillar, Renderer, Returner, SSH Wrapper, State.

The __grains__ dictionary contains the grains data generated by the minion that is currently being worked with. In execution modules, state modules and returners this is the grains of the minion running the calls, when generating the external pillar the __grains__ is the grains data from the minion that the pillar is being generated for.

While __grains__ is defined for every module, it's only filled in for some.

__pillar__

Filled in for: Execution, Renderer, Returner, SSH Wrapper, State

The __pillar__ dictionary contains the pillar for the respective minion.

While __pillar__ is defined for every module, it's only filled in for some.

__ext_pillar__

Filled in for: Pillar

The __ext_pillar__ dictionary contains the external pillar modules.
During a state run the `__context__` dictionary persists across all states that are run and then is destroyed when the state ends.

When running an execution module `__context__` persists across all module executions until the modules are refreshed; such as when `saltutil.sync_all` or `state.apply` are executed.

A great place to see how to use `__context__` is in the `cp.py` module in `salt/modules/cp.py`. The fileclient authenticates with the master when it is instantiated and then is used to copy files to the minion. Rather than create a new fileclient for each file that is to be copied down, one instance of the fileclient is instantiated in the `__context__` dictionary and is reused for each file. Here is an example from `salt/modules/cp.py`:

```
if not "cp.fileclient" in __context__:
    __context__["cp.fileclient"] = salt.fileclient.get_file_client(__opts__)
```

Note: Because `__context__` may or may not have been destroyed, always be sure to check for the existence of the key in `__context__` and generate the key before using it.

---

## __utils__

Defined in: Cloud, Engine, Execution, File Server, Grain, Pillar, Proxy, Roster, Runner, SDB, State

## __proxy__

Defined in: Beacon, Engine, Execution, Executor, Proxy, Renderer, Returner, State, Util

## __runner__

Defined in: Engine, Roster, Thorium

Note: When used in engines, it should be called `__runners__` (plural)

## __executors__

Defined in: Executor

## __ret__

Defined in: Proxy
29.19.2 Configuration Options

A number of configuration options can affect the load process. This is a quick list of them:

- `autoload_dynamic_modules (Minion)`
- `cython_enable (Minion, Master)`
- `disable_modules (Minion)`
- `disable_returners (Minion)`
- `enable_zip_modules (Minion)`
- `extension_modules (Master)`
- `extmod_whitelist (Minion, Master)`
- `extmod_blacklist (Minion, Master)`
- `whitelist_modules (Minion)`
- `grains_dirs (Minion)`
- `module_dirs (Minion, Master)`
- `outputter_dirs (Minion, Master)`
- `providers (Minion)`
- `render_dirs (Minion)`
- `returner_dirs (Minion)`
- `runner_dirs (Master)`
- `states_dirs (Minion)`
- `utils_dirs (Minion)`
29.19.3 Loading Modules

Modules come primarily from several sources:

- The Salt package itself
- The Salt File Server
- The extmods directory
- Secondary packages installed

Using one source to override another is not supported.

The Salt Package

Salt itself ships with a large number of modules. These are part of the Salt package itself and don’t require the user to do anything to use them. (Although a number of them have additional dependencies and/or configuration.)

The Salt File Server

The user may add modules by simply placing them in special directories in their fileserver. The name of the directory inside of the file server is the directory name prepended by underscore, such as:

- _grains
- _modules
- _states

Modules must be synced before they can be used. This can happen a few ways, discussed below.

Note: Using saltenvs besides base may not work in all contexts.

Sync Via States

The minion configuration contains an option autoload_dynamic_modules which defaults to True. This option makes the state system refresh all dynamic modules when states are run. To disable this behavior set autoload_dynamic_modules to False in the minion config.

When dynamic modules are autoloaded via states, only the modules defined in the same saltenvs as the states currently being run.

Sync Via the saltutil Module

The saltutil module has a number of functions that can be used to sync all or specific dynamic modules. The saltutil.sync_* execution functions and runner functions can be used to sync modules to minions and the master, respectively.
The extmods Directory

Any files places in the directory set by `extension_modules` settings (`minion`, `master`, `default`, `/var/cache/salt/*/extmods`) can also be loaded as modules. Note that these directories are also used by the `saltutil.sync_*` functions (mentioned above) and files may be overwritten.

Secondary Packages

Third-party packages may also add modules to Salt if they are installed in the same system and Python environment as the Salt Minion or Master.

This is done via setuptools entry points:

```python
setup(
    # ...
    entry_points={"salt.loader": ["module_dirs=spirofs.loader:module"],
                 # ...
    }
)
```

Note that these are not synced from the Salt Master to the Minions. They must be installed independently on each Minion.

### 29.19.4 Module Types

The specific names used by each loading method above are as follows. See sections below for a short summary of each of these systems.

<table>
<thead>
<tr>
<th>Module Type</th>
<th>Salt Package Name</th>
<th>FS/Directory Name</th>
<th>Entry Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auth</td>
<td><code>salt.auth</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>auth&lt;sup&gt;1&lt;/sup&gt;</td>
<td>auth_dirs</td>
</tr>
<tr>
<td>Beacon</td>
<td><code>salt.beacons</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>beacons</td>
<td>beacons_dirs</td>
</tr>
<tr>
<td>Cache</td>
<td><code>salt.cache</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>cache</td>
<td>cache_dirs</td>
</tr>
<tr>
<td>Cloud</td>
<td><code>salt.cloud.clouds</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>clouds</td>
<td>cloud_dirs</td>
</tr>
<tr>
<td>Engine</td>
<td><code>salt.engines</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>engines</td>
<td>engines_dirs</td>
</tr>
<tr>
<td>Execution</td>
<td><code>salt.modules</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>modules</td>
<td>module_dirs</td>
</tr>
<tr>
<td>Executor</td>
<td><code>salt.executors</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>executors</td>
<td>executor_dirs</td>
</tr>
<tr>
<td>File Server</td>
<td><code>salt.fileserver</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>fileserver</td>
<td>fileserver_dirs</td>
</tr>
<tr>
<td>Grain</td>
<td><code>salt.grains</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>grains</td>
<td>grains_dirs</td>
</tr>
<tr>
<td>Log Handler</td>
<td><code>salt.log.handlers</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>log_handlers</td>
<td>log_handlers_dirs</td>
</tr>
<tr>
<td>Matcher</td>
<td><code>salt.matchers</code></td>
<td>matchers</td>
<td>matchers_dirs</td>
</tr>
<tr>
<td>Metaproxy</td>
<td><code>salt.metaproxy</code></td>
<td>metaproxy&lt;sup&gt;1&lt;/sup&gt;</td>
<td>metaproxy_dirs</td>
</tr>
<tr>
<td>Net API</td>
<td><code>salt.netapi</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>netapi&lt;sup&gt;1&lt;/sup&gt;</td>
<td>netapi_dirs</td>
</tr>
<tr>
<td>Outputter</td>
<td><code>salt.output</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>output</td>
<td>outputter_dirs</td>
</tr>
<tr>
<td>Pillar</td>
<td><code>salt.pillar</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>pillar</td>
<td>pillar_dirs</td>
</tr>
<tr>
<td>Proxy</td>
<td><code>salt.proxy</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>proxy</td>
<td>proxy_dirs</td>
</tr>
<tr>
<td>Queue</td>
<td><code>salt.queues</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>queues</td>
<td>queue_dirs</td>
</tr>
<tr>
<td>Renderer</td>
<td><code>salt.renderers</code>&lt;sup&gt;(index)&lt;/sup&gt;</td>
<td>renderers</td>
<td>render_dirs</td>
</tr>
</tbody>
</table>

continues on next page
### Table 1 – continued from previous page

<table>
<thead>
<tr>
<th>Module Type</th>
<th>Salt Package Name</th>
<th>FS/Directory Name</th>
<th>Entry Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Returner</td>
<td>salt.returners((index))</td>
<td>returners</td>
<td>returner_dirs</td>
</tr>
<tr>
<td>Roster</td>
<td>salt.roster((index))</td>
<td>roster</td>
<td>roster_dirs</td>
</tr>
<tr>
<td>Runner</td>
<td>salt.runners((index))</td>
<td>runners</td>
<td>runner_dirs</td>
</tr>
<tr>
<td>SDB</td>
<td>salt.sdb((index))</td>
<td>sdb</td>
<td>sdb_dirs</td>
</tr>
<tr>
<td>Serializer</td>
<td>salt.serializers((index))</td>
<td>serializers(^1)</td>
<td>serializers_dirs</td>
</tr>
<tr>
<td>SPM pkgdb</td>
<td>salt.spm.pkgdb</td>
<td>pkgdb(^1)</td>
<td>pkgdb_dirs</td>
</tr>
<tr>
<td>SPM pkgfiles</td>
<td>salt.spm.pkgfiles</td>
<td>pkgfiles(^1)</td>
<td>pkgfiles_dirs</td>
</tr>
<tr>
<td>SSH Wrapper</td>
<td>salt.client.ssh.wrapper</td>
<td>wrapper(^1)</td>
<td>wrapper_dirs</td>
</tr>
<tr>
<td>State</td>
<td>salt.states((index))</td>
<td>states</td>
<td>states_dirs</td>
</tr>
<tr>
<td>Thorium</td>
<td>salt.thorium((index))</td>
<td>thorium</td>
<td>thorium_dirs</td>
</tr>
<tr>
<td>Tokens</td>
<td>salt.tokens</td>
<td>tokens</td>
<td>tokens_dirs</td>
</tr>
<tr>
<td>Top</td>
<td>salt.tops((index))</td>
<td>tops</td>
<td>top_dirs</td>
</tr>
<tr>
<td>Util</td>
<td>salt.utils</td>
<td>utils</td>
<td>utils_dirs</td>
</tr>
<tr>
<td>Wheel</td>
<td>salt.wheels((index))</td>
<td>wheel</td>
<td>wheel_dirs</td>
</tr>
</tbody>
</table>

Note: While it is possible to import modules directly with the import statement, it is strongly recommended that the appropriate *dunder dictionary* is used to access them instead. This is because a number of factors affect module names, module selection, and module overloading.

### Auth

The auth module system allows for external authentication routines to be easily added into Salt. The *auth* function needs to be implemented to satisfy the requirements of an auth module. Use the `pam` module as an example.

See *External Authentication System* for more about authentication in Salt.

### Beacon

- **Writing Beacons**

Beacons are polled by the Salt event loop to monitor non-salt processes. See *Beacons* for more information about the beacon system.

### Cache

The minion cache is used by the master to store various information about minions. See *Minion Data Cache* for more information.

\(^1\) These modules cannot be loaded from the Salt File Server.
Cloud

Cloud modules are backend implementations used by Salt Cloud.

Engine

Engines are open-ended services managed by the Salt daemon (both master and minion). They may interact with event loop, call other modules, or a variety of non-salt tasks. See Salt Engines for complete details.

Execution

Execution modules make up the core of the functionality used by Salt to interact with client systems. The execution modules create the core system management library used by all Salt systems, including states, which interact with minion systems.

Execution modules are completely open ended in their execution. They can be used to do anything required on a minion, from installing packages to detecting information about the system. The only restraint in execution modules is that the defined functions always return a JSON serializable object.

Executor

Executors control how execution modules get called. The default is to just call them, but this can be customized.

File Server

The file server module system is used to create file server backends used by the Salt Master. These modules need to implement the functions used in the fileserver subsystem. Use the gitfs module as an example. See File Server Backends for more information.

Grains

- Writing Grains

Grain modules define extra routines to populate grains data. All defined public functions will be executed and MUST return a Python dict object. The dict keys will be added to the grains made available to the minion.

See Grains for more.

Log Handler

Log handlers allows the logs from salt (master or minion) to be sent to log aggregation systems.
Matcher

Matcher modules are used to define the *minion targeting expressions*. For now, it is only possible to override the *existing matchers* (the required CLI plumbing for custom matchers is not implemented yet).

Metaproxy

Metaproxy is an abstraction layer above the existing proxy minion. It enables adding different types of proxy minions that can still load existing proxymodules.

Net API

Net API modules are the actual server implementation used by Salt API.

Output

The output modules supply the outputter system with routines to display data in the terminal. These modules are very simple and only require the *output* function to execute. The default system outputter is the *nested* module.

Pillar

External Pillars

Salt provides a mechanism for generating pillar data by calling external pillar interfaces. This document will describe an outline of an ext_pillar module.

Location

Salt expects to find your ext_pillar module in the same location where it looks for other python modules. If the extension_modules option in your Salt master configuration is set, Salt will look for a pillar directory under there and load all the modules it finds. Otherwise, it will look in your Python site-packages salt/pillar directory.

Configuration

The external pillars that are called when a minion refreshes its pillars is controlled by the ext_pillar option in the Salt master configuration. You can pass a single argument, a list of arguments or a dictionary of arguments to your pillar:

```
ext_pillar:
    - example_a: some argument
    - example_b:
        - argumentA
        - argumentB
    - example_c:
        keyA: valueA
        keyB: valueB
```
The Module

Imports and Logging

Import modules your external pillar module needs. You should first include generic modules that come with stock Python:

```python
import logging
```

And then start logging. This is an idiomatic way of setting up logging in Salt:

```python
log = logging.getLogger(__name__)
```

Finally, load modules that are specific to what you are doing. You should catch import errors and set a flag that the `__virtual__` function can use later.

```python
try:
    import weird_thing
    EXAMPLE_A_LOADED = True
except ImportError:
    EXAMPLE_A_LOADED = False
```

Options

If you define an `__opts__` dictionary, it will be merged into the `__opts__` dictionary handed to the `ext_pillar` function later. This is a good place to put default configuration items. The convention is to name things `modulename.option`.

```python
__opts__ = {
    "example_a.someconfig": 137
}
```

Initialization

If you define an `__init__` function, it will be called with the following signature:

```python
def __init__(__opts__):
    # Do init work here
    ...
```

Note: The `__init__` function is ran every time a particular minion causes the external pillar to be called, so don't put heavy initialization code here. The `__init__` functionality is a side-effect of the Salt loader, so it may not be as useful in pillars as it is in other Salt items.
If you define a __virtual__ function, you can control whether or not this module is visible. If it returns False then Salt ignores this module. If it returns a string, then that string will be how Salt identifies this external pillar in its ext_pillar configuration. If you're not renaming the module, simply return True in the __virtual__ function, which is the same as if this function did not exist, then, the name Salt's ext_pillar will use to identify this module is its conventional name in Python.

This is useful to write modules that can be installed on all Salt masters, but will only be visible if a particular piece of software your module requires is installed.

```python
# This external pillar will be known as `example_a`
def __virtual__():
    if EXAMPLE_A_LOADED:
        return True
    return False

# This external pillar will be known as `something_else`__virtualname__ = "something_else"
def __virtual__():
    if EXAMPLE_A_LOADED:
        return __virtualname__
    return False
```

This is where the real work of an external pillar is done. If this module is active and has a function called ext_pillar, whenever a minion updates its pillar this function is called.

How it is called depends on how it is configured in the Salt master configuration. The first argument is always the current pillar dictionary, this contains pillar items that have already been added, starting with the data from pillar_roots, and then from any already-ran external pillars.

Using our example above:

```python
ext_pillar(id, pillar, "some argument")  # example_a
ext_pillar(id, pillar, "argumentA", "argumentB")  # example_b
ext_pillar(id, pillar, keyA="valueA", keyB="valueB")  # example_c
```

In the example_a case, pillar will contain the items from the pillar_roots, in example_b pillar will contain that plus the items added by example_a, and in example_c pillar will contain that plus the items added by example_b. In all three cases, id will contain the ID of the minion making the pillar request.

This function should return a dictionary, the contents of which are merged in with all of the other pillars and returned to the minion. Note: this function is called once for each minion that fetches its pillar data.

```python
def ext_pillar(minion_id, pillar, *args, **kwargs):
    my_pillar = {"external_pillar": {}}
    my_pillar["external_pillar"] = get_external_pillar_dictionary()
    return my_pillar
```
You can call pillar with the dictionary's top name to retrieve its data. From above example, 'external_pillar' is the top dictionary name. Therefore:

```
salt '*' pillar.get external_pillar
```

You shouldn't just add items to pillar and return that, since that will cause Salt to merge data that already exists. Rather, just return the items you are adding or changing. You could, however, use pillar in your module to make some decision based on pillar data that already exists.

This function has access to some useful globals:

- **__opts__**  A dictionary of mostly Salt configuration options. If you had an __opts__ dictionary defined in your module, those values will be included.
- **__salt__**  A dictionary of Salt module functions, useful so you don't have to duplicate functions that already exist. E.g. __salt__['cmd.run']( 'ls -l' ) Note, runs on the master
- **__grains__**  A dictionary of the grains of the minion making this pillar call.

**Example configuration**

As an example, if you wanted to add external pillar via the cmd_json external pillar, add something like this to your master config:

```
ext_pillar:
  - cmd_json: 'echo "\"arg\"":"\"value\"")
```

**Reminder**

Just as with traditional pillars, external pillars must be refreshed in order for minions to see any fresh data:

```
salt '*' saltutil.refresh_pillar
```

Used to define optional external pillar systems. The pillar generated via the filesystem pillar is passed into external pillars. This is commonly used as a bridge to database data for pillar, but is also the backend to the libvirt state used to generate and sign libvirt certificates on the fly.

**Proxy**

Proxy Minions are a way to manage devices that cannot run a full minion directly.

**Renderers**

Renderers are the system used to render sls files into salt highdata for the state compiler. They can be as simple as the py renderer and as complex as stateconf and pydsl.
**Returners**

Returners are used to send data from minions to external sources, commonly databases. A full returner will implement all routines to be supported as an external job cache. Use the `redis` returner as an example.

**Roster**

The *Roster system* is used by Salt SSH to enumerate devices.

**Runners**

Runners are purely master-side execution sequences.

**SDB**

- *Writing SDB Modules*

SDB is a way to store data that’s not associated with a minion. See *Storing Data in Other Databases*.

**Serializer**

Primarily used with `file.serialize`.

**State**

State modules are used to define the state interfaces used by Salt States. These modules are restrictive in that they must follow a number of rules to function properly.

**Note**: State modules define the available routines in sls files. If calling an execution module directly is desired, take a look at the `module` state.

**SPM pkgdb**

- *SPM Development Guide: Package Database*

pkgdb modules provides storage backends to the package database.

**SPM pkgfiles**

- *SPM Development Guide: Package Database*

pkgfiles modules handle the actual installation.
SSH Wrapper

SSH Wrapper

Salt-SSH Background

Salt-SSH works by creating a tar ball of salt, a bunch of python modules, and a generated short minion config. It then copies this onto the destination host over ssh, then uses that host's local python install to run `salt-client --local` with any requested modules. It does not automatically copy over states or cache files and since it uses a local file_client, modules that rely on `cp.cache*` functionality do not work.

SSH Wrapper modules

To support `cp` modules or other functionality which might not otherwise work in the remote environment, a wrapper module can be created. These modules are run from the salt-master initiating the salt-ssh command and can include logic to support the needed functionality. SSH Wrapper modules are located in `/salt/client/ssh/wrapper/` and are named the same as the execution module being extended. Any functions defined inside of the wrapper module are called from the `salt-ssh module.function` argument command rather than executing on the minion.

State Module example

Running salt states on an salt-ssh minion, obviously requires the state files themselves. To support this, a state module wrapper script exists at `salt/client/ssh/wrapper/state.py`, and includes standard state functions like `apply`, `sls`, and `highstate`. When executing `salt-ssh minion state.highstate`, these wrapper functions are used and include the logic to walk the low_state output for that minion to determine files used, gather needed files, tar them together, transfer the tar file to the minion over ssh, and run a state on the ssh minion. This state then extracts the tar file, applies the needed states and data, and cleans up the transferred files.

Wrapper Handling

From the wrapper script any invocations of `__salt__['some.module']()` do not run on the master which is running the wrapper, but instead magically are invoked on the minion over ssh. Should the function being called exist in the wrapper, the wrapper function will be used instead.

One way of supporting this workflow may be to create a wrapper function which performs the needed file copy operations. Now that files are resident on the ssh minion, the next step is to run the original execution module function. But since that function name was already overridden by the wrapper, a function alias can be created in the original execution module, which can then be called from the wrapper.

Example

The saltcheck module needs sls and tst files on the minion to function. The invocation of `saltcheck.run_state_tests` is run from the wrapper module, and is responsible for performing the needed file copy. The saltcheck execution module includes an alias line of `run_state_tests_ssh = salt.utils.funcutils.alias_function(run_state_tests, 'run_state_tests_ssh')` which creates an alias of `run_state_tests` with the name `run_state_tests_ssh`. At the end of the `run_state_tests` function in the wrapper module, it then calls `__salt__['saltcheck.run_state_tests_ssh']()`(). Since this function does not exist in the wrapper script, the call is made on the remote minion, which then having the needed files, runs as expected.
Replacement execution modules for *Salt SSH*.

**Thorium**

Modules for use in the *Thorium* event reactor.

**Tokens**

Token stores for *External Authentication*. See the `salt.tokens` docstring for details.

*Note:* The runner to load tokens modules is `saltutil.sync_eauth_tokens`.

**Tops**

Tops modules are used to convert external data sources into top file data for the state system.

**Util**

Just utility modules to use with other modules via `__utils__` (see *Dunder Dictionaries*).

**Wheel**

The wheel system is used to manage master side management routines. These routines are primarily intended for the API to enable master configuration.

### 29.20 Salt Extend

`salt-extend` is a templating tool for extending SaltStack. If you're looking to add a module to SaltStack, then the `salt-extend` utility can guide you through the process.

You can use Salt Extend to quickly create templated modules for adding new behaviours to some of the module subsystems within Salt.

Salt Extend takes a template directory and merges it into a SaltStack source code directory.

#### 29.20.1 Command line usage

See `salt-extend`
29.20.2 Choosing a template

The following templates are available:

**module**

Creates a new execution module within `salt/modules/{{module_name}}.py`

**module_unit**

Creates a new execution module unit test suite within `tests/unit/modules/test_{{module_name}}.py`

**state**

Creates a new state module within `salt/states/{{module_name}}.py`

**state_unit**

Creates a new state module unit test suite within `tests/unit/states/test_{{module_name}}.py`

29.20.3 Adding templates

1. Create a directory under `<src>/templates`
2. Create a file `template.yml` containing properties for
   - **description** - a description of the template
   - **questions** - a collection of additional questions to ask the user, the name of the item will be used as the key in the context dictionary within the jinja template.
     - **question** - The question to ask the user, as a string
     - **default** - (optional) the default value, can contain Jinja2 template syntax and has access to the default context properties

**Example template.yml**

```
# template.yml

description: "Execution module"
questions:
  depending_libraries:
    question: "What libraries does this module depend upon?"
  virtual_name:
    question: "What module virtual name to use?"
    default: "{{module_name}}"
```

3. Create the files within `<src>/templates/<your template>` to match the target

**Note:** File names can contain Jinja 2 template syntax, e.g. `('{{module_name}}.py')`
Example file in the template directory

```python
print("Hello {{module_name}}")
__virtual__ = "{{__virtual_name__}}"
```

Default context properties

The default context provides the following properties

- **description** - A description of the template
- **short_description** - A short description of the module as entered by the user
- **version** - The version name of the next release
- **module_name** - The module name as entered by the user
- **release_date** - The current date in the format `YYYY-MM-DD`
- **year** - The current year in the format `YYYY`

As well as any additional properties entered from the questions section of `template.yml`

29.20.4 API

salt.utils.extend module

29.21 Salt's Test Suite

Salt comes with a powerful integration and unit test suite allowing for the fully automated run of integration and/or unit tests from a single interface. It uses the combination of pytest, nox and Kitchen Salt to run these tests. Nox is used to manage all of the test python dependencies. When you run the test runner with nox, you will be installing the same python dependencies that we use to run our test suite on PRs and branch tests. Kitchen Salt is used to spin up our virtual machines based off of golden images. These virtual machines use the `salt-jenkins` sls states to configure any system dependencies.

To learn the basics of how Salt's test suite works, be sure to check out the [Salt's Test Suite: An Introduction](https://docs.saltstack.com/en/latest/topics/testing/intro.html) tutorial.

29.21.1 Nox

Nox is used to manage all of the python dependencies used in the test suite and spins up the different nox sessions. You can look at the `noxfile.py` in the salt repo to view all of the current nox configurations. In that file you will notice various nox sessions. When creating each of these sessions, nox will create a virtualenv with the specified interpreter. Once the virtualenv is created it will also install all of the required python dependencies required for that session and run the tests.

For example if you want to run all of the tests using the zeromq transport on python3 you would need to specify the zeromq transport and python3.

```bash
nox -e 'pytest-zeromq-3(coverage=False)'
```

As a contrast, when using the deprecated `runtests.py` test runner, the command would be:

```bash
nox -e 'runtests-zeromq-3(coverage=False)'
```
To run all the tests but on the tcp transport, you would need to specify the tcp session.

```
nox -e 'pytest-tcp-3(coverage=False)'
```

As a contrast, when using the deprecated `runtests.py` test runner, the command would be:

```
nox -e 'runtests-tcp-3(coverage=False)'
```

You can view all available sessions by running:

```
nox --list-sessions
```

For the most part you will only need nox to run the test suite, as this tool will install the exact same python dependencies we use to run on our test runs. The exception to this is when a system dependency is required, for example `mysql`. These system dependencies are installed with sls states managed in the `salt-jenkins` repo or you can manually install the dependency yourself.

### 29.21.2 System Dependencies

The system dependencies are installed from the `salt-jenkins` repo. The `golden-images-provision` state is what is run to determine what dependencies to install on which platform. We run this state only when we want to update our current VM images with new dependencies.

### 29.21.3 Kitchen Salt

We also use Kitchen Salt to spin up the VM's used for testing. You can view the kitchen-salt getting started for instructions on how to install and set it up. Kitchen Salt uses Test Kitchen to spin up the VM or container in the configured provider. Once the VM is spun up, Kitchen Salt can install salt and run a particular set of states. In the case of our branch and PR tests we create "Golden Images" which run the `salt-jenkins` states and install salt system dependencies beforehand. We only update these "Golden Images" when we need to upgrade or install a system dependency. You can view the kitchen-salt jenkins setup docs for instructions on how to set up Kitchen Salt similar to the jenkins environment we use to run branch and PR tests.

### 29.21.4 Test Directory Structure

Salt's test suite is located in the `tests/` directory in the root of Salt’s codebase.

With the migration to PyTest, Salt has created a separate directory for tests that are written taking advantage of the full potential of PyTest. These are located under `tests/pytests`.

As for the old test suite, it is divided into two main groups:

- **Integration Tests**
- **Unit Tests**

Within each of these groups, the directory structure roughly mirrors the structure of Salt's own codebase. Notice that there are directories for `states`, `modules`, `runners`, `output`, and more in each testing group.

The files that are housed in the `modules` directory of either the unit or the integration testing factions contain respective integration or unit test files for Salt execution modules.

The PyTest only tests under `tests/pytests` should, more or less, follow the same grouping as the old test suite.
Integration Tests

The Integration section of Salt’s test suite start up a number of Salt daemons to test functionality in a live environment. These daemons include two Salt Masters, one Syndic, and two Minions. This allows the Syndic interface to be tested and Master/Minion communication to be verified. All of the integration tests are executed as live Salt commands sent through the started daemons.

Integration tests are particularly good at testing modules, states, and shell commands, among other segments of Salt’s ecosystem. By utilizing the integration test daemons, integration tests are easy to write. They are also SaltStack’s generally preferred method of adding new tests.

The discussion in the Integration vs. Unit section of the testing tutorial is beneficial in learning why you might want to write integration tests vs. unit tests. Both testing arenas add value to Salt’s test suite and you should consider adding both types of tests if possible and appropriate when contributing to Salt.

• Integration Test Documentation

Unit Tests

Unit tests do not spin up any Salt daemons, but instead find their value in testing singular implementations of individual functions. Instead of testing against specific interactions, unit tests should be used to test a function’s logic as well as any return or raises statements. Unit tests also rely heavily on mocking external resources.

The discussion in the Integration vs. Unit section of the testing tutorial is useful in determining when you should consider writing unit tests instead of, or in addition to, integration tests when contributing to Salt.

• Unit Test Documentation

29.21.5 Running The Tests

There is only one requirement to install, to quickly get started running salt’s test suite: nox.

```shell
pip install nox
```

Once this requirement is installed, you can use the nox binary to run all of the tests included in Salt’s test suite:

```shell
nox -e 'pytest-zeromq-3(coverage=False)'
```

For more information about options you can pass the test runner, see the --help option:

```shell
nox -e 'pytest-zeromq-3(coverage=False)' -- --help
```

Running Test Subsections

Instead of running the entire test suite all at once, which can take a long time, there are several ways to run only specific groups of tests or individual tests:

• Run unit tests only: nox -e 'pytest-zeromq-3(coverage=False)' -- tests/unit/, using the deprecated runtests.py the command would be nox -e 'runtests-zeromq-3(coverage=False)' -- --unit-tests

• Run unit and integration tests for states: nox -e 'pytest-zeromq-3(coverage=False)' -- tests/unit/states/ tests/integration/states/, using the deprecated runtests.py the command would be nox -e 'runtests-zeromq-3(coverage=False)' -- --state-tests
• Run integration tests for an individual module: `nox -e 'pytest-zeromq-3(coverage=False)' -- tests/integration/modules/test_virt.py`, using the deprecated runtests.py the command would be `nox -e 'runtests-zeromq-3(coverage=False)' -- -n integration.modules.test_virt

• Run unit tests for an individual module: `nox -e 'pytest-zeromq-3(coverage=False)' -- tests/unit/modules/test_virt.py`, using the deprecated runtests.py the command would be `nox -e 'runtests-zeromq-3(coverage=False)' -- -n unit.modules.test_virt

• Run an individual test by using the class and test name (this example is for the `test_default_kvm_profile` test in the `tests/integration/module/test_virt.py`): `nox -e 'pytest-zeromq-3(coverage=False)' -- tests/integration/modules/test_virt.py::VirtTest::test_default_kvm_profile`, using the deprecated runtests.py the command would be `nox -e 'runtests-zeromq-3(coverage=False)' -- -n integration.modules.test_virt.VirtTest.test_default_kvm_profile

For more specific examples of how to run various test subsections or individual tests, please see the pytest documentation on how to run specific tests or the Running Specific Tests section of the Salt's Test Suite: An Introduction tutorial.

Running Unit Tests Without Integration Test Daemons

Since the unit tests do not require a master or minion to execute, it is often useful to be able to run unit tests individually, or as a whole group, without having to start up the integration testing daemons. Starting up the master, minion, and syndic daemons takes a lot of time before the tests can even start running and is unnecessary to run unit tests. To run unit tests without invoking the integration test daemons, simply add the unit directory as an argument:

```
nox -e 'pytest-zeromq-3(coverage=False)' -- tests/unit/
```

As a contrast, when using the deprecated runtests.py test runner, the command would be:

```
nox -e 'runtests-zeromq-3(coverage=False)' -- --unit-tests
```

All of the other options to run individual tests, entire classes of tests, or entire test modules still apply.

Running Destructive Integration Tests

Salt is used to change the settings and behavior of systems. In order to effectively test Salt's functionality, some integration tests are written to make actual changes to the underlying system. These tests are referred to as “destructive tests”. Some examples of destructive tests are changes may be testing the addition of a user or installing packages. By default, destructive tests are disabled and will be skipped.

Generally, destructive tests should clean up after themselves by attempting to restore the system to its original state. For instance, if a new user is created during a test, the user should be deleted after the related test(s) have completed. However, no guarantees are made that test clean-up will complete successfully. Therefore, running destructive tests should be done with caution.

**Note:** Running destructive tests will change the underlying system. Use caution when running destructive tests.

To run tests marked as destructive, set the `--run-destructive` flag:

```
nox -e 'pytest-zeromq-3(coverage=False)' -- --run-destructive
```

As a contrast, when using the deprecated runtests.py test runner, the command would be:
Running Cloud Provider Tests

Salt's testing suite also includes integration tests to assess the successful creation and deletion of cloud instances using Salt-Cloud for providers supported by Salt-Cloud.

The cloud provider tests are off by default and run on sample configuration files provided in tests/integration/files/conf/cloud.providers.d/. In order to run the cloud provider tests, valid credentials, which differ per provider, must be supplied. Each credential item that must be supplied is indicated by an empty string value and should be edited by the user before running the tests. For example, DigitalOcean requires a client key and an api key to operate. Therefore, the default cloud provider configuration file for DigitalOcean looks like this:

```
.digitalocean-config:
  driver: digitalocean
  client_key: ''
  api_key: ''
  location: New York 1
```

As indicated by the empty string values, the `client_key` and the `api_key` must be provided:

```
.digitalocean-config:
  driver: digitalocean
  client_key: wFGEwgregeqw3435gDger
  api_key: GDE43t43REGTrkilg43934t34qT43t4dgegerGEgg
  location: New York 1
```

Note: When providing credential information in cloud provider configuration files, do not include the single quotes.

Once all of the valid credentials for the cloud provider have been supplied, the cloud provider tests can be run by setting the `--cloud-provider-tests` flag:

```
nox -- 'runtests-zeromq-3(coverage=False)' -- --run-destructive
```

As a contrast, when using the deprecated `runtests.py` test runner, the command would be:

```
nox -- 'runtests-cloud-3(coverage=False)'
```

29.21.6 Automated Test Runs

SaltStack maintains a Jenkins server to allow for the execution of tests across supported platforms. The tests executed from Salt's Jenkins server create fresh virtual machines for each test run, then execute destructive tests on the new, clean virtual machine.

SaltStack's Jenkins server continuously runs the entire test suite, including destructive tests, on an array of various supported operating systems throughout the day. Each actively supported branch of Salt's repository runs the tests located in the respective branch's code. Each set of branch tests also includes a pylint run. These branch tests help ensure the viability of Salt code at any given point in time as pull requests are merged into branches throughout the day.
In addition to branch tests, SaltStack’s Jenkins server also runs tests on pull requests. These pull request tests include a smaller set of virtual machines that run on the branch tests. The pull request tests, like the branch tests, include a pylint test as well.

When a pull request is submitted to Salt’s repository on GitHub, the suite of pull request tests are started by Jenkins. These tests are used to gauge the pull request’s viability to merge into Salt’s codebase. If these initial tests pass, the pull request can then merged into the Salt branch by one of Salt’s core developers, pending their discretion. If the initial tests fail, core developers may request changes to the pull request. If the failure is unrelated to the changes in question, core developers may merge the pull request despite the initial failure.

As soon as the pull request is merged, the changes will be added to the next branch test run on Jenkins.

For a full list of currently running test environments, go to https://jenkinsci.saltstack.com.

Using Salt-Cloud on Jenkins

For testing Salt on Jenkins, SaltStack uses Salt-Cloud to spin up virtual machines. The script using Salt-Cloud to accomplish this is open source and can be found here: https://github.com/saltstack/salt/blob/master/tests/jenkins.py

29.21.7 Writing Tests

The salt testing infrastructure is divided into two classes of tests, integration tests and unit tests. These terms may be defined differently in other contexts, but for Salt they are defined this way:

- Unit Test: Tests which validate isolated code blocks and do not require external interfaces such as salt-call or any of the salt daemons.
- Integration Test: Tests which validate externally accessible features.

Salt testing uses unittest2 from the python standard library and MagicMock.

- Writing integration tests
- Writing unit tests

Naming Conventions

Any function in either integration test files or unit test files that is doing the actual testing, such as functions containing assertions, must start with test_:

```python
def test_user_present(self):
    ...
```

When functions in test files are not prepended with test_, the function acts as a normal, helper function and is not run as a test by the test suite.
Submitting New Tests

Which branch of the Salt codebase should new tests be written against? The location of where new tests should be submitted depends largely on the reason you're writing the tests.

Tests for New Features

If you are adding new functionality to Salt, please write the tests for this new feature in the same pull request as the new feature. New features should always be submitted to the `master` branch.

If you have already submitted the new feature, but did not write tests in the original pull request that has already been merged, please feel free to submit a new pull request containing tests. If the feature was recently added to Salt’s `master` branch, then the tests should be added there as well. However, if the feature was added to `master` some time ago and is already present in one or more release branches, please refer to the Tests for Entire Files or Functions section below for more details about where to submit tests for functions or files that do not already have tests.

Tests to Accompany a Bugfix

If you are writing tests for code that fixes a bug in Salt, tests will be required before merging the PR. A great option for most bugfixes is to adopt a TDD style approach:

- reproduce the issue
- write a test that exhibits the behavior
- write the bugfix

This helps ensure that known issues are not reintroduced into the codebase.

Tests for Entire Files or Functions

Sometimes entire files in Salt are completely untested. If you are writing tests for a file that doesn’t have any tests written for it, write your test against the earliest supported release branch that contains the file or function you're testing.

Once your tests are submitted in a pull request and is merged into the branch in question, the tests you wrote will be merged-forward by SaltStack core engineers and the new tests will propagate to the newer release branches. That way the tests you wrote will apply to all current and relevant release branches, and not just the `master` branch, for example. This methodology will help protect against regressions on older files in Salt’s codebase.

There may be times when the tests you write against an older branch fail in the merge-forward process because functionality has changed in newer release branches. In these cases, a Salt core developer may reach out to you for advice on the tests in question if the path forward is unclear.

Note: If tests are written against a file in an older release branch and then merged forward, there may be new functionality in the file that is present in the new release branch that is untested. It would be wise to see if new functionality could use additional testing once the test file has propagated to newer release branches.
Test Helpers

Several Salt-specific helpers are available. A full list is available by inspecting functions exported in tests.support.helpers.

@expensiveTest -- Designates a test which typically requires a relatively costly external resource, like a cloud virtual machine. This decorator is not normally used by developers outside of the Salt core team.

@destructiveTest -- Marks a test as potentially destructive. It will not be run by the test runner unless the `-run-destructive` test is expressly passed.

@requires_network -- Requires a network connection for the test to operate successfully. If a network connection is not detected, the test will not run.

@requires_salt_modules -- Requires all the modules in a list of modules in order for the test to be executed. Otherwise, the test is skipped.

@requires_system_grains -- Loads and passes the grains on the system as an keyword argument to the test function with the name grains.

@skip_if_binaries_missing(['list', 'of', 'binaries']) -- If called from inside a test, the test will be skipped if the binaries are not all present on the system.

@skip_if_not_root -- If the test is not executed as root, it will be skipped.

@with_system_user -- Creates and optionally destroys a system user within a test case. See implementation details in tests.support.helpers for details.

@with_system_group -- Creates and optionally destroys a system group within a test case. See implementation details in tests.support.helpers for details.

@with_system_user_and_group -- Creates and optionally destroys a system user and group within a test case. See implementation details in tests.support.helpers for details.

29.22 Integration Tests

The Salt integration tests come with a number of classes and methods which allow for components to be easily tested. These classes are generally inherited from and provide specific methods for hooking into the running integration test environment created by the integration tests.

It is noteworthy that since integration tests validate against a running environment that they are generally the preferred means to write tests.

The integration system is all located under tests/integration in the Salt source tree. Each directory within tests/integration corresponds to a directory in Salt's tree structure. For example, the integration tests for the test.py Salt module that is located in salt/modules should also be named test.py and reside in tests/integration/modules.
29.22.1 Preparing to Write Integration Tests

This guide assumes that your Salt development environment is already configured and that you have a basic understanding of contributing to the Salt codebase. If you're unfamiliar with either of these topics, please refer to the Installing Salt for Development and the Contributing pages, respectively.

This documentation also assumes that you have an understanding of how to run Salt's test suite, including running the test subsections, and running a single integration test file, class, or individual test.

29.22.2 Best Practices

Integration tests should be written to the following specifications.

What to Test?

Since integration tests are used to validate against a running Salt environment, integration tests should be written with the Salt components, and their various interactions, in mind.

- Isolate testing functionality. Don't rely on the pass or failure of other, separate tests.
- Individual tests should test against a single behavior.
- Since it occasionally takes some effort to “set up” an individual test, it may be necessary to call several functions within a single test. However, be sure that once the work has been done to set up a test, make sure you are clear about the functionality that is being tested.

Naming Conventions

Test names and docstrings should indicate what functionality is being tested. Test functions are named test_<fcn>_<test-name> where <fcn> is the function being tested and <test-name> describes the behavior being tested.

In order for integration tests to get picked up during a run of the test suite, each individual test must be prepended with the test_ naming syntax, as described above.

If a function does not start with test_, then the function acts as a "normal" function and is not considered a testing function. It will not be included in the test run or testing output.

The setUp and tearDown Functions

There are two special functions that can be utilized in the integration side of Salt's test suite: setUp and tearDown. While these functions are not required in all test files, there are many examples in Salt's integration test suite illustrating the broad usefulness of each function.

The setUp function is used to set up any repetitive or useful tasks that the tests in a test class need before running. For example, any of the mac_* integration tests should only run on macOS machines. The setUp function can be used to test for the presence of the Darwin kernel. If the Darwin kernel is not present, then the test should be skipped.

```python
def setUp(self):
    """
    Sets up test requirements
    """
    os_grain = self.run_function("grains.item", ["kernel"])
```

(continues on next page)
The `setUp` function can be used for many things. The above code snippet is only one example. Another example might be to ensure that a particular setting is present before running tests that would require the setting.

The `tearDown` function is used to clean up after any tests. This function is useful for restoring any settings that might have been changed during the test run.

**Note:** The `setUp` and `tearDown` functions run before and after each test in the test class that the `setUp` and `tearDown` functions are defined.

Be sure to read the *Destructive vs Non-Destructive Tests* section when using any kind of destructive functions that might alter the system running the test suite in either the `setUp` or `tearDown` function definitions.

### Testing Order

The test functions within a test class do not run in the order they were defined, but instead run in lexicographical order.

Note that if any `setUp` or `tearDown` functions are defined in the class, those functions will run before (for `setUp`) or after (for `tearDown`) each test case.

### 29.22.3 Integration Classes

The integration classes are located in `tests/integration/__init__.py` and can be extended therein. There are four classes available to extend:

- `ModuleCase`
- `ShellCase`
- `SSHCase`
- `SyndicCase`

**ModuleCase**

Used to define executions run via the master to minions and to call single modules and states. The available testing functions are:

`run_function`

Run a single salt function and condition the return down to match the behavior of the raw function call. This will run the command and only return the results from a single minion to verify.
run_state

Run the state.single command and return the state return structure.

minion_run

Run a single salt function on the 'minion' target and condition the return down to match the behavior of the raw function call.

ShellCase

Shell out to the scripts which ship with Salt. The testing functions are:

run_cp

Execute salt-cp. Pass in the argument string as it would be passed on the command line.

run_call

Execute salt-call, pass in the argument string as it would be passed on the command line.

run_cloud

Execute the salt-cloud command. Pass in the argument string as it would be passed on the command line.

run_key

Execute the salt-key command. Pass in the argument string as it would be passed on the command line.

run_run

Execute the salt-run command. Pass in the argument string as it would be passed on the command line.

run_run_plus

Execute the runner function the and return the return data and output in a dict
run_salt

Execute the salt command. Pass in the argument string as it would be passed on the command line.

run_script

Execute a salt script with the given argument string.

run_ssh

Execute the salt-ssh. Pass in the argument string as it would be passed on the command line.

SSHCase

Used to execute remote commands via salt-ssh. The available methods are as follows:

run_function

Run a single salt function via salt-ssh and condition the return down to match the behavior of the raw function call. This will run the command and only return the results from a single minion to verify.

SyndicCase

Used to execute remote commands via a syndic and is only used to verify the capabilities of the Salt Syndic. The available methods are as follows:

run_function

Run a single salt function and condition the return down to match the behavior of the raw function call. This will run the command and only return the results from a single minion to verify.

29.22.4 Examples

The following sections define simple integration tests present in Salt’s integration test suite for each type of testing class.

Module Example via ModuleCase Class

Import the integration module, this module is already added to the python path by the test execution. Inherit from the integration.ModuleCase class.

Now the workhorse method run_function can be used to test a module:
import os
from tests.support.case import ModuleCase

class TestModuleTest(ModuleCase):
    """
    Validate the test module
    """

def test_ping(self):
    """
    test.ping
    """
    self.assertTrue(self.run_function("test.ping"))

def test_echo(self):
    """
    test.echo
    """
    self.assertEqual(self.run_function("test.echo", ["text"], ["text"]), "text")

The first example illustrates the testing master issuing a `test.ping` call to a testing minion. The test asserts that the minion returned with a True value to the master from the `test.ping` call.

The second example similarly verifies that the minion executed the `test.echo` command with the `text` argument. The `assertEqual` call maintains that the minion ran the function and returned the data as expected to the master.

Shell Example via ShellCase

Validating the shell commands can be done via shell tests:

```
import sys
import shutil
import tempfile

from tests.support.case import ShellCase

class KeyTest(ShellCase):
    """
    Test salt-key script
    """
    _call_binary_ = "salt-key"

def test_list(self):
    """
    test salt-key -L
    """
    data = self.run_key("-L")
    expect = ['Unaccepted Keys:',
              'Accepted Keys:',
              'minion",
              'sub_minion",
              'Rejected:"
```
This example verifies that the `salt-key` command executes and returns as expected by making use of the `run_key` method.

**SSH Example via SSHCase**

Testing salt-ssh functionality can be done using the SSHCase test class:

```python
from tests.support.case import SSHCase

class SSHGrainsTest(SSHCase):
    
    def test_grains_id(self):
        cmd = self.run_function("grains.get", ["id"])
        self.assertEqual(cmd, "localhost")
```

**Testing Event System via SaltMinionEventAssertsMixin**

The fundamentally asynchronous nature of Salt makes testing the event system a challenge. The `SaltMinionEventAssertsMixin` provides a facility for testing that events were received on a minion event bus.

```python
import salt.utils.event
from tests.support.mixins import SaltEventAssertsMixin

class TestEvent(SaltEventAssertsMixin):
    
    def test_event(self):
        e = salt.utils.event.get_event("minion", sock_dir=self.minion_opts["sock_dir"], opts=self.minion_opts)

        e.fire_event({"a": "b"}, "/test_event")

        self.assertMinionEventReceived({"a": "b"})
```
Syndic Example via SyndicCase

Testing Salt’s Syndic can be done via the SyndicCase test class:

```python
from tests.support.case import SyndicCase

class TestSyndic(SyndicCase):
    """
    Validate the syndic interface by testing the test module
    """

def test_ping(self):
    """
    test.ping
    """
    self.assertTrue(self.run_function("test.ping"))
```

This example verifies that a `test.ping` command is issued from the testing master, is passed through to the testing syndic, down to the minion, and back up again by using the `run_function` located with in the `SyndicCase` test class.

29.22.5 Integration Test Files

Since using Salt largely involves configuring states, editing files, and changing system data, the integration test suite contains a directory named `files` to aid in testing functions that require files. Various Salt integration tests use these example files to test against instead of altering system files and data.

Each directory within `tests/integration/files` contain files that accomplish different tasks, based on the needs of the integration tests using those files. For example, `tests/integration/files/ssh` is used to boot-strap the test runner for salt-ssh testing, while `tests/integration/files/pillar` contains files storing data needed to test various pillar functions.

The `tests/integration/files` directory also includes an integration state tree. The integration state tree can be found at `tests/integration/files/file/base`.

The following example demonstrates how integration files can be used with ModuleCase to test states:

```python
# Import python libs
from __future__ import absolute_import
import os
import shutil

# Import Salt Testing libs
from tests.support.case import ModuleCase
from tests.support.paths import FILES, TMP
from tests.support.mixins import SaltReturnAssertsMixin

# Import salt libs
import salt.utils.files

HFILE = os.path.join(TMP, "hosts")

class HostTest(ModuleCase, SaltReturnAssertsMixin):
    """
    Validate the host state
    """
```
To access the integration files, a variable named FILES points to the tests/integration/files directory. This is where the referenced host.present sls file resides.

In addition to the static files in the integration state tree, the location TMP can also be used to store temporary files that the test system will clean up when the execution finishes.

### 29.22.6 Destructive vs Non-Destructive Tests

Since Salt is used to change the settings and behavior of systems, one testing approach is to run tests that make actual changes to the underlying system. This is where the concept of destructive integration tests comes into play. Tests can be written to alter the system they are running on. This capability is what fills in the gap needed to properly test aspects of system management like package installation.

Any test that changes the underlying system in any way, such as creating or deleting users, installing packages, or changing permissions should include the @destructive decorator to signal system changes and should be written with care. System changes executed within a destructive test should also be restored once the related tests have completed. For example, if a new user is created to test a module, the same user should be removed after the test is completed to maintain system integrity.

To write a destructive test, import, and use the destructiveTest decorator for the test method:

```python
from tests.support.case import ModuleCase
from tests.support.helpers import destructiveTest, skip_if_not_root

class DestructiveExampleModuleTest(ModuleCase):
    ""
    Demonstrate a destructive test
    """
    @destructiveTest
    @skip_if_not_root
```

(continues on next page)
def test_user_not_present(self):
    
    """
    This is a DESTRUCTIVE TEST it creates a new user on the minion.
    And then destroys that user.
    """
    ret = self.run_state("user.present", name="salt_test")
    self.assertSaltTrueReturn(ret)
    ret = self.run_state("user.absent", name="salt_test")
    self.assertSaltTrueReturn(ret)

29.22.7 Cloud Provider Tests

Cloud provider integration tests are used to assess Salt-Cloud's ability to create and destroy cloud instances for various supported cloud providers. Cloud provider tests inherit from the ShellCase Integration Class.

Any new cloud provider test files should be added to the tests/integration/cloud/providers/ directory. Each cloud provider test file also requires a sample cloud profile and cloud provider configuration file in the integration test file directory located at tests/integration/files/conf/cloud.*.d/.

The following is an example of the default profile configuration file for Digital Ocean, located at: tests/integration/files/conf/cloud.profiles.d/digitalocean.conf:

digitalocean-test:
    provider: digitalocean-config
    image: Ubuntu 14.04 x64
    size: 512MB

Each cloud provider requires different configuration credentials. Therefore, sensitive information such as API keys or passwords should be omitted from the cloud provider configuration file and replaced with an empty string. The necessary credentials can be provided by the user by editing the provider configuration file before running the tests.

The following is an example of the default provider configuration file for Digital Ocean, located at: tests/integration/files/conf/cloud.providers.d/digitalocean.conf:

digitalocean-config:
    driver: digitalocean
    client_key: ''
    api_key: ''
    location: New York 1

In addition to providing the necessary cloud profile and provider files in the integration test suite file structure, appropriate checks for if the configuration files exist and contain valid information are also required in the test class's setUp function:

from tests.support.case import ShellCase
from tests.support.paths import FILES

class LinodeTest(ShellCase):
    """
    Integration tests for the Linode cloud provider in Salt-Cloud
    """

    def setUp(self):
        """
        (continues on next page)
Sets up the test requirements

```
super(LinodeTest, self).setUp()
```

# check if appropriate cloud provider and profile files are present
profile_str = "linode-config:"
provider = "linode"
providers = self.run_cloud("--list-providers")
if profile_str not in providers:
    self.skipTest(
        "Configuration file for {0} was not found. Check {0}.conf files "
        "in tests/integration/files/conf/cloud.*.d/ to run these tests."
        .format(provider)
    )

# check if apikey and password are present
path = os.path.join(FILES, "conf", "cloud.providers.d", provider + ".conf")
config = cloud_providers_config(path)
api = config["linode-config"]["linode"]["apikey"]
password = config["linode-config"]["linode"]["password"]
if api == "" or password == "":
    self.skipTest(
        "An api key and password must be provided to run these tests. Check "
        "tests/integration/files/conf/cloud.providers.d/{0}.conf".format(
            provider
        )
    )

Repeatedly creating and destroying instances on cloud providers can be costly. Therefore, cloud provider tests are
off by default and do not run automatically. To run the cloud provider tests, the --cloud-provider-tests flag must be provided:

```
./tests/runtests.py --cloud-provider-tests
```

Since cloud provider tests do not run automatically, all provider tests must be preceded with the @expensiveTest
decorator. The expensive test decorator is necessary because it signals to the test suite that the
--cloud-provider-tests flag is required to run the cloud provider tests.

To write a cloud provider test, import, and use the expensiveTest decorator for the test function:

```
from tests.support.helpers import expensiveTest

@expensiveTest
def test_instance(self):
    
    Test creating an instance on Linode

    name = "linode-testing"

    # create the instance
    instance = self.run_cloud("-p linode-test {0}".format(name))
    str = "
```

(continues on next page)
# check if instance with salt installed returned as expected
try:
    self.assertIn(str, instance)
except AssertionError:
    self.run_cloud("-d {0} --assume-yes".format(name))
raise

# delete the instance
delete = self.run_cloud("-d {0} --assume-yes".format(name))
str = "True"
try:
    self.assertIn(str, delete)
except AssertionError:
    raise

## 29.22.8 Adding New Directories

If the corresponding Salt directory does not exist within `tests/integration`, the new directory must be created along with the appropriate test file to maintain Salt's testing directory structure.

In order for Salt's test suite to recognize tests within the newly created directory, options to run the new integration tests must be added to `tests/runtests.py`. Examples of the necessary options that must be added can be found here: https://github.com/saltstack/salt/blob/master/tests/runtests.py. The functions that need to be edited are `setup_additional_options`, `validate_options`, and `run_integration_tests`.

### 29.23 Writing Unit Tests

#### 29.23.1 Introduction

Like many software projects, Salt has two broad-based testing approaches -- integration testing and unit testing. While integration testing focuses on the interaction between components in a sandboxed environment, unit testing focuses on the singular implementation of individual functions.

Unit tests should be used specifically to test a function's logic. Unit tests rely on mocking external resources.

While unit tests are good for ensuring consistent results, they are most useful when they do not require more than a few mocks. Effort should be made to mock as many external resources as possible. This effort is encouraged, but not required. Sometimes the isolation provided by completely mocking the external dependencies is not worth the effort of mocking those dependencies.

In these cases, requiring an external library to be installed on the system before running the test file is a useful way to strike this balance. For example, the unit tests for the MySQL execution module require the presence of the MySQL python bindings on the system running the test file before proceeding to run the tests.

Overly detailed mocking can also result in decreased test readability and brittleness as the tests are more likely to fail when the code or its dependencies legitimately change. In these cases, it is better to add dependencies to the test runner dependency state.
29.23.2 Preparing to Write a Unit Test

This guide assumes that your Salt development environment is already configured and that you have a basic understanding of contributing to the Salt codebase. If you're unfamiliar with either of these topics, please refer to the Installing Salt for Development and the Contributing pages, respectively.

This documentation also assumes that you have an understanding of how to run Salt's test suite, including running the unit test subsection, running the unit tests without testing daemons to speed up development wait times, and running a unit test file, class, or individual test.

29.23.3 Best Practices

Unit tests should be written to the following specifications.

What to Test?

Since unit testing focuses on the singular implementation of individual functions, unit tests should be used specifically to test a function's logic. The following guidelines should be followed when writing unit tests for Salt's test suite:

- Each raise and return statement needs to be independently tested.
- Isolate testing functionality. Don't rely on the pass or failure of other, separate tests.
- Test functions should contain only one assertion, at most, multiple assertions can be made, but against the same outcome.
- Many Salt execution modules are merely wrappers for distribution-specific functionality. If there isn’t any logic present in a simple execution module, consider writing an integration test instead of heavily mocking a call to an external dependency.

Mocking Test Data

A reasonable effort needs to be made to mock external resources used in the code being tested, such as APIs, function calls, external data either globally available or passed in through function arguments, file data, etc.

- Test functions should contain only one assertion and all necessary mock code and data for that assertion.
- External resources should be mocked in order to "block all of the exits". If a test function fails because something in an external library wasn’t mocked properly (or at all), this test is not addressing all of the "exits" a function may experience. We want the Salt code and logic to be tested, specifically.
- Consider the fragility and longevity of a test. If the test is so tightly coupled to the code being tested, this makes a test unnecessarily fragile.
- Make sure you are not mocking the function to be tested so vigorously that the test return merely tests the mocked output. The test should always be testing a function's logic.
Mocking Loader Modules

Salt loader modules use a series of globally available dunder variables, `__salt__`, `__opts__`, `__pillar__`, etc. To facilitate testing these modules `pytest-salt-factories` has a plugin which will prepare the module globals by patching and mocking the dunder variables prior to running each test, as long as the test module defines a fixture named `configure_loader_modules`. Check out the code for the `pytest-salt-factories` plugin to know how it’s internals work.

The reason for the existence of this plugin is because historically one would add these dunder variables directly on the imported module. This, however, introduces unexpected behavior when running the full test suite since those attributes would not be removed once we were done testing the module and would therefore leak to other modules being tested with unpredictable results. This is the kind of work that should be deferred to mock, and that’s exactly what this plugin provides.

As an example, if one needs to specify some options which should be available to the module being tested one should do:

```python
import pytest
import salt.modules.somemodule as somemodule

@ pytest.fixture
def configure_loader_modules():
    
    This fixture should return a dictionary which is what's going to be used to patch and mock Salt's loader

    return {somemodule: {"__opts__": {"test": True}}}
```

Consider this more extensive example from `tests/pytests/unit/beacons/test_sensehat.py`:

```python
import pytest
import salt.beacons.sensehat as sensehat
from tests.support.mock import MagicMock

@ pytest.fixture
def configure_loader_modules():
    return {
        sensehat: {
            "__salt__": {
                "sensehat.get_humidity": MagicMock(return_value=80),
                "sensehat.get_temperature": MagicMock(return_value=30),
                "sensehat.get_pressure": MagicMock(return_value=1500),
            },
        }
    }

def test_non_list_config():
    config = {}

    ret = sensehat.validate(config)

    assert ret == (False, "Configuration for sensehat beacon must be a list.")

def test_empty_config():
```

(continues on next page)
config = [[]]
ret = sensehat.validate(config)
assert ret == (False, "Configuration for sensehat beacon requires sensors.")

def test_sensehat_humidity_match():
    config = ["sensors": {"humidity": "70%"}]
    ret = sensehat.validate(config)
    assert ret == (True, "Valid beacon configuration")
    ret = sensehat.beacon(config)
    assert ret == ["tag": "sensehat/humidity", "humidity": 80]]

def test_sensehat_temperature_match():
    config = ["sensors": {"temperature": 20}]
    ret = sensehat.validate(config)
    assert ret == (True, "Valid beacon configuration")
    ret = sensehat.beacon(config)
    assert ret == ["tag": "sensehat/temperature", "temperature": 30}]

def test_sensehat_temperature_match_range():
    config = ["sensors": {"temperature": [20, 29]}
    ret = sensehat.validate(config)
    assert ret == (True, "Valid beacon configuration")
    ret = sensehat.beacon(config)
    assert ret == ["tag": "sensehat/temperature", "temperature": 30}]

def test_sensehat_pressure_match():
    config = ["sensors": {"pressure": "1400"}]
    ret = sensehat.validate(config)
    assert ret == (True, "Valid beacon configuration")
    ret = sensehat.beacon(config)
    assert ret == ["tag": "sensehat/pressure", "pressure": 1500}]

def test_sensehat_no_match():
    config = ["sensors": {"pressure": "1600"}]
    ret = sensehat.validate(config)
```python
assert ret == (True, "Valid beacon configuration")
ret = sensehat.beacon(config)
assert ret == []
```

What happens in the above example is we mock several calls of the `sensehat` module to return known expected values to assert against.

### Mocking Filehandles

**Note:** This documentation applies to the 2018.3 release cycle and newer. The extended functionality for `mock_open` described below does not exist in the 2017.7 and older release branches.

Opening files in Salt is done using `salt.utils.files.fopen()`. When testing code that reads from files, the `mock_open` helper can be used to mock filehandles. Note that is not the same `mock_open` as `unittest.mock.mock_open()` from the Python standard library, but rather a separate implementation which has additional functionality.

```python
from tests.support.mock import patch, mock_open
import salt.modules.mymod as mymod

def test_something():
    fopen_mock = mock_open(read_data="foo\nbar\nbaz\n")
    with patch("salt.utils.files.fopen", fopen_mock):
        result = mymod.myfunc()
        assert result is True
```

This will force any filehandle opened to mimic a filehandle which, when read, produces the specified contents.

**Important:** String Types

When configuring your `read_data`, make sure that you are using bytestrings (e.g. b"foo\nbar\nbaz\n") when the code you are testing is opening a file for binary reading, otherwise the tests will fail. The mocked filehandles produced by `mock_open` will raise a `TypeError` if you attempt to read a bytestring when opening for non-binary reading, and similarly will not let you read a string when opening a file for binary reading. They will also not permit bytestrings to be "written" if the mocked filehandle was opened for non-binary writing, and vice-versa when opened for non-binary writing. These enhancements force test writers to write more accurate tests.

### More Complex Scenarios

#### Multiple File Paths

What happens when the code being tested reads from more than one file? For those cases, you can pass `read_data` as a dictionary:

```python
import textwrap
```

(continues on next page)
from tests.support.mock import patch, mock_open

import salt.modules.mymod as mymod

def test_something():
    contents = {
        "/etc/foo.conf": textwrap.dedent("foo
    bar
    baz
    ")
    },
    "/etc/b*.conf": textwrap.dedent("one
two
three
    ")
    ),
    }
    fopen_mock = mock_open(read_data=contents)
    with patch("salt.utils.files.fopen", fopen_mock):
        result = mymod.myfunc()
        assert result is True

This would make salt.utils.files.fopen() produce filehandles with different contents depending on which file was being opened by the code being tested. /etc/foo.conf and any file matching the pattern /etc/b*.conf would work, while opening any other path would result in a FileNotFoundError being raised.

Since file patterns are supported, it is possible to use a pattern of '*' to define a fallback if no other patterns match the filename being opened. The below two mock_open calls would produce identical results:

mock_open(read_data="foo\n")
mock_open(read_data=｛"*": "foo\n"｝)

Note: Take care when specifying the read_data as a dictionary, in cases where the patterns overlap (e.g. when both /etc/b*.conf and /etc/bar.conf are in the read_data). Dictionary iteration order will determine which pattern is attempted first, second, etc., with the exception of * which is used when no other pattern matches. If your test case calls for specifying overlapping patterns, and you are not running Python 3.6 or newer, then an OrderedDict can be used to ensure matching is handled in the desired way:

contents = OrderedDict()
contents["/etc/bar.conf"] = "foo\nbar\nbaz\n"
contents["/etc/b*.conf"] = IOError(errno.EACCES, "Permission denied")
contents["*"] = ʹThis is a fallback for files not beginning with "/etc/b\n"
fopen_mock = mock_open(read_data=contents)
Raising Exceptions

Instead of a string, an exception can also be used as the `read_data`:

```python
import errno
from tests.support.mock import patch, mock_open
import salt.modules.mymod as mymod

def test_something():
    exc = IOError(errno.EACCES, "Permission denied")
    fopen_mock = mock_open(read_data=exc)
    with patch("salt.utils.files.fopen", fopen_mock):
        mymod.myfunc()
```

The above example would raise the specified exception when any file is opened. The expectation would be that `mymod.myfunc()` would gracefully handle the IOError, so a failure to do that would result in it being raised and causing the test to fail.

Multiple File Contents

For cases in which a file is being read more than once, and it is necessary to test a function's behavior based on what the file looks like the second (or third, etc.) time it is read, just specify the contents for that file as a list. Each time the file is opened, `mock_open` will cycle through the list and produce a mocked filehandle with the specified contents. For example:

```python
import errno
import textwrap
from tests.support.mock import patch, mock_open
import salt.modules.mymod as mymod

def test_something():
    contents = {
        "/etc/foo.conf": [
            textwrap.dedent("""
            foo
            bar
            """"
        ],
        "/etc/b*.conf": [
            IOError(errno.ENOENT, "No such file or directory"),
            textwrap.dedent("""
            foo
            bar
            baz
            """"
        ],
    }
```

(continues on next page)
Using this example, the first time `/etc/foo.conf` is opened, it will simulate a file with the first string in the list as its contents, while the second time it is opened, the simulated file's contents will be the second string in the list.

If no more items remain in the list, then attempting to open the file will raise a `RuntimeError`. In the example above, if `/etc/foo.conf` were to be opened a third time, a `RuntimeError` would be raised.

Note that exceptions can also be mixed in with strings when using this technique. In the above example, if `/etc/bar.conf` were to be opened twice, the first time would simulate the file not existing, while the second time would simulate a file with string defined in the second element of the list.

Note: Notice that the second path in the `contents` dictionary above (`/etc/b*.conf`) contains an asterisk. The items in the list are cycled through for each match of a given pattern (not separately for each individual file path), so this means that only two files matching that pattern could be opened before the next one would raise a `RuntimeError`.

### Accessing the Mocked Filehandles in a Test

Accessing the Mocked Filehandles in a Test

Note: The code for the `MockOpen`, `MockCall`, and `MockFH` classes (referenced below) can be found in `tests/support/mock.py`. There are extensive unit tests for them located in `tests/unit/test_mock.py`.

The above examples simply show how to mock `salt.utils.files.fopen()` to simulate files with the contents you desire, but you can also access the mocked filehandles (and more), and use them to craft assertions in your tests. To do so, just add an `as` clause to the end of the `patch` statement:

```python
fopen_mock = mock_open(read_data="foo\nbar\nbaz\n")
with patch("salt.utils.files.fopen", fopen_mock) as m_open:
    # do testing here
    ...
```

When doing this, `m_open` will be a `MockOpen` instance. It will contain several useful attributes:

- **read_data** - A dictionary containing the `read_data` passed when `mock_open` was invoked. In the event that multiple file paths are not used, then this will be a dictionary mapping `*` to the `read_data` passed to `mock_open`.
- **call_count** - An integer representing how many times `salt.utils.files.fopen()` was called to open a file.
• **calls** - A list of `MockCall` objects. A `MockCall` object is a simple class which stores the arguments passed to it, making the positional arguments available via its `args` attribute, and the keyword arguments available via its `kwargs` attribute.

```python
from tests.support.mock import patch, mock_open, MockCall
import salt.modules.mymod as mymod

def test_something():
    with patch("salt.utils.files.fopen", mock_open(read_data=b"foo\n")) as m_open:
        mymod.myfunc()
        # Assert that only two opens attempted
        assert m_open.call_count == 2
        # Assert that only /etc/foo.conf was opened
        assert all(call.args[0] == "/etc/foo.conf" for call in m_open.calls)
        # Assert that the first open was for binary read, and the
        # second was for binary write.
        assert m_open.calls == [
            MockCall("/etc/foo.conf", "rb"),
            MockCall("/etc/foo.conf", "wb"),
        ]
```

Note that `MockCall` is imported from `tests.support.mock` in the above example. Also, the second assert above is redundant since it is covered in the final assert, but both are included simply as an example.

• **filehandles** - A dictionary mapping the unique file paths opened, to lists of `MockFH` objects. Each open creates a unique `MockFH` object. Each `MockFH` object itself has a number of useful attributes:

  - **filename** - The path to the file which was opened using `salt.utils.files.fopen()`
  - **call** - A `MockCall` object representing the arguments passed to `salt.utils.files.fopen()`. Note that this `MockCall` is also available in the parent `MockOpen` instance's `calls` list.
  - The following methods are mocked using `unittest.mock.Mock` objects, and Mock's built-in asserts (as well as the call data) can be used as you would with any other Mock object:
    - `.read()`
    - `.readlines()`
    - `.readline()`
    - `.close`
    - `.write`
    - `.writelines`
    - `.seek()`

      - The read functions (.read(), .readlines(), .readline()) all work as expected, as does iterating through the file line by line (i.e. for line in fh:).
      - The `.tell()` method is also implemented in such a way that it updates after each time the mocked filehandle is read, and will report the correct position. The one caveat here is that `.seek()` doesn't actually work (it's simply mocked), and will not change the position. Additionally, neither `.write()` or `.writelines()` will modify the mocked filehandle's contents.
      - The attributes `.write_calls` and `.writelines_calls` (no parenthesis) are available as shorthands and correspond to lists containing the contents passed for all calls to `.write()` and `.writelines()`, respectively.
Examples

```python
with patch("salt.utils.files.fopen", mock_open(read_data=contents)) as m_open:
    # Run the code you are unit testing
    mymod.myfunc()
    # Check that only the expected file was opened, and that it was opened
    # only once.
    assert m_open.call_count == 1
    assert list(m_open.filehandles) == ["/etc/foo.conf"]
    # "opens" will be a list of all the mocked filehandles opened
    opens = m_open.filehandles["/etc/foo.conf"]
    # Check that we wrote the expected lines ("expected" here is assumed to
    # be a list of strings)
    assert opens[0].write_calls == expected
```

```python
with patch("salt.utils.files.fopen", mock_open(read_data=contents)) as m_open:
    # Run the code you are unit testing
    mymod.myfunc()
    # Check that .readlines() was called (remember, it's a Mock)
    m_open.filehandles["/etc/foo.conf"][0].readlines.assert_called()
```

```python
with patch("salt.utils.files.fopen", mock_open(read_data=contents)) as m_open:
    # Run the code you are unit testing
    mymod.myfunc()
    # Check that we read the file and also wrote to it
    m_open.filehandles["/etc/foo.conf"][0].read.assert_called_once()
    m_open.filehandles["/etc/foo.conf"][1].writelines.assert_called_once()
```

Naming Conventions

Test names and docstrings should indicate what functionality is being tested. Test functions are named `test_<fcn>_<test-name>` where `<fcn>` is the function being tested and `<test-name>` describes the raise or return being tested.

Unit tests for `salt/.../<module>.py` are contained in a file called `tests/pytests/unit/.../test_<module>.py`, e.g. the tests for `salt/modules/alternatives.py` are in `tests/pytests/unit/modules/test_alternatives.py`.

In order for unit tests to get picked up during a run of the unit test suite, each unit test file must be prefixed with `test_` and each individual test must also be prefixed with the `test_` naming syntax, as described above.

If a function does not start with `test_`, then the function acts as a "normal" function and is not considered a testing function. It will not be included in the test run or testing output. The same principle applies to unit test files that do not have the `test_*` naming syntax. This test file naming convention is how the test runner recognizes that a test file contains tests.
Imports

Most commonly, the following imports are necessary to create a unit test:

```python
import pytest
```

If you need mock support to your tests, please also import:

```python
from tests.support.mock import MagicMock, patch, call
```

29.23.4 Evaluating Truth

A longer discussion on the types of assertions one can make can be found by reading PyTest’s documentation on assertions.

29.23.5 Tests Using Mock Objects

In many cases, the purpose of a Salt module is to interact with some external system, whether it be to control a database, manipulate files on a filesystem or something else. In these varied cases, it’s necessary to design a unit test which can test the function whilst replacing functions which might actually call out to external systems. One might think of this as “blocking the exits” for code under tests and redirecting the calls to external systems with our own code which produces known results during the duration of the test.

To achieve this behavior, Salt makes heavy use of the MagicMock package.

To understand how one might integrate Mock into writing a unit test for Salt, let’s imagine a scenario in which we’re testing an execution module that’s designed to operate on a database. Furthermore, let’s imagine two separate methods, here presented in pseudo-code in an imaginary execution module called ‘db.py’.

```python
def create_user(username):
    qry = "CREATE USER {0}".format(username)
    execute_query(qry)

def execute_query(qry):
    # Connect to a database and actually do the query...
...
```

Here, let’s imagine that we want to create a unit test for the create_user function. In doing so, we want to avoid any calls out to an external system and so while we are running our unit tests, we want to replace the actual interaction with a database with a function that can capture the parameters sent to it and return pre-defined values. Therefore, our task is clear -- to write a unit test which tests the functionality of create_user while also replacing 'execute_query' with a mocked function.

To begin, we set up the skeleton of our test much like we did before, but with additional imports for MagicMock:

```python
from salt.modules import db
from tests.support.mock import MagicMock, patch, call

def test_create_user():
    """
    Test creating a user
    """
    # First, we replace 'execute_query' with our own mock function
```

(continues on next page)
with patch.object(db, "execute_query", MagicMock()) as db_exq:

    # Now that the exits are blocked, we can run the function under test.
    db.create_user("testuser")

    # We could now query our mock object to see which calls were made
    # to it.
    ## print db_exq.mock_calls

    # Construct a call object that simulates the way we expected
    # execute_query to have been called.
    expected_call = call("CREATE USER testuser")

    # Compare the expected call with the list of actual calls. The
    # test will succeed or fail depending on the output of this
    # assertion.
    db_exq.assert_has_calls(expected_call)

29.23.6 Modifying __salt__ In Place

At times, it becomes necessary to make modifications to a module’s view of functions in its own __salt__ dictionary. Luckily, this process is quite easy.

Below is an example that uses MagicMock’s patch functionality to insert a function into __salt__ that’s actually a MagicMock instance.

import pytest
import salt.modules.my_module as my_module

def configure_loader_modules():
    """
    This fixture should return a dictionary which is what's going to be used to
    patch and mock Salt’s loader
    """
    return {my_module: {}}

def show_patch(self):
    with patch.dict(my_module.__salt__, {"function.to.replace": MagicMock()}):
        # From this scope, carry on with testing, with a modified __salt__!
        ...

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29.23.7 A Simple Example

Let’s assume that we’re testing a very basic function in an imaginary Salt execution module. Given a module called `fib.py` that has a function called `calculate(num_of_results)`, which given a `num_of_results`, produces a list of sequential Fibonacci numbers of that length.

A unit test to test this function might be commonly placed in a file called `tests/pytests/unit/modules/test_fib.py`. The convention is to place unit tests for Salt execution modules in `test/pytests/unit/modules/` and to name the tests module prefixed with `test_*.py`.

Tests are grouped around test cases, which are logically grouped sets of tests against a piece of functionality in the tested software. To return to our example, here’s how we might write the skeleton for testing `fib.py`:

```python
import salt.modules.fib as fib

def test_fib():
    """
    To create a unit test, we should prefix the name with `test_` so that it’s recognized by the test runner.
    """
    fib_five = (0, 1, 1, 2, 3)
    assert fib.calculate(5) == fib_five
```

At this point, the test can now be run, either individually or as a part of a full run of the test runner. To ease development, a single test can be executed:

```bash
nox -e 'pytest-3(coverage=False)' -- -v tests/pytests/unit/modules/test_fib.py
```

This will report the status of the test: success, failure, or error. The -v flag increases output verbosity.

To review the results of a particular run, take a note of the log location given in the output for each test run:

```bash
...etc... --log-file=artifacts/logs/runtests-20210106103414.685791.log ...etc...
```

29.23.8 A More Complete Example

Consider the following function from `salt/modules/linux_sysctl.py`.

```python
def get(name):
    """
    Return a single sysctl parameter for this minion

    CLI Example:
    .. code-block:: bash

        salt '*' sysctl.get net.ipv4.ip_forward
    """
    cmd = "sysctl -n {}".format(name)
    out = __salt__['cmd.run'](cmd, python_shell=False)
    return out
```

This function is very simple, comprising only four source lines of code and having only one return statement, so we know only one test is needed. There are also two inputs to the function, the `name` function argument and the call to `__salt__['cmd.run']()` (both of which need to be appropriately mocked.

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29.23. Writing Unit Tests

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1793
Mocking a function parameter is straightforward, whereas mocking a function call will require, in this case, the use of MagicMock. For added isolation, we will also redefine the __salt__ dictionary such that it only contains 'cmd.run'.

```python
import pytest
import salt.modules.linux_sysctl as linux_sysctl
from tests.support.mock import MagicMock, patch

@pytest.fixture
def configure_loader_modules():
    return {linux_sysctl: {}}

def test_get():
    
    Tests the return of get function
    
    mock_cmd = MagicMock(return_value=1)
    with patch.dict(linux_sysctl.__salt__, {'cmd.run': mock_cmd}):
        assert linux_sysctl.get('net.ipv4.ip_forward') == 1
```

Since get() has only one raise or return statement and that statement is a success condition, the test function is simply named test_get(). As described, the single function call parameter, name is mocked with net.ipv4.ip_forward and __salt__['cmd.run'] is replaced by a MagicMock function object. We are only interested in the return value of __salt__['cmd.run'], which MagicMock allows us by specifying via return_value=1. Finally, the test itself tests for equality between the return value of get() and the expected return of 1. This assertion is expected to succeed because get() will determine its return value from __salt__['cmd.run'], which we have mocked to return 1.

### 29.23.9 A Complex Example

Now consider the assign() function from the same salt/modules/linux_sysctl.py source file.

```python
def assign(name, value):
    
    Assign a single sysctl parameter for this minion

    CLI Example:
    .. code-block:: bash

        salt '*' sysctl.assign net.ipv4.ip_forward 1
    
    value = str(value)

    tran_tab = name.translate(':'.maketrans('/', ' '))

    sysctl_file = '/proc/sys/{}'.format(tran_tab)
    if not os.path.exists(sysctl_file):
        raise CommandExecutionError("sysctl {} does not exist".format(name))

    ret = {}
    cmd = 'sysctl -w {}={}'.format(name, value)
    data = __salt__['cmd.run_all'](cmd, python_shell=False)
    out = data['stdout']
```

(continues on next page)
err = data["stderr"]

# Example:
#    # sysctl -w net.ipv4.tcp_rmem="4096 87380 16777216"
#    net.ipv4.tcp_rmem = 4096 87380 16777216
regex = re.compile(r"^{}\s+=\s+{}$".format(re.escape(name), re.escape(value)))

if not regex.match(out) or "Invalid argument" in str(err):
    if data["retcode"] != 0 and err:
        error = err
    else:
        error = out
    raise CommandExecutionError("sysctl -w failed: {}".format(error))
new_name, new_value = out.split(" = ", 1)
ret[new_name] = new_value
return ret

This function contains two raise statements and one return statement, so we know that we will need (at least) three tests. It has two function arguments and many references to non-built-in functions. In the tests below you will see that MagicMock’s `patch()` method may be used as a context manager or as a decorator. When patching the salt dunders however, please use the context manager approach.

There are three test functions, one for each raise and return statement in the source function. Each function is self-contained and contains all and only the mocks and data needed to test the raise or return statement it is concerned with.

```python
import pytest
import salt.modules.linux_sysctl as linux_sysctl
from salt.exceptions import CommandExecutionError
from tests.support.mock import MagicMock, patch

@pytest.fixture
def configure_loader_modules():
    return {linux_sysctl: {}}

def test_assign_proc_sys_failed():
    """
    Tests if /proc/sys/<kernel-subsystem> exists or not
    """
    with patch("os.path.exists", MagicMock(return_value=False)):
        cmd = {
            "pid": 1337,
            "retcode": 0,
            "stderr": "",
            "stdout": "net.ipv4.ip_forward = 1",
        }
        mock_cmd = MagicMock(return_value=cmd)
        with patch.dict(linux_sysctl.__salt__, {"cmd.run_all": mock_cmd}):  # with pytest.raises(CommandExecutionError):
            linux_sysctl.assign("net.ipv4.ip_forward", 1)

def test_assign_cmd_failed():
    """
```

(continues on next page)
Tests if the assignment was successful or not

```python
with patch("os.path.exists", MagicMock(return_value=True)):
    cmd = {
        "pid": 1337,
        "retcode": 0,
        "stderr": 'sysctl: setting key "net.ipv4.ip_forward": Invalid argument',
        "stdout": "net.ipv4.ip_forward = backward",
    }
    mock_cmd = MagicMock(return_value=cmd)
    with patch.dict(linux_sysctl.__salt__, {"cmd.run_all": mock_cmd}):
        with pytest.raises(CommandExecutionError):
            linux_sysctl.assign("net.ipv4.ip_forward", "backward")
```

```python
def test_assign_success():
    
    Tests the return of successful assign function

    with patch("os.path.exists", MagicMock(return_value=True)):
        cmd = {
            "pid": 1337,
            "retcode": 0,
            "stderr": "",
            "stdout": "net.ipv4.ip_forward = 1",
        }
        ret = {"net.ipv4.ip_forward": "1"}
        mock_cmd = MagicMock(return_value=cmd)
        with patch.dict(linux_sysctl.__salt__, {"cmd.run_all": mock_cmd}):
            assert linux_sysctl.assign("net.ipv4.ip_forward", 1) == ret
```

## 29.24 SaltStack Git Policy

The SaltStack team follows a git policy to maintain stability and consistency with the repository.

The git policy has been developed to encourage contributions and make contributing to Salt as easy as possible. Code contributors to SaltStack projects DO NOT NEED TO READ THIS DOCUMENT, because all contributions come into SaltStack via a single gateway to make it as easy as possible for contributors to give us code.

The primary rule of git management in SaltStack is to make life easy on contributors and developers to send in code. Simplicity is always a goal!
29.24.1 New Code Entry

All new SaltStack code should be submitted against master.

29.24.2 Release Branching

SaltStack maintains two types of releases, Feature Releases and Point Releases (also commonly referred to as Bugfix Releases). A feature release is managed by incrementing the first or second release point number, so 2015.5.5 -> 2015.8.0 signifies a feature release and 2015.8.0 -> 2015.8.1 signifies a point release.

Feature Release Branching

Each feature release is maintained in a dedicated git branch derived from the last applicable release commit on develop. All file changes relevant to the feature release will be completed in the master branch prior to the creation of the feature release branch. The feature release branch will be named after the relevant numbers to the feature release, which constitute the first two numbers. This means that the release branch for the 2015.8.0 series is named 2015.8.

A feature release branch is created with the following command:

```
# git checkout -b 2015.8 # From the master branch
# git push origin 2015.8
```

Point Releases

As documented in SEP 14, point releases should be rare.

29.25 Salt Conventions

29.25.1 Writing Salt Documentation

Salt’s documentation is built using the Sphinx documentation system. It can be built in a large variety of output formats including HTML, PDF, ePub, and manpage.

All the documentation is contained in the main Salt repository. Speaking broadly, most of the narrative documentation is contained within the https://github.com/saltstack/salt/blob/master/doc subdirectory and most of the reference and API documentation is written inline with Salt’s Python code and extracted using a Sphinx extension.

Style

The Salt project recommends the IEEE style guide as a general reference for writing guidelines. Those guidelines are not strictly enforced but rather serve as an excellent resource for technical writing questions. The NCBI style guide is another very approachable resource.
Point-of-view

Use third-person perspective and avoid "I", "we", "you" forms of address. Identify the addressee specifically e.g., "users should", "the compiler does", etc.

Active voice

Use active voice and present-tense. Avoid filler words.

Title capitalization

Document titles and section titles within a page should follow normal sentence capitalization rules. Words that are capitalized as part of a regular sentence should be capitalized in a title and otherwise left as lowercase. Punctuation can be omitted unless it aids the intent of the title (e.g., exclamation points or question marks).

For example:

This is a main heading

Paragraph.

This is an exciting sub-heading!

Paragraph.

Serial Commas

According to Wikipedia: In English punctuation, a serial comma or series comma (also called Oxford comma and Harvard comma) is a comma placed immediately before the coordinating conjunction (usually "and", "or", or "nor") in a series of three or more terms. For example, a list of three countries might be punctuated either as "France, Italy, and Spain" (with the serial comma), or as "France, Italy and Spain" (without the serial comma).

When writing a list that includes three or more items, the serial comma should always be used.

Documenting modules

Documentation for Salt's various module types is inline in the code. During the documentation build process it is extracted and formatted into the final HTML, PDF, etc format.

Inline documentation

Python has special multi-line strings called docstrings as the first element in a function or class. These strings allow documentation to live alongside the code and can contain special formatting. For example:

```python
def my_function(value):
    
    Upper-case the given value
```

(continues on next page)
Usage:

```python
val = 'a string'
new_val = myfunction(val)
print(new_val)  # 'A STRING'
```

```
:param value: a string
:return: a copy of ``value`` that has been upper-cased

:return value.upper()
```

Specify a release for additions or changes

New functions or changes to existing functions should include a marker that denotes what Salt release will be affected. For example:

```python
def my_function(value):
    
    Upper-case the given value

    .. versionadded:: 2014.7.0

    <...snip...>

    return value.upper()

```

For changes to a function:

```python
def my_function(value, strip=False):
    
    Upper-case the given value

    .. versionchanged:: 2016.3.0
        Added a flag to also strip whitespace from the string.

    <...snip...>

    if strip:
        return value.upper().strip()

    return value.upper()

```

Adding module documentation to the index

Each module type has an index listing all modules of that type. For example: `execution modules`, `state modules`, `renderer modules`. New modules must be added to the index manually.

1. Edit the file for the module type: `execution modules`, `state modules`, `renderer modules`, etc.
2. Add the new module to the alphabetized list.
3. `Build the documentation` which will generate an `.rst` file for the new module in the same directory as the `index.rst`.

---

29.25. Salt Conventions
4. Commit the changes to `index.rst` and the new `.rst` file and send a pull request.

**Cross-references**

The Sphinx documentation system contains a wide variety of cross-referencing capabilities.

**Glossary entries**

Link to *glossary entries* using the `term` role. A cross-reference should be added the first time a Salt-specific term is used in a document.

```
A common way to encapsulate master-side functionality is by writing a
custom `Runner Function`. Custom Runner Functions are easy to write.
```

**Index entries**

Sphinx automatically generates many kinds of index entries, but it is occasionally useful to manually add items to the index.

One method is to use the `index` directive above the document or section that should appear in the index.

```
.. index:: ! Event, event bus, event system
    see: Reactor; Event
```

Another method is to use the `index` role inline with the text that should appear in the index. The index entry is created and the target text is left otherwise intact.

```
Information about the `Salt Reactor`
-----------------------------------

Paragraph.
```

**Documents and sections**

Each document should contain a unique top-level label of the form:

```
.. _my-page:

My page
=======

Paragraph.
```

Unique labels can be linked using the `ref` role. This allows cross-references to survive document renames or movement.

```
For more information see :ref:`my-page`.
```

Note, the `doc` role should *not* be used to link documents together.
Modules

Cross-references to Salt modules can be added using Sphinx's Python domain roles. For example, to create a link to the test.ping function:

```
A useful execution module to test active communication with a minion is the `test.ping <salt.modules.test.ping>` function.
```

Salt modules can be referenced as well:

```
The `test module <salt.modules.test>` contains many useful functions for inspecting an active Salt connection.
```

The same syntax works for all modules types:

```
One of the workhorse state module functions in Salt is the `file.managed <salt.states.file.managed>` function.
```

Settings

Individual settings in the Salt Master or Salt Minion configuration files are cross-referenced using two custom roles, conf_master, and conf_minion.

```
The `minion ID <id>` setting is a unique identifier for a single minion.
```

29.25.2 Salt Formulas

Formulas are pre-written Salt States. They are as open-ended as Salt States themselves and can be used for tasks such as installing a package, configuring, and starting a service, setting up users or permissions, and many other common tasks.

All official Salt Formulas are found as separate Git repositories in the "saltstack-formulas" organization on GitHub: https://github.com/saltstack-formulas

As a simple example, to install the popular Apache web server (using the normal defaults for the underlying distro) simply include the apache-formula from a top file:

```
base:
  'web*':
    - apache
```

Installation

Each Salt Formula is an individual Git repository designed as a drop-in addition to an existing Salt State tree. Formulas can be installed in the following ways.
Adding a Formula as a GitFS remote

One design goal of Salt's GitFS fileserv backend was to facilitate reusable States. GitFS is a quick and natural way to use Formulas.

1. Install any necessary dependencies and configure GitFS.
2. Add one or more Formula repository URLs as remotes in the `gitfs_remotes` list in the Salt Master configuration file:

```
<table>
<thead>
<tr>
<th>gitfs_remotes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- <a href="https://github.com/saltstack-formulas/apache-formula">https://github.com/saltstack-formulas/apache-formula</a></td>
</tr>
<tr>
<td>- <a href="https://github.com/saltstack-formulas/memcached-formula">https://github.com/saltstack-formulas/memcached-formula</a></td>
</tr>
</tbody>
</table>
```

We strongly recommend forking a formula repository into your own GitHub account to avoid unexpected changes to your infrastructure.

Many Salt Formulas are highly active repositories so pull new changes with care. Plus any additions you make to your fork can be easily sent back upstream with a quick pull request!

3. Restart the Salt master.

Beginning with the 2018.3.0 release, using formulas with GitFS is now much more convenient for deployments which use many different fileserv environments (i.e. saltenvs). Using the `all_saltenvs` parameter, files from a single git branch/tag will appear in all environments. See here for more information on this feature.

Adding a Formula directory manually

Formulas are simply directories that can be copied onto the local file system by using Git to clone the repository or by downloading and expanding a tarball or zip file of the repository. The directory structure is designed to work with `file_roots` in the Salt master configuration.

1. Clone or download the repository into a directory:

```
mkdir -p /srv/formulas
cd /srv/formulas
git clone https://github.com/saltstack-formulas/apache-formula.git
```

# or

```
mkdir -p /srv/formulas
cd /srv/formulas
wget https://github.com/saltstack-formulas/apache-formula/archive/master.tar.gz
tar xf apache-formula-master.tar.gz
```

2. Add the new directory to `file_roots`:

```
<table>
<thead>
<tr>
<th>file_roots:</th>
</tr>
</thead>
<tbody>
<tr>
<td>base:</td>
</tr>
<tr>
<td>- /srv/salt</td>
</tr>
<tr>
<td>- /srv/formulas/apache-formula</td>
</tr>
</tbody>
</table>
```

3. Restart the Salt Master.
Usage

Each Formula is intended to be immediately usable with sane defaults without any additional configuration. Many formulas are also configurable by including data in Pillar; see the pillar.example file in each Formula repository for available options.

Including a Formula in an existing State tree

Formula may be included in an existing sls file. This is often useful when a state you are writing needs to require or extend a state defined in the formula.

Here is an example of a state that uses the epel-formula in a require declaration which directs Salt to not install the python26 package until after the EPEL repository has also been installed:

```yaml
include:
  - epel

python26:
  pkg.installed:
    - require:
      - pkg: epel
```

Including a Formula from a Top File

Some Formula perform completely standalone installations that are not referenced from other state files. It is usually cleanest to include these Formula directly from a Top File.

For example the easiest way to set up an OpenStack deployment on a single machine is to include the openstack-standalone-formula directly from a top.sls file:

```yaml
base:
  'myopenstackmaster':
    - openstack
```

Quickly deploying OpenStack across several dedicated machines could also be done directly from a Top File and may look something like this:

```yaml
base:
  'controller':
    - openstack.horizon
    - openstack.keystone
  'hyper-*':
    - openstack.nova
    - openstack.glance
  'storage-*':
    - openstack.swift
```
Configuring Formula using Pillar

Salt Formulas are designed to work out of the box with no additional configuration. However, many Formula support additional configuration and customization through *Pillar*. Examples of available options can be found in a file named `pillar.example` in the root directory of each Formula repository.

Using Formula with your own states

Remember that Formula are regular Salt States and can be used with all Salt's normal state mechanisms. Formula can be required from other States with `require` declarations, they can be modified using `extend`, they can made to watch other states with *The _in version of requisites*.

The following example uses the stock `apache-formula` alongside a custom state to create a vhost on a Debian/Ubuntu system and to reload the Apache service whenever the vhost is changed.

```yaml
# Include the stock, upstream apache formula.
include:
  - apache

# Use the watch_in requisite to cause the apache service state to reload
# apache whenever the my-example-com-vhost state changes.
my-example-com-vhost:
  file:
    - managed
    - name: /etc/apache2/sites-available/my-example-com
    - watch_in:
      - service: apache
```

Don't be shy to read through the source for each Formula!

Reporting problems & making additions

Each Formula is a separate repository on GitHub. If you encounter a bug with a Formula please file an issue in the respective repository! Send fixes and additions as a pull request. Add tips and tricks to the repository wiki.

Writing Formulas

Each Formula is a separate repository in the `saltstack-formulas` organization on GitHub.

Get involved creating new Formulas

The best way to create new Formula repositories for now is to create a repository in your own account on GitHub and notify a SaltStack employee when it is ready. We will add you to the Contributors team on the `saltstack-formulas` organization and help you transfer the repository over. Ping a SaltStack employee on IRC (#salt on Freenode), join the #formulas channel on the salt-slack (bridged to #saltstack-formulas on Freenode) or send an email to the salt-users mailing list. Note that the IRC logs are available at https://freenode.logbot.info/salt and https://freenode.logbot.info/saltstack-formulas respectively.

There are a lot of repositories in that organization! Team members can manage which repositories they are subscribed to on GitHub’s watching page: https://github.com/watching.
Members of the Contributors team are welcome to participate in reviewing pull requests across the Organization. Some repositories will have regular contributors and some repositories will not. As you get involved in a repository be sure to communicate with any other contributors there on pull requests that are large or have breaking changes.

In general it is best to have another Contributor review and merge any pull requests that you open. Feel free to at-mention other regular contributors to a repository and request a review. However, there are a lot of formula repositories so if a repository does not yet have regular contributors or if your pull request has stayed open for more than a couple days feel free to "selfie-merge" your own pull request.

**Style**

Maintainability, readability, and reusability are all marks of a good Salt sls file. This section contains several suggestions and examples.

```yaml
# Deploy the stable master branch unless version overridden by passing
# Pillar at the CLI or via the Reactor.

deploy_myapp:
  git.latest:
    - name: git@github.com/myco/myapp.git
    - version: {{ salt.pillar.get('myapp:version', 'master') }}
```

**Use a descriptive State ID**

The ID of a state is used as a unique identifier that may be referenced via other states in `requisites`. It must be unique across the whole state tree (*it is a key in a dictionary*, after all).

In addition a state ID should be descriptive and serve as a high-level hint of what it will do, or manage, or change. For example, `deploy_webapp`, or `apache`, or `reload_firewall`.

**Use `module.function` notation**

So-called "short-declaration" notation is preferred for referencing state modules and state functions. It provides a consistent pattern of `module.function` shared between Salt States, the Reactor, Salt Mine, the Scheduler, as well as with the CLI.

```yaml
# Do
apache:
  pkg.installed:
    - name: httpd

# Don't
apache:
  pkg:
    - installed
    - name: httpd
```

Salt's state compiler will transform "short-decs" into the longer format *when compiling the human-friendly highstate structure into the machine-friendly lowstate structure.*
Specify the `name` parameter

Use a unique and permanent identifier for the state ID and reserve `name` for data with variability.

The `name` declaration is a required parameter for all state functions. The state ID will implicitly be used as `name` if it is not explicitly set in the state.

In many state functions the `name` parameter is used for data that varies such as OS-specific package names, OS-specific file system paths, repository addresses, etc. Any time the ID of a state changes all references to that ID must also be changed. Use a permanent ID when writing a state the first time to future-proof that state and allow for easier refactors down the road.

Comment state files

YAML allows comments at varying indentation levels. It is a good practice to comment state files. Use vertical whitespace to visually separate different concepts or actions.

```yaml
# Start with a high-level description of the current sls file.
# Explain the scope of what it will do or manage.

# Comment individual states as necessary.
update_a_config_file:
  # Provide details on why an unusual choice was made. For example:
  #
  # This template is fetched from a third-party and does not fit our
  # company norm of using Jinja. This must be processed using Mako.
  file.managed:
    - name: /path/to/file.cfg
    - source: salt://path/to/file.cfg.template
    - template: mako

  # Provide a description or explanation that did not fit within the state
  # ID. For example:
  #
  # Update the application's last-deployed timestamp.
  # This is a workaround until Bob configures Jenkins to automate RPM
  # builds of the app.
  cmd.run:
    # FIXME: Joe needs this to run on Windows by next quarter. Switch these
    # from shell commands to Salt's file.managed and file.replace state
    # modules.
    - name: |
      touch /path/to/file_last_updated
      sed -e 's/foo/bar/g' /path/to/file_environment
    - onchanges:
      - file: a_config_file
```

Be careful to use Jinja comments for commenting Jinja code and YAML comments for commenting YAML code.

```yaml
# BAD EXAMPLE
# The Jinja in this YAML comment is still executed!
# {% set apache_is_installed = 'apache' in salt.pkg.list_pkgs() %}

# GOOD EXAMPLE
# The Jinja in this Jinja comment will not be executed.
{% set apache_is_installed = 'apache' in salt.pkg.list_pkgs() %}
```
Easy on the Jinja!

Jinja templating provides vast flexibility and power when building Salt sls files. It can also create an unmaintainable tangle of logic and data. Speaking broadly, Jinja is best used when kept apart from the states (as much as is possible). Below are guidelines and examples of how Jinja can be used effectively.

Know the evaluation and execution order

High-level knowledge of how Salt states are compiled and run is useful when writing states.

The default renderer setting in Salt is Jinja piped to YAML. Each is a separate step. Each step is not aware of the previous or following step. Jinja is not YAML aware, YAML is not Jinja aware; they cannot share variables or interact.

- Whatever the Jinja step produces must be valid YAML.
- Whatever the YAML step produces must be a valid highstate data structure. (This is also true of the final step for any of the alternate renderers in Salt.)
- Highstate can be thought of as a human-friendly data structure; easy to write and easy to read.
- Salt’s state compiler validates the highstate and compiles it to low state.
- Low state can be thought of as a machine-friendly data structure. It is a list of dictionaries that each map directly to a function call.
- Salt’s state system finally starts and executes on each “chunk” in the low state. Remember that requisites are evaluated at runtime.
- The return for each function call is added to the “running” dictionary which is the final output at the end of the state run.

The full evaluation and execution order:

Jinja -> YAML -> Highstate -> low state -> execution

Avoid changing the underlying system with Jinja

Avoid calling commands from Jinja that change the underlying system. Commands run via Jinja do not respect Salt’s dry-run mode (test=True)! This is usually in conflict with the idempotent nature of Salt states unless the command being run is also idempotent.

Inspect the local system

A common use for Jinja in Salt states is to gather information about the underlying system. The grains dictionary available in the Jinja context is a great example of common data points that Salt itself has already gathered. Less common values are often found by running commands. For example:

{% set is_selinux_enabled = salt.cmd.run('sestatus') == '1' %}

This is usually best done with a variable assignment in order to separate the data from the state that will make use of the data.
Gather external data

One of the most common uses for Jinja is to pull external data into the state file. External data can come from anywhere like API calls or database queries, but it most commonly comes from flat files on the file system or Pillar data from the Salt Master. For example:

```jinja
{% set some_data = salt.pillar.get('some_data', {'sane default': True}) %}

[# or #]
{% import_yaml 'path/to/file.yaml' as some_data %}

[# or #]
{% import_json 'path/to/file.json' as some_data %}

[# or #]
{% import_text 'path/to/ssh_key.pub' as ssh_pub_key %}

[# or #]
{% from 'path/to/other_file.jinja' import some_data with context %}
```

This is usually best done with a variable assignment in order to separate the data from the state that will make use of the data.

Light conditionals and looping

Jinja is extremely powerful for programmatically generating Salt states. It is also easy to overuse. As a rule of thumb, if it is hard to read it will be hard to maintain!

Separate Jinja control-flow statements from the states as much as is possible to create readable states. Limit Jinja within states to simple variable lookups.

Below is a simple example of a readable loop:

```jinja
{% for user in salt.pillar.get('list_of_users', []) %}

[# Ensure unique state IDs when looping. #]
{{ user.name }}-{{ loop.index }}:
    - name: {{ user.name }}
    - shell: {{ user.shell }}

{% endfor %}
```

Avoid putting a Jinja conditionals within Salt states where possible. Readability suffers and the correct YAML indentation is difficult to see in the surrounding visual noise. Parametrization (discussed below) and variables are both useful techniques to avoid this. For example:

```jinja
[# ---- Bad example ---- #]

apache:
    pkg.installed:
        {% if grains.os_family == 'RedHat' %}
```
Dictionaries are useful to effectively "namespace" a collection of variables. This is useful with parametrization (dis-
cussed below). Dictionaries are also easily combined and merged. And they can be directly serialized into YAML
which is often easier than trying to create valid YAML through templating. For example:

```
# ---- Bad example ---- #

haproxy_conf:
  file.managed:
    - name: /etc/haproxy/haproxy.cfg
      template: jinja
      source: salt://haproxy/external_haproxy.cfg
      if 'external_loadbalancer' in grains.roles %
      source: salt://haproxy/internal_haproxy.cfg
      else %
      context:
        if 'external_loadbalancer' in grains.roles %
        ssl_termination: True
        else %
        ssl_termination: False
        endif %
      endif %

# ---- Better example ---- #

{% load_yaml as haproxy_defaults %}
common_settings:
  bind_port: 80
```
internal_loadbalancer:
  source: salt://haproxy/internal_haproxy.cfg
  settings:
    bind_port: 8080
    ssl_termination: False

external_loadbalancer:
  source: salt://haproxy/external_haproxy.cfg
  settings:
    ssl_termination: True

{% endload %}

{% if 'external_loadbalancer' in grains.roles %}
{% set haproxy = haproxy_defaults['external_loadbalancer'] %}
{% elif 'internal_loadbalancer' in grains.roles %}
{% set haproxy = haproxy_defaults['internal_loadbalancer'] %}
{% endif %}

{% do haproxy.settings.update(haproxy_defaults.common_settings) %}

haproxy_conf:
  file.managed:
    - name: /etc/haproxy/haproxy.cfg
    - template: jinja
    - source: {{ haproxy.source }}
    - context: {{ haproxy.settings | yaml() }}

There is still room for improvement in the above example. For example, extracting into an external file or replacing
the if-elif conditional with a function call to filter the correct data more succinctly. However, the state itself is simple
and legible, the data is separate and also simple and legible. And those suggested improvements can be made at some
future date without altering the state at all!

Avoid heavy logic and programming

Jinja is not Python. It was made by Python programmers and shares many semantics and some syntax but it does
not allow for arbitrary Python function calls or Python imports. Jinja is a fast and efficient templating language but
the syntax can be verbose and visually noisy.

Once Jinja use within an sls file becomes slightly complicated -- long chains of if-elif-elif-else statements, nested
conditionals, complicated dictionary merges, wanting to use sets -- instead consider using a different Salt renderer,
such as the Python renderer. As a rule of thumb, if it is hard to read it will be hard to maintain -- switch to a format
that is easier to read.

Using alternate renderers is very simple to do using Salt's "she-bang" syntax at the top of the file. The Python
renderer must simply return the correct highstate data structure. The following example is a state tree of two sls files,
one simple and one complicated.

/srv/salt/top.sls:

```
base:
  '*':
    - common_configuration
    - roles_configuration
```

/srv/salt/common_configuration.sls:
Salt Documentation, Release 3002.5

common_users:
  user.present:
    - names:
      - larry
      - curly
      - moe

/srv/salt/roles_configuration:

```python
#!/py
def run():
    list_of_roles = set()

    # This example has the minion id in the form 'web-03-dev'.
    # Easily access the grains dictionary:
    try:
        app, instance_number, environment = __grains__['id'].split('-')
        instance_number = int(instance_number)
    except ValueError:
        app, instance_number, environment = ['Unknown', 0, 'dev']

    list_of_roles.add(app)

    if app == 'web' and environment == 'dev':
        list_of_roles.add('primary')
        list_of_roles.add('secondary')
    elif app == 'web' and environment == 'staging':
        if instance_number == 0:
            list_of_roles.add('primary')
        else:
            list_of_roles.add('secondary')

    # Easily cross-call Salt execution modules:
    if __salt__['myutils.query_valid_ec2_instance']():
        list_of_roles.add('is_ec2_instance')

    return {
        "set_roles_grains": {
            "grains.present": [{"name": "roles"}, {"value": list(list_of_roles)},],
        },
    }
```

Jinja Macros

In Salt sls files Jinja macros are useful for one thing and one thing only: creating mini templates that can be reused and rendered on demand. Do not fall into the trap of thinking of macros as functions; Jinja is not Python (see above).

Macros are useful for creating reusable, parameterized states. For example:

```jinja
{% macro user_state(state_id, user_name, shell='/bin/bash', groups=[]) %}
{{ state_id }}:
  user.present:
    - name: {{ user_name }}
    - shell: {{ shell }}
    - groups: {{ groups | json() }}
{% endmacro %}
```
Macros are also useful for creating one-off "serializers" that can accept a data structure and write that out as a domain-specific configuration file. For example, the following macro could be used to write a php.ini config file:

```
/srv/salt/php.sls:

php_ini:
    file.managed:
        - name: /etc/php.ini
        - source: salt://php.ini.tmpl
        - template: jinja
        - context:
            php_ini_settings: {{ salt.pillar.get('php_ini', {}) | json() }}
```

```
/srv/pillar/php.sls:

php_ini:
    PHP:
        engine: 'On'
        short_open_tag: 'Off'
        error_reporting: 'E_ALL & ~E_DEPRECATED & ~E_STRICT'
```

```
/srv/salt/php.ini.tmpl:

{% macro php_ini_serializer(data) %}
{% for section_name, name_val_pairs in data.items() %}
    [{{ section_name }}]
{% for name, val in name_val_pairs.items() -%}
    {{ name }} = "{{ val }}"
{% endfor %}
{% endfor %}
{% endmacro %}

; File managed by Salt at {{{ source }}}.  
; Your changes will be overwritten.

{{ php_ini_serializer(phi

Abstracting static defaults into a lookup table

Separate data that a state uses from the state itself to increases the flexibility and reusability of a state.

An obvious and common example of this is platform-specific package names and file system paths. Another example is sane defaults for an application, or common settings within a company or organization. Organizing such data as a dictionary (aka hash map, lookup table, associative array) often provides a lightweight namespaceing and allows for quick and easy lookups. In addition, using a dictionary allows for easily merging and overriding static values within a lookup table with dynamic values fetched from Pillar.

A strong convention in Salt Formulas is to place platform-specific data, such as package names and file system paths, into a file named map.jinja that is placed alongside the state files.
The following is an example from the MySQL Formula. The \texttt{grains.filter\_by} function performs a lookup on that table using the \texttt{os\_family} grain (by default).

The result is that the \texttt{mysql} variable is assigned to a \texttt{subset} of the lookup table for the current platform. This allows states to reference, for example, the name of a package without worrying about the underlying OS. The syntax for referencing a value is a normal dictionary lookup in Jinja, such as \texttt{\{\{ mysql["service"] \}\}} or the shorthand \texttt{\{\{ mysql.service \}\}}.

\texttt{map.jinja}:

\begin{verbatim}
{% set mysql = salt['grains.filter_by']({
    'Debian': {
        'server': 'mysql-server',
        'client': 'mysql-client',
        'service': 'mysqld',
        'config': '/etc/mysql/my.cnf',
        'python': 'python-mysqldb',
    },
    'RedHat': {
        'server': 'mysql-server',
        'client': 'mysql',
        'service': 'mysqld',
        'config': '/etc/my.cnf',
        'python': 'MySQL-python',
    },
    'Gentoo': {
        'server': 'dev-db/mysql',
        'client': 'dev-db/mysql',
        'service': 'mysqld',
        'config': '/etc/mysql/my.cnf',
        'python': 'dev-python/mysql-python',
    },
}, merge=salt['pillar.get'](\'mysql:lookup\')) %}
\end{verbatim}

Values defined in the map file can be fetched for the current platform in any state file using the following syntax:

\begin{verbatim}
{% from "mysql/map.jinja" import mysql with context %}

mysql-server:
pkg.installed:
    - name: {{ mysql.server }}
service.running:
    - name: {{ mysql.service }}
\end{verbatim}

Organizing Pillar data

It is considered a best practice to make formulas expect all formula-related parameters to be placed under second-level lookup key, within a main namespace designated for holding data for particular service/software/etc, managed by the formula:

\begin{verbatim}
mysql:
    lookup:
        version: 5.7.11
\end{verbatim}
Collecting common values

Common values can be collected into a base dictionary. This minimizes repetition of identical values in each of the lookup_dict sub-dictionaries. Now only the values that are different from the base must be specified by the alternates:

map.jinja:

```jinja
{% set mysql = salt['grains.filter_by']({
    'default': {
        'server': 'mysql-server',
        'client': 'mysql-client',
        'service': 'mysql',
        'config': '/etc/mysql/my.cnf',
        'python': 'python-mysqldb',
    },
    'Debian': {},
    'RedHat': {
        'client': 'mysql',
        'service': 'mysqldb',
        'config': '/etc/my.cnf',
        'python': 'MySQL-python',
    },
    'Gentoo': {
        'server': 'dev-db/mysql',
        'client': 'dev-db/mysql',
        'python': 'dev-python/mysql-python',
    },
}, merge=salt['pillar.get']('mysql:lookup'), base='default') %}
```

Overriding values in the lookup table

Allow static values within lookup tables to be overridden. This is a simple pattern which once again increases flexibility and reusability for state files.

The merge argument in filter_by specifies the location of a dictionary in Pillar that can be used to override values returned from the lookup table. If the value exists in Pillar it will take precedence.

This is useful when software or configuration files is installed to non-standard locations or on unsupported platforms. For example, the following Pillar would replace the config value from the call above.

```
mysql:
    lookup:
        config: /usr/local/etc/mysql/my.cnf
```

Note: Protecting Expansion of Content with Special Characters

When templating keep in mind that YAML does have special characters for quoting, flows, and other special structure and content. When a Jinja substitution may have special characters that will be incorrectly parsed by YAML care must be taken. It is a good policy to use the yaml_encode or the yaml_dquote Jinja filters:

```jinja
{% set foo = 7.7 %}
{% set bar = 'none' %}
```
{%- set baz = true %}
{%- set zap = 'The word of the day is "salty".' %}
{%- set zip = "The quick brown fox . . ." %}

foo: {{ foo|yaml_encode }}
bar: {{ bar|yaml_encode }}
baz: {{ baz|yaml_encode }}
zap: {{ zap|yaml_encode }}
zip: {{ zip|yaml_dquote }}

The above will be rendered as below:

```
foo: 7.7
bar: null
baz: true
zap: "The word of the day is \"salty\"."
zip: "\"The quick brown fox . . .\""
```

The **filter_by** function performs a simple dictionary lookup but also allows for fetching data from Pillar and overriding data stored in the lookup table. That same workflow can be easily performed without using **filter_by**; other dictionaries besides data from Pillar can also be used.

{%- set lookup_table = (...) %}
{%- do lookup_table.update(salt.pillar.get('my:custom:data')) %}

**When to use lookup tables**

The **map.jinja** file is only a convention within Salt Formulas. This greater pattern is useful for a wide variety of data in a wide variety of workflows. This pattern is not limited to pulling data from a single file or data source. This pattern is useful in States, Pillar and the Reactor, for example.

Working with a data structure instead of, say, a config file allows the data to be cobbled together from multiple sources (local files, remote Pillar, database queries, etc), combined, overridden, and searched.

Below are a few examples of what lookup tables may be useful for and how they may be used and represented.

**Platform-specific information**

An obvious pattern and one used heavily in Salt Formulas is extracting platform-specific information such as package names and file system paths in a file named **map.jinja**. The pattern is explained in detail above.

**Sane defaults**

Application settings can be a good fit for this pattern. Store default settings along with the states themselves and keep overrides and sensitive settings in Pillar. Combine both into a single dictionary and then write the application config or settings file.

The example below stores most of the Apache Tomcat `server.xml` file alongside the Tomcat states and then allows values to be updated or augmented via Pillar. (This example uses the BadgerFish format for transforming JSON to XML.)

```
/srv/salt/tomcat/defaults.yaml
```
Server:

'@port': '8005'
'@shutdown': SHUTDOWN

GlobalNamingResources:

Resource:

'@auth': Container
'@description': User database that can be updated and saved
'@factory': org.apache.catalina.users.MemoryUserDatabaseFactory
'@name': UserDatabase
'@pathname': conf/tomcat-users.xml
'@type': org.apache.catalina.UserDatabase

# <...snip...>

/srv/pillar/tomcat.sls:

appX:
  server_xml_overrides:
    Server:
      Service:
        'name': Catalina
      Connector:
        '@port': '8009'
        '@protocol': AJP/1.3
        '@redirectPort': '8443'

# <...snip...>

/srv/salt/tomcat/server_xml.sls:

{% import_yaml 'tomcat/defaults.yaml' as server_xml_defaults %}
{% set server_xml_final_values = salt.pillar.get(
    'appX:server_xml_overrides',
    default=server_xml_defaults,
    merge=True
)%}

appX_server_xml:
  file.serialize:
    - name: /etc/tomcat/server.xml
      dataset: {{ server_xml_final_values | json() }}
      formatter: xml_badgerfish

The file.serialize state can provide a shorthand for creating some files from data structures. There are also many examples within Salt Formulas of creating one-off "serializers" (often as Jinja macros) that reformat a data structure to a specific config file format. For example, look at the `Nginx vhosts`_ states or the php.ini file template.

Environment specific information

A single state can be reused when it is parameterized as described in the section below, by separating the data the state will use from the state that performs the work. This can be the difference between deploying Application X and Application Y, or the difference between production and development. For example:

/srv/salt/app/deploy.sls:

{% import_yaml 'app/defaults.yaml' as app_defaults %}

{% set app_defaults = salt.pillar.get('app:app_defaults',
    default=app_defaults,
    merge=True
)%}
{% Extract the relevant subset for the app configured on the current machine (configured via a grain in this example). %}

{% app = app_defaults.get(salt.grains.get('role')) %}

{% Allow values from Pillar to (optionally) update values from the lookup table. %}

{% do app_defaults.update(salt.pillar.get('myapp', {})) %}

deploy_application:
  git.latest:
    - name: {{ app.repo_url }}
    - version: {{ app.version }}
    - target: {{ app.deploy_dir }}

myco/myapp/deployed:
  event.send:
    - data:
      - version: {{ app.version }}
      - onchanges:
        - git: deploy_application

/srv/salt/app/defaults.yaml:

appX:
  repo_url: git@github.com/myco/appX.git
  target: /var/www/appX
  version: master

appY:
  repo_url: git@github.com/myco/appY.git
  target: /var/www/appY
  version: v1.2.3.4

Single-purpose SLS files

Each sls file in a Formula should strive to do a single thing. This increases the reusability of this file by keeping unrelated tasks from getting coupled together.

As an example, the base Apache formula should only install the Apache httpd server and start the httpd service. This is the basic, expected behavior when installing Apache. It should not perform additional changes such as set the Apache configuration file or create vhosts.

If a formula is single-purpose as in the example above, other formulas, and also other states can include and use that formula with Requisites and Other Global State Arguments without also including undesirable or unintended side-effects.

The following is a best-practice example for a reusable Apache formula. (This skips platform-specific options for brevity. See the full apache-formula for more.)

# apache/init.sls
apache:
  pkg.installed:
    [...]  
  service.running:
    [...]
To illustrate a bad example, say the above Apache formula installed Apache and also created a default vhost. The mod_wsgi state would not be able to include the Apache formula to create that dependency tree without also installing the unneeded default vhost.

*Formulas should be reusable.* Avoid coupling unrelated actions together.

**Parameterization**

*Parameterization is a key feature of Salt Formulas* and also for Salt States. Parameterization allows a single Formula to be reused across many operating systems; to be reused across production, development, or staging environments; and to be reused by many people all with varying goals.

Writing states, specifying ordering and dependencies is the part that takes the longest to write and to test. Filling those states out with data such as users or package names or file locations is the easy part. How many users, what those users are named, or where the files live are all implementation details that should be parameterized. This separation between a state and the data that populates a state creates a reusable formula.

In the example below the data that populates the state can come from anywhere -- it can be hard-coded at the top of the state, it can come from an external file, it can come from Pillar, it can come from an execution function call, or it can come from a database query. The state itself doesn't change regardless of where the data comes from. Production data will vary from development data will vary from data from one company to another, however the state itself stays the same.

```yaml
{% set user_list = [
    {'name': 'larry', 'shell': 'bash'},
    {'name': 'curly', 'shell': 'bash'},
    {'name': 'moe', 'shell': 'zsh'},
] %}

[# or #]

{% set user_list = salt['pillar.get']('user_list') %}

[# or #]
```
{% load_json "default_users.json" as user_list %}

{% or %}

{% set user_list = salt['acme_utils.get_user_list']() %}

{% for user in list_list %}
{{ user.name }}:
  - name: {{ user.name }}
  - shell: {{ user.shell }}
{% endfor %}

Configuration

Formulas should strive to use the defaults of the underlying platform, followed by defaults from the upstream project, followed by sane defaults for the formula itself.

As an example, a formula to install Apache should not change the default Apache configuration file installed by the OS package. However, the Apache formula should include a state to change or override the default configuration file.

Pillar overrides

Pillar lookups must use the safe `get()` and must provide a default value. Create local variables using the Jinja `set` construct to increase readability and to avoid potentially hundreds or thousands of function calls across a large state tree.

{% from "apache/map.jinja" import apache with context %}
{% set settings = salt['pillar.get']('apache', {}) %}

mod_status:
  - name: {{ apache.conf_dir }}
  - source: {{ settings.get('mod_status_conf', 'salt://apache/mod_status.conf') }}
  - template: {{ settings.get('template_engine', 'jinja') }}

Any default values used in the Formula must also be documented in the `pillar.example` file in the root of the repository. Comments should be used liberally to explain the intent of each configuration value. In addition, users should be able copy-and-paste the contents of this file into their own Pillar to make any desired changes.

Scripting

Remember that both State files and Pillar files can easily call out to Salt `execution modules` and have access to all the system grains as well.

{% if '/storage' in salt['mount.active']() %}
/usr/local/etc/myfile.conf:
  - symlink
  - target: /storage/myfile.conf
{% endif %}
Jinja macros to encapsulate logic or conditionals are discouraged in favor of writing custom execution modules in Python.

**Repository structure**

A basic Formula repository should have the following layout:

```
foo-formula
|-- foo/
   |-- map.jinja
   |-- init.sls
   `-- bar.sls
|-- CHANGELOG.rst
|-- LICENSE
|-- pillar.example
|-- README.rst
|-- VERSION
```

See also:

`template-formula`

The `template-formula` repository has a pre-built layout that serves as the basic structure for a new formula repository. Just copy the files from there and edit them.

**README.rst**

The README should detail each available `.sls` file by explaining what it does, whether it has any dependencies on other formulas, whether it has a target platform, and any other installation or usage instructions or tips.

A sample skeleton for the `README.rst` file:

```
===
foo
===

Install and configure the FOO service.

**NOTE**

See the full `Salt Formulas installation and usage instructions <https://docs.saltstack.com/en/latest/topics/development/conventions/formulas.html>`_.

Available states

```
.. contents::
   :local:

```

```
```
**foo**
```

---

Install the `foo` package and enable the service.

```
```
**foo.bar**
```

```
Install the `bar` package.

**CHANGELOG.rst**

The CHANGELOG.rst file should detail the individual versions, their release date and a set of bullet points for each version highlighting the overall changes in a given version of the formula.

A sample skeleton for the CHANGELOG.rst file:

CHANGELOG.rst:

```
foo formula
==========

0.0.2 (2013-01-01)
- Re-organized formula file layout
- Fixed filename used for upstart logger template
- Allow for pillar message to have default if none specified
```

Versioning

Formulas are versioned according to Semantic Versioning, https://semver.org/.

---

**Note:** Given a version number MAJOR.MINOR.PATCH, increment the:

1. MAJOR version when you make incompatible API changes,
2. MINOR version when you add functionality in a backwards-compatible manner, and
3. PATCH version when you make backwards-compatible bug fixes.

Additional labels for pre-release and build metadata are available as extensions to the MAJOR.MINOR.PATCH format.

Formula versions are tracked using Git tags as well as the VERSION file in the formula repository. The VERSION file should contain the currently released version of the particular formula.

**Testing Formulas**

A smoke-test for invalid Jinja, invalid YAML, or an invalid Salt state structure can be performed by with the `state.show_sls` function:

```
salt '*' state.show_sls apache
```

Salt Formulas can then be tested by running each `.sls` file via `state.apply` and checking the output for the success or failure of each state in the Formula. This should be done for each supported platform.
29.25.3 SaltStack Packaging Guide

Since Salt provides a powerful toolkit for system management and automation, the package can be split into a number of sub-tools. While packaging Salt as a single package containing all components is perfectly acceptable, the split packages should follow this convention.

Patching Salt For Distributions

The occasion may arise where Salt source and default configurations may need to be patched. It is preferable if Salt is only patched to include platform specific additions or to fix release time bugs. It is preferable that configuration settings and operations remain in the default state, as changes here lowers the user experience for users moving across distributions.

In the event where a packager finds a need to change the default configuration it is advised to add the files to the master.d or minion.d directories.

Source Files

Release packages should always be built from the source tarball distributed via pypi. Release packages should NEVER use a git checkout as the source for distribution.

Single Package

Shipping Salt as a single package, where the minion, master, and all tools are together is perfectly acceptable and practiced by distributions such as FreeBSD.

Split Package

Salt Should always be split in a standard way, with standard dependencies, this lowers cross distribution confusion about what components are going to be shipped with specific packages. These packages can be defined from the Salt Source as of Salt 2014.1.0:

Salt Common

The salt-common or salt package should contain the files provided by the salt python package, or all files distributed from the salt/ directory in the source distribution packages. The documentation contained under the doc/ directory can be a part of this package but splitting out a doc package is preferred. Since salt-call is the entry point to utilize the libs and is useful for all salt packages it is included in the salt-common package.

Name

- salt OR salt-common
Files

- salt/*
- man/salt.7
- scripts/salt-call
- tests/*
- man/salt-call.1

Depends

- Python 2.6-2.7
- PyYAML
- jinja2

Salt Master

The *salt-master* package contains the applicable scripts, related man pages and init information for the given platform.

Name

- salt-master

Files

- scripts/salt-master
- scripts/salt
- scripts/salt-run
- scripts/salt-key
- scripts/salt-cp
- pkg/<master init data>
- man/salt.1
- man/salt-master.1
- man/salt-run.1
- man/salt-key.1
- man/salt-cp.1
- conf/master
Depends

- Salt Common
- ZeroMQ >= 3.2
- PyZMQ >= 2.10
- PyCrypto
- M2Crypto
- Python MessagePack (Messagepack C lib, or msgpack-pure)

Salt Syndic

The Salt Syndic package can be rolled completely into the Salt Master package. Platforms which start services as part of the package deployment need to maintain a separate salt-syndic package (primarily Debian based platforms). The Syndic may optionally not depend on the anything more than the Salt Master since the master will bring in all needed dependencies, but fall back to the platform specific packaging guidelines.

Name

- salt-syndic

Files

- scripts/salt-syndic
- pkg/<syndic init data>
- man/salt-syndic.1

Depends

- Salt Common
- Salt Master
- ZeroMQ >= 3.2
- PyZMQ >= 2.10
- PyCrypto
- M2Crypto
- Python MessagePack (Messagepack C lib, or msgpack-pure)
Salt Minion

The Minion is a standalone package and should not be split beyond the salt-minion and salt-common packages.

Name

- salt-minion

Files

- scripts/salt-minion
- pkg/<minion init data>
- man/salt-minion.1
- conf/minion

Depends

- Salt Common
- ZeroMQ >= 3.2
- PyZMQ >= 2.10
- PyCrypto
- M2Crypto
- Python MessagePack (Messagepack C lib, or msgpack-pure)

Salt SSH

Since Salt SSH does not require the same dependencies as the minion and master, it should be split out.

Name

- salt-ssh

Files

- scripts/salt-ssh
- man/salt-ssh.1
- conf/cloud*
depends

- Salt Common
- Python MessagePack (Messagepack C lib, or msgpack-pure)

Salt Cloud

As of Salt 2014.1.0 Salt Cloud is included in the same repo as Salt. This can be split out into a separate package or it can be included in the salt-master package.

Name

- salt-cloud

Files

- scripts/salt-cloud
- man/salt-cloud.1

Depends

- Salt Common
- apache libcloud >= 0.14.0

Salt Doc

The documentation package is very distribution optional. A completely split package will split out the documentation, but some platform conventions do not prefer this. If the documentation is not split out, it should be included with the Salt Common package.

Name

- salt-doc

Files

- doc/*
Optional Depends

- Salt Common
- Python Sphinx
- Make

29.25.4 Salt Release Process

The goal for Salt projects is to cut a new feature release every three to four months. This document outlines the process for these releases, and the subsequent bug fix releases which follow.

Feature Release Process

When a new release is ready to be cut, the person responsible for cutting the release will follow the following steps (written using the 3000 release as an example):

1. Create first public draft of release notes with major features.
2. Remove any deprecations for the upcoming release.
3. Ensure all required features are merged.
4. Create issue to start the process of deprecating for the next feature release.
5. Run through a manual test run based off of the head of the feature branch.
6. Update all name references to version number in the docs. For example all neon references in the docs needs to be moved to v3000
7. Review the release notes with major features.
8. Generate the new man pages for the release.
9. Create internal RC tag for testing from the head of the master branch.
10. Build latest windows, mac, ubuntu, debian and redhat packages.
11. Run manual and package tests against new RC packages.
12. Push the internal tag live to salt’s repo.
13. Publish release archive to pypi based off tag.
15. Announce new RC to salt-users and salt-announce google groups.
17. Fix RC issues once they are categorized as a release blocker.
18. Depending on the issues found during the RC process make a decesion on whether to release based off the RC or go through another RC process
19. If a RC is categorized as stable, build all required packages.
20. Test all release packages.
22. Update installation instructions with new release number at repo.saltstack.com.
23. Review and update all impacted Installation documentation.
24. Update and build docs to include new version (3000) as the latest.
25. Pre-announce on salt-users google group that we are about to update our repo.
26. Publish release (v3000) archive to pypi based off tag.
27. Publish all packages live to repo.
28. Publish the docs.
29. Create release at github
30. Update win-repo-ng with new salt versions.
31. Announce release is live to irc, salt-users, salt-announce and release slack community channel.

### Bugfix Releases

Once a feature release branch has been cut from the master branch, if serious bugs or a CVE is found for the most recent release a bugfix release will need to be cut. A temporary branch will be created based off of the previous release tag. For example, if it is determined that a 3000.1 release needs to occur a 3000.1 branch will be created based off of the v3000 tag. The fixes that need to go into 3000.1 will be added and merged into this branch. Here are the steps for a bugfix release.

1. Ensure all required bug fixes are merged.
2. Create release branch with the version of the release. (ex. 3000.1)
3. Create jenkins jobs that test the new release branch.
4. Run through a manual test run based off of the head of the branch.
5. Generate the new man pages for the release.
6. Create internal tag for testing.(ex v3000.1)
7. Build all release packages.
8. Run manual and package tests against new packages.
10. Update and build docs to include new version. (ex. 3000.1)
11. Pre-announce on salt-users google groups that we are about to update our repo.
12. Push the internal tag live to salt’s repo.
13. Publish release archive to pypi based off tag.
14. Push the packages live.
15. Publish release (v3000) archive to pypi based off tag.
16. Publish all packages live to repo.
17. Publish the docs.
18. Create release at github
20. Announce release is live to irc, salt-users, salt-announce and release slack channel.
Salt Documentation, Release 3002.5

29.25.5 Salt Coding Style

To make it easier to contribute and read Salt code, SaltStack has adopted Black as its code formatter. There are a few places where Black is silent, and this guide should be used in those cases.

Coding style is NEVER grounds to reject code contributions, and is never grounds to talk down to another member of the community (There are no grounds to treat others without respect, especially people working to improve Salt)!

Linting

Most Salt style conventions are codified in Salt’s .pylintrc file. Salt’s pylint file has two dependencies: pylint and saltpylint, however, linting should be done using nox.

```
nox -e lint
```

One can target either salt's source code or the test suite(different pylint rules apply):

```
nox -e lint-salt
nox -e lint-tests
```

Variables

Variables should be a minimum of three characters and should provide an easy-to-understand name of the object being represented.

When keys and values are iterated over, descriptive names should be used to represent the temporary variables.

Multi-word variables should be separated by an underscore.

Variables which are two-letter words should have an underscore appended to them to pad them to three characters.

Formatting Strings

All strings which require formatting should use the .format string method:

Please do NOT use printf formatting, unless it’s a log message.

Good:

```
data = "some text"
more = "{} and then some".format(data)
log.debug("%s and then some", data)
```

Bad:

```
data = "some text"
log.debug("{} and then some".format(data))
```
Docstring Conventions

When adding a new function or state, where possible try to use a `versionadded` directive to denote when the function, state, or parameter was added.

```python
def new_func(msg="
```
   .. versionadded:: 0.16.0
   Prints what was passed to the function.
   msg : None
       The string to be printed.
   
   print(msg)
```
```

If you are uncertain what version should be used, either consult a core developer in IRC or bring this up when opening your pull request and a core developer will let you know what version to add. Typically this will be the next element in the periodic table.

Similar to the above, when an existing function or state is modified (for example, when an argument is added), then under the explanation of that new argument a `versionadded` directive should be used to note the version in which the new argument was added. If an argument's function changes significantly, the `versionchanged` directive can be used to clarify this:

```python
def new_func(msg="", signature="
```
   .. versionadded:: 0.16.0
   Prints what was passed to the function.
   msg : None
       The string to be printed. Will be prepended with 'Greetings! '.
   
   .. versionchanged:: 0.17.1
   signature : None
       An optional signature.
   
   print("Greetings! {0}\n{n[1].format(msg, signature))
```
```
Dictionaries

Dictionaries should be initialized using \{\} instead of dict().
See here for an in-depth discussion of this topic.

Imports

Salt code prefers importing modules and not explicit functions. This is both a style and functional preference. The functional preference originates around the fact that the module import system used by pluggable modules will include callable objects (functions) that exist in the direct module namespace. This is not only messy, but may unintentionally expose code python libs to the Salt interface and pose a security problem.

To say this more directly with an example, this is GOOD:

```python
import os

def minion_path():
    path = os.path.join(self.opts["cachedir"], "minions")
    return path
```

This on the other hand is DISCOURAGED:

```python
from os.path import join

def minion_path():
    path = join(self.opts["cachedir"], "minions")
    return path
```

The time when this is changed is for importing exceptions, generally directly importing exceptions is preferred:

This is a good way to import exceptions:

```python
from salt.exceptions import CommandExecutionError
```

Absolute Imports

Although absolute imports seems like an awesome idea, please do not use it. Extra care would be necessary all over salt’s code in order for absolute imports to work as supposed. Believe it, it has been tried before and, as a tried example, by renaming salt.modules.sysmod to salt.modules.sys, all other salt modules which needed to import sys would have to also import absolute_import, which should be avoided.

Note: An exception to this rule is the absolute_import from __future__ at the top of each file within the Salt project. This import is necessary for Py3 compatibility. This particular import looks like this:

```python
from __future__ import absolute_import
```

This import is required for all new Salt files and is a good idea to add to any custom states or modules. However, the practice of avoiding absolute imports still applies to all other cases as to avoid a name conflict.
Code Churn

Many pull requests have been submitted that only churn code in the name of PEP 8. Code churn is a leading source of bugs and is strongly discouraged. While style fixes are encouraged they should be isolated to a single file per commit, and the changes should be legitimate, if there are any questions about whether a style change is legitimate please reference this document and the official PEP 8 (https://legacy.python.org/dev/peps/pep-0008/) document before changing code. Many claims that a change is PEP 8 have been invalid, please double check before committing fixes.

29.26 Salt code and internals

Reference documentation on Salt's internal code.

29.26.1 Contents

salt.aggregation

salt.utils.aggregation

This library makes it possible to introspect dataset and aggregate nodes when it is instructed.

**Note:** The following examples with be expressed in YAML for convenience's sake:

- `!aggr-scalar` will refer to Scalar python function
- `!aggr-map` will refer to Map python object
- `!aggr-seq` will refer for Sequence python python object

How to instructs merging

This yaml document has duplicate keys:

```yaml
foo: !aggr-scalar first
foo: !aggr-scalar second
bar: !aggr-map {first: foo}
bar: !aggr-map {second: bar}
baz: !aggr-scalar 42
```

but tagged values instruct Salt that overlapping values they can be merged together:

```yaml
foo: !aggr-seq [first, second]
bar: !aggr-map {first: foo, second: bar}
baz: !aggr-seq [42]
```
Default merge strategy is keep untouched

For example, this yaml document still has duplicate keys, but does not instruct aggregation:

```
foo: first
foo: second
bar: {first: foo}
bar: {second: bar}
baz: 42
```

So the late found values prevail:

```
foo: second
bar: {second: bar}
baz: 42
```

Limitations

Aggregation is permitted between tagged objects that share the same type. If not, the default merge strategy prevails. For example, these examples:

```
foo: {first: value}
foo: !aggr-map {second: value}

bar: !aggr-map {first: value}
bar: 42

baz: !aggr-seq [42]
baz: [fail]

qux: 42
qux: !aggr-scalar fail
```

are interpreted like this:

```
foo: !aggr-map{second: value}

bar: 42

baz: [fail]

qux: !aggr-seq [fail]
```

Introspection

TODO: write this part

```
salt.utils.aggregation.aggregate(obj_a, obj_b, level=False, map_class=salt.utils.aggregation.Map, sequence_class=salt.utils.aggregation.Sequence)
```

Merge obj_b into obj_a.

```
>>> aggregate('first', 'second', True) == ['first', 'second']
True
```
class salt.utils.aggregation.Aggregate
    Aggregation base.

class salt.utils.aggregation.Map
    Map aggregation.

salt.utils.aggregation.Scalar(obj)
    Shortcut for Sequence creation

    >>> Scalar('foo') == Sequence(['foo'])
    True

class salt.utils.aggregation.Sequence
    Sequence aggregation.

Exceptions

Salt-specific exceptions should be thrown as often as possible so the various interfaces to Salt (CLI, API, etc) can handle those errors appropriately and display error messages appropriately.

salt.exceptions
    This module is a central location for all salt exceptions

salt.exceptions

This module is a central location for all salt exceptions

exception salt.exceptions.ArgumentValueError
    Used when an invalid argument was passed to a command execution

exception salt.exceptions.AuthenticationError
    If sha256 signature fails during decryption

exception salt.exceptions.AuthorizationError
    Thrown when runner or wheel execution fails due to permissions

exception salt.exceptions.CheckError
    Used when a check fails

exception salt.exceptions.CodePageError
    Raised when an error occurs while getting or setting the windows code page

exception salt.exceptions.CommandExecutionError
    Used when a module runs a command which returns an error and wants to show the user the output gracefully instead of dying

exception salt.exceptions.CommandNotFoundError
    Used in modules or grains when a required binary is not available

exception salt.exceptions.EauthAuthenticationError
    Thrown when eauth authentication fails

exception salt.exceptions.FileLockError
    Used when an error occurs obtaining a file lock

exception salt.exceptions.FileserverConfigError
    Used when invalid fileserver settings are detected
exception salt.exceptions.GitLockError(erno, message, 'args', **'kwargs')
Raised when an uncaught error occurs in the midst of obtaining an update/checkout lock in salt.utils.gitfs.

NOTE: While this uses the errno param similar to an OSError, this exception class is not a subclass of OSError. This is done intentionally, so that this exception class can be caught in a try/except without being caught as an OSError.

exception salt.exceptions.GitRemoteError(message='')
Used by GitFS to denote a problem with the existence of the "origin" remote or part of its configuration

exception salt.exceptions.InvalidConfigError(message='', info=None)
Used when the config is invalid

exception salt.exceptions.InvalidEntityError(message='', info=None)
Used when an entity fails validation

exception salt.exceptions.LoaderError(message='')
Problems loading the right renderer

exception salt.exceptions.LoggingRuntimeError
Raised when we encounter an error while logging

exception salt.exceptions.MasterExit
Rise when the master exits

exception salt.exceptions.MinionError(message='')
Minion problems reading uris such as salt:// or http://

exception salt.exceptions.MissingSmb(message='')
Raised when no smb library is found.

exception salt.exceptions.NotImplemented(message='')
Used when a module runs a command which returns an error and wants to show the user the output gracefully instead of dying

exception salt.exceptions.NxosCliError(message='')
NX-OS Cli Error raised when Cli command rejected by the NX-OS device

exception salt.exceptions.NxosClientError(message='')
NX-OS Client Error raised for problems connecting to the NX-OS device

exception salt.exceptions.NxosError(message='')
NX-OS Base Exception class

exception salt.exceptions.NxosRequestNotSupported(message='')
Raised for unsupported client requests

exception salt.exceptions.PkgParseError(message='')
Used when of the pkg modules cannot correctly parse the output from the CLI tool (pacman, yum, apt, aptitude, etc)

exception salt.exceptions.PublishError(message='')
Problems encountered when trying to publish a command

exception salt.exceptions.SaltCacheError(message='')
Thrown when a problem was encountered trying to read or write from the salt cache

exception salt.exceptions.SaltClientError(message='')
Problem reading the master root key

exception salt.exceptions.SaltClientTimeout(message, jid= None, 'args', **'kwargs')
Thrown when a job sent through one of the Client interfaces times out
Takes the jid as a parameter
exception salt.exceptions.SaltCloudConfigError
Raised when a configuration setting is not found and should exist.

exception salt.exceptions.SaltCloudException
Generic Salt Cloud Exception

exception salt.exceptions.SaltCloudExecutionFailure
Raised when too much failures have occurred while querying/waiting for data.

exception salt.exceptions.SaltCloudExecutionTimeout
Raised when too much time has passed while querying/waiting for data.

exception salt.exceptions.SaltCloudNotFound
Raised when some cloud provider function cannot find what's being searched.

exception salt.exceptions.SaltCloudPasswordError
Raise when virtual terminal password input failed

exception salt.exceptions.SaltCloudSystemExit
This exception is raised when the execution should be stopped.

exception salt.exceptions.SaltConfigurationError
Configuration error

exception salt.exceptions.SaltDaemonNotRunning
Throw when a running master/minion/syndic is not running but is needed to perform the requested operation (e.g., eauth).

exception salt.exceptions.SaltDeserializationError
Thrown when salt cannot deserialize data.

exception salt.exceptions.SaltException
Base exception class; all Salt-specific exceptions should subclass this

_pack()
Pack this exception into a serializable dictionary that is safe for transport via msgpack

exception salt.exceptions.SaltInvocationError
Used when the wrong number of arguments are sent to modules or invalid arguments are specified on the command line

exception salt.exceptions.SaltMasterError
Problem reading the master root key

exception salt.exceptions.SaltMasterUnresolvableError
Problem resolving the name of the Salt master

exception salt.exceptions.SaltNoMinionsFound
An attempt to retrieve a list of minions failed

exception salt.exceptions.SaltRenderError
Used when a renderer needs to raise an explicit error. If a line number and buffer string are passed, get_context will be invoked to get the location of the error.

exception salt.exceptions.SaltReqTimeoutError
Thrown when a salt master request call fails to return within the timeout

exception salt.exceptions.SaltRunnerError
Problem in runner

exception salt.exceptions.SaltSyndicMasterError
Problem while proxying a request in the syndication master
**exception** salt.exceptions.SaltSystemExit *(code=0, msg=None)*

This exception is raised when an unsolvable problem is found. There's nothing else to do, salt should just exit.

**exception** salt.exceptions.SaltWheelError *(message="")*

Problem in wheel

**exception** salt.exceptions.TemplateError *(message="")*

Used when a custom error is triggered in a template

**exception** salt.exceptions.TimedProcTimeoutError *(message="")*

Thrown when a timed subprocess does not terminate within the timeout, or if the specified timeout is not an int or a float

**exception** salt.exceptions.TimeoutError *(message="")*

Thrown when an operation cannot be completed within a given time limit.

**exception** salt.exceptions.TokenAuthenticationError *(message="")*

Thrown when token authentication fails

**exception** salt.exceptions.VMwareApiError *(message="", info=None)*

Used when representing a generic VMware API error

**exception** salt.exceptions.VMwareConnectionError *(message="", info=None)*

Used when the client fails to connect to a either a VMware vCenter server or to a ESXi host

**exception** salt.exceptions.VMwareFileNotFoundError *(message="", info=None)*

Used when representing a generic VMware error if a file not found

**exception** salt.exceptions.VMwareMultipleObjectsError *(message="", info=None)*

Used when multiple objects were retrieved (and one was expected)

**exception** salt.exceptions.VMwareNotFoundError *(message="", info=None)*

Used when a VMware object was not found

**exception** salt.exceptions.VMwareObjectExistsError *(message="", info=None)*

Used when a VMware object already exists

**exception** salt.exceptions.VMwareObjectNotFoundError *(message="", info=None)*

Used when a VMware object was not found

**exception** salt.exceptions.VMwareObjectRetrievalError *(message="", info=None)*

Used when a VMware object cannot be retrieved

**exception** salt.exceptions.VMwarePowerOnError *(message="", info=None)*

Used when error occurred during power on

**exception** salt.exceptions.VMwareRuntimeError *(message="", info=None)*

Used when a runtime error is encountered when communicating with the vCenter

**exception** salt.exceptions.VMwareSaltError *(message="", info=None)*

Used when a VMware object cannot be retrieved

**exception** salt.exceptions.VMwareSystemError *(message="", info=None)*

Used when representing a generic VMware system error

**exception** salt.exceptions.VMwareVmCreationError *(message="", info=None)*

Used when a configuration parameter is incorrect

**exception** salt.exceptions.VMwareVmRegisterError *(message="", info=None)*

Used when a configuration parameter is incorrect

**salt.exceptions.get_error_message(error)**

Get human readable message from Python Exception
The Salt Fileserver and Client

Introduction

Salt has a modular fileserver, and multiple client classes which are used to interact with it. This page serves as a developer's reference, to help explain how the fileserver and clients both work.

Fileserver

The fileserver is not a daemon, so the fileserver and client are not a true server and client in the traditional sense. Instead, the fileserver is simply a class (salt.fileserver.Fileserver), located in salt/fileserver/__init__.py. This class has access to the configured fileserver backends via a loader instance, referenced as self.servers. When a request comes in from the fileclient, it will ultimately result in a Fileserver class function being run.

The functions in this class will run corresponding functions in the configured fileserver backends to perform the requested action. So, in summary:

1. A fileclient class makes a request...
2. which triggers the fileserver to run a function...
3. which runs a named function in each of the configured backends.

Not all of the functions will always execute on every configured backend. For instance, the find_file function in the fileserver will stop when it finds a match, so if it finds a match for the desired path in the first configured backend, it won't proceed and try to find the file in the next backend in the list.

Additionally, not all backends implement all functions in the salt.fileserver.Fileserver class. For instance, there is a function called update, which exists to update remote file servers such as the git, hg, and svn backends. This action has no use however in the roots backend, so it is simply not implemented there, and thus the roots backend will be skipped if the update function is run on the fileserver.

Backends for the fileserver are located in salt/fileserver/ (the files not named __init__.py).

Fileclient

There are three fileclient classes:

salt.fileclient.RemoteClient

This client is used when file_client is set to remote. This is how minions request files from the master.

Functions in this client will craft a payload and send it to the master via the transport channel. This is the same way that the minion asks the minion to do other things, such as updating and requesting data from the mine. The payload will be a dictionary with a key called cmd, and other values as needed.

Payloads sent via the transport channel are processed my an MWorker instance on the master, and the MWorker's _handle_aes() function will execute the command. The command will be a function attribute of the salt.master.AESFuncs class. The AESFuncs class' __setup_fileserver() function instantiates a salt.fileserver.Fileserver instance and maps its member functions to AESFuncs attributes. This is what makes the fileserver functions available remotely. The result of the function is returned back through the transport channel to the minion.

Transporting files is done in chunks, the size of which is decided by the file_buffer_size config option. If you look at the serve_file() function in any of the fileserver backends, you can see how the loc value in the payload
determines the offset so that an intermediate chunk of the file can be served. The RemoteClient's `get_file()` function will loop until the end of the file is reached, retrieving one chunk at a time.

**salt.fileclient.FSClient**

This client is used when `file_client` is set to `local`. This is how masterless minions request files.

This class inherits from the RemoteClient, but instead of using a transport channel (`zmq`, `tcp`, etc.), it uses a "fake" transport channel (`salt.fileserver.FSChan`), which implements its own `send()` function. Thus, when a function that the FSClient inherits from the RemoteClient runs `self.channel.send()`, it's actually calling `salt.fileserver.FSChan.send()`, which calls corresponding functions in the `salt.fileserver.Fileserver()` class. The result is that local file requests use the same code as remote file requests, they just bypass sending them through an actual transport channel and instead call them on the FSChan's Fileserver instance.

**salt.fileclient.LocalClient**

This client is now used exclusively by Pillar. This used to be used when `file_client` was set to `local`, but the FSChan class was written to allow minions with `file_client: local` to access the full set of backends. This class will probably be renamed at some point as it is often confused with `salt.client.LocalClient`.

**The cp Module**

Most of the user-facing interaction with the fileclient happens via the `cp` module. The functions in this module instantiate a fileclient instance (if one is not already saved to the `__context__` dunder) and run fileclient functions.

**Updating the Fileserver**

The master daemon spawns a process dedicated to routine maintenance tasks upon startup. This process runs an instance of `salt.master.Maintenance`, which loops forever, running a series of functions and then sleeping for a length of time determined by the `loop_interval` config option. One of the maintenance tasks is to update the fileserver, and it essentially runs `salt.fileserver.Fileserver.update()`, which as we know from above will run all configured backends' `update()` functions, if present. This is now remote fileserver like `git`, `hg`, and `svn` stay up-to-date.

For the local file_client (FSClient), since it does not interact with the master, upon spawning of its FSChan it will update the fileserver.

**Salt opts dictionary**

It is very common in the Salt codebase to see `opts` referred to in a number of contexts.

For example, it can be seen as `__opts__` in certain cases, or simply as `opts` as an argument to a function in others.

Simply put, this data structure is a dictionary of Salt's runtime configuration information that's passed around in order for functions to know how Salt is configured.

When writing Python code to use specific parts of Salt, it may become necessary to initialize a copy of `opts` from scratch in order to have it available for a given function.

To do so, use the utility functions available in `salt.config`.

As an example, here is how one might generate and print an options dictionary for a minion instance:
import salt.config

opts = salt.config.minion_config("/etc/salt/minion")
print(opts)

To generate and display `opts` for a master, the process is similar:

```python
import salt.config

opts = salt.config.master_config("/etc/salt/master")
print(opts)
```

### Unicode in Salt

Though Unicode handling in large projects can often be complex, Salt adheres to several basic rules to help developers handle Unicode correctly.

(For a basic introduction to this problem, see Ned Batchelder's excellent introduction to the topic [here](http://nedbatchelder.com/text/unipain/unipain.html).

Salt's basic workflow for Unicode handling is as follows:

1. **Salt should** convert whatever data is passed on CLI/API to Unicode. Internally, everything that Salt does should be Unicode unless it is printing to the screen or writing to storage.

2. **Modules and various Salt pluggable systems** use incoming data assuming Unicode.
   1. **For Salt modules that query an API**, the module should convert the data received from the API into Unicode.
   2. **For Salt modules that shell out to get output**, the module should convert data received into Unicode. (This does not apply if using the `cmd` execution module, which should handle this for you.)
   3. **For Salt modules which print directly to the console (not via an outputter)** or which write directly to disk, a string should be encoded when appropriate. To handle this conversion, the global variable `__salt_system_encoding__` is available, which declares the locale of the system that Salt is running on.

3. **When a function in a Salt module returns a string**, it should return a `unicode` type in Python 2.

4. **When Salt delivers the data to an outputter or a returner**, it is the job of the outputter or returner to encode the Unicode before displaying it on the console or writing it to storage.

### 29.27 Salt Community Projects

This page contains links to Salt-related projects created by community members. If you come across a useful project please add it to the list!
29.27.1 Hubblestack

Hubble is a modular, open-source security compliance framework built on top of SaltStack. The project provides on-demand profile-based auditing, real-time security event notifications, automated remediation, alerting and reporting.

https://hubblestack.io/

29.27.2 alkali

alkali is a collection of SaltStack states and pillar data that provide just the basics for provisioning Linux instances that may be built upon. alkali is a starter kit of sorts, to help new users to SaltStack get up-and-running quickly with the most commonly used, core packages.

https://github.com/zulily/alkali

29.27.3 buoyant

buoyant leverages docker to provide an alternative to VM-centric SaltStack development environments. buoyant containers may be spun up nearly instantly, once an initial docker image has been built.

https://github.com/zulily/buoyant

29.27.4 Salt Sandbox

Salt Sandbox is a multi-VM Vagrant-based Salt development environment used for creating and testing new Salt state modules outside of your production environment. It’s also a great way to learn firsthand about Salt and its remote execution capabilities.

https://github.com/elasticdog/salt-sandbox

29.27.5 Salt Vagrant Demo

A Salt Demo using Vagrant.

https://github.com/UtahDave/salt-vagrant-demo
See the version numbers page for more information about the version numbering scheme.

30.1 Latest Branch Release

Release Candidate

30.2 Previous Releases

30.2.1 Salt 3002 Release Notes - Codename Magnesium

New Features

Network Teaming Support Added (RHEL/CentOS)

Support for two new interface types (team and teamport) has been added to the network.managed state. See the documentation for example usage.

Execution Module Changes

The ip.get_bond and ip.build_bond functions have been removed from the ip module for RHEL/CentOS. Configuring bonding opts in modprobe configurations has not been necessary since RHEL 4, and Salt was in fact redundantly both creating modprobe configurations and using the BONDING_OPTS interface configuration parameter.

Removed

- removed boto_vpc.describe_route_table please use boto_vpc.describe_route_tables (#58636)
- removed show_ipv4 arg from all functions in from salt.runners.manage (#58638)
- removed kwargs from mandrill.send if you use "async" please use "asynchronous" (#58640)
- removed salt/modules/mac_brew_pkg.__fix_cask_namespace (#58641)
- zfs.mount Passing '-a' as name is deprecated please just pass 'None' (#58642)
- Remove include_localhost kwarg for connected_ids method in salt/utils/minions.py (#58224)
• deprecated opts default argument of none and removed deprecation warnings (#58635)

Deprecated

• The ssh parameter of virt.migrate has been deprecated. Use a libvirt URI target value instead. Both virt.migrate_non_shared and virt.migrate_non_shared_inc have been deprecated. Use the copy_storage parameter with virt.migrate instead. (#57947)

Changed

• Allow to specify a custom port for Proxmox connection (#50620)
• Changed the lvm.lv_present state to accept a resizefs switch. So, when the logical volume is resized, the filesystem will be resized too. (#55265)
• Change the enable_fqdns_grains setting to default to False on proxy minions as it is generally not needed and just slows down start up time. (#57676)
• Adds network teaming support to network.managed state for RHEL-based distros. Removes ip.get_bond and ip.build_bond for the same, as is redundant and not needed for any current RHEL/CentOS/Fedora/etc. release. (#57775)
• The serializer argument has been added to the file.serialize state, as an alternative to formatter. This brings it more in line with the serializer_opts and deserializer_opts arguments. formatter is still supported, but using both serializer and formatter will cause the state to fail. (#57858)

Fixed

• file.read exec module function no longer fails on binary data. (#58033)
• Remove py2 support from winrepo execution module and runner (#58596)
• Create ini file if does not exist when using ini.options_present state module. (#34236)
• Added an bool "strict" argument to sdb.get module to force module to fail if the sdb uri is not correct. (#39163)
• Fixed issue with postgres.has_privilege breaking on ALL. (#49063)
• fix frequent rest_tornado non-fatal tracebacks (#49572)
• Do not use reverse DNS of the target used in salt-ssh. Use the target the user provides. (#49840)
• Fixes startup issue where it tried to load the kernalparams grain on Windows (#49901)
• Fixed error in nilrt_ip.get_interfaces_details when loading config. (#50416)
• Doesn’t remove underscore when sanitizing hostname in network salt util (#50527)
• permit the use of int/float type for the version in:
  – the state postgres_cluster.present
  – the state postgres_cluster.absent
the module postgres.cluster_create
• the module postgres.cluster_remove (#50899)

• Cleaned up a trackback in lvm.pv_present when the disk doesn’t exist. (#52363)
• Fixed UnboundLocalError when using win_network.connect (#53371)
• Add accept_ra 2 option to modules.debian_ip (#54067)
• salt.runner test mode support (#54382)
• Fixed mkpart to allow the creation of a partition without filesystem (#54456)
• Fixes bogus warning message when an empty list is used for an environment in a topfile. This allows [] to be used as a placeholder in a topfile without needing to comment everything out as a workaround. (#54882)
• win_certutil state will no longer fail on non-English systems upon successful additions and deletions of a certificate. (#55024)
• Fixed file.directory state always showing mode change for symlinks. (#55878)
• check for a docker error that the swarm already exists when calling swarm.swarm_init on an existing docker swarm (#55949)
• Fixing stalekey engine so it deletes the keys when they are a list. (#55977)
• An invalid _schedule.conf configuration file is renamed to _schedule.confYAMLError. This avoids disabling the minion and busy polling the CPU on Windows. (#56216, #58177)
• Proper calculation of tpldir and related context parameters (#56410)
• Make gpg.encrypt examples work (#56646)
• Artifactory encoding of headers fixed for py3 (#56660)
• Fixed handling of extents extended attribute in file.managed state. (#57189)
• Remove buggy start parameter from virt.pool_running docstring (#57275)
• Fixed saltcheck rendering of map.jinja files from saltenv (#57327)
• Fix for virt.get_profiles resolves an error that appears due to new parameters introduced with _disk_profile() (#57431)
• Accept nested namespaces in spacewalk.api runner function. (#57442)
• virt.init fix the disk target names (#57477)
• Fix volume name for disk-typed pools in virt.defined (#57497)
• Fixes an issue with filesystems options ordering which kept already applied NFS fstab entries being updated. (#57520)
• Do not allow python2 to be added to salt-ssh tar since Salt deprecated Python 2. (#57647)
• Fixed exception on loading custom zipped modules. (#57674)
• corrected support for app_id or local vault configurations (#57705)
• Fix the registration of libvirt pool and nodedev events (#57746)
• Pass cmd.run state arguments to unless and onlyif when they exist (#57760)
• The 2004 release of Windows 10 introduced a bug in the InstallationBehavior COM object where you can no longer get properties from that object. Calls to this object are now wrapped in a try/except block with sane defaults when it fails to read attributes.
Additionally, some pre-flight checks have been added to the win_wua module to make sure Windows Update can actually run. (#57762)

- Changed get_repo in yumpkg.py to use "repo" as first parameter. This fixes #57778, a bug were every run of pkgrepo.managed state were marked as changed because the get_repo did fail to detect a previously applied run. (#57778)

- Raise SaltClientError in parse_host_port insted of ValueError so it is caught and handled properly when the minion is connecting to the master. (#57789)

- Fixed issue with the return dictionary from the workgroup() function in the salt.states.win_system module. This resulted in a windows-based minion logging an error and could also interfere with a highstate being applied. (#57790)

- Fixes broken block_device_mapping and block_device_mapping_v2 type checks in the OpenStack cloud driver. Salt was looking for a dict and the shade library was looking for a list of dicts. This made it impossible to use those params. (#57802)

- Fixed incorrect parsing of Set-Cookie response headers. (#57829)

- When using yumpkg, report stdout when stderr is redirected to stdout. (#57862)

- Fixes an issue on macOS where if you try and restart the macOS using servive.restart salt-minion it would fail because the service names are different on macOS. (#57878)

- Fixes an issue on macOS where salt would take extra time to run on a service.dead call and the service is missing. (#57907)

- Fixes an issue where a disabled macOS and Windows service would fail to start with service.running. (#57908)

- Use "use_bin_type" to differentiate between bytes and str when writing cache for pillar and grains. (#57918)

- Set the comment to "No minions responded" if salt.function fails to find any minions (#57920)

- Fix issue with __utils__ usage in the __virtual__ functions on a few of the execution modules. (#57948)

- remove encoding kwarg for both pack(b)/unpack(b) in msgpack for versions >=1.0.0 https://github.com/msgpack/msgpack-python/blob/master/ChangeLog.rst#100 (#57965)

- Replace deprecated cgi.escape() with html.escape() after it was removed from Python 3.8. (#57983)

- Fix btrfs state decorator, that produces exceptions when creating subvolumes. (#58012)

- Fix kubeadm token_list when the list of tokens is empty (#58116)

- Add a fix for the mac_service modules where it would fail to load in some new services and crash on Big Sur. (#58143)

- Fix blank tplfile context parameter when loading top level sls files (#58249)

- Do not include init directory in sls context parameters if explicitly specified (#58250)

- Fixing pillar caching when pillar environments are involved. (#58274)

- Make proxy_config read in the proxy specific configuration which is typically found in /etc/salt/proxy.d/minionid/. (#58307)

- Add timeout kwarg docs for service.running and service.dead (#58311)

- Return empty dict on win_pdh.get_counters rather than raising exception when no data are available (#58327)

- Leave boot parameters untouched if boot parameter is set to None in virt.update (#58331)

- Convert disks of volume type to file or block disks on Xen (#58333)
• Apparently Apple is using both "10.16" and "11" for versioning Big Sur, depending on where you look. The mac_softwareupdate module uses a different regex depending on OS version, and the determination was based on the osrelease_info grain. This results in a Big Sur machine not using the correct regex; osrelease_info[1] is 0 for Big Sur.

This change simply adds an additional clause to the if statement to handle osmajorrelease > 10. (#58340)

• Fixed zmq salt-call hang!

Some objects from the 3rd party module zmq fail to deconstruct if left to the GC when Python exits. This is because the objects get destroyed out of order. This only happens on some platforms like ubuntu 20.04 and some versions of FreeBSD. We fixed this hang by deconstructing all zmq objects in the right order before we exit salt-call. (#58364)

• Reactor runner functions will now ensure reactor system is available before attempting to run and error out if it is not available. (#58384)

• Fix endpoint typos (#58416)

• Make sure we repopulate __utils__ on Windows when a job is run from the scheduler. (#58437)

• Adding a check when a source is an HTTP or FTP URL to do a query to ensure the URL is valid before returning, then we know if we need to move onto the next source in the list or not. (#58441)

• Improved documentation for the LGPO state module (#58521)

• Remove old documented pending reboot key (#58530)

• On macOS, skip GUI dialog for Developer Command Line Tools when importing gitfs util. (#58575)

• Fixing a use case when multiple inotify beacons are defined but when notifications are fired the configuration from the first beacon are used. (#58655)

Added

• salt-api will now work on Windows platforms with limited support. You will be able to configure the rest_cherrypy module, without pam external authentication and without ssl support. (#49949)

• Added execution_timeout support to chocolatey.installed state (#50449)

• Add new verify_ssl option to file modules. This allows a user to not validate the server certificate for HTTPS source and source hash’s. (#52663)

• Added list target type support to the scan salt-ssh roster. (#52675)

• Added pvresize and lvextend to linux_lvm (#56089)

• Added COPR option to states.pkgrepo (#57258)

• Add "get_return" key for onlyif and unless requisites to parse deep module results (#57470)

• Allow setting VM boot devices order in virt.running and virt.defined states (#57544)

• Added grains to show the LVM Volume Groups and their Logical Volumes. (#57629)

• Memory Tuning Support which allows much greater control of memory allocation (#57639)

• Add output filter to saltcheck to only display test failures (#57788)

• Added an execution module for running idem exec modules

• Added a state module for running idem states (#57969)

• Added the ability for states to return sub_state_run’s results from external state engines (#57993)
• Added salt-cloud support for Linode APIv4 via the `api_version` provider configuration parameter. (#58093)
• Added support to manage services in Slackware Linux. (#58206)
• Added list_sources to chocolatey module to have an overview of the repositories present on the minions. Added `source_added` to chocolatey state in order to add repositories to chocolatey. (#58588)
• Adding tests for changes to virtual function for netmiko module. Adding tests for netmiko proxy minion module. (#58609)
• Added features config option for feature flags. Added a feature flag `enable_slsvars_fixes` to enable fixes to tpldir, tplfile and sls_path. This flag will be deprecated in the Phosphorus release when this functionality becomes the default. (#58652)

30.2.2 Salt 3002.1 Release Notes

Version 3002.1 is a CVE fix release for 3002.

Fixed

• Prevent shell injections in netapi ssh client (cve-2020-16846)
• Prevent creating world readable private keys with the tls execution module. (cve-2020-17490)
• Properly validate eauth credentials and tokens along with their ACLs. Prior to this change eauth was not properly validated when calling Salt ssh via the salt-api. Any value for 'eauth' or 'token' would allow a user to bypass authentication and make calls to Salt ssh. (CVE-2020-25592)

30.2.3 Salt 3002.2 Release Notes

Version 3002.2 is a bugfix release for 3002.

Fixed

• Change dict check to `isinstance` instead of `type()` for key_values in file.keyvalue. (#57758)
• Fail when func_ret is False when using the new module.run syntax. (#57768)
• Fix comparison of certificate values (#58296)
• When using ssh_pre_flight if there is a failure, fail on retcode not stderr. (#58439)
• Fix use of unauthd cached vmware service instance (#58691)
• Removing use of undefined variable in utils/slack.py. (#58753)
• Restored the ability to specify the amount of extents for a Logical Volume as a percentage. (#58759)
• Ensuring that the version check function is run a second time in all the user related functions incase the user being managed is the connection user and the password has been updated. (#58773)
• Allow bytes in gpg renderer (#58794)
• Fix issue where win_wua module fails to load when BITS is set to Manual (#58848)
• Ensure that `elasticsearch.index_exists` is available before loading the elasticsearch returner. (#58851)
• Log a different object when debugging if we’re using disk cache vs memory cache. The disk cache pillar class
has the dict object but the cache pillar object which is used with the memory cache does not include a _dict
object because it is a dict already. (#58861)

• Do not generate grains for every job run on Windows minions. This makes Windows conform more to the
way posix OSes work today. (#58904)

• Fixes salt-ssh authentication when using tty (#58922)

• Revert LazyLoader finalizer. Removed the weakref.finalizer code. On some occasions, the finalized would run
when trying to load a new module, firing a race condition. (#58947)

### 30.2.4 Salt 3002.3 Release Notes

Version 3002.3 is a CVE fix release for 3002.

**Fixed**

• CVE-2020-28243 - Fix local privilege escalation in the restartcheck module.

• CVE-2020-28972 - Ensure authentication to vcenter, vsphere, and esxi server validates the SSL/TLS certificate
by default. If you want to skip SSL verification you can use `verify_ssl: False`.

• CVE-2020-35662 - Ensure the asam runner, qingcloud, splunk returner, panos proxy, cimc proxy, zenoss mod-
ule, esxi module, vsphere module, glassfish module, bigip module, and keystone module validate SSL by default.
If you want to skip SSL verification you can use `verify_ssl: False`.

• CVE-2021-3148 - Fix a command injection in the Salt-API when using the Salt-SSH client.

• CVE-2021-3144 - Fix eauth tokens can be used once after expiration

• CVE-2021-25281 - Fix salt-api so it honors eauth credentials for the wheel_async client.

• CVE-2021-25282 - Fix the salt.wheel.pillar_roots.write method so it is not vulnerable to directory traversal.

• CVE-2021-25283 - Fix the jinja render to protect against server side template injection attacks.

• CVE-2021-25284 - Fix cmdmod so it will not log credentials to log levels info and error.

• CVE-2021-3197 - Fix ssh client to remove ProxyCommand from arguments provided by cli and netapi.

### 30.2.5 Salt 3002.4 Release Notes

Version 3002.4 is a bug fix release for 3002.

**Fixed**

• Fix runners that broke when patching for CVE-2021-25281

• Fix issue with runners in SSE
Known Issue

When using the Salt-API with the SSH client some of the SSH options are not working currently and will be fixed in an upcoming bug fix release. We are currently testing and fixing which options still need to be fixed, but have confirmed the following ones do not work in this release: extra-filerefs, pre-flight. This does not impact normal Salt-SSH usage on the cli.

30.2.6 Salt 3002.5 Release Notes

Version 3002.5 is a cve fix release for 3002.

Fixed

- Tests and fix for CVE-2021-25283

Known Issue

When using the Salt-API with the SSH client some of the SSH options are not working currently and will be fixed in an upcoming bug fix release. We are currently testing and fixing which options still need to be fixed, but have confirmed the following ones do not work in this release: extra-filerefs, pre-flight. This does not impact normal Salt-SSH usage on the cli.

30.2.7 Salt 3001 Release Notes - Codename Sodium

Python 2 Dropped

Python 2 support has been dropped in Salt 3001. See https://community.saltstack.com/blog/sunsetting-python-2-support/ for more info.

Salt mine updates

Syntax update

The syntax for defining salt functions in config or pillar files has changed to also support the syntax used in module.run. The old syntax for the mine_function - as a dict, or as a list with dicts that contain more than exactly one key - is still supported but discouraged in favor of the more uniform syntax of module.run.

State updates

The creates state requisite has been migrated from the docker_container and cmd states to become a global option. This acts similar to an equivalent unless: test -f filename but can also accept a list of filenames. This allows all states to take advantage of the enhanced functionality released in Neon, of allowing salt execution modules for requisite checks.

When using salt functions onlyif or unless requisites, a get_return key can now be used to specify a key to evaluate for truthiness. This can be used for execution modules which return status in a nested key.
The `state.test` function can be used to test a state on a minion. This works by executing the `state.apply` function while forcing the `test` kwarg to `True` so that the `state.apply` function is not required to be called by the user directly. This also allows you to add the `state.test` function to a minion's `minion_blackout_whitelist` pillar if you wish to be able to test a state while a minion is in blackout.

New Grains

`systempath`

This grain provides the same information as the `path` grain, only formatted as a list of directories.

Salt-SSH updates

`ssh_pre_flight`

A new Salt-SSH roster option `ssh_pre_flight` has been added. This enables you to run a script before Salt-SSH tries to run any commands. You can set this option in the roster for a specific minion or use the `roster_defaults` to set it for all minions.

Example for setting `ssh_pre_flight` for specific host in roster file

```
minion1:
  host: localhost
  user: root
  passwd: P@ssword
  ssh_pre_flight: /srv/salt/pre_flight.sh
```

Example for setting `ssh_pre_flight` using `roster_defaults`, so all minions run this script.

```
roster_defaults:
  ssh_pre_flight: /srv/salt/pre_flight.sh
```

The `ssh_pre_flight` script will only run if the thin dir is not currently on the minion. If you want to force the script to run you have the following options:

- Wipe the thin dir on the targeted minion using the `-w` arg.
- Set `ssh_run_pre_flight` to `True` in the config.
- Run `salt-ssh` with the `--pre-flight` arg.
set_path

A new salt-ssh roster option `set_path` has been added. This allows you to set the path environment variable used to run the salt-ssh command on the target minion. You can set this setting in your roster file like so:

```
minion1:
  host: localhost
  user: root
  passwd: P@ssword
  set_path: "$PATH:/usr/local/bin/
```

auto_detect

You can now auto detect the dependencies to be packed into the salt thin when using the `ssh_ext_alternatives` feature.

```
ssh_ext_alternatives:
  2019.2:
    # Namespace, can be anything.
    py-version: [2, 7] # Constraint to specific interpreter version
    path: /opt/2019.2/salt # Main Salt installation directory.
    auto_detect: True # Auto detect dependencies
    py_bin: /usr/bin/python2.7 # Python binary path used to auto detect dependencies
```

This new `auto_detect` option needs to be set to True in your `ssh_ext_alternatives` configuration. Salt-ssh will attempt to auto detect the file paths required for the default dependencies to include in the thin. If you have a dependency already set in your configuration, it will not attempt to auto detect for that dependency.

You can also set the `py_bin` option to set the python binary to be used to auto detect the dependencies. If `py_bin` is not set, it will attempt to use the major Python version set in `py-version`. For example, if you set `py-version` to be `[2, 7]` it will attempt to find and use the `python2` binary.

State Changes

- Adding a new option for the State compiler, `disabled_requisites` will allow requisites to be disabled during State runs.

Salt Renderer updates

A new renderer for toml files has been added.

```
#jinjatoml
{% set myvar = "sometext" %}

["some id"."test.nop"]
name = "{{ myvar }}"

["some id"."test.nop"]
txt = "hello"

["some id"."test.nop"]
"somekey" = "somevalue"
```
Execution Module updates

Vault Module

The vault module has been updated with the ability to cache generated tokens. By specifying uses and optionally ttl, the token generated on behalf of the minion will be allowed to persist and function for the defined time period or number of uses. Setting uses: 0 creates an unlimited use token, that is only constrained by the ttl.

```
vault:
  auth:
    uses: 25
```

This functionality is configured by default on the master and is thus shared behavior for all minion token generation. To delegate use count to individual minions, specify allow_minion_override: True in the master config, and define uses and ttl in the minion config as directed above.

```
vault:
  auth:
    method: token
    allow_minion_override: True
```

Additionally, the vault module now supports Vault secrets backend version 2. The appropriate secrets backend will be automatically detected, and cached in the same credentials file as long lived vault tokens mentioned above. For any configurations that worked around KV v2 handling by adding a manual data key to the end of vault lookups, `salt[vault].read_secret('secret/my/secret')['data']`, these are automatically detected and will continue to function, but will generate a debug log message and can be removed.

The long lived token and secret metadata cache file can be cleared with the new `vault.clear_token_cache` execution function.

30.2.8 Salt 3001.1 Release Notes

Version 3001.1 is a bugfix release for 3001.

Changed

- Change the `enable_fqdns_grains` setting to default to False on Windows to address some issues with slowness. (#56296, #57529)
- Handle the UCRT libraries the same way they are handled in the Python 3 installer (#57594)
- Changes the ‘SSDs’ grain name to ‘ssds’ as all grains needs to be resolved in lowered case. (#57612)

Fixed

- When running scheduled jobs from a proxy minion with multiprocessing turned off (default) a recursive error occurs as `__pub_fun_args` is repeated over and over again in the kwargs element in the data dictionary. Now we make a copy of data[‘kwargs’] instead of using a reference. (#57941)
- The `x509.certificate_managed` state no longer triggers a change because of sorting issues if the certificate being evaluated was previously generated under Python 2. (#56556)
- Added support to lo ip alias in network.managed state by checking if lo inet data from network.interfaces contains label with the name of managed interface. Return status True if match found. (#56901)
• Redact passwords in the return when setting credentials using `win_iis.container_setting` (#57285)
• Fixes issue with `cmd.powershell`. Some powershell commands do not return anything in stdout. This causes the JSON parser to fail because an empty string is not valid JSON. This changes an empty string to `[]` which is valid JSON and will not cause the JSON loader to stacktrace. (#57493)
• Improves performance. Profiling `test.ping` on Windows shows that 13 of 17 seconds are wasted when the esxi grain loads vsphere before noting that the OS is not a esxi host. (#57529)
• Fixed permissions issue with certain pip/virtualenv states/modules when configured for non-root user. (#57550)
• Allow running nox sessions either using our `nox-py2` fork or upstream `nox`. (#57583)
• Fixes issue with `lgpo.get` when there are unicode characters in the hostname (#57591)
• Fixes issue with virtual block devices, like loopbacks and LVMs, wrongly populating the "disks" or "ssds" grains. (#57612)
• Due to some optimization the `virtual` grain was never updated on illumos. Move the fallback in prtdiag output parsing outside the loop that now gets skipped due to the command exiting non-zero. (#57714)
• Grains module delkey and delval methods now support the force option. This is needed for deleting grains with complex (nested) values. (#57718)
• Moving import `salt.modules.vsphere` into `__virtual__` so we have access to test proxytype in opts, previously this was causing a traceback when run on proxy minion as `__opts__` does not exist outside of any functions. Introducing a new utils function, is_proxytype, to check that the device is a proxy minion and also that the proxy type matches. (#57743)
• Fixed `fail_with_changes` in the test state to use the comment argument when passed. (#57766)
• Adds a fix so salt can run on the latest macOS version Big Sur. (#57787)
• Fixes UnpackValueError when using GPG cache by using atomic open. (#57798)
• The `gid_from_name` argument was removed from the `user.present` state in version 3001, with no deprecation path. It has been restored and put on a proper deprecation path. (#57843)
• Fixes dictionary being changed during iteration. (#57845)

Added

• Added docs demonstrating how to apply an MSI patch with winrepo (#32780)

30.2.9 Salt 3001.2 Release Notes

Version 3001.2 is a CVE fix release for 3001.
Fixed

- Prevent shell injections in netapi ssh client (cve-2020-16846)
- Prevent creating world readable private keys with the tls execution module. (cve-2020-17490)

30.2.10 Salt 3001.3 Release Notes

Version 3001.3 is a CVE fix release for 3001.

Fixed

- Properly validate eauth credentials and tokens along with their ACLs. Prior to this change eauth was not properly validated when calling Salt ssh via the salt-api. Any value for ‘eauth’ or ‘token’ would allow a user to bypass authentication and make calls to Salt ssh. (CVE-2020-25592)

30.2.11 Salt 3001.4 Release Notes

Version 3001.4 is a bugfix release for 3001.

Fixed

- Fixes salt-ssh authentication when using tty (#58922)

30.2.12 Salt 3001.5 Release Notes

Version 3001.5 is a CVE fix release for 3001.

Fixed

- CVE-2020-28243 - Fix local privilege escalation in the restartcheck module.
- CVE-2020-28972 - Ensure authentication to vcenter, vsphere, and esxi server validates the SSL/TLS certificate by default. If you want to skip SSL verification you can use `verify_ssl: False`.
- CVE-2020-35662 - Ensure the asam runner, qingcloud, splunk returner, panos proxy, cimc proxy, zenoss module, esxi module, vsphere module, glassfish module, bigip module, and keystone module validate SSL by default. If you want to skip SSL verification you can use `verify_ssl: False`.
- CVE-2021-3148 - Fix a command injection in the Salt-API when using the Salt-SSH client.
- CVE-2021-3144 - Fix eauth tokens can be used once after expiration
- CVE-2021-25281 - Fix salt-api so it honors eauth credentials for the wheel_async client.
- CVE-2021-25282 - Fix the salt.wheel.pillar_roots.write method so it is not vulnerable to directory traversal.
- CVE-2021-25283 - Fix the jinja render to protect against server side template injection attacks.
- CVE-2021-25284 - Fix cmdmod so it will not log credentials to log levels info and error.
- CVE-2021-3197 - Fix ssh client to remove ProxyCommand from arguments provided by cli and netapi.
30.2.13 Salt 3001.6 Release Notes

Version 3001.6 is a bug fix release for 3001.

Fixed

- Fix runners that broke when patching for CVE-2021-25281
- Fix issue with runners in SSE

Known Issue

When using the Salt-API with the SSH client some of the SSH options are not working currently and will be fixed in an upcoming bug fix release. We are currently testing and fixing which options still need to be fixed, but have confirmed the following ones do not work in this release: extra-filerefs, pre-flight. This does not impact normal Salt-SSH usage on the cli.

30.2.14 Salt 3000 Release Notes - Codename Neon

Security Advisory

For historical reasons, Salt requires PyCrypto as a "lowest common denominator". However, PyCrypto is unmaintained and best practice is to manually upgrade to use a more maintained library such as PyCryptodome. See Issue #52674 and Issue #54115 for more info

New Versioning

The neon release has removed the date versioning. Going forward we will use a non-date based version schema beginning at 3000. The version will be MAJOR.PATCH. For a planned release containing features and/or bug fixes the MAJOR version will be incremented. Please review the approved SEP for further details.

The new versioning scheme is PEP 440 compliant, but distutils.StrictVersion will result in an error invalid version number. If using StrictVersion to compare Salt's versions, please use LooseVersion. There is also the packaging library you can use to compare versions. Another alternative is using the salt version module

Python 3.8 Not Supported

Please note that running Salt with Python 3.8 is currently not supported. It is recommended to not use a version higher than 3.7.

Vendored Tornado Code Base

The Tornado code base has been included as salt.ext.tornado. This was done to provide a consistent version of Tornado across all operating systems while we continue to work on upgrading Tornado to a recent version. New code that uses Tornado should import the module from salt.ext.tornado instead of importing the system version of Tornado.
**Msgpack 1.0.0rc1 Incompatibility**

Salt is currently incompatible with msgpack 1.0.0rc1. We recommend using versions < 1.0.0. This impacts the Salt Master's ability to run commands against minions. Please see Issue 56007 for more details and updates.

**Pip Installing Salt On Windows**

This release will not install correctly on windows when using pip to install salt. This issue is addressed in PR 56099. The workaround for this issue is:

```
pip install "pywin32==224" "WMI==1.4.9"
```

Those using the Salt Windows Installer are not affected by this issue.

**Saltcheck Updates**

Available since 2018.3, the `saltcheck` module has been enhanced to:

- Support saltenv environments
- Associate tests with states by naming convention
- Adds `report_highstate_tests` function
- Adds empty and notempty assertions
- Adds skip keyword
- Adds `print_result` keyword
- Adds `assertion_section` keyword
- Use `saltcheck.state_apply` to run `state.apply` for test setup or teardown
- Changes output to display test time
- Works with `salt-ssh`

Saltcheck provides unittest like functionality requiring only the knowledge of salt module execution and yaml. Saltcheck uses salt modules to return data, then runs an assertion against that return. This allows for testing with all the features included in salt modules.

In order to run state and highstate saltcheck tests, a sub-folder in the state directory must be created and named `saltcheck-tests`. Tests for a state should be created in files ending in `.tst` and placed in the `saltcheck-tests` folder. `tst` files are run through the salt rendering system, enabling tests to be written in yaml (or renderer of choice), and include jinja, as well as the usual grain and pillar information. Like states, multiple tests can be specified in a `tst` file. Multiple `tst` files can be created in the `saltcheck-tests` folder, and should be named the same as the associated state. The `id` of a test works in the same manner as in salt state files and should be unique and descriptive.
Usage

Example file system layout:

```
/srv/salt/apache/
  init.sls
  config.sls
  saltcheck-tests/
    init.tst
    config.tst
    deployment_validation.tst
```

Tests can be run for each state by name, for all apache/saltcheck/*.*tst files, or for all states assigned to the minion in top.sls. Tests may also be created with no associated state. These tests will be run through the use of `saltcheck.run_state_tests`, but will not be automatically run by `saltcheck.run_highstate_tests`.

```
salt '/*' saltcheck.run_state_tests apache,apache.config
salt '/*' saltcheck.run_state_tests apache check_all=True
salt '/*' saltcheck.run_highstate_tests
salt '/*' saltcheck.run_state_tests apache.deployment_validation
```

Example Tests

```
{% # will run the common salt state before further testing %}
setup_test_environment:
  module_and_function: saltcheck.state_apply
  args:
    - common
  pillar-data:
    data: value

{% for package in ["apache2", "openssh"] %}
  jinja_test_{{ package }}_latest:
    module_and_function: pkg.upgrade_available
    args:
      - {{ package }}
    assertion: assertFalse
{% endfor %}

validate_user_present_and_shell:
  module_and_function: user.info
  args:
    - root
  assertion: assertEqual
  expected-return: /bin/bash
  assertion_section: shell
  print_result: False

skip_test:
  module_and_function: pkg.upgrade_available
  args:
    - apache2
```

(continues on next page)
assertion: assertFalse
skip: True

Output Format Changes

Saltcheck output has been enhanced to display the time taken per test. This results in a change to the output format.

Previous Output:

```
local:
  |_---------
    ntp:
      |---------
      ntp-client-installed:
        Pass
      ntp-service-status:
        Pass
    |_---------
      TEST RESULTS:
      |---------
      Failed:
        0
      Missing Tests:
        0
      Passed:
        2
```

New output:

```
local:
  |_---------
    ntp:
      |---------
      ntp-client-installed:
        duration: 1.0408
        status: Pass
      ntp-service-status:
        duration: 1.464
        status: Pass
    |_---------
      TEST RESULTS:
      |---------
      Execution Time: 2.5048
      Failed:
```

(continues on next page)
Unless and onlyif Enhancements

The `unless` and `onlyif` requisites can now be operated with salt modules. The dictionary must contain an argument `fun` which is the module that is being run, and everything else must be passed in under the `args` key or will be passed as individual kwargs to the module function.

Note: Certain states have an `unless/onlyif` implementation that predates this feature, and may not work as expected:

- `states.git`
- `states.cmd`
- `states.macpackage`
- `states.file`
- `states.docker_container`

Examples:

```
check external ip address:
http.query:
  - name: https://icanhazip.com
  - status: 200
  - onlyif:
    - fun: file.file_exists
      path: /usr/local/bin/whatever
```

is equivalent to

```
check another ip address:
http.query:
  - name: https://icanhazip.com
  - status: 200
  - onlyif:
    - test -f /tmp/fnord.txt
```

Another example:

```
set mysql root password:
debconf.set:
  - name: mysql-server-5.7
  - data:
    ’mysql-server/root_password’: {’type’: ’password’, ’value’: {{pillar[’mysql.
      → pass’]}}}
  - unless:
```

(continues on next page)
- **fun**: pkg.version
  
  **args**:
  - mysql-server-5.7

---

**Keystore State and Module**

A new *state* and *execution module* for managing Java Keystore files is now included. It allows for adding/removing/listing as well as managing keystore files.

```bash
# salt-call keystore.list /path/to/keystore.jks changeit
local:
  |--
     |--
     |  alias:
     |     hostname1
     |     expired:
     |        True
     |     sha1:
     |     type:
     |        TrustedCertEntry
     |     valid_start:
     |        August 22 2012
     |     valid_until:
     |        August 21 2017

define_keystore:
  keystore.managed:
    - name: /tmp/statestore.jks
    - passphrase: changeit
    - force_remove: True
    - entries:
      |--
      |  alias: hostname1
      |     certificate: /tmp/testcert.crt
      |  alias: remotehost
      |     certificate: /tmp/512.cert
      |     private_key: /tmp/512.key
      |  alias: stringhost
      |     certificate: |
      |        -----BEGIN CERTIFICATE-----
      |        MIICEjCCAX
      |        Hn+GmxZA
      |        -----END CERTIFICATE-----
```
XML Module

A new state and execution module for editing XML files is now included. Currently it allows for editing values from an xpath query, or editing XML IDs.

```bash
# salt-call xml.set_attribute /tmp/test.xml ".//actor[@id='3']" editedby "Jane Doe"
local: True
# salt-call xml.get_attribute /tmp/test.xml ".//actor[@id='3']"
local: {
  editedby: Jane Doe
  id: 3
}
# salt-call xml.get_value /tmp/test.xml ".//actor[@id='2']"
local: Liam Neeson
# salt-call xml.set_value /tmp/test.xml ".//actor[@id='2']" "Patrick Stewart"
local: True
# salt-call xml.get_value /tmp/test.xml ".//actor[@id='2']"
local: Patrick Stewart
```

```yaml
ensure_value_true:
  xml.value_present:
    - name: /tmp/test.xml
    - xpath: .//actor[@id='1']
    - value: William Shatner
```

LGPO Execution Module

Multiple fixes were made to the win_lgpo to expand support for additional policies and improve performance. Issues with encoding and unsupported characters (smart-quotes, em-dash, etc) found in the ADML files as well as whitespace in some policies have been addressed.

Speed enhancements include:

- Caching the compiled xml from ADMX/ADML files in __context__
- Lowercasing all keys before compiling XML to remove an expensive XPath lookup

Additional functionality:

- Adds the lgpo.get_policy function that allows you to get the current settings for a single policy.
- Changes some policy names that were overly long
LGPO State Module

Multiple changes were made to the win_lgpo state to improve performance. It now uses the lgpo.get_policy function instead of the lgpo.get to avoid reloading all settings on the machine at the beginning and end of each state run. Supports the new shorter policy names but also attempts to resolve the older, longer policy names.

Win_network Salt Util

Now uses .NET libraries to obtain Interface information on Windows systems that support it. Unsupported systems fall back to the more expensive WMI calls. This is important as this data is gathered for grains and occurs each time a process is forked.

Jinja enhancements

Troubleshooting Jinja map files

A new execution module for map.jinja troubleshooting has been added. Assuming the map is loaded in your formula SLS as follows:

```{% from "myformula/map.jinja" import myformula with context %}
```

The following command can be used to load the map and check the results:

```
salt myminion jinja.load_map myformula/map.jinja myformula
```

The module can be also used to test json and yaml maps:

```
salt myminion jinja.import_yaml myformula/defaults.yaml
salt myminion jinja.import_json myformula/defaults.json
```

json_query filter

A port of Ansible json_query Jinja filter has been added. It allows making queries against JSON data using JMESPath language. Could be used to filter pillar data, yaml maps, and also useful with http_query. Depends on the jmespath Python module.

Slot Syntax Updates

The slot syntax has been updated to support parsing dictionary responses and to append text.

```yaml
demo dict parsing and append:
  test.configurable_test_state:
    - name: slot example
    - changes: False
    - comment: __slot__:salt:test.arg(shell="/bin/bash").kwargs.shell ~ / appended
```
Also, slot parsing is now supported inside of nested state data structures (dicts, lists, unless/onlyif args):

```yaml
demo slot parsing for nested elements:
  file.managed:
    - name: /tmp/slot.txt
    - source: salt://slot.j2
    - template: jinja
    - context:
      variable: __slot__:salt:test.echo(a_value)
    - unless:
      - fun: file.search
        args:
        # Slot as unless argument
        - __slot__:salt:test.echo(/tmp/slot.txt)
        - "DO NOT OVERRIDE"
      ignore_if_missing: True
```

State Changes

- The file.symlink state was fixed to remove existing file system entries other than files, directories and symbolic links properly.
- The onchanges and prereq requisites now behave properly in test mode, due to removing pchanges.
- Added new ssh_auth.manage state to ensure only the specified ssh keys are present for the specified user.
- Added new saltutil state to use instead of module.run to more easily handle change.

Module Changes

- Added new boto_ssm module to set and query secrets in AWS SSM parameters.
- Added new flatpak module to work with flatpak packages.
- The file.remove module was fixed to remove file system entries other than files, directories and symbolic links properly.
- The debian_ip module used by the network.managed state has been heavily refactored. The order that options appear in inet/inet6 blocks may produce cosmetic changes. Many options without an 'ipvX' prefix will now be shared between inet and inet6 blocks. The options enable_ipv4 and enabled_ipv6 will now fully remove relevant inet/inet6 blocks. Overriding options by prefixing them with 'ipvX' will now work with most options (i.e. dns can be overridden by ipv4dns or ipv6dns). The proto option is now required.
Enhancements to Engines

Multiple copies of a particular Salt engine can be configured by including the `engine_module` parameter in the engine configuration.

```yaml
engines:
  - production_logstash:
      host: production_log.my_network.com
      port: 5959
      proto: tcp
      engine_module: logstash
  - develop_logstash:
      host: develop_log.my_network.com
      port: 5959
      proto: tcp
      engine_module: logstash
```

- A new `fluent` engine has been added to export Salt events to fluentd.

```yaml
engines:
  - fluent
    host: localhost
    port: 24224

<source>
  @type forward
  port 24224
</source>
<match saltstack.**>
  @type file
  path /var/log/td-agent/saltstack
</match>
```

Enhancements to Beacons

Multiple copies of a particular Salt beacon can be configured by including the `beacon_module` parameter in the beacon configuration.

```yaml
beacons:
  watch_importand_file:
    files:
      /etc/important_file: {}
    beacon_module: inotify
  watch_another_file:
    files:
      /etc/another_file: {}
    beacon_module: inotify
```
Enhancements to chroot

- New functions added to chroot apply, sls, and highstate that allow executing states in sls files or running apply/highstate inside of a chroot.

Minion-side ACL

Salt has had master-side ACL for the salt mine for some time, where the master configuration contained mine_get that specified which minions could request which functions. However, now you can specify which minions can access a function in the salt mine function definition itself (or when calling mine.send). This targeting works the same as the generic minion targeting as specified here. The parameters used are allow_tgt and allow_tgt_type. See also the documentation of the Salt Mine. Please note that if you want to use this new feature both your minion and masters will need to be on at least version 3000.

Deprecations

Raet Deprecated

- The Raet transport has been deprecated. Please use the supported transport protocols tcp or zeromq.

Module Deprecations

- The hipchat module has been removed due to the service being retired. Google Chat, MS Teams, or Slack may be suitable replacements.
- The dockermod module has been changed as follows:
  - Support for the tags kwarg has been removed from the dockermod.resolve_tag function.
  - Support for the network_id kwarg has been removed from the dockermod.connect_container_to_network function. Please use net_id instead.
  - Support for the name kwarg has been removed from the dockermod.sls_build function. Please use repository and tag instead.
  - Support for the image kwarg has been removed from the following functions. In all cases, please use both the repository and tag options instead:
    * dockermod.build
    * dockermod.commit
    * dockermod.import
    * dockermod.load
    * dockermod.tag
- The heat module has removed the enviroment kwarg from the heat.create_stack and heat.update_stack functions due to a spelling error. Please use environment instead.
- The ssh execution module has been changed as follows:
  - Support for the ssh.get_known_host function has been removed. Please use the ssh.get_known_host_entries function instead.
  - Support for the ssh.recv_known_host function has been removed. Please use the ssh.recv_known_host_entries function instead.
The :py:mod:`firewalld <salt.modules.firewalld>` module has been changed as follows:

- The default setting for the `force_masquerade` option in the `firewalld.add_port <salt.module.firewalld.add_port>()` function has changed from `True` to `False`.
- Support for the `force_masquerade` option in the `firewalld.add_port_fwd <salt.module.firewalld.add_port_fwd>()` function has been changed from `True` to `False`.

**State Deprecations**

- The hipchat state has been removed due to the service being retired. MS Teams or Slack may be suitable replacements.
- The cmd state module has removed the `quiet` kwarg from the `cmd.run` function. Please set `output_loglevel` to `quiet` instead.
- The heat state module has removed the `enviroment` kwarg from the `heat.deployed` function due to a spelling error. Please use `environment` instead.
- The :py:mod:`firewalld <salt.states.firewalld>` state has been changed as follows:
  - The default setting for the `prune_services` option in the `firewalld.present` function has changed from `True` to `False`.

**Fileserver Deprecations**

- The hgfs fileserver had the following config options removed:
  - The `hgfs_env_whitelist` config option has been removed in favor of `hgfs_saltenv_whitelist`.
  - The `hgfs_env_blacklist` config option has been removed in favor of `hgfs_saltenv_blacklist`.
- The svnfs fileserver had the following config options removed:
  - The `svnfs_env_whitelist` config option has been removed in favor of `svnfs_saltenv_whitelist`.
  - The `svnfs_env_blacklist` config option has been removed in favor of `svnfs_saltenv_blacklist`.
- The gitfs fileserver had the following config options removed:
  - The `gitfs_env_whitelist` config option has been removed in favor of `gitfs_saltenv_whitelist`.
  - The `gitfs_env_blacklist` config option has been removed in favor of `gitfs_saltenv_blacklist`.
Engine Removal

- The hipchat engine has been removed due to the service being retired. For users migrating to Slack, the slack engine may be a suitable replacement.

Returner Removal

- The hipchat returner has been removed due to the service being retired. For users migrating to Slack, the slack returner may be a suitable replacement.

Grain Deprecations

For smartos some grains have been deprecated. These grains have been removed.

- The hypervisor_uuid has been replaced with mdata:sdc:server_uuid grain.
- The datacenter has been replaced with mdata:sdc:datacenter_name grain.

Cloud Deprecations

- The nova cloud driver has been removed in favor of the openstack cloud driver.

Jinja Filter Deprecations

- The following jinja filters are set to be removed in the Aluminium release:
  - json_decode_dict in favor of tojson
  - json_decode_list in favor of tojson

Utils Deprecations

- All of the functions in salt.utils.__init__.py have been removed. These include:
  - salt.utils.option
  - salt.utils.required_module_list
  - salt.utils.required_modules_error
  - salt.utils.get_accumulator_dir. Please use salt.state.get_accumulator_dir() instead.
  - salt.utils.fnmatch_multiple. Please use salt.utils.itertools.fnmatch_multiple() instead.
  - salt.utils.appendproctitle. Please use salt.utils.process.appendproctitle() instead.
  - salt.utils.daemonize. Please use salt.utils.process.daemonize() instead.
  - salt.utils.daemonize_if. Please use salt.utils.process.daemonize_if() instead.
  - salt.utils.reinit_crypto. Please use salt.utils.crypt.reinit_crypto() instead.
  - salt.utils.pem_finger. Please use salt.utils.crypt.pem_finger() instead.
  - salt.utils.to_bytes. Please use salt.utils.stringutils.to_bytes() instead.
- `salt.utils.to_str`. Please use `salt.utils.stringutils.to_str()` instead.
- `salt.utils.to_unicode`. Please use `salt.utils.stringutils.to_unicode()` instead.
- `salt.utils.str_to_num`. Please use `salt.utils.stringutils.to_num()` instead.
- `salt.utils.is_quoted`. Please use `salt.utils.stringutils.is_quoted()` instead.
- `salt.utils.dequote`. Please use `salt.utils.stringutils.dequote()` instead.
- `salt.utils.is_hex`. Please use `salt.utils.stringutils.is_hex()` instead.
- `salt.utils.is_bin_str`. Please use `salt.utils.stringutils.is_binary()` instead.
- `salt.utils.rand_string`. Please use `salt.utils.stringutils.random()` instead.
- `salt.utils.contains_whitespace`. Please use `salt.utils.stringutils.contains_whitespace()` instead.
- `salt.utils.build_whitespace_split_regex`. Please use `salt.utils.stringutils.build_whitespace_split_regex()` instead.
- `salt.utils.expr_match`. Please use `salt.utils.stringutils.expr_match()` instead.
- `salt.utils.check_whitelist_blacklist`. Please use `salt.utils.stringutils.check_whitelist_blacklist()` instead.
- `salt.utils.check_include_exclude`. Please use `salt.utils.stringutils.check_include_exclude()` instead.
- `salt.utils.print_cli`. Please use `salt.utils.stringutils.print_cli()` instead.
- `salt.utils.clean_kwvars`. Please use `salt.utils.args.clean_kwvars()` instead.
- `salt.utils.invalid_kwvars`. Please use `salt.utils.args.invalid_kwvars()` instead.
- `salt.utils.shlex_split`. Please use `salt.utils.args.shlex_split()` instead.
- `salt.utils.arg_lookup`. Please use `salt.utils.args.arg_lookup()` instead.
- `salt.utils.split_input`. Please use `salt.utils.args.split_input()` instead.
- `salt.utils.test_mode`. Please use `salt.utils.args.test_mode()` instead.
- `salt.utils.format_call`. Please use `salt.utils.args.format_call()` instead.
- `salt.utils.which`. Please use `salt.utils.path.which()` instead.
- `salt.utils.which_bin`. Please use `salt.utils.path.which_bin()` instead.
- `salt.utils.path_join`. Please use `salt.utils.path.join()` instead.
- `salt.utils.check_or_die`. Please use `salt.utils.path.check_or_die()` instead.
- `salt.utils.sanitize_win_path_string`. Please use `salt.utils.path.sanitize_win_path()` instead.
- `salt.utils.rand_str`. Please use `salt.utils.hashutils.random_hash()` instead.
- `salt.utils.get_hash`. Please use `salt.utils.hashutils.get_hash()` instead.
- `salt.utils.is_windows`. Please use `salt.utils.platform.is_windows()` instead.
- `salt.utils.is_proxy`. Please use `salt.utils.platform.is_proxy()` instead.
- `salt.utils.is_linux`. Please use `salt.utils.platform.is_linux()` instead.
- `salt.utils.is_darwin`. Please use `salt.utils.platform.is_darwin()` instead.
- salt.utils.is_sunos. Please use salt.utils.platform.is_sunos() instead.
- salt.utils.is_smartos. Please use salt.utils.platform.is_smartos() instead.
- salt.utils.is_smartos_globalzone. Please use salt.utils.platform.is_smartos_globalzone() instead.
- salt.utils.is_smartos_zone. Please use salt.utils.platform.is_smartos_zone() instead.
- salt.utils.is_freebsd. Please use salt.utils.platform.is_freebsd() instead.
- salt.utils.is_netbsd. Please use salt.utils.platform.is_netbsd() instead.
- salt.utils.is_openbsd. Please use salt.utils.platform.is_openbsd() instead.
- salt.utils.is_aix. Please use salt.utils.platform.is_aix() instead.
- salt.utils.safe_rm. Please use salt.utils.files.safe_rm() instead.
- salt.utils.is_empty. Please use salt.utils.files.is_empty() instead.
- salt.utils.fopen. Please use salt.utils.files.fopen() instead.
- salt.utils.flopen. Please use salt.utils.files.flopen() instead.
- salt.utils.rm_rf. Please use salt.utils.files.rm_rf() instead.
- salt.utils.mkstemp. Please use salt.utils.files.mkstemp() instead.
- salt.utils.istextfile. Please use salt.utils.files.is_text_file() instead.
- salt.utils.is_bin_file. Please use salt.utils.files.is_binary() instead.
- salt.utils.list_files. Please use salt.utils.files.list_files() instead.
- salt.utils.safe_walk. Please use salt.utils.files.safe_walk() instead.
- salt.utils.st_mode_to_octal. Please use salt.utils.files.st_mode_to_octal() instead.
- salt.utils.normalize_mode. Please use salt.utils.files.normalize_mode() instead.
- salt.utils.human_size_to_bytes. Please use salt.utils.files.human_size_to_bytes() instead.
- salt.utils.backup_minion. Please use salt.utils.files.backup_minion() instead.
- salt.utils.str_version_to_evr. Please use salt.utils.pkg.rpm.version_to_evr() instead.
- salt.utils.parse_docstring. Please use salt.utils.doc.parse_docstring() instead.
- salt.utils.compare_versions. Please use salt.utils.versions.compare() instead.
- salt.utils.version_cmp. Please use salt.utils.versions.version_cmp() instead.
- salt.utils.warn_until. Please use salt.utils.versions.warn_until() instead.
- salt.utils.kwargs_warn_until. Please use salt.utils.versions.kwargs_warn_until() instead.
- salt.utils.get_color_theme. Please use salt.utils.color.get_color_theme() instead.
- salt.utils.get_colors. Please use salt.utils.color.get_colors() instead.
- salt.utils.gen_state_tag. Please use salt.utils.state.gen_tag() instead.
- salt.utils.search_onfail_requisites. Please use salt.utils.state.search_onfail_requisites() instead.
- `salt.utils.check_onfail_requisites`. Please use `salt.utils.state.check_onfail_requisites()` instead.
- `salt.utils.check_state_result`. Please use `salt.utils.state.check_result()` instead.
- `salt.utils.get_user`. Please use `salt.utils.user.get_user()` instead.
- `salt.utils.get_uid`. Please use `salt.utils.user.get_uid()` instead.
- `salt.utils.get_specific_user`. Please use `salt.utils.user.get_specific_user()` instead.
- `salt.utils.chugid`. Please use `salt.utils.user.chugid()` instead.
- `salt.utils.chugid_and_umask`. Please use `salt.utils.user.chugid_and_umask()` instead.
- `salt.utils.get_default_group`. Please use `salt.utils.user.get_default_group()` instead.
- `salt.utils.get_group_list`. Please use `salt.utils.user.get_group_list()` instead.
- `salt.utils.get_group_dict`. Please use `salt.utils.user.get_group_dict()` instead.
- `salt.utils.get_gid_list`. Please use `salt.utils.user.get_gid_list()` instead.
- `salt.utils.get_gid`. Please use `salt.utils.user.get_gid()` instead.
- `salt.utils.enable_ctrl_logoff_handler`. Please use `salt.utils.win_functions.enable_ctrl_logoff_handler()` instead.
- `salt.utils.traverse_dict`. Please use `salt.utils.data.traverse_dict()` instead.
- `salt.utils.traverse_dict_and_list`. Please use `salt.utils.data.traverse_dict_and_list()` instead.
- `salt.utils.filter_by`. Please use `salt.utils.data.filter_by()` instead.
- `salt.utils.subdict_match`. Please use `salt.utils.data.subdict_match()` instead.
- `salt.utils.substr_in_list`. Please use `salt.utils.data.substr_in_list()` instead.
- `salt.utils.is_dictlist`. Please use `salt.utils.data.is_dictlist()` instead.
- `salt.utils.repack_dictlist`. Please use `salt.utils.data.repack_dictlist()` instead.
- `salt.utils.compare_dicts`. Please use `salt.utils.data.compare_dicts()` instead.
- `salt.utils.compare_lists`. Please use `salt.utils.data.compare_lists()` instead.
- `salt.utils.decode_dict`. Please use `salt.utils.data.encode_dict()` instead.
- `salt.utils.decode_list`. Please use `salt.utils.data.encode_list()` instead.
- `salt.utils.is_sorted`. Please use `salt.utils.data.sorted_ignorecase()` instead.
- `salt.utils.is_true`. Please use `salt.utils.data.is_true()` instead.
- `salt.utils.mysql_to_dict`. Please use `salt.utils.data.mysql_to_dict()` instead.
- `salt.utils.simple_types_filter`. Please use `salt.utils.data.simple_types_filter()` instead.
- `salt.utils.ip_bracket`. Please use `salt.utils.zeromq.ip_bracket()` instead.
- `salt.utils.gen_mac`. Please use `salt.utils.network.gen_mac()` instead.
salt.utils.mac_str_to_bytes: Please use salt.utils.network.mac_str_to_bytes() instead.
- salt.utils.refresh_dns: Please use salt.utils.network.refresh_dns() instead.
- salt.utils.dns_check: Please use salt.utils.network.dns_check() instead.
- salt.utils.get_context: Please use salt.utils.stringutils.get_context() instead.
- salt.utils.get_master_key: Please use salt.utils.master.get_master_key() instead.
- salt.utils.date_cast: Please use salt.utils.dateutils.date_cast() instead.
- salt.utils.date_format: Please use salt.utils.dateutils.strftime() instead.
- salt.utils.total_seconds: Please use salt.utils.dateutils.total_seconds() instead.
- salt.utils.find_json: Please use salt.utils.json.find_json() instead.
- salt.utils.import_json: Please use salt.utils.json.import_json() instead.
- salt.utils.namespaced_function: Please use salt.utils.functools.namespaced_function() instead.
- salt.utils.alias_function: Please use salt.utils.functools.alias_function() instead.
- salt.utils.profile_func: Please use salt.utils.profile.profile_func() instead.
- salt.utils.activate_profile: Please use salt.utils.profile.activate_profile() instead.
- salt.utils.output_profile: Please use salt.utils.profile.output_profile() instead.

salt.auth.Authorize Class Removal

- The salt.auth.Authorize Class inside of the salt/auth/__init__.py file has been removed and the any_auth method inside of the file salt/utils/minions.py. These method and classes were not being used inside of the salt code base.

30.2.15 Salt 3000.1 Release Notes

Version 3000.1 is a bugfix release for 3000.

Statistics

- Total Merges: 53
- Total Issue References: 15
- Total PR References: 54
- Contributors: 16 (Ch3LL, UtahDave, bryceml, cmcmarrow, dwoz, frogunder, garethgreenaway, lorengordon, mchugh19, oeufette, raddessi, s0undt3ch, sjorge, terminalmage, twangboy, waynew)
Changelog for v3000..v3000.1

Generated at: 2020-03-27 16:48:41 UTC

- **PR #56455**: (s0undt3ch) Fix gitpython windows requirement @ 2020-03-27 16:31:57 UTC
  - c5a700e01e Merge pull request #56455 from s0undt3ch/hotfix/gitpython
  - d9791c393f Revert and fix windows requirements
  - 4b573c1c94 Revert "Fix win deps"

- **PR #56446**: (frogunder) 3000.1 releasenotes updates @ 2020-03-24 20:28:23 UTC
  - 7ba36325d9 Merge pull request #56446 from frogunder/releasenotes_3000.1_updates
  - 6b4f474af 3000.1 releasenotes updates

- **PR #56435**: (twangboy) Update mac build scripts @ 2020-03-24 19:47:40 UTC
  - 4d2bc7004d Merge pull request #56435 from twangboy/update_mac_build_scripts
  - 5d244b0aa6 Merge branch 'master' into update_mac_build_scripts
  - 8fd52a243 Update gitpython to 2.1.15
  - afced5232 Remove --ignore-installed
  - e6cc2a6192 Separate pyobjc requirements
  - 262ad2e98a Compile static requirements
  - 224f72d0f2 Update noxfile and .precommit
  - 68a362e37 Add req_ext.txt
  - 5851a5c2cd Roll back changes, fix dependencies

- **ISSUE #56433**: (Ch3LL) integration.states.test_pip_state.PipStateTest.test_pip_installed_specific_env failing on MAC (refs: #56436)

- **PR #56436**: (Ch3LL) Fix #56433 - test_pip_installed_specific_env @ 2020-03-24 19:47:20 UTC
  - 8a8ae8ebe4 Merge pull request #56436 from Ch3LL/pip_custom_pypi
  - 5565ff96c Merge branch 'master' into pip_custom_pypi

- **PR #56423**: (Ch3LL) Update changelog with package fixes @ 2020-03-24 16:42:17 UTC
  - 3a993d73a9 Merge pull request #56423 from Ch3LL/changelog_again
  - 963c16e1a7 update pr number for mac build changes in changelog
  - 83e22b77c7 Update changelog with package fixes

- **PR #56417**: (twangboy) Update mac build scripts @ 2020-03-23 18:45:34 UTC
  - d2a5bd8add Merge pull request #56417 from twangboy/update_mac_build_scripts
  - 3bda8dd82 Update noxfile and pre-commit
  - de58c52d66 Merge branch 'update_mac_build_scripts' of https://github.com/twangboy/salt into update_mac_build_scripts
    - e7f08d5349 Update static requirements
    - a53977de5b Merge branch 'update_mac_build_scripts' of github.com:twangboy/salt into update_mac_build_scripts
    - 04e5cde9dd pkg/osx/req_ext.txt no longer exists
* be4a272d07 Update static requirements
  - 02dfe4119c Add pyobjc in its own requirements file
  - 6b2ac2be64 Remove pyobjc, enforce pip install location
  - 30ca5d04ec Remove cryptography, it gets installed by pyopenssl
  - fda8abf4a8 Update static requirements
  - 732ecc83c1 Update pre-commit config
  - 1fa9864e3d Don't set a version for pyopenssl
  - 461b198978 Update dependencies, remove req_ext.txt

• PR #56418: (Ch3LL) Ensure version.py included before we install @ 2020-03-23 18:27:46 UTC
  - 74575a6993 Merge pull request #56418 from Ch3LL/egg_version
  - 85d7c784ef Fix integration setup egg test
  - 8a8a22a4040 Ensure version.py included before we install
  - 86fe450c82 Fix #56433 - test_pip_installed_specific_env

• PR #56403: (frogunder) update 3000.1 releasenotes @ 2020-03-17 23:50:21 UTC
  - 249367b462 Merge pull request #56403 from frogunder/update_releasenotes_3000.1
  - 9d97c996e8 update 3000.1 releasenotes

• PR #56398: (Ch3LL) Add additional PRs to 3000.1 changelog @ 2020-03-17 18:08:15 UTC
  - 0de5c1e136 Merge pull request #56398 from Ch3LL/change_3000.1
  - 79c337b3db Add additional PRs to 3000.1 changelog

• PR #56376: (twangboy) Fix win deps @ 2020-03-17 17:02:46 UTC
  - 5ac09dec89 Merge pull request #56376 from twangboy/fixed_win_deps
  - 6c83bee9be Fix win deps

• PR #56378: (Ch3LL) Include _version.py if building wheel @ 2020-03-17 17:01:33 UTC
  - e72a8d2cbe Merge pull request #56378 from Ch3LL/wheel_version
  - 22cccd2107 Use virtualenv test helper that already exists and fix setup.py
  - 293b1fddf2 cleanup code
  - ddfb065bfb add bdist_wheel test
  - fceff0287c ensure name is included in new version
  - 0cbfa6d3246 Ensure SaltStackVersion attributes in _version.py correct
  - 39d5f3582d Include _version.py if building wheel

• PR #56387: (bryceml) update gpg key expiration date @ 2020-03-17 16:59:30 UTC
  - 6a9326fb70 Merge pull request #56387 from bryceml/update_gpg_key
  - b74b26ccf3 update gpg key expiration date

• PR #55822: (cmcmarrow) fix Indefinitely code @ 2020-03-16 17:34:11 UTC
  - fce6692c4a Merge pull request #55822 from cmcmarrow/win_task_repeat
  - e257fb2804 Merge branch 'master' into win_task_repeat
- 07cad0f8f Merge branch 'master' into win_task_repeat
- 4b80301338 Merge branch 'master' into win_task_repeat
- 9df94569c4 Merge branch 'master' into win_task_repeat
- 22a2d0b9ec Merge branch 'master' into win_task_repeat
- dee9c134e7 Merge branch 'master' into win_task_repeat
- bea05d514 Update test_win_task.py
- 6e923f75fc Merge branch 'master' into win_task_repeat
- 5839da81ee add test
- 2aa638ef00 fix Indefinitely code

- PR #56373: (frogunder) update 3000.1 releasenotes @ 2020-03-13 18:58:43 UTC
  - c11ef89200 Merge pull request #56373 from frogunder/releasenotes_3000.1
  - a5ca8b5277 Fix doc test errors
  - 47e483187e update 3000.1 releasenotes

- PR #56365: (Ch3LL) Update 3000.1 changelog @ 2020-03-13 17:21:02 UTC
  - 62857a9f0e Merge pull request #56365 from Ch3LL/changelog_3000.1
  - 851d7d8fc7 Update 3000.1 changelog

- PR #56360: (Ch3LL) Use virtualenv 20.0.10 for macosx tests @ 2020-03-13 16:39:57 UTC
  - a660e96fb2 Merge pull request #56360 from Ch3LL/mac_virtual
  - abda12508c Update static requirements files
  - dca3390c0c skip zcbuildout state test when virtualenv 20.0.0
  - fdea1f0e1 Use virtualenv 20.0.10 for macosx tests

- ISSUE #56324: (kiemlicz) Cannot use Saltcheck module (refs: #56327)

- PR #56327: (mchugh19) keep cache_copied_files variable a list @ 2020-03-13 16:39:32 UTC
  - d8fc07274c Merge pull request #56327 from mchugh19/56324
  - e1e2d2fb1d Merge branch 'master' into 56324
  - 6d7572706d use includes for saltcheck integration test
  - 5b7073b01d keep cache_copied_files variable a list

- PR #56023: (cmcmarrow) add fix for bin_env @ 2020-03-13 16:39:09 UTC
  - 2d31d61a9 Merge pull request #56023 from cmcmarrow/binary_fix_pip_bin_env
  - f780fd013e Merge branch 'master' into binary_fix_pip_bin_env
  - 6d42cf270 Merge branch 'master' into binary_fix_pip_bin_env
  - 82b39d26f8 Merge branch 'binary_fix_pip_bin_env' of https://github.com/cmcmarrow/salt into binary_fix_pip_bin_env
    - a5fa22528a Merge branch 'master' into binary_fix_pip_bin_env
  - 10ca0fa5d6 fix space
  - 22f6fc180 fix _pip_bin_env

30.2. Previous Releases 1875
- d5425e6630 Merge branch ‘master’ into binary_fix_pip_bin_env
- ceda3fde00 add full support for when missing kwargs or args
- cf4ab215b5 add fix for bin_env

• PR #56310: (twangboy) Only process ADMX files when loading policies @ 2020-03-11 23:47:50 UTC
  - 19bb6aae0c Merge pull request #56310 from twangboy/fix_lgpo_admx
  - 4bc5b05586 Fix some lint
  - ce282f9754 Mark destructive test
  - 8af09c31ca Add test case
  - 547d35cf4c Only process ADMX files when loading policies

• PR #56272: (twangboy) Properly resolve the policy name @ 2020-03-11 22:11:02 UTC
  - 2d78931ef Merge pull request #56272 from twangboy/fix_lgpo_names
  - 233ed12472 Add comments to helper function
  - a7369e41d7 Remove redundant code... some more
  - 1db3052b94 Consolidate duplicate code
  - b25b56299d Fix failing PY2 tests
  - 36a24ac28f Only load adml data once
  - bc13be6850 Add some tests
  - 2e9be6e461 Properly resolve the policy name

• PR #56358: (s0undt3ch) Fix version instantiation when minor is an empty string @ 2020-03-11 22:10:04 UTC
  - c6c6e2e3d9 Merge pull request #56358 from s0undt3ch/hotfix/version-parsing
  - cb22e78502 Fix version instantiation when minor is an empty string

• PR #56160: (twangboy) Fix issue with existing reg_dword entries @ 2020-03-11 22:09:21 UTC
  - b33047c574 Merge pull request #56160 from twangboy/fix_reg_dword
  - 80650c2a8c Make test more explicit
  - 67dd1c18c7 Fix issue with existing reg_dword entries

• PR #56337: (twangboy) Handle Adapter Type 53 and Undefined Types @ 2020-03-11 22:08:19 UTC
  - 8f23706871 Merge pull request #56337 from twangboy/fix_win_network_type
  - 18a31a0b22 Merge branch ‘master’ into fix_win_network_type
  - d92914ad91 Merge branch ‘master’ into fix_win_network_type
  - 224629bdeb Handle Adapter Type 53 and Undefined Types

• PR #56060: (twangboy) Fix regex string for **Del and **DelVals @ 2020-03-11 22:05:43 UTC
  - e551ff6a31 Merge pull request #56060 from twangboy/fix_lgpo_regex
  - ca260ef582 Use byte-strings in the test
  - 7c81874a5b Add some tests
  - 944b022f33 Fix regex string for **Del and **DelVals

• ISSUE #56131: (thusoy) Salt v3000 crashes with unless clause if pip is missing (refs: #56215)
• PR #56215: (dwoz) Fix for unless requisite when pip is not installed @ 2020-03-11 22:04:30 UTC
  - c9bc9431c1 Merge pull request #56215 from dwoz/issue-56131
  - 5dd8f8eabe Fix linter
  - 7492c2f7c7 Remove crufty prints from test
  - 8ceaa66f3 Only remove pip related modules
  - 69b21e5e68 Add regression test for issue 56131
  - 9d23f55adc Fix for unless requisite when pip is not installed

• PR #56339: (twangboy) Fix win_dns_client when used with scheduler @ 2020-03-11 22:01:32 UTC
  - 74b67ea741 Merge pull request #56339 from twangboy/fix_win_dns_client
  - d6a4f885f0 Fix bad test (lint)
  - 47bd67373f Add some tests
  - 995975649a Add missing import, improve docs

• ISSUE #56288: (lorenorgordon) win_lgpo: lgpo.set with secedit policy always generates KeyError: u'lgpo.secedit_data' (refs: #56290)

• PR #56290: (lorenorgordon) Ensures popping lgpo.secedit_data does not throw KeyError @ 2020-03-11 17:27:04 UTC
  - 7701e8762d Merge pull request #56290 from lorenorgordon/pop-secdatal
  - 62453bb6ce Merge branch 'master' into pop-secdatal
  - 95d5ca9ff Merge branch 'master' into pop-secdatal
  - 2979158a8b Tests the if_secedits: logic path in lgpo.set_
  - d1f776178c Ensures popping lgpo.secedit_data does not throw KeyError

• ISSUE #56119: (finalduty) Release notes for v3000 do not mention changes to slspath variable (refs: #56341)

• PR #56341: (dwoz) Revert "Don't remove one directory level from slspath" @ 2020-03-11 17:03:33 UTC
  - 84c60708cd Merge pull request #56341 from dwoz/issue-56119
  - afe6e84c36 Clarify slspath documentation
  - 6dfc09fd1 Add debug for test asserts
  - 9fa9dab8b2 Fix linter warts
  - fd707bddd4 Add regression test for #56119
  - 3d3b673ece Revert "Don't remove one directory level from slspath"

• PR #56185: (terminalmage) Fix regression in service states with reload argument @ 2020-03-11 16:45:58 UTC
  - 49f813a94c Merge pull request #56185 from terminalmage/issue56167
  - 65b3f4c9a0 Merge branch 'master' into issue56167
  - 7b41a0b4f Merge branch 'master' into issue56167
  - 8f7034d946 Merge branch 'master' into issue56167
  - e9fb634e1 Skip on OSX for now
  - 5996280241 Add __opts__ and __grains__ just in case
  - af3e841d08 Fix failing test
- 586f21aecd Add functional test
- 1af9c10f0 Fix regression in service states with reload argument

- **PR #56068**: (s0undt3ch) Update the bootstrap script to latest version, v2020.02.24 @ 2020-03-11 16:44:23 UTC
  - 74f8b2a926 Merge pull request #56068 from s0undt3ch/hotfix/update-bootstrap
  - ce83b190ed Merge branch 'master' into hotfix/update-bootstrap
  - ccd231d82d Merge branch 'master' into hotfix/update-bootstrap
  - 88a52f88ff Update the bootstrap script to latest version, v2020.02.24
  - 012fb5bc4b Update the bootstrap script to latest version, v2020.02.04

- **PR #56321**: (oeuftete) Tidy up formatting in boto_secgroup docs @ 2020-03-11 08:14:48 UTC
  - 154257e2e9 Merge pull request #56321 from oeuftete/tidy-boto-secgroup-docs
  - 616f11b33e Merge branch 'master' into tidy-boto-secgroup-docs
  - 412bb4d62d Tidy up formatting in boto_secgroup docs

- **PR #56336**: (Ch3LL) Fix test_issue_2594_non_invalidated_cache test (update zope.interface) @ 2020-03-11 00:08:43 UTC
  - 11d33e3d90 Merge pull request #56336 from Ch3LL/fix_56330
  - bbf37e090b Fix test_issue_2594_non_invalidated_cache test (update zope.interface)

- **PR #56346**: (frogunder) Update man pages to 3000.1 @ 2020-03-11 00:07:31 UTC
  - a640bd30fc Merge pull request #56346 from frogunder/man_pages_3000_1
  - 6d7c1b6482 Update man pages to 3000.1

- **PR #56099**: (s0undt3ch) Fix Windows and macOS requirements handling in setup.py @ 2020-03-11 00:04:37 UTC
  - 2f783d247e Merge pull request #56099 from s0undt3ch/hotfix/requirements
  - c19f4a3fae Merge branch 'master' into hotfix/requirements
  - 1e7bc8fc8f Also take into account macOS requirements
  - 7ee1f14952e Also include req_win.txt

- **PR #56218**: (raddessi) Changed StrictVersion checking of setuptools to LooseVersion @ 2020-03-10 23:59:54 UTC
  - 7c4d879073 Merge pull request #56218 from raddessi/master.v3000-conda
  - 445566d57 Merge branch 'master' into master.v3000-conda
  - 566c03b786 Merge branch 'master' into master.v3000-conda
  - 82773a9799 Removed now-unused StrictVersion import from setup.py
  - 31bbof7cd1 Changed StrictVersion checking of setuptools to LooseVersion

- **PR #56128**: (waynew) Update CHANGELOG with release date and unreleased. @ 2020-03-10 23:58:15 UTC
  - acbd3556e5 Merge pull request #56128 from waynew/master
  - e3216db3e5 Update CHANGELOG with release date and unreleased.

- **PR #55937**: (twangboy) Update windows build scripts @ 2020-03-10 23:55:55 UTC
  - 12140545ab Merge pull request #55937 from twangboy/update_deps
- f00a504a48 Add back the pylauncher
- 30b9c32356 Revert changes to req and req_win
- 98d0e970c Fix some warts in the build_env scripts
- 8404141f65 Update dependencies

- **PR #55906** (sjorge) smartos.vm_present could not handle nics with vrrp_vrid property @ 2020-03-10 23:54:44 UTC
  - 485a47cdf1 Merge pull request #55906 from sjorge/smartos_vrrp
  - 5bd7d009a Merge branch 'master' into smartos_vrrp
  - f77719c179 smartos state should handle vrrp config

- **ISSUE #55185** (sjorge) salt.modules.pdbedit doesn't work on samba older than 4.8 (refs: #55894)

- **PR #55894** (sjorge) #55185 pdbedit module should check for version 4.8.x or newer @ 2020-03-10 23:54:21 UTC
  - 1fa855360 Merge pull request #55894 from sjorge/pdbedit_55185
  - 9dc7b71122 Merge branch 'master' into pdbedit_55185

- **ISSUE #56195** (lorengordon) Windows: Using inline powershell in args with cmd.script and shell: powershell (refs: #56197)

- **PR #56197** (lorengordon) Allows use of inline powershell for cmd.script args @ 2020-03-10 23:52:47 UTC
  - 3e57d58db2 Merge pull request #56197 from lorengordon/file-or-no-file
  - fcd1699f5e Allows use of inline powershell for cmd.script args
  - be2e67c0a0 Tests that powershell processes inline powershell in args

- **ISSUE #53152** (jbeaird) daily highstate fails after 2019.2 upgrade (refs: #56149)

- **PR #56149** (garethgreenaway) [master] Fix to scheduler for use of when and splay @ 2020-03-10 23:52:16 UTC
  - 547c73e4cc Merge pull request #56149 from garethgreenaway/53152_fix_schedule_when_splay
  - 80686f6f9f9 Fix for when using a combination of when and splay. Previously comparing the wrong value when determining if the job should be run and next_fire_time updated. This resulted in multiple job runs when when and splay were used together. Code updated and test updated to ensure only one run at the specific time. Skip eval tests if dateutil.parser is unavailable.

- **PR #56345** (s0undt3ch) Bump Windows Py3 builds timeout to 10 hours @ 2020-03-10 20:43:41 UTC
  - 192ce76a95 Merge pull request #56345 from s0undt3ch/hotfix/win-py3-timeouts
  - 1bde38ae3 Bump Windows 2019 Py3 builds timeout to 10 hours

- **PR #55888** (s0undt3ch) Disable codecov PR comments and status checks @ 2020-03-10 15:45:52 UTC
  - a204906c80 Merge pull request #55888 from s0undt3ch/hotfix/coverage-reporting
  - 4b8dc8a586 Disable codecov PR comments and status checks
  - cb0f4d8f87 Apply the suggestion given by the codecov team

- **ISSUE #56177** (jodok) mysql states fail because conv is ``` instead of None (refs: #56174)

- **ISSUE #56170** (jeffdyke) mariadb socket access must be enabled before highstate - salt 3K still tries empty password (refs: #56174)

- **ISSUE #56124** (ymasson) MySQL state and module broken after upgrade to 3000 (refs: #56174)

- **PR #56174** (garethgreenaway) [master] MySQL module fixes @ 2020-03-10 04:03:23 UTC
- 3e913631bb Merge pull request #56174 from garethgreenaway/56124_mysql_module_state_fixes
- fcc061368b Removing quotes from the plugin_status query. Updating tests to reflect changes.
- 3dc66393b2 Adding better error reporting around plugins. Updating tests. Only attempt to delete a user if they exist.
- 1337da1e4e Ensure _mysql_user_exists is using auth_socket. Updating mysql and mariadb chpass functions to ensure that the respective plugins are enabled before attempting to use them.
- 34995ba4e8 Reworking the unix_socket code to support the differences between MySQL and MariaDB. Adding some functions to install, remove, and check the status of plugins which we can then use when adding users which will use the unix_socket & auth_socket plugins. Adding additional tests for these new functions as well as test to ensure the correct SQL is being generated when using passwordless and unix_socket options.
- 5bfd67c13e Minor tweak to mysql module. Fixing failing tests.
- e871a3ffdf1 Various fixes to the mysql module to break out the handling of user management into different functions based on MySQL variant.

- **ISSUE #56063**: ([terminalmage]) [master] Traceback in esxi grain module on import (refs: #56094)
- **PR #56094**: ([dwoz]) Fix type error in TornadoImporter @ 2020-03-10 01:39:08 UTC
  - 211c88bfbc Merge pull request #56094 from dwoz/fix_56063
  - 7b1632e8e3 Fix type error in TornadoImporter
- **PR #56172**: ([Ch3LL]) Only change mine data if using new allow_tgt feature @ 2020-03-10 01:34:27 UTC
  - fb5252fe53 Merge pull request #56172 from Ch3LL/mine_g
  - f4c9c2a5c1 Fix docs
  - 6c914a9ae8 Use different targeting for windows/linux
  - f6348127dc Only change mine data if using new allow_tgt feature

- **ISSUE #56121**: ([githubcdr]) salt-minion broken after upgrade to 3000 (refs: #56143)
- **ISSUE #51854**: ([Oloremo]) Fluorine: minion_pillar_cache: True leads to exception (refs: #56143, #52195)
- **PR #56143**: ([waynew]) Use encoding when caching pillar data @ 2020-03-10 01:33:37 UTC
  - PR #52195: ([waynew]) Use encoding when caching pillar data (refs: #56143)
  - 8a8e9c95c5 Merge pull request #56143 from waynew/51854-minion-pillar-cache-exception
  - 58c94d8a8a Merge branch 'master' into 51854-minion-pillar-cache-exception
- **PR #56082**: ([Ch3LL]) Fix saltversioninfo grain for new version @ 2020-03-10 01:32:11 UTC
  - 9f27ca07d0 Merge pull request #56082 from Ch3LL/ver_grains
  - 66ab6d31b ensure_full_info/noc_info work with new versioning
  - bcc502cc4 Add saltversioninfo grains test
  - 510e149b87 Fix saltversioninfo grain for new version
- **PR #56285**: ([UtahDave]) Add missing colon. @ 2020-03-09 22:22:17 UTC
  - 602ff3b9f1 Merge pull request #56285 from UtahDave/fix_f5_doc
- **PR #56333**: ([Ch3LL]) add pylint ignore in django returner @ 2020-03-09 20:42:42 UTC
30.2.16 Salt 3000.2 Release Notes

Version 3000.2 is a CVE-fix release for 3000.

Security Fix

CVE-2020-11651

An issue was discovered in SaltStack Salt before 2019.2.4 and 3000 before 3000.2. The salt-master process ClearFuncs class does not properly validate method calls. This allows a remote user to access some methods without authentication. These methods can be used to retrieve user tokens from the salt master and/or run arbitrary commands on salt minions.

CVE-2020-11652

An issue was discovered in SaltStack Salt before 2019.2.4 and 3000 before 3000.2. The salt-master process ClearFuncs class allows access to some methods that improperly sanitize paths. These methods allow arbitrary directory access to authenticated users.
Known Issue

Part of the fix for CVE-2020-11651 added better validation of the methods allowed to be called by remote clients. Both AESFuncs and ClearFuncs now have an explicit list of methods that can be called. The name of one of these whitelisted methods on AESFuncs had a typo. The _minion_runner method should be minion_runner (without the underscore prefix). This typo breaks the publish module’s runner method. Calling runners, for example:

```
salt minion publish.runner manage.down
```

Will not work, and you will receive and empty reply from the salt master.

This will be addressed in the 3001 release of Salt set for mid-June 2020.

30.2.17 Salt 3000.3 Release Notes

Version 3000.3 is a bug-fix release for 3000.

Statistics

- Total Merges: 2
- Total Issue References: 2
- Total PR References: 2
- Contributors: 2 (dwoz, frogunder)

Changelog for v3000.2..v3000.3

Generated at: 2020-05-06 02:53:12 UTC

- PR #57097: (frogunder) Update man_pages 3000.3 @ 2020-05-05 22:13:09 UTC
- ISSUE #57027: (ecarson) [BUG] Master running 2019.2.4 or 3000.2 unable to synchronize files using saltutil.sync_all to 2017.7.1 minion due to CVE fix (refs: #57100)
- ISSUE #57016: (idontwanttosignin) [BUG] Requested method not exposed: minion_runner (refs: #57100)
- PR #57100: (dwoz) Address Issues in CVE Release @ 2020-05-05 22:09:25 UTC

30.2.18 Salt 3000.4 Release Notes

Version 3000.4 is a CVE fix release for 3000.

Fixed

- Prevent shell injections in netapi ssh client (cve-2020-16846)
- Prevent creating world readable private keys with the tls execution module. (cve-2020-17490)
30.2.19 Salt 3000.5 Release Notes

Version 3000.5 is a CVE fix release for 3000.

Fixed

- Properly validate eauth credentials and tokens along with their ACLs. Prior to this change eauth was not properly validated when calling Salt ssh via the salt-api. Any value for 'eauth' or 'token' would allow a user to bypass authentication and make calls to Salt ssh. (CVE-2020-25592)

30.2.20 Salt 3000.6 Release Notes

Version 3000.6 is a bugfix release for 3000.

Fixed

- Fixes salt-ssh authentication when using tty (#58922)

30.2.21 Salt 3000.7 Release Notes

Version 3000.7 is a CVE fix release for 3000.

Fixed

- CVE-2020-28243 - Fix local privilege escalation in the restartcheck module.
- CVE-2020-28972 - Ensure authentication to vcenter, vsphere, and esxi server validates the SSL/TLS certificate by default. If you want to skip SSL verification you can use verify_ssl: False.
- CVE-2020-35662 - Ensure the asam runner, qingcloud, splunk returner, panos proxy, cimc proxy, zenoss module, esxi module, vsphere module, glassfish module, bigip module, and keystone module validate SSL by default. If you want to skip SSL verification you can use verify_ssl: False.
- CVE-2021-3148 - Fix a command injection in the Salt-API when using the Salt-SSH client.
- CVE-2021-3144 - Fix eauth tokens can be used once after expiration
- CVE-2021-25281 - Fix salt-api so it honors eauth credentials for the wheel_async client.
- CVE-2021-25282 - Fix the salt.wheel.pillar_roots.write method so it is not vulnerable to directory traversal.
- CVE-2021-25283 - Fix the jinja render to protect against server side template injection attacks.
- CVE-2021-25284 - Fix cmdmod so it will not log credentials to log levels info and error.
- CVE-2021-3197 - Fix ssh client to remove ProxyCommand from arguments provided by cli and netapi.
30.2.22 Salt 3000.8 Release Notes

Version 3000.8 is a bug fix release for 3000.

Fixed

- Fix runners that broke when patching for CVE-2021-25281
- Fix issue with runners in SSE

Known Issue

When using the Salt-API with the SSH client some of the SSH options are not working currently and will be fixed in an upcoming bug fix release. We are currently testing and fixing which options still need to be fixed, but have confirmed the following ones do not work in this release: extra-filerefs, pre-flight. This does not impact normal Salt-SSH usage on the cli.

30.2.23 Salt 2019.2.0 Release Notes - Codename Fluorine

Python 2.7 Deprecation

In light of Python 2.7 reaching its End of Life (EOL) on Jan 1st 2020, Python 2 will be deprecated from SaltStack no earlier than the 3001 release, that is either the 3001 release or a later release. This decision is pending further community discussion.

Known Issues

The following are known issues for the 2019.2.0 release and will be fixed for 2019.2.1:

- #51699

Non-Backward-Compatible Change to YAML Renderer

In earlier releases, this was considered valid usage in Python 2, assuming that data was a list or dictionary containing keys/values which are unicode types:

```
/etc/foo.conf:
  file.managed:
    - source: salt://foo.conf.jinja
    - template: jinja
    - context:
      data: {{ data }}
```

One common use case for this is when using one of Salt’s custom Jinja filters which return lists or dictionaries, such as the ipv4 filter.

In Python 2, Jinja will render the unicode string types within the list/dictionary with the "u" prefix (e.g. `{u'foo': u'bar'}`). While not valid YAML, earlier releases would successfully load these values.

As of this release, the above SLS would result in an error message. To allow for a data structure to be dumped directly into your SLS file, use the tojson Jinja filter:
Another example where the new filter needs to be used is the following state example:

```
grafana_packages:
    pkg.installed:
        - names: {{ server.pkgs }}
```

This will fail when pkgs is a list or dictionary. You will need to update the state:

```
grafana_packages:
    pkg.installed:
        - names: {{ server.pkgs|tojson }}
```

This test case has also been tested with the `yaml` and `json` filters successfully.

**Note:** This filter was added in Jinja 2.9. However, fear not! The 2018.3.3 release added a `tojson` filter which will be used if this filter is not already present, making it available on platforms like RHEL 7 and Ubuntu 14.04 which provide older versions of Jinja.

**Important:** The `json_encode_dict` and `json_encode_list` filters do not actually dump the results to JSON. Since `tojson` accomplishes what those filters were designed to do, they are now deprecated and will be removed in the 3000 release. The `tojson` filter should be used in all cases where `json_encode_dict` and `json_encode_list` would have been used.

---

**Ansible Playbook State and Execution Modules**

Along with the including the `ansible` modules in the Oxygen release, running playbooks has been added in 2019.2.0 with the `playbooks` function. This also includes an `ansible playbooks state module` which can be used on a targeted host to run ansible playbooks, or used in an orchestration state runner.

```
install nginx:
    ansible.playbooks:
        - name: install.yml
        - git_repo: git://github.com/gtmanfred/playbook.git
        - git_kwargs:
            rev: master
```

The playbooks modules also includes the ability to specify a git repo to clone and use, or a specific directory can to used when running the playbook.
Network Automation

Beginning with this release, Salt provides much broader support for a variety of network operating systems, and features for configuration manipulation or operational command execution.

NetBox

Added in the previous release, 2018.3.0, the capabilities of the netbox Execution Module have been extended, with a much longer list of available features:

- netbox.create_circuit
- netbox.create_circuit_provider
- netbox.create_circuit_termination
- netbox.create_circuit_type
- netbox.create_device
- netbox.create_device_role
- netbox.create_device_type
- netbox.create_interface
- netbox.create_interface_connection
- netbox.create_inventory_item
- netbox.create_ipaddress
- netbox.create_manufacturer
- netbox.create_platform
- netbox.create_site
- netbox.delete_interface
- netbox.delete_inventory_item
- netbox.delete_ipaddress
- netbox.get_circuit_provider
- netbox.get_interfaces
- netbox.get_ipaddresses
- netbox.make_interface_child
- netbox.make_interface_lag
- netbox.openconfig_interfaces
- netbox.openconfig_lacp
- netbox.update_device
- netbox.update_interface

Besides this Execution Module, Salt users can load data directly from NetBox into the device Pillar, via the netbox External Pillar module.
Netmiko

Netmiko, the multi-vendor library to simplify Paramiko SSH connections to network devices, is now officially integrated into Salt. The network community can use it via the netmiko Proxy Module or directly from any Salt Minions, passing the connection credentials - see the documentation for the netmiko Execution Module.

Arista

Arista switches can now be managed running under the pyeapi Proxy Module, and execute RPC requests via the pyeapi Execution Module.

Cisco Nexus

While support for SSH-based operations has been added in the release codename Carbon (2016.11), the new nxos_api Proxy Module and nxos_api allow management of Cisco Nexus switches via the NX-API.

It is important to note that these modules don’t have third party dependencies, therefore they can be used straight away from any Salt Minion. This also means that the user may be able to install the regular Salt Minion on the Nexus switch directly and manage the network devices like a regular server.

General-purpose Modules

The new ciscoconfparse Execution Module can be used for basic configuration parsing, audit or validation for a variety of network platforms having Cisco IOS style configuration (one space indentation), as well as brace-delimited configuration style.

The iosconfig can be used for various configuration manipulation for Cisco IOS style configuration, such as: configuration cleanup, tree representation of the config, etc.

NAPALM

Commit At and Commit Confirmed

Beginning with this release, NAPALM users are able to execute scheduled commits (broadly known as "commit at") and "commit confirmed" (revert the configuration change unless the user confirms by running another command). These features are available via the commit_in, commit_at, revert_in, or revert_at arguments for the net.load_config and net.load_template execution functions, or netconfig.managed.

The counterpart execution functions net.confirm_commit, or net.cancel_commit, as well as the State functions netconfig.commit_cancelled, or netconfig.commit_confirmed can be used to confirm or cancel a commit.

Please note that the commit confirmed and commit cancelled functionalities are available for any platform whether the network devices supports the features natively or not. However, be cautious and make sure you read and understand the caveats before using them in production.
Multiple Templates Rendered Simultaneously

The `template_name` argument of the `net.load_template` Execution and `netconfig.managed` State function now supports a list of templates. This is particularly useful when a very large Jinja template is split into multiple smaller and easier to read templates that can eventually be reused in other States. For example, the following syntax is not correct to manage the configuration of NTP and BGP simultaneously, using two different templates and changing the device configuration through one single commit:

```
manage_bgp_and_ntp:
  netconfig.managed:
    - template_name:
      - salt://templates/bgp.jinja
      - salt://templates/ntp.jinja
    - context:
      bpg: {{ pillar.bgp }}
      ntp: {{ pillar.ntp }}
```

Connection Re-establishment on Demand

Beginning with this release, any NAPALM command executed when running under a NAPALM Proxy Minion supports the `force_reconnect` magic argument.

Proxy Minions generally establish a connection with the remote network device at the time of the Minion startup and that connection is going to be used forever.

If one would need to execute a command on the device but is connecting using different parameters (due to various causes, e.g., unable to authenticate the user specified in the Pillar as the authentication system - say TACACS+ is not available, or the DNS resolver is currently down and would like to temporarily use the IP address instead, etc.), it implies updating the Pillar data and restarting the Proxy Minion process restart. In particular cases like that, you can pass the `force_reconnect=True` keyword argument, together with the alternative connection details, to enforce the command to be executed over a separate connection.

For example, if the usual command is `salt '*' net.arp`, you can use the following to connect using a different username instead:

```
salt '*' net.arp username=my-alt-usr force_reconnect=True
```

The same goes with any of the other configuration arguments required for the NAPALM connection - see NAPALM proxy documentation.

Configuration Replace Features

To replace various configuration chunks, you can use the new `net.replace_pattern` execution function, or the `netconfig.replace_pattern` State function. For example, if you want to update your configuration and rename a BGP policy referenced in many places, you can do so by running:

```
salt '*' net.replace_pattern OLD-POLICY-CONFIG new-policy-config
```

Similarly, you can also replace entire configuration blocks using the `net.blockreplace` function.
Configuration Save Features

The `net.save_config` function can be used to save the configuration of the managed device into a file. For the State subsystem, the `netconfig.saved` function has been added which provides a complete list of facilities when managing the target file where the configuration of the network device can be saved.

For example, backup the running configuration of each device under its own directory tree:

```
/var/backups/{{ opts.id }}/running.cfg:
netconfig.saved:
  - source: running
  - makedirs: true
```

All the new network automation modules mentioned above are directly exposed to the NAPALM users, without requiring any architectural changes, just eventually install some requirements:

**Junos**

The features from the existing `junos` Execution Module are available via the following functions:

- `napalm.junos_cli`: Execute a CLI command and return the output as text or Python dictionary.
- `napalm.junos_rpc`: Execute an RPC request on the remote Junos device, and return the result as a Python dictionary, easy to digest and manipulate.
- `napalm.junos_install_os`: Install the given image on the device.
- `napalm.junos_facts`: The complete list of Junos facts collected by the `junos-eznc` underlying library.

**Note:** To be able to use these features, you must ensure that you meet the requirements for the `junos` module. As `junos-eznc` is already a dependency of NAPALM, you will only have to install `jxmlease`.

Usage examples:

```
salt '*' napalm.junos_cli 'show arp' format=xml
salt '*' napalm.junos_rpc get-interface-information
```

**Netmiko**

The features from the newly added `netmiko` Execution Module are available as:

- `napalm.netmiko_commands`: Execute one or more commands to be execute on the remote device, via Netmiko, and return the output as a text.
- `napalm.netmiko_config`: Load a list of configuration command on the remote device, via Netmiko. The commands can equally be loaded from a local or remote path, and passed through Salt's template rendering pipeline (by default using Jinja as the template rendering engine).

Usage examples:

```
salt '*' napalm.netmiko_commands 'show version' 'show interfaces'
```
Arista pyeapi

For various operations and various extension modules, the following features have been added to gate functionality from the pyeapi module:

- `napalm.pyeapi_run_commands`: Execute a list of commands on the Arista switch, via the pyeapi library.
- `napalm.pyeapi_config`: Configure the Arista switch with the specified commands, via the pyeapi Python library. Similarly to `napalm.netmiko_config`, you can use both local and remote files, with or without templating.

Usage examples:

```
salt '*' napalm.pyeapi_run_commands 'show version' 'show interfaces'
salt '*' napalm.pyeapi_config config_file=salt://path/to/template.jinja
```

Cisco NX-API

In the exact same way as above, the user has absolute control by using the following primitives to manage Cisco Nexus switches via the NX-API:

- `napalm.nxos_api_show`: Execute one or more show (non-configuration) commands, and return the output as plain text or Python dictionary.
- `napalm.nxos_api_rpc`: Execute arbitrary RPC requests via the Nexus API.
- `napalm.nxos_api_config`: Configures the Nexus switch with the specified commands, via the NX-API. The commands can be loaded from the command line, or a local or remote file, eventually rendered using the templating engine of choice (default: jinja).

Usage examples:

```
salt '*' napalm.nxos_api_show 'show bgp sessions' 'show processes' raw_text=False
```

Ciscoconfparse

The following list of function may be handy when manipulating Cisco IOS or Junos style configurations:

- `napalm.config_filter_lines`: Return a list of detailed matches, for the configuration blocks (parent-child relationship) whose parent and children respect the regular expressions provided.
- `napalm.config_find_lines`: Return the configuration lines that match the regular expression provided.
- `napalm.config_lines_w_child`: Return the configuration lines that match a regular expression, having child lines matching the child regular expression.
- `napalm.config_lines_wo_child`: Return the configuration lines that match a regular expression, that don't have child lines matching the child regular expression.

**Note:** These functions require the ciscoconfparse Python library to be installed.

Usage example (find interfaces that are administratively shut down):
Salt Documentation, Release 3002.5

```
salt '*' napalm.config_lines_w_child 'interface' 'shutdown'
```

**IOSConfig**

For Cisco IOS style configuration, the following features have been added to the `napalm` Execution Module:

- `napalm.config_tree`: Transform Cisco IOS style configuration to structured Python dictionary, using the configuration of the interrogated network device.
- `napalm.config_merge_tree`: Return the merge tree of the configuration of the managed network device with a different configuration to be merged with (without actually loading any changes on the device).
- `napalm.config_merge_text`: Return the merge result (as text) of the configuration of the managed network device with a different configuration to be merged with.
- `napalm.config_merge_diff`: Return the merge diff after merging the configuration of the managed network device with a different configuration (without actually loading any changes on the device).

**SCP**

Reusing the already available connection credentials provided for NAPALM, the following features are now available:

- `napalmscp_put`: Transfer files and directories to remote network device.
- `napalmscp_get`: Transfer files and directories from remote network device to the localhost of the Minion.

**PeeringDB**

The `peeringdb` Execution Module is useful to gather information about other networks you can potentially peer with, and automatically establish BGP sessions, e.g., given just a specific AS number, the rest of the data (i.e., IP addresses, locations where the remote network is available, etc.) is retrieved from PeeringDB, and the session configuration is automated with minimal to no effort (typing the IP addresses manually can be both tedious and error prone).

**New Docker Proxy Minion**

Docker containers can now be treated as actual minions without installing salt in the container, using the new `docker proxy minion`.

This proxy minion uses the `docker executor` to pass commands to the docker container using `docker.call`. Any state module calls are passed through the corresponding function from the `docker` module.

```
proxy:
  proxytype: docker
  name: keen_proskuriakova
```
**Terraform Salt-SSH Roster**

You can now dynamically generate a Salt-SSH roster from the terraform resources defined with `terraform-provider-salt`.

This allows you to combine both terraform and Salt-SSH to provision and configure your hosts. See the terraform roster for an example on how to setup and use.

**Grains Dictionary Passed into Custom Grains**

Starting in this release, if a custom grains function accepts a variable named `grains`, the Grains dictionary of the already compiled grains will be passed in. Because of the non-deterministic order that grains are rendered in, the only grains that can be relied upon to be passed in are `core.py` grains, since those are compiled first.

**More Precise virtual Grain**

This release improves the accuracy of the `virtual` grain when running Salt in a nested virtualization environment (e.g. `systemd-nspawn` container inside a VM) and having `virt-what` installed.

Until now, the `virtual` grain was determined by matching against all output lines of `virt-what` instead of individual items which could lead to not quite precise results (e.g. reporting HyperV inside a `systemd-nspawn` container running within a Hyper-V-based VM.

**Configurable Module Environment**

Salt modules (states, execution modules, returners, etc.) now can have custom environment variables applied when running shell commands. This can be configured by setting a `system-environment` key either in Grains or Pillar. The syntax is as follows:

```
system-environment:

  <type>:
    <module>:
      # Namespace for all functions in the module
      _:
        <key>: <value>
      # Namespace only for particular function in the module
      <function>:
        <key>: <value>
```

- `<type>` would be the type of module (i.e. `states`, `modules`, etc.).
- `<module>` would be the module's name.

**Note:** The module name can be either the virtual name (e.g. `pkg`), or the physical name (e.g. `yumpkg`).

- `<function>` would be the function name within that module. To apply environment variables to all functions in a given module, use an underscore (i.e. `_`) as the function name. For example, to set the same environment variable for all package management functions, the following could be used:

```
system-environment:
  modules:
    pkg:
```

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To set an environment variable in `pkg.install` only:

```yaml
system-environment:
  modules:
    pkg:
      install:
        LC_ALL: en_GB.UTF-8
```

To set the same variable but only for SUSE minions (which use zypper for package management):

```yaml
system-environment:
  modules:
    zypper:
      install:
        LC_ALL: en_GB.UTF-8
```

Note: This is not supported throughout Salt; the module must explicitly support this feature (though this may change in the future). As of this release, the only modules which support this are the following `pkg` virtual modules:

- `aptpkg`
- `yumpkg`
- `zypper`

"Virtual Package" Support Dropped for APT

In APT, some packages have an associated list of packages which they provide. This allows one to do things like run `apt-get install foo` when the real package name is `foo1.8`, and get the right package installed.

Salt has traditionally designated as "virtual packages" those which are provided by an installed package, but for which there is no real package by that name installed. Given the above example, if one were to run a `pkg.installed` state for a package named `foo`, then `pkg.list_pkgs` would show a package version of simply 1 for package `foo`, denoting that it is a virtual package.

However, while this makes certain aspects of package management convenient, there are issues with this approach that make relying on "virtual packages" problematic. For instance, Ubuntu has four different mutually-conflicting packages for `nginx`:

- `nginx-core`
- `nginx-full`
- `nginx-light`
- `nginx-extras`

All four of these provide `nginx`. Yet there is an `nginx` package as well, which has no actual content and merely has dependencies on any one of the above four packages. If one used `nginx` in a `pkg.installed` state, and none of the above four packages were installed, then the `nginx` metapackage would be installed, which would pull in `nginx-core`. Later, if `nginx` were used in a `pkg.removed` state, the `nginx` metapackage would be removed, leaving `nginx-core` installed. The result would be that, since `nginx-core` provides `nginx`, Salt would now see `nginx`
as an installed virtual package, and the `pkg.removed` state would fail. Moreover, *nginx would not actually have been removed*, since `nginx-core` would remain installed.

Starting with this release, Salt will no longer support using "virtual package" names in `pkg` states, and package names will need to be specified using the proper package name. The `pkg.list_repo_pkgs` function can be used to find matching package names in the repositories, given a package name (or glob):

```
# salt myminion pkg.list_repo_pkgs 'nginx*'
myminion:
    nginx:
        - 1.10.3-0ubuntu0.16.04.2
        - 1.9.15-0ubuntu1
    nginx-common:
        - 1.10.3-0ubuntu0.16.04.2
        - 1.9.15-0ubuntu1
    nginx-core:
        - 1.10.3-0ubuntu0.16.04.2
        - 1.9.15-0ubuntu1
    nginx-core-dbgs:  
        - 1.10.3-0ubuntu0.16.04.2
        - 1.9.15-0ubuntu1
    nginx-doc:
        - 1.10.3-0ubuntu0.16.04.2
        - 1.9.15-0ubuntu1
    nginx-extras:
        - 1.10.3-0ubuntu0.16.04.2
        - 1.9.15-0ubuntu1
    nginx-extras-dbgs:  
        - 1.10.3-0ubuntu0.16.04.2
        - 1.9.15-0ubuntu1
    nginx-full:
        - 1.10.3-0ubuntu0.16.04.2
        - 1.9.15-0ubuntu1
    nginx-full-dbgs:  
        - 1.10.3-0ubuntu0.16.04.2
        - 1.9.15-0ubuntu1
    nginx-light:
        - 1.10.3-0ubuntu0.16.04.2
        - 1.9.15-0ubuntu1
    nginx-light-dbgs:  
        - 1.10.3-0ubuntu0.16.04.2
        - 1.9.15-0ubuntu1
```

Alternatively, the newly-added `pkg.show` function can be used to get more detailed information about a given package and help determine what package name is correct:

```
# salt myminion pkg.show 'nginx*' filter=description,provides
myminion:
    nginx:
        1.10.3-0ubuntu0.16.04.2:
            Description: small, powerful, scalable web/proxy server
    1.9.15-0ubuntu1:
```

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Description:
small, powerful, scalable web/proxy server
nginx-common:
----------
1.10.3-0ubuntu0.16.04.2:
----------
Description:
small, powerful, scalable web/proxy server - common files
1.9.15-0ubuntu1:
----------
Description:
small, powerful, scalable web/proxy server - common files
nginx-core:
----------
1.10.3-0ubuntu0.16.04.2:
----------
Description:
nginx web/proxy server (core version)
Provides:
httpd, httpd-cgi, nginx
1.9.15-0ubuntu1:
----------
Description:
nginx web/proxy server (core version)
Provides:
httpd, httpd-cgi, nginx
nginx-core-dbgl:
----------
1.10.3-0ubuntu0.16.04.2:
----------
Description:
nginx web/proxy server (core version) - debugging symbols
1.9.15-0ubuntu1:
----------
Description:
nginx web/proxy server (core version) - debugging symbols
nginx-doc:
----------
1.10.3-0ubuntu0.16.04.2:
----------
Description:
small, powerful, scalable web/proxy server - documentation
1.9.15-0ubuntu1:
----------
Description:
small, powerful, scalable web/proxy server - documentation
nginx-extras:
----------
1.10.3-0ubuntu0.16.04.2:
----------
Description:
nginx web/proxy server (extended version)
Provides:
httpd, httpd-cgi, nginx
1.9.15-0ubuntu1:
----------
Description:
    nginx web/proxy server (extended version)
Provides:
    httpd, httpd-cgi, nginx
nginx-extras-dbg:
------------
1.10.3-0ubuntu0.16.04.2:
------------
    Description:
    nginx web/proxy server (extended version) - debugging symbols
1.9.15-0ubuntu1:
------------
    Description:
    nginx web/proxy server (extended version) - debugging symbols
nginx-full:
------------
1.10.3-0ubuntu0.16.04.2:
------------
    Description:
    nginx web/proxy server (standard version)
Provides:
    httpd, httpd-cgi, nginx
1.9.15-0ubuntu1:
------------
    Description:
    nginx web/proxy server (standard version)
Provides:
    httpd, httpd-cgi, nginx
nginx-full-dbg:
------------
1.10.3-0ubuntu0.16.04.2:
------------
    Description:
    nginx web/proxy server (standard version) - debugging symbols
1.9.15-0ubuntu1:
------------
    Description:
    nginx web/proxy server (standard version) - debugging symbols
nginx-light:
------------
1.10.3-0ubuntu0.16.04.2:
------------
    Description:
    nginx web/proxy server (basic version)
Provides:
    httpd, httpd-cgi, nginx
1.9.15-0ubuntu1:
------------
    Description:
    nginx web/proxy server (basic version)
Provides:
    httpd, httpd-cgi, nginx
nginx-light-dbg:
------------
1.10.3-0ubuntu0.16.04.2:
------------
Minion Startup Events

When a minion starts up it sends a notification on the event bus with a tag that looks like this: salt/minion/\<minion_id>/start. For historical reasons the minion also sends a similar event with an event tag like this: minion_start. This duplication can cause a lot of clutter on the event bus when there are many minions. Set enable_legacy_startup_events: False in the minion config to ensure only the salt/minion/\<minion_id>/start events are sent.

The new enable_legacy_startup_events minion config option defaults to True, but will be set to default to False beginning with the 3001 release of Salt.

The Salt Syndic currently sends an old style syndic_start event as well. The syndic respects enable_legacy_startup_events as well.

Failhard changes

It is now possible to override a global failhard setting with a state-level failhard setting. This is most useful in case where global failhard is set to True and you want the execution not to stop for a specific state that could fail, by setting the state level failhard to False. This also allows for the use of onfail*-requisites, which would previously be ignored when a global failhard was set to True. This is a deviation from previous behavior, where the global failhard setting always resulted in an immediate stop whenever any state failed (regardless of whether the failing state had a failhard setting of its own, or whether any onfail*-requisites were used).

Pass Through Options to file.serialize State

This allows for more granular control over the way in which the dataset is serialized. See the documentation for the new serializer_opts and deserializer_opts options in the file.serialize state for more information.

file.patch State Rewritten

The file.patch state has been rewritten with several new features:

- Patch sources can now be remote files instead of only salt:// URLs
- Multi-file patches are now supported
- Patch files can be templated

In addition, it is no longer necessary to specify what the hash of the patched file should be.

30.2. Previous Releases
New no_proxy Minion Configuration

Pass a list of hosts using the no_proxy minion config option to bypass an HTTP proxy.

Note: This key does nothing unless proxy_host is configured and it does not support any kind of wildcards.

```
no_proxy: [ '127.0.0.1', 'foo.tld' ]
```

Changes to slack Engine

The output returned to Slack from functions run using this engine is now formatted using that function’s proper outputer. Earlier releases would format the output in YAML for all functions except for when states were run.

Enhancements to wtmp Beacon

A new key, action, has been added to the events fired by this beacon, which will contain either the string login or logout. This will simplify reactors which use this beacon’s data, as it will no longer be necessary to check the integer value of the type key to know whether the event is a login or logout.

Additionally, in the event that your platform has a non-standard utmp.h, you can now configure which type numbers indicate a login and logout.

See the wtmp beacon documentation for more information.

Deprecated and Removed Options

API Removed Arguments

Support for LocalClient’s expr_form argument has been removed. Please use tgt_type instead. This change was made due to numerous reports of confusion among community members, since the targeting method is published to minions as tgt_type, and appears as tgt_type in the job cache as well.

Those who are using the LocalClient (either directly, or implicitly via a netapi module) need to update their code to use tgt_type.

```
>>> import salt.client
>>> local = salt.client.LocalClient()
>>> local.cmd('*', 'cmd.run', ['whoami'], tgt_type='glob')
{'jerry': 'root'}
```

Minion Configuration Deprecated Option

The master_shuffle configuration option is deprecated as of the 2019.2.0 release. Please use the random_master option instead.
Module Removed Options

- The `napalm_network` module has been changed as follows:
  - Support for the `template_path` has been removed from `net.load_template` function. This is because support for NAPALM native templates has been dropped.

- The `pip` module has been changed as follows:
  - Support for the `no_chown` option has been removed from `pip.install` function.

- The `trafficserver` module has been changed as follows:
  - The `trafficserver.match_var` function was removed. Please use `trafficserver.match_metric` instead.
  - The `trafficserver.read_var` function was removed. Please use `trafficserver.read_config` instead.
  - The `trafficserver.set_var` function was removed. Please use `trafficserver.set_config` instead.

- The `win_update` module has been removed. It has been replaced by `win_wua`.

- The `win_wua` module has been changed as follows:
  - The `win_wua.download_update` and `win_wua.download_updates` functions have been removed. Please use `win_wua.download` instead.
  - The `win_wua.install_update` and `win_wua.install_updates` functions have been removed. Please use `win_wua.install` instead.
  - The `win_wua.list_update` function has been removed. Please use functions have been removed. Please use `win_wua.get` instead.
  - The `win_wua.list_updates` function has been removed. Please use functions have been removed. Please use `win_wua.list` instead.

Pillar Removed Option

- The `vault` external pillar has been changed as follows:
  - Support for the `profile` argument was removed. Any options passed up until and following the first `path=` are discarded.

Roster Removed Option

- The `cache` roster has been changed as follows:
  - Support for `roster_order` as a list or tuple has been removed. As of the 2019.2.0 release, `roster_order` must be a dictionary.
  - The `roster_order` option now includes IPv6 in addition to IPv4 for the private, public, global or local settings. The syntax for these settings has changed to `ipv4-*` or `ipv6-*`, respectively.
State Removed Modules and Options

- The `docker` state module has been removed
  - In 2017.7.0, the states from this module were split into four separate state modules:
    - `docker_container`
    - `docker_image`
    - `docker_volume`
    - `docker_network`
  - The `docker` module remained, for backward-compatibility, but it has now been removed. Please update SLS files to use the new state names:
    - `docker.running` => `docker_container.running`
    - `docker.stopped` => `docker_container.stopped`
    - `docker.absent` => `docker_container.absent`
    - `docker.network_present` => `docker_network.present`
    - `docker.network_absent` => `docker_network.absent`
    - `docker.image_present` => `docker_image.present`
    - `docker.image_absent` => `docker_image.absent`
    - `docker.volume_present` => `docker_volume.present`
    - `docker.volume_absent` => `docker_volume.absent`

- The `docker_network` state module has been changed as follows:
  - The `driver` option has been removed from `docker_network.absent`. It had no functionality, as the state simply deletes the specified network name if it exists.

- The deprecated `ref` option has been removed from the `git.detached` state. Please use `rev` instead.

- The `k8s` state module has been removed in favor of the `kubernetes` state module. Please update SLS files as follows:
  - In place of `k8s.label_present`, use `kubernetes.node_label_present`
  - In place of `k8s.label_absent`, use `kubernetes.node_label_absent`
  - In place of `k8s.label_folder_absent`, use `kubernetes.node_label_folder_absent`

- Support for the `template_path` option in the `netconfig.managed <salt.states.netconfig.managed()>` state has been removed. This is because support for NAPALM native templates has been dropped.

- Support for the `no_chown` option in the `pip.insalled` state has been removed.

- The `trafficserver.set_var` state has been removed. Please use `trafficserver.config` instead.

- Support for the `no_chown` option in the `virtualenv.managed` state has been removed.

- The `win_update` state module has been removed. It has been replaced by `win_wua`.

- Support for virtual packages has been removed from the `virtualenv managed <salt.states.virtualenv.managed()>` function has been removed.

- Support for the `no_chown` option in the `pip.insalled` state has been removed.
Utils Removed Options

The cloud utils module had the following changes:

• Support for the cache_nodes_ip function in salt utils module has been removed. The function was incomplete and non-functional.

The vault utils module had the following changes:

• Support for specifying Vault connection data within a 'profile' has been removed. Please see the vault execution module documentation for details on the new configuration schema.

Dependency Deprecations

Salt-Cloud has been updated to use the pypexec Python library instead of the winexe executable. Both winexe and pypexec run remote commands against Windows OSes. Since winexe is not packaged for every system, it has been deprecated in favor of pypexec.

Salt-Cloud has deprecated the use impacket in favor of smbprotocol. This changes was made because impacket is not compatible with Python 3.

SaltSSH Major Updates

SaltSSH now works across different major Python versions. Python 2.7 - Python 3.x are now supported transparently. Requirement is, however, that the SaltMaster should have installed Salt, including all related dependencies for Python 2 and Python 3. Everything needs to be importable from the respective Python environment.

SaltSSH can bundle up an arbitrary version of Salt. If there would be an old box for example, running an outdated and unsupported Python 2.6, it is still possible from a SaltMaster with Python 3.5 or newer to access it. This feature requires an additional configuration in /etc/salt/master as follows:

```
ssh_ext_alternatives:
  2016.3:
    py-version: [2, 6]  # Constraint to specific interpreter version
    path: /opt/2016.3/salt  # Main Salt installation
    dependencies:
      jinja2: /opt/jinja2
      yaml: /opt/yaml
      tornado: /opt/tornado
      msgpack: /opt/msgpack
      certifi: /opt/certifi
      singledispatch: /opt/singledispatch.py
      singledispatch_helpers: /opt/singledispatch_helpers.py
      markupsafe: /opt/markupsafe
      backports_abc: /opt/backports_abc.py
```

It is also possible to use several alternative versions of Salt. You can for instance generate a minimal tarball using runners and include that. But this is only possible, when such specific Salt version is also available on the Master machine, although does not need to be directly installed together with the older Python interpreter.

SaltSSH now support private key's passphrase. You can configure it by:

• --priv-passwd for salt-ssh cli
• salt_priv_passwd for salt master configure file
• priv_passwd for salt roster file
State Module Changes

salt State Module (used in orchestration)

The `test` option now defaults to None. A value of `True` or `False` set here is passed to the state being run and can be used to override a `test: True` option set in the minion's config file. In previous releases the minion's config option would take precedence and it would be impossible to run an orchestration on a minion with test mode set to True in the config file.

If a minion is not in permanent test mode due to the config file and the 'test' argument here is left as None then a value of `test=True` on the command-line is passed correctly to the minion to run an orchestration in test mode. At present it is not possible to pass `test=False` on the command-line to override a minion in permanent test mode and so the `test: False` option must still be set in the orchestration file.

event.send State

The `event.send` state does not know the results of the sent event, so returns changed every state run. It can now be set to return changed or unchanged.

influxdb_user.present Influxdb User Module State

The `password` parameter has been changed to `passwd` to remove the name collusion with the influxdb client configuration (`client_kwargs`) allowing management of users when authentication is enabled on the influxdb instance.

Old behavior:

```
influxdb_user.present:
    - name: exampleuser
    - password: exampleuserpassword
    - user: admin
    - password: adminpassword
```

New behavior:

```
influxdb_user.present:
    - name: exampleuser
    - passwd: exampleuserpassword
    - user: admin
    - password: adminpassword
```

winrepo_cache_expire_min Windows Package Definitions Caching

The `winrepo_cache_expire_min` has been changed from 0 to 1800 (30 minutes) For example if you run highstate the package definitions are normally updated, however now if the package definitions are younger than `winrepo_cache_expire_min` (30 minutes) the package definitions will not be refreshed, reducing the amount of time taken to run a 2nd highstate. To get the old behaviour change the value back to 0 in the minion configuration file. This also effects the behaviour of other functions which default to refresh. The `pkg.refresh_db` will always refresh the package definitions.
LDAP External Authentication

_freeipa groupattribute support_

Previously, if Salt was using external authentication against a freeipa LDAP system it could only search for users via the `accountattributename` field. This release add an additional search using the `groupattribute` field as well. The original `accountattributename` search is done first then the `groupattribute` allowing for backward compatibility with previous Salt releases.

**Jinja Include Relative Paths**

When a jinja include template name begins with `.//` or `../` then the import will be relative to the importing file. Prior practices required the following construct:

```
{% from tpldir ~/'/foo' import bar %}
```

A more "natural" construct is now supported:

```
{% from './foo' import bar %}
```

Comparatively when importing from a parent directory - prior practice:

```
{% from tpldir ~/'/../foo' import bar %}
```

New style for including from a parent directory:

```
{% from '../foo' import bar %}
```

**salt-api**

**salt-api Windows support**

Previously, salt-api was was not supported on the Microsoft Windows platforms. Now it is! salt-api provides a RESTful interface to a running Salt system. It allows for viewing minions, runners, and jobs as well as running execution modules and runners of a running Salt system through a REST API that returns JSON. See [Salt-API documentation](https://docs.saltstack.com/en/latest/topics/netapi/index.html).

**Logging Changes**

**Include Job ID (JID) in Minion and Master Logs**

The Job ID (JID) can now be optionally included in both the minion and master logs by including `jid` in either the `log_fmt_console` or `log_fmt_logfile` configuration option:

```
log_fmt_console: "[%(levelname)-8s] %(jid)s %(message)s"
```

The will cause the JID to be included in any log entries that are related to a particular Salt job. The JID will be included using the default format, `[JID: %jid]` but can be overridden with the `log_fmt_jid` configuration item.

```
log_fmt_jid: "[JID: %(jid)s]"
```

30.2. Previous Releases
Security

Windows runas changes

A password is no longer required with runas under normal circumstances. The password option is only needed if the minion process is run under a restricted (non-administrator) account. In the aforementioned case, a password is only required when using the runas argument to run command as a different user.

New Modules

**Execution Modules**

- `salt.modules.ciscoconfparse_mod`
- `salt.modules.jira`
- `salt.modules.google_chat`
- `salt.modules.iosconfig`
- `salt.modules.netmiko`
- `salt.modules.nxos_api`
- `salt.modules.peeringdb`
- `salt.modules.purefb`
- `salt.modules.pyeapi`

**Pillar Modules**

- `netbox`

**Proxy Modules**

- `salt.proxy.netmiko`
- `salt.proxy.nxos_api`
- `salt.proxy.pyeapi`

30.2.24 Salt 2019.2.1 Release Notes

Version 2019.2.1 is a bugfix release for 2019.2.0.
Known Issues

- **ISSUE #54751**: Proxy minion fails to start. Fix planned in 2019.2.2 release.
- **ISSUE #54762**: URIs with IPv6 addresses are broken, preventing master-minion communication in IPv6-only environments. Fix planned in 2019.2.2 release.
- **ISSUE #54776**: Minion fails to start when it contains `ping_interval` in minion configuration file. Fix planned in 2019.2.2 release.
- **ISSUE #54731**: Returners (except for default salt master returner) not loading properly in Py3. Fix planned in 2019.2.2 release.
- **ISSUE #54758**: salt-call state.show_states gives "Passed invalid arguments" error when a sls defined in top.sls file is missing. Fix planned in 2019.2.2 release.
- **ISSUE #54765**: Jinja from import is broken. Fix planned in 2019.2.2 release.
- **ISSUE #54771**: Affects only Debian 10. pkgrepo.managed does not work if used with proxy (configured at salt-minion). No fix date available yet.
- **ISSUE #54759**: Deprecation warnings for pyzmq. No fix date available yet.

Change to YAML Renderer

```
/etc/foo.conf:
  file.managed:
    - source: salt://foo.conf.jinja
    - template: jinja
    - context:
      data: {{ data }}
```

In 2019.2.0, the above SLS will result in an error message following changes to the YAML renderer that now require the new Jinja filter `tojson`.

```
/etc/foo.conf:
  file.managed:
    - source: salt://foo.conf.jinja
    - template: jinja
    - context:
      data: {{ data|tojson }}
```

In 2019.2.1, we introduce a new configuration option for both the Salt master and Salt minion configurations to be able to support the older YAML renderer. Using the option `use_yammloader_old` will allow the YAML renderer to function as before.

Statistics

- Total Merges: 541
- Total Issue References: 70
- Total PR References: 355
- Contributors: 49 (Akm0d, Ch3LL, DmitryKuzmenko, Ethyling, FireGrace, KChandrashekhar, ScoreUnder, amendlik, aplanas, arsiesys, bbinet, bryceml, chosdo, cdalvaro, chdamianos, cmcmarrow, cro, damianosSemmle, dmurphy18, doesitblend, dwoz, felippeb, frogunder, garethgreenaway, github-abcde, isbm, jfindlay, lomeroe, mattLLVW, mattpp-, mirceaulinic, nicholasmhughes, rbthomp, rombert, rskalala, s0undt3ch,
Changelog for v2019.2.0..v2019.2.1

Generated at: 2019-09-09 19:56:22 UTC

- **ISSUE #54429**: (frogunder) [2019.2.1] Sudo user error (refs: #54433)
- **PR #54433**: (dwoz) Re-gen executors with proper arguments @ 2019-09-09 19:14:05 UTC
  - 62fc61c Merge pull request #54433 from dwoz/sudo_minion
  - e08eb19 Merge branch '2019.2.1' into sudo_minion
- **PR #54434**: (frogunder) fix_docs @ 2019-09-09 18:55:28 UTC
  - 76fac57 Merge pull request #54434 from frogunder/fix_doc
  - 2d22d73 fix_docs error
  - a266a5c fix_docs
  - db5464a Fix linter warts
  - 144a600 Re-gen executors with proper arguments
- **PR #54424**: (frogunder) remove in progress from release_notes 2019.2.1 @ 2019-09-05 23:11:03 UTC
  - 4071dcb Merge pull request #54424 from frogunder/release_notes_201921_new
  - b66436f Update 2019.2.1.rst
  - bcfef11 remove in progress from release_notes 2019.2.1
- **PR #54416**: (frogunder) Update man_pages for 2019.2.1 @ 2019-09-05 22:48:51 UTC
  - c1587cc Merge pull request #54416 from frogunder/man_pages_201921
  - 6f7c4ee Update man_pages for 2019.2.1
- **PR #54419**: (frogunder) releasenotes 2019.2.1 @ 2019-09-05 22:48:42 UTC
  - 3118e2f Merge pull request #54419 from frogunder/release_notes_201921
  - 2caee96 Update doc/topics/releases/2019.2.1.rst
  - ffabde2 Update 2019.2.1.rst
  - dd6426d Update doc/topics/releases/2019.2.1.rst
  - 9d4239c Update doc/topics/releases/2019.2.1.rst
  - 8c60ae4 Update doc/topics/releases/2019.2.1.rst
  - 72cb24c releasenotes 2019.2.1
- **PR #54409**: (dwoz) Point salt-call to correct multi-master configs @ 2019-09-04 20:08:24 UTC
  - 04e28cf Merge pull request #54409 from dwoz/mm_log
  - e207de6 Point salt-call to correct multi-master configs
- **PR #54396**: (dwoz) Use different logging port for multimaster tests @ 2019-09-03 23:20:23 UTC
  - 2c281e0 Merge pull request #54396 from dwoz/multimaster_logging
  - 104e0a0 Use different logging port for multimaster tests
• ISSUE #54256: (sleminov-tc) Empty salt api token file breaks maintenance process. (refs: #54325, #54324, #54388, #54376)

• ISSUE #37945: (gstachowiak) Missing exception handling in salt.master.Maintenance. Process never completes. (refs: #54325, #54324, #54388, #54376)

• PR #54388: (dwoz) 54256 re fix empty api token 2019.2.1 @ 2019-09-03 23:19:20 UTC
  - PR #54325: (waynew) Delete bad API token files (refs: #54388)
  - PR #54324: (waynew) Delete bad API token files (refs: #54325, #54388)
  - 730a007 Merge pull request #54388 from dwoz/54256-re-fix-empty-api-token-2019.2.1
  - 80651d3 Fix linter
  - 982ed3d Delete bad API token files

• ISSUE #54256: (sleminov-tc) Empty salt api token file breaks maintenance process. (refs: #54325, #54324, #54388, #54376)

• ISSUE #37945: (gstachowiak) Missing exception handling in salt.master.Maintenance. Process never completes. (refs: #54325, #54324, #54388, #54376)

• PR #54376: (dwoz) Move tokens in place with an atomic operation @ 2019-09-03 20:40:50 UTC
  - 11016ce Merge pull request #54376 from dwoz/tmp_token
  - 0b28c60 Fix linter complaints
  - 8e33343 Move tokens in place with an atomic operation

• PR #54386: (twangboy) Fix unit.utils.test_win_dacl (2019.2.1) @ 2019-09-03 16:57:25 UTC
  - 5161203 Merge pull request #54386 from twangboy/fixed-test_win_dacl_2019.2.1
  - b8fa7d3 Sort the perms

• PR #54355: (s0undt3ch) [2019.2.1] [GitPillar Tests] Have the started processes log instead of just writing to stdout/stderr @ 2019-08-29 23:26:50 UTC
  - b4caaad Merge pull request #54355 from s0undt3ch/hotfix-test-daemons-2019.2.1
  - 561c0a2 Have the started processes log instead of just writing to stdout/stderr
  - c2a3115 Don't overwritethe stderr logger

• PR #54353: (cmcmarrow) adds @skipIf not windows @ 2019-08-29 19:33:11 UTC
  - ce5b109 Merge pull request #54353 from cmcmarrow/2019_win_system_skip
  - 8e28074 adds @skipIf not windows

• PR #54338: (dwoz) Log server closes completely during shutdown @ 2019-08-29 17:14:05 UTC
  - 94c03e5 Merge pull request #54338 from dwoz/logging_fixup
  - a3e227e Log server closes completely during shutdown

• PR #54327: (garethgreenaway) [2019.2.1] Catch the AccessDenied exception and continue when running under Py3. @ 2019-08-29 16:59:34 UTC
  - 490ee69 Merge pull request #54327 from garethgreenaway/more_test_program_fixes
  - 97b4d86 Catch the AccessDenied exception and continue when running under Py3.

• PR #54316: (Akm0d) Azure cleanup @ 2019-08-27 16:14:09 UTC
  - bb911c3 Merge pull request #54316 from Akm0d/azure-clean-up
- 2072773 pass longer timeout to msazure destroyinstance
- 34eb477 Merge branch '2019.2.1' of https://github.com/saltstack/salt into azure-cleanup
- 7ae48b1 Allow azure tests enough time to clean up interfaces
- b45ae74 Clean up azure instances properly

**PR #54314: (garethgreenaway) [2019.2.1] Do not raise the exception in testprogram.py @ 2019-08-26 23:59:37 UTC**
- 9334e4e Merge pull request #54314 from garethgreenaway/testprogram_access_denied_do_not_raise
- a53bach Do not raise the exception if a process can not be access, just continue

**PR #54305: (dwoz) Fix wart in test_process tests on windows @ 2019-08-26 17:59:12 UTC**
- 71fb051 Merge pull request #54305 from dwoz/winfix
- 4e68860 Fix wart in test_process tests on windows

**PR #54303: (dwoz) Fix wart in periodic callback interval @ 2019-08-24 20:04:35 UTC**
- 4d80f0a Merge pull request #54303 from dwoz/periodic_cb
- bf57de Fix wart in periodic callback interval

**ISSUE #54219: (KChandrashekhar) integration.shell.test_call.py and tests/integration/shell/test_proxy.py (refs: #54259)**

**ISSUE #54153: (KChandrashekhar) Ubuntu 16.04 Proxy failures (refs: #54259)**

**PR #54259: (dwoz) Call os.fork less to avoid race conditions @ 2019-08-24 02:12:42 UTC**
- 5838851 Merge pull request #54259 from dwoz/less_forking
- bf4d0dd Fix process list tests on windows py3
- 316ec78 Allow more time for slow test
- 9ba86f Do not remove attributes from process class
- e7b6a8 Clean up cruft
- ed7103a Attempt to fix integration.shell.test_call test
- 659c805 Change noise log to debug
- 0660b1a Clean up typoses
- 9f1fe42 Call os.fork less to avoid race conditions

**ISSUE #50814: (doesitblend) Minion continues trying down master (refs: #54239, #53417)**

**ISSUE #49680: (doesitblend) Beacon events handled differently than event.send (refs: #53344, #54239)**

**ISSUE #49663: (doesitblend) Beacon only fires to single random master in HA mode (refs: #53344, #54239)**

**PR #54247: (DmitryKuzmenko) 2019.2.1 with multimaster bb fixes @ 2019-08-23 20:19:19 UTC**
- PR #54239: (DmitryKuzmenko) Multimaster tests with bb fixes (refs: #54247)
- PR #53848: (DmitryKuzmenko) Features/multimaster tests (refs: #54239)
- PR #53417: (DmitryKuzmenko) Multimaster minion hang on fire_master (refs: #54239, #53848)
- PR #53344: (DmitryKuzmenko) Run beacons on the only one minion instance. Return to all masters. (refs: #54239, #53848)
- 531f3aa Merge pull request #54247 from DSRCorporation/2019.2.1_with_multimaster_bb_fixes
• PR #54235: (github-abcde) Fix 46034 2019.2.1 @ 2019-08-22 22:32:09 UTC
  - 993c341 Merge pull request #54235 from ogd-software/fix_46034-2019.2.1
  - 93bd30d Add alternative fix for "!" stomping Apparently (after watching Jenkins tests fail), what yaml.safe_load returns depends not on the version of salt, but on some other external dependency. Because of this, fix both possible return values.
  - c95dd4d Add test for this specific bugfix
  - efc29d8 Prevent yamlify_arg from stomping "!

• PR #54282: (Akm0d) clean up renamed instances in the teardown @ 2019-08-22 22:13:51 UTC
  - 5d1a4d0 Merge pull request #54282 from Akm0d/clean-up-renamed
  - 11c1117 Removed redundant parenthesis
  - 802235d don't delete shutting down ec2 instances
  - 3602942 reversed the order in which an instance was renamed
  - 5500ede renamed _alt_name function
  - 23beab4 clean up renamed instances in the teardown

• PR #54252: (s0undt3ch) [2019.2.1] More control on spun test daemons on git pillar tests @ 2019-08-22 22:13:08 UTC
  - c181f5a Merge pull request #54252 from s0undt3ch/hotfix/git-pillar-2019.2.1
  - 4eb85fa Skip tests on RHEL family < 7
  - 64a1be8 Don't even go through the transport to get the system grains
  - d0f8efa Don't keep recreating the git repos. Restore from backup.
  - 6114e9d All prep work is done in setUpClass.
  - 5b030dd Daemons are now started/stopped on tests, not by salt
  - ed60f0d We don't actually need grains
  - 911446d Lock uwsgi requirement.
  - 805f0ac Merge branch '2019.2.1' into 2019.2.1_with_multimaster_bb_fixes

• PR #54214: (Ch3LL) Remove unnecessary logging from minion.py @ 2019-08-22 18:08:26 UTC
  - b40c6bf Merge pull request #54214 from Ch3LL/fix_logging
  - 8fd24cf Remove unnecessary logging from minion.py
  - 9d28098 Merge branch '2019.2.1' into 2019.2.1_with_multimaster_bb_fixes

• PR #54277: (dwoz) Win runas plus @ 2019-08-21 23:59:16 UTC
  - de77762 Merge pull request #54277 from dwoz/win_runs_plus
  - f719591 Update tests
  - d8749d9 Do not remove attributes from process class
  - ac5a2a4 Only close handle if it got created

• PR #54278: (Akm0d) Correctly detect when an ms_azure instance is deleted @ 2019-08-21 23:14:01 UTC
  - 93cf40a Merge pull request #54278 from Akm0d/cloud-test-logging
- 2dc1520 Merge branch '2019.2.1' into cloud-test-logging
- 3867448 Fixed incorrect arguments
- bdce5f4 Fix detecting msazure deletion with multiple tries

• PR #54263: (s0undt3ch) [2019.2.1] Exit test suite if test daemons fail to start @ 2019-08-21 22:06:52 UTC
  - 94f77a0 Merge pull request #54263 from s0undt3ch/test-daemons-2019.2.1
  - 655ef6d Rearrange logging termination
  - 28fa5d2 Prevent traceback on python interpreter shutdown
  - 9035731 Write to stderr a message with the exit code
  - 5666e20 Exit the test suite if one of the test daemons fails to start

• PR #54270: (s0undt3ch) [2019.2.1] Speedup testing helpers decorators @ 2019-08-21 20:33:25 UTC
  - 3b9fd44 Merge pull request #54270 from s0undt3ch/requires-system-grains-2019.2.1
  - 9f99bff Speedup testing helpers decorators

• ISSUE #53931: (KChandrashekhar) integration.states.test_pip_state.PipStateTest.test_issue_6912_wrong_owner_requirements_file (refs: #54274)

• PR #54274: (felippeb) #53931 never fail on codecov curls @ 2019-08-21 18:12:19 UTC
  - 2c4afa0 Merge pull request #54274 from felippeb/2019.2.1
  - 9c0b216 #53931 never fail on codecov curls

• PR #54264: (dwoz) Fix unit utils jinja when run on their own @ 2019-08-21 17:22:10 UTC
  - b3c70c3 Merge pull request #54264 from dwoz/jinja_units
  - 10a6d53 Fix unit utils jinja when run on thier own

• PR #54266: (Akm0d) Fix incorrect types on failing cloud tests @ 2019-08-21 17:14:40 UTC
  - 308ba55 Merge pull request #54266 from Akm0d/cloud_test_ultimate_fix
  - ff2125a Invert assertion to test for instance gone
  - 82136a8 test for ec2 instance shutting down
  - 283f631 run cloud --query if delete string is not available
  - 33e6b6d changed deprecated assertEquals
  - 41e6bc8 Cloud tests run correctly everywhere
  - 03a8b2c reverted literal_eval

• PR #54251: (Akm0d) reduced query calls to salt-cloud @ 2019-08-20 20:10:59 UTC
  - 25d0b52 Merge pull request #54251 from Akm0d/cloud_test_optimization
  - 5fe6bfc Optimized salt-query calls
  - 43418a4 Merge pull request #7 from Ch3LL/cloud_provider_files
    - 93944b Remove joyent config cloud test files
    - bd37849 Rename provider azure-config to azurearm-config
  - c7c06cb Added longer delays for ec2 tests
  - 5ceb47e Correctly check for GCE and EC2 deletion
- 52c178c Added pretty yaml formatting to cloud-test logs
- 4fc5e9e re-fixed simultaneous GCE tests
- 326e9f2 Merge pull request #6 from Ch3LL/cloud_provider_files
  - adb1464 fix pylint
  - 51ce819 Move provider config setup into Setup/Teardown class
- e5840a Merge pull request #5 from Ch3LL/cloud_provider_files
  - ab8adcc Only use the provider conf.d file we are testing
- 76609ad Merge branch '2019.2.1' into cloud_test_optimization
- f764bc0 Clean up expensive queries
- b3d02df reduced query calls to salt-cloud

- **PR #54240:** (Ch3LL) Fix TypeError python3 in get_image_id ec2 cloud @ 2019-08-20 20:10:01 UTC
- ba81ca3 Merge pull request #54240 from Ch3LL/get_image_ec2
- a3a39f3 Use ami variable instead in test
- dc1ae52 Fix TypeError python3 in get_image_id
  - d6a4df75 Merge branch '2019.2.1' into 2019.2.1_with_multimaster_bb_fixes

- **PR #54246:** (dwoz) Cut down on log noise @ 2019-08-19 17:20:03 UTC
- 8404ec2 Merge pull request #54246 from dwoz/log_noise
- e572711 Cut down on log noise

- **PR #54245:** (dwoz) Fix the sshd pid file @ 2019-08-19 17:19:32 UTC
- 5b3e925 Merge pull request #54245 from dwoz/sshd_pid_file
- d9f5347 Fix the sshd pid file

- **PR #54237:** (dwoz) Do not dup2 things without fileno @ 2019-08-18 17:13:29 UTC
- 268803b Merge pull request #54237 from dwoz/dup2
- 2ebd22b Fix linter
- 63c616a Do not dup2 things without fileno
  - 0b33498 Workaround for beacons.list_available slowness.
  - b7a1058 Minor: Better support of named multimaster tests.
  - a5ccdf Minor: remove unneded logging
  - fcb8ff0 Properly set HAS_IPTABLES from __virtual__ return.
  - a75db01 Multimaster related fixup: don't run test engine on minions
  - 8a88542 Multimaster beacons fix: put list into a dict to fire on the bus
  - 790fb41 Inotify beacons test logging and cleanup update
  - d84c8851 Inotify beacon test fixes and improvements.
  - 472ff0 Give minion more time to handle beacon creation.
  - 17ceee0 Fixed Lint errors
0bcf53c Fixed the unicode and timing inotify test issues.
f17bcf3 Improved assertion error diagnostic for master down test.
db0bae8 Run multimaster as well tests when no specific group is set
723f363 Ignore the multimaster minion subgroup test in module names test.
612191c Fixed lint failures
c1efa6 Multimaster test for events handling on master disconnect
1654fe8 Multimaster inotify beacons test
65dc47c Multimaster tests environment and test module test.
2c178b0 Moved annoying message to trace log level.
3e497c1 Handle minion events asynchronously.
909323a Tests fixes
6dad18f Cleanup event object
2bf55be Run beacons on the only one minion instance. Return to all masters.

- **PR #54121:** (Akm0d) Refactored cloud tests @ 2019-08-16 17:24:14 UTC
  - 27d89bd Merge pull request #54121 from Akm0d/gce_cloud_test
  - 48c57b3 Try multiple times to detect deletion of an instance
  - 74300eb return a valid set
  - 2d63b87 Wait for an instance to be fully created if necessary
  - 83ad8b3 Merge branch '2019.2.1' of github.com:SaltStack/salt into gce_cloud_test

- **ISSUE #54174:** (dwoz) SignalHandlingMultiprocessingProcess bugs (refs: #54204)

- **PR #54204:** (dwoz) Fix signal handling in subprocesses @ 2019-08-16 00:46:40 UTC
  - c5ee91c Merge pull request #54204 from dwoz/signal_proc
  - 09e5e49 Merge branch '2019.2.1' into signal_proc

- **ISSUE #7745:** (mgwilliams) yaml 'module' has no attribute 'Dumper' (refs: #54223)

- **PR #54223:** (dwoz) Test verify logs without a whole minion @ 2019-08-16 00:46:09 UTC
  - 99a8fc5 Merge pull request #54223 from dwoz/7754_test_removal
  - 4be711e Fix up linter warts
  - 7573826 Remove crufty un-needed tests
  - e77a77e Test verify logs without a whole minion
    - b40f41f Revert fallback to default signals change
    - 1d83b10 Fix signal handling in subprocesses
      - f90fe66 Reverted foo/bar creds per #46265
      - 3f56bad Reduced the amount of informtaion in debuggings tatement
      - de53bf0 Merge branch '2019.2.1' of github.com:SaltStack/salt into gce_cloud_test

- **PR #54203:** (dwoz) Run transport test loops in single thread @ 2019-08-15 20:10:20 UTC
  - 8d440e0 Merge pull request #54203 from dwoz/transport_tests
- 22b9d38 Run transport test loops in single thread
  * f6180a6 Even better logging of errors
  * a15dc4b better formatting and error reporting
  * 51fbc2a better logging on instance create failure
  * 1f7dd52 removed hack fixes from gce
  * 31cdc7c WAR ROOM SKIP GCE TESTS
  * 7d603be hasattr cannot find parent properties starting with __
  * 686cab9 Separated assertInstanceDestroy and _destry_instance
  * 158a38c Revert "Removed subclass from cloud name"
  * b7cf43d Removed subclass from cloud name
  * 8c5eb18 fixed pylint error on format string
  * 59e20bc Merge branch '2019.2.1' of https://github.com/saltstack/salt into gce_cloud_test

  - PR #54191: (garethgreenaway) [2019.2.1] Addition logging in testprogram used by integration.shell.test_minion.MinionTest.test_exit_status_correct_usage @ 2019-08-13 21:44:41 UTC
    - a05018e Merge pull request #54191 from garethgreenaway/test_program_test_mininion
    - 8463f84 Adding some additional logging when the call to "proc_cmdline = proc.cmdline()" results in a AccessDenied exception, so we can see what the process is and who the process is running as.

  - PR #54202: (waynew) Only run one filter test @ 2019-08-13 21:33:32 UTC
    - e5e9299 Merge pull request #54202 from waynew/shorter-jinja-ssh-tests
    - c333ac8 Only run one filter test
      * 5912f24 Switched to Azurearm over msazure

  - PR #54172: (Ch3LL) Migrate from azure to azurearm tests @ 2019-08-13 20:07:34 UTC
    - a13cb3e Merge pull request #54172 from Ch3LL/azurearm_tests
    - 465523f Migrate from azure to azurearm tests

  - ISSUE #50535: (wyarldle) salt errors with current azure-storage because of no version set (refs: #50567)

  - PR #54173: (Ch3LL) Cherry Pick #50567 and #53238 into 2019.2.1 @ 2019-08-13 20:07:09 UTC
    - PR #53238: (nicholasmhughes) Azure: Fixed ability to pass SSH key to Linux VMs (refs: #54173)
    - PR #50567: (rombert) azurefs: gracefully handle AttributeError (refs: #54173)
    - 39d0c59 Merge pull request #54173 from Ch3LL/azure_fixes
    - 9052af reverting log string handling
    - a1a61ee fixed ability to pass ssh key to Linux VMs
    - 4a141a1 azurefs: gracefully handle AttributeError
      * 6a28de fixed underscores
        - c35379a Moved finding installer into class
      * 9548f8 Moved finding installer into class
      * a86ae34 moved installer finder to SetUp method
      * 933964a removed default user/pass from profitbricks test file

30.2. Previous Releases
- 2a2437d fixed dictionary access
- b9ee411 Fixed broken tests
- 80ef626 fixed misspelled provider information
- 511779b removed unused imports
- 1cd1c13 setUp all cloud tests the same way
- d322408 Got rid of unnecessary delay
- 98ba18c fixed pylint error
- c34c17e Merge branch ‘2019.2.1’ of https://github.com/saltstack/salt into gce_cloud_test

- **PR #54178:** (dwoz) Fix flaky set_computer_name in mac_system module @ 2019-08-12 18:26:40 UTC
  - 19f4d5e Merge pull request #54178 from dwoz/mac_computer_name
  - e51100e Fix skip on non macos platforms
  - a3a9d92 Fix linter
  - c499d44 Revert unwanted flaky from non computer name tests
  - 941fcc8 Fix flaky set_computer_name in mac_system module
    - 90e8350 Merge branch ‘2019.2.1’ of https://github.com/saltstack/salt into gce_cloud_test

- **PR #54180:** (dwoz) Point test-kitchen to my keepalive_maxcount branch @ 2019-08-12 18:18:26 UTC
  - 6fe6799 Merge pull request #54180 from dwoz/keepalive_maxcount
  - dc9ee21 Add reminder about kitchen version
  - 19a1ff1b Point test-kitchen to my keepalive_maxcount branch
    - 60f8351 Fixed failing Ec2 Tests
    - e2f085c removed py3-only function call
    - 4406c57 fixed lint errors, more descriptive fails
    - 6840df5 assert instances exist in unified way
    - 03da233 skip EOL joyent tests, secure delete instances
    - 3123b571 Merge branch ‘2019.2.1’ of https://github.com/saltstack/salt into gce_cloud_test

- **ISSUE #53306:** (doesitblend) Fully Qualify CMD on Windows Minions (refs: #53311, #54033)

- **PR #54033:** (twangboy) Backport #53311 to 2019.2.1 @ 2019-08-09 16:46:36 UTC
  - PR #53311: (doesitblend) Add fully qualified cmd call (refs: #54033)
  - 9f5302d Merge pull request #54033 from twangboy/fix_win_service_2019.2.1
  - 2850fab Merge branch ‘2019.2.1’ into fix_win_service_2019.2.1
  - 0e2a2b8 Merge branch ‘2019.2.1’ into fix_win_service_2019.2.1
  - 16c704e Backport #53311 to 2019.2.1

- **PR #53900:** (twangboy) Fix inconsistent full names in LGPO @ 2019-08-09 09:15:41 UTC
  - c0e4df9 Merge pull request #53900 from twangboy/fix_lgpo
  - e05abdf Merge branch ‘2019.2.1’ into fix_lgpo
  - e4e71cd Remove duplicate test
- 68c632b Add some tests
- 3c34075 Fall back to slower method if new method not available
- 0108bcd Avoid using the lowercase method in XPath
- fcc0405 Fix telemetry issue, add some timing logs

- **PR #52818:** (twangboy) Add watchdog as a bundled dependency on Windows @ 2019-08-09 04:26:54 UTC
  - 9eb2938 Merge pull request #52818 from twangboy/add_watchdog
  - 2658634 pre-commit
  - 35691f2 Add watchdog to Linux and OSX .in files
  - 5ef5969 Rremove opensuse 42 static files
  - ec285d0 Remove watchdog from the rest of the .in files
  - 86e64ae Remove unused import, remove Windows reference
  - b934d53 Remove watchdog from windows.in
  - cfbee96 Fix and unify watchdog beacon tests for all OS's
  - cc73204 Put Windows tests in their own class
  - 6fb1a3 Remove unused import... lint
  - 832a1db Fix windowsisms
  - 4f47d50 Update static requirements
  - 762fe3b Remove some fluff
  - 946076c Add watchdog for tests
  - 02248dc Fix modified test to account for OS variances
  - 15ee479 Compile static requirements
  - 78a5723 Add watchdog to Linux and OSX .in files
  - 9a0f08a Update static requirements
  - 5cad13b Rremove opensuse 42 static files
  - 105f8ee Remove watchdog from the rest of the .in files
  - 121595a Remove unused import, remove Windows reference
  - c410a4b Remove watchdog from windows.in
  - 05a0845 Fix and unify watchdog beacon tests for all OS's
  - 200e230 Put Windows tests in their own class
  - 6cc8d96 Remove unused import... lint
  - a4abb72 Fix windowsisms
  - 005bed9 Update static requirements
  - c1bc627 Remove some fluff
  - 92c8d47 Add watchdog for tests
  - 9544624 Add watchdog as a bundled dependency on Windows

- **PR #54143:** (Akm0d) Don't call potentially missing shade library (#53734) @ 2019-08-09 01:05:26 UTC
- **PR #53734**: (Akm0d) Don't call potentially missing shade library (refs: #54143)
- 5bef520 Merge pull request #54143 from Akm0d/openstack_fix
- 3f58885 Merge branch '2019.2.1' into openstack_fix
- 71f5f38 Don't call potentially missing shade library (#53734)
  - 29ee7ce removed print statements, optimized query
  - 14b7539 added back print statements for easy debug
  - 823b3b2 Removed print statements and broken re
  - 9696ed9 experiment with subclass names
  - 2fa6157 more verbose instance names based on test
  - 2acb2df undercased non-const variable and added print statements
  - c5e875d Merge branch '2019.2.1' of https://github.com/saltstack/salt into gce_cloud_test

- **PR #54001**: (garethgreenaway) [2019.2.1] Porting metaproxy changes in #50183 to 2019.2.1 @ 2019-08-08 04:24:31 UTC
  - **PR #50183**: (cro) Allow proxy minion types to be dynamically loaded (refs: #54001)
  - 584e3f2 Merge pull request #54001 from garethgreenaway/add_metaproxy_2019_2_1
  - 8353467 Merge branch 'add_metaproxy_2019_2_1' of github.com:garethgreenaway/salt into add_metaproxy_2019_2_1
    - 1892d86 Merge branch '2019.2.1' into add_metaproxy_2019_2_1
  - ab72e1b Adding unit.test_proxy_minion to ignore list
  - 09f6fed Removing match tests, functionality does not exist in 2019.2.1
  - 4af95e4 Adding tests to ensure _metaproxy_call to called when ProxyMinion objects are created.
  - d162a88 Adding salt/metaproxy/proxy.py and tests/unit/modules/test_match.py
  - 51726b1 POrting metaproxy changes in #50183 to 2019.2.1

- **ISSUE #51008**: (cdalvaro) cwd option not working with cmd.run and runas (refs: #52632, #54079)

- **PR #54136**: (ScoreUnder) Fix cmd.run on MacOS (rebased) @ 2019-08-08 04:20:31 UTC
  - **PR #54079**: (ScoreUnder) Fix cmd.run on MacOS -- wrong environment variables (refs: #54136)
  - **PR #52632**: (cdalvaro) Prevent shell injection as root with cmd.run on macOS (refs: #54079)
  - **PR #47212**: (weswhet) fix macOS running as user. (refs: #54079)
  - bf863d0 Merge pull request #54136 from ScoreUnder/2019.2.1-patch-macos-cmd.run
  - 1182eb9 Add integration test justifying strange use of braces after cd in cmd.run
  - 733d2e7 Fixes to ITs
  - da38993 Add integration tests for cwd/runas changes on MacOS
  - ab8b39c Fix environment in cmd.run runas on MacOS
    - c9cb18f Don't call potentially missing shade library (#53734)
    - 5ef8414 Added more verbose logging to cloud tests
    - 2f3942f better logging and fail messages
    - 945f4c Fixed pylint errors and temporary print statements
- fd13ce1 Further refactored cloud test code
- b03cc48 Assume the instance exists and needs to be deleted
- 0991ff5 fixed pylint errors and failed tests
- 55e502a Merge branch '2019.2.1' of https://github.com/saltstack/salt into gce_cloud_test

- **PR #53974**: (Ch3LL) [2019.2.1] Add pygit2 requirement @ 2019-08-06 17:32:05 UTC
  
  - e268b95 Merge pull request #53974 from Ch3LL/add_pygit2
  - 11864a0 Merge branch '2019.2.1' into add_pygit2
  - d1b1452 Merge branch '2019.2.1' into add_pygit2
  - a5698cc Merge branch '2019.2.1' into add_pygit2
  - 7dd97a6 Merge branch '2019.2.1' into add_pygit2
  - 358974a Skip Pygit2 tests on windows
  - bc64961 Use accurate file:// URI on windows for gitfs tests
  - 894f958 Fix GitFS support for pygit2 >= 0.28.0
  - 4580030 [2019.2.1] Add pygit2 requirement
    - 4009bb5 fixed pylint errors
    - 459b16d put cloudtest base in separate file so that only one change needs to be made
    - 8e72335 Merge branch 'gce_cloud_test' of github.com:Akm0d/salt into gce_cloud_test
      - 0e2621e Merge branch '2019.2.1' into gce_cloud_test
    - 9f98b16 finished merge

- **PR #54108**: (dwoz) More robust azure instance deletion @ 2019-08-03 03:58:20 UTC
  
  - 46f5e2e Merge pull request #54108 from dwoz/azure_test
  - 754b719 Fix linter
  - 773235d Fix missing time import
  - 5a8f2ec More robust azure instance deletion

- **PR #54017**: (dmurphy18) Allow for main thread having terminated pid, before ThreadPoolExecutor threads @ 2019-08-02 18:11:48 UTC
  
  - 2cb5a0b Merge pull request #54017 from dmurphy18/fix_deb9_build90_tests
  - 2866520 Skip process kill tests on Windows
  - 5577f14 Clean up lint errors
  - 4ca709e Merge branch '2019.2.1' into fix_deb9_build90_tests
  - 264c767 Merge pull request #1 from dwoz/fix_deb9_build90_tests
    - 9bb9466 Add unit tests for weird pid does not exist cases
    - 64d9752 Add warning messages to help determine why pids do not exist
  - 406d382 Adjusted for review comments
  - 2d20f6e Adjusted try/except statements on process checking
  - e189177 Removed typos
- 2e3ca43 Updated for review comments
- 68c29af Allow for main thread having terminated pid, before ThreadPoolExecutor threads
  - e3158c8 refactored all cloud tests
  - 194e0c7 Refactored GCE cloud test

- **PR #54080**: (dmurphy18) Disabling random website tests till allow for quota usage @ 2019-07-31 21:16:54 UTC
  - 4e2efcd Merge pull request #54080 from dmurphy18/u1804_py3_random_skip
  - 0660e6e Disabling random website tests till allow for quota usage
- **PR #54063**: (twangboy) Make the skip apply to any system missing crypt @ 2019-07-30 19:22:07 UTC
  - dbbbcc9 Merge pull request #54063 from twangboy/fix_test_pycrypto_2019.2.1
  - 6fcf035 Make the skip apply to any system missing crypt
- **PR #54050**: (cmcmarrow) fixes integration terminate error @ 2019-07-30 13:38:55 UTC
  - 4df6271 Merge pull request #54050 from cmcmarrow/integration_terminate_fix
  - ebb07f4 Merge branch '2019.2.1' into integration_terminate_fix
- **PR #54057**: (dmurphy18) Added support for is_fedora and skip Minion test test_issue_7754 on Fedora @ 2019-07-29 22:41:25 UTC
  - 9d1bd63 Merge pull request #54057 from dmurphy18/fix_fedora30_test
  - 30f3bda Added support for is_fedora and skip Minion test test_issue_7754
  - b3293a9 Merge branch '2019.2.1' into integration_terminate_fix

- **ISSUE #53948**: (KChandrashekhar) integration.shell.test_call.CallTest.test_issue_2731_masterless (refs: #54040)

- **ISSUE #2731**: (cwood) Masterless Broken in 0.10.5 (refs: #54040)
- **PR #54040**: (waynew) Remove dead test @ 2019-07-29 17:23:45 UTC
  - 5d3bcd7 Merge pull request #54040 from waynew/remove-dead-test
  - e9a5a57 Remove dead test
  - ba3e867 Merge branch '2019.2.1' into integration_terminate_fix

- **PR #54051**: (twangboy) Skip get time test @ 2019-07-29 16:54:50 UTC
  - 70ffcec Merge pull request #54051 from twangboy/fix_test_system
  - ceaba05 Skip get time test
- **PR #54038**: (Ch3LL) Pyton3 digital ocean test fix: to_str on key @ 2019-07-29 16:54:19 UTC
  - 4aed833 Merge pull request #54038 from Ch3LL/do_py3_fix
  - f7346db Pyton3 digital ocean test fix: to_str on key
    - 05cd93f fixes integration terminate error
    - 69c3106 fixes integration terminate error
- **PR #53735**: (twangboy) Fix Windows tests in test_system @ 2019-07-26 22:38:28 UTC
  - 3cedac3 Merge pull request #53735 from twangboy/fix_test_system
  - a9e9c97 Add timeouts and account for those in assert
  - d3a160e Merge branch '2019.2.1' into fix_test_system
- f95f0e7 Merge branch '2019.2.1' into fix_test_system
- 87e02b8 Use setUpClass
- 6a685bd Fix some tests in the Windows Class

- **PR #53953**: (Ch3LL) Send SIGTERM to webserver in teardown of gitfs tests @ 2019-07-25 21:12:42 UTC
  - cc1cda1 Merge pull request #53953 from Ch3LL/improve_git_test
  - 347ea1e Use Sigkill and add time.sleep before check
  - 637bf95 Merge branch '2019.2.1' into improve_git_test
  - c0be147 Send SIGTERM webserver during teardown of gitfs tests
  - b776c0c Check if gitfs server fails to setup for tests

- **PR #53999**: (Ch3LL) Generate new key each time for digital ocean key test @ 2019-07-25 21:07:45 UTC
  - 2324167 Merge pull request #53999 from Ch3LL/improve_git_test
  - b0663b Generate new key each time for digital ocean key test

- **PR #53970**: (Ch3LL) [2019.2.1] Adding a WAR ROOM Skip for test_directory_clean_require_with_name @ 2019-07-25 21:03:49 UTC
  - 32fe66 Merge pull request #53970 from garethgreenaway/osx_skip_test_directory_clean_require_with_name
  - 362b84a Adding a WAR ROOM Skip for test_directory_clean_require_with_name

- **PR #54003**: (dwoz) War room skip for tcp build @ 2019-07-24 22:52:18 UTC
  - 213dff Merge pull request #54003 from dwoz/skip_test
  - 6c9b9fa War room skip for tcp build

- **PR #53897**: (cmcmarrow) patches salt grains locale_info decode error @ 2019-07-23 13:19:00 UTC
  - 048e097 Merge pull request #53897 from cmcmarrow/timezone_fix
  - d9a402d Merge branch '2019.2.1' into timezone_fix

- **PR #53920**: (s0undt3ch) [2019.2.1] Update CI pipelines. Remove old jenkins cruft. @ 2019-07-20 12:33:01 UTC
  - 9a846b4 Merge pull request #53920 from s0undt3ch/hotfix/ci-pipelines-2019.2.1
  - b09963b Update CI pipelines. Remove old jenkins cruft.

- **PR #53728**: (garethgreenaway) [2019.2.1] Disabling test_get_set_computer_name on OS X and Py3 @ 2019-07-19 17:18:33 UTC
  - 15acce7 Merge pull request #53728 from garethgreenaway/2019_2_1_mac_system_disable_test_get_set_computer_name
  - a6d853e Merge branch '2019.2.1' into 2019_2_1_mac_system_disable_test_get_set_computer_name
  - 5d537ed Missing six import. Updating skip message.
  - ac6d6cc Disabling test_get_set_computer_name on OS X and Py3.

- **PR #53913**: (garethgreenaway) [2019.2.1] skip test_issue_2594_non_invalidated_cache on MacOS @ 2019-07-19 17:17:36 UTC
  - 5a4ec89 Merge pull request #53913 from garethgreenaway/disble_test_issue_2594_non_invalidated_cache_macos
  - c65cd5f Skip the test test_issue_2594_non_invalidated_cache on MacOS where it is flakey.

- **PR #53902**: (twangboy) Skip tests that modify date or time @ 2019-07-18 17:53:31 UTC
  - b091eb7 Merge pull request #53902 from twangboy/skip_dt
- 76cf936 Skip tests that modify date or time

- **PR #53901**: (s0undt3ch) [2019.2.1] Don't fail when combining coverage files @ 2019-07-18 17:46:32 UTC
  - 22b7b1a Merge pull request #53901 from s0undt3ch/hotfix/wrap-coverage-combine
  - b459a48 Don't fail when combining coverage files

- **PR #53542**: (dwoz) Fix leak of SaltMessageClient instances when using tcp transport @ 2019-07-18 17:44:44 UTC
  - 84e798a Merge pull request #53542 from dwoz/tcp_leak
  - 3daeb4f Update TCP pipelines
  - 52f9556 Merge branch '2019.2.1' into tcp_leak
  - f5313fd Fix tcp message client test
  - 3419bf5 Merge branch '2019.2.1' into tcp_leak
  - 3125cd3 Merge branch '2019.2.1' into tcp_leak
  - 9a33582 Merge branch '2019.2.1' into tcp_leak
  - 7eb5d41 Merge branch '2019.2.1' into tcp_leak
  - 481372b Fix torando loop thread issue
  - aff15d4 Fix linter wart
  - 9606db7 Comment the tcp message client test better
  - dcf576f Add unit test for tcp message client close method
  - 4420556 Download artifacts for tcp jobs
  - 66a09dd Merge remote-tracking branch 'origin/tcp_leak' into tcp_leak
    - f484f3f Merge branch '2019.2.1' into tcp_leak
  - 4a37234 Add tcp suffix to github notifications
  - 4a2848b Add transport PR tests
  - 9a4b407 Fix leak of SaltMessageClient instances when using tcp transport
    - 592f3fe undo test
    - bc550ad wip pytest test david
    - 75571e4 fixes timezone decode error
    - d041660 fixes timezone decode error
    - 1dd1a9 fixes timezone decode error
    - e75dafa patches timezone grain
    - eca473 patches salt grains locale_info decode error

- **PR #53873**: (bryceml) increase sleep time between kitchen create failures to account for api limits @ 2019-07-16 23:46:09 UTC
  - 61e9e6f Merge pull request #53873 from bryceml/2019.2.1-increase-sleep
  - aae0bf6 increase sleep time between kitchen create failures to account for api limits

- **PR #53750**: (twangboy) Fix memory error when the test suite cleans up (2019.2.1) @ 2019-07-16 23:00:07 UTC
  - 317d9af Merge pull request #53750 from twangboy/fix_helpers
- fa0e9c3 Merge branch '2019.2.1' into fix_helpers

- **PR #53851**: (dwoz) Master stats revert @ 2019-07-16 16:05:38 UTC
  - 6c2b3a5 Merge pull request #53851 from dwoz/master_stats_revert
  - 0bc72e4 Revert "Merge pull request #53822 from dwoz/master_stats_test"
  - 4553ba7 Revert "Merge pull request #53829 from saltstack/fix_stats_2019.2.1"

- **PR #53829**: (dwoz) Fix stats on windows @ 2019-07-12 01:03:47 UTC
  - 5064027 Merge pull request #53829 from saltstack/fix_stats_2019.2.1
  - 9f2d20d Fix stats on windows

- **PR #53826**: (dmurphy18) WAR ROOM test skip till rewritten to allow for dnf on RHEL 8 and F30 @ 2019-07-12 00:39:11 UTC
  - 971eda3 Merge pull request #53826 from dmurphy18/fedora30_fixes
  - 34b261d WAR ROOM test skip till rewritten to allow for dnf on RHEL 8 and Fedora 30

- **PR #53822**: (dwoz) Enable master stats for tests @ 2019-07-11 23:37:55 UTC
  - ba33d76 Merge pull request #53822 from dwoz/master_stats_test
  - d2b8315 Enable master stats for tests
  - 3471422 Fix memory error when the test suite cleans up

- **PR #53591**: (twangboy) Fix whitelist errors in test_boto_* state tests on Windows @ 2019-07-07 05:45:21 UTC
  - 1756156 Merge pull request #53591 from twangboy/fix_boto_tests
  - ba8b26 Merge branch '2019.2.1' into fix_boto_tests

- **ISSUE #53532**: (dafyddj) win_lgpo.py: crash caused by empty presentation text element (refs: #53662)

- **PR #53688**: (twangboy) Merge Forward #53662 (2019.2.1) @ 2019-07-07 05:44:25 UTC
  - PR #53662: (lomeroe) Update win_lgpo (refs: #53688)
  - 464464c Merge pull request #53688 from twangboy/mf_53662
  - c19de97 Merge branch '2019.2.1' into mf_53662

- **ISSUE #52391**: (rsmekala) Port Junos-related bug fixes from develop to 2019.2 (refs: #52401)

- **PR #52401**: (rsmekala) Port Junos-related bug fixes from develop to 2019.2 @ 2019-07-06 21:50:51 UTC
  - PR #51164: (rsmekala) Updates to salt-junos modules (refs: #52401)
    - 1a76e00 Merge pull request #52401 from rsmekala/2019.2.1
    - 345938d Merge branch '2019.2.1' into 2019.2.1
    - 326f9f4 Merge branch '2019.2.1' into 2019.2.1
    - c11a004 Merge branch '2019.2.1' into 2019.2.1
    - 33b45d2 Merge branch '2019.2.1' into 2019.2.1
    - af66fac Merge branch '2019.2.1' into 2019.2.1
    - 211b169 Ported relevant fixes from unit.modules.test_junos from develop to 2019.2
    - 0c51bc9 Ported relevant fixes from states.junos from develop to 2019.2
    - a966ad1 Ported relevant fixes from proxy.junos from develop to 2019.2
- 263e9f5 Ported relevant fixes from modules.junos from develop to 2019.2
  - b9033b9 Merge branch '2019.2.1' into mf_53662
  - 75c740e Merge forward #53662
    - 8ace391 Merge branch '2019.2.1' into fix_boto_tests
- PR #53585: (twangboy) Fix test_winrepo on Windows @ 2019-07-06 15:15:47 UTC
  - 056f596 Merge pull request #53585 from twangboy/fix_test_winrepo
  - c1f8c3a Merge branch '2019.2.1' into fix_test_winrepo
- PR #53590: (twangboy) Fix test_status on Windows @ 2019-07-06 15:15:13 UTC
  - db950f2 Merge pull request #53590 from twangboy/fix_test_status
  - 67750b7 Merge branch '2019.2.1' into fix_test_status
  - b667045 Merge branch '2019.2.1' into fix_test_status
  - 9b4338a Merge branch '2019.2.1' into fix_test_status
  - 2735b19 Add __grains__
  - bb12da9 Load grains properly
    - 91da774 Merge branch '2019.2.1' into fix_test_winrepo
- PR #53556: (twangboy) Fixes an issue with line endings in the jinja renderer @ 2019-07-05 23:06:01 UTC
  - becaf12 Merge pull request #53556 from twangboy/fix_test_pillar
  - ac405d1 Merge branch '2019.2.1' into fix_test_pillar
- PR #53557: (twangboy) Fix test_pydsl on Windows @ 2019-07-05 22:36:40 UTC
  - 7a5111b Merge pull request #53557 from twangboy/fix_test_pydsl
  - d9df951 Merge branch '2019.2.1' into fix_test_pydsl
  - 1619c68 Merge branch '2019.2.1' into fix_test_pydsl
  - 2c3e91d Fix test_pydsl on Windows
    - 137f4a4 Merge branch '2019.2.1' into fix_test_pillar
    - 4a96252 Fixes an issue with line endings in the jinja renderer
      - c8c8be0 Merge branch '2019.2.1' into fix_test_winrepo
      - 8373865 Merge branch '2019.2.1' into fix_test_winrepo
      - a818396 Split out the tests, patch test=True
      - 62041eb Merge branch '2019.2.1' into fix_boto_tests
- PR #53653: (s0undt3ch) [2019.2.1] Log which address failed to resolve @ 2019-07-05 18:29:31 UTC
  - 8f05226 Merge pull request #53653 from s0undt3ch/hotfix/fix-nox-bypass-2019.2.1
  - f44253c Merge branch '2019.2.1' into hotfix/fix-nox-bypass-2019.2.1
  - 0ead7fe Log which address failed to resolve
- PR #53725: (s0undt3ch) [2019.2.1] Archive the kitchen logs @ 2019-07-05 18:19:50 UTC
  - f750f44 Merge pull request #53725 from s0undt3ch/features/f30-reqs-2019.2.1
  - 118fb7f Improve slack message
- 62a2ee8 Archive the kitchen logs

- **PR #53689**: (twangboy) Merge Forward #52593 (2019.2.1) @ 2019-07-05 14:58:10 UTC
  - PR #52593: (twangboy) Update setup.py (refs: #53689)
  - 0c6009f Merge pull request #53689 from twangboy/fix_setup_2019.2.1
  - c6f3da5 Merge branch '2019.2.1' into fix_setup_2019.2.1

- **PR #53690**: (twangboy) Merge Forward #52065 (2019.2.1) @ 2019-07-05 14:55:12 UTC
  - PR #52065: (twangboy) Use the dism binary that matches system architecture (refs: #53690)
  - 54c4220 Merge pull request #53690 from twangboy/fix_win_dism_2019.2.1
  - fae9f1a Merge branch '2019.2.1' into fix_win_dism_2019.2.1

- **PR #53719**: (s0undt3ch) [2019.2.1] PR Pipeline Enhancements @ 2019-07-04 20:29:06 UTC
  - 78c45eb Merge pull request #53719 from s0undt3ch/features/f30-reqs-2019.2.1
  - 76b99fd Enhance lint report
  - 45f19af Use milestones to abort previous, still running, builds, on new builds

- **PR #53697**: (s0undt3ch) [2019.2.1] Add Fedora 30 requirements files @ 2019-07-04 04:26:02 UTC
  - 3db42db Merge pull request #53697 from s0undt3ch/features/f30-reqs-2019.2.1
  - 36198cd Delete Opensuse 42 static requirements
  - 4413626 Delete Fedora 28 static requirements
  - 41809e5 Add Fedora 30 requirements files

- **PR #53680**: (Ch3LL) Pytest 5.0 contextmanager str: call value on ExceptionInfo objects @ 2019-07-04 00:12:56 UTC
  - f5c5da4 Merge pull request #53680 from Ch3LL/pytest_5_changes
  - b5e2b0b Merge branch '2019.2.1' into pytest_5_changes

- **PR #53682**: (twangboy) Fix compare issue in lgpo state module @ 2019-07-03 04:43:22 UTC
  - 727843c Merge pull request #53682 from twangboy/fix_lock_1740_lgpo
  - 62450db Merge branch '2019.2.1' into fix_lock_1740_lgpo
  - f6276a3 Fix compare issue in lgpo state module
    - 110b953 Pytest 5.0 contextmanager str: call value on ExceptionInfo objects
    - b71b655 Merge forward #52065
    - 023c47d Fix typo
    - 43dd7b3 Merge Forward #52593

- **PR #53678**: (twangboy) Fix LGPO when string object is None @ 2019-07-02 23:47:05 UTC
  - 491bfa8 Merge pull request #53678 from twangboy/fix_lock_1688_lgpo
  - 7b05b8f Merge branch '2019.2.1' into fix_lock_1688_lgpo

- **PR #53220**: (twangboy) Don’t remove the pythonwin directory (2019.2.1) @ 2019-07-02 22:43:43 UTC
  - 4aa91b Merge pull request #53220 from twangboy/fix_pywin32_2019.2.1
  - 748bf1c Merge branch '2019.2.1' into fix_pywin32_2019.2.1
• **PR #53614**: (Ch3LL) Increase flaky attempts on mac tests using systemsetup @ 2019-07-02 21:33:56 UTC
  - c2be0e2 Merge pull request #53614 from Ch3LL/mac_flaky
  - 5460031 Merge branch '2019.2.1' into mac_flaky
  - 7daa0f0 Increase flaky attempts on mac tests using systemsetup

• **PR #53624**: (Ch3LL) Allow yaml list notation for nodegroup expansion @ 2019-07-02 21:32:43 UTC
  - 02460cb Merge pull request #53624 from Ch3LL/nodegroup_group_list
  - 475d904 Merge branch '2019.2.1' into nodegroup_group_list
  - fbb15cd Add nodegroup list test
  - ee59d39 Merge branch '2019.2.1' into nodegroup_group_list
  - d236bd4 Allow yaml list notation for nodegroup expansion

• **PR #53562**: (Ch3LL) Move create key call into try/except in Digital Ocean key test @ 2019-07-02 16:08:08 UTC
  - 8857dbd Merge pull request #53562 from Ch3LL/do_key_test
  - 315eb35 Merge branch '2019.2.1' into do_key_test
  - 75ac708 Merge branch '2019.2.1' into do_key_test
  - 128ba07 Move create key call into try/except in Digital Ocean key test
    - 22da43a Merge branch '2019.2.1' into fix_pywin32_2019.2.1
    - 6b50d7 Merge branch '2019.2.1' into fix_pywin32_2019.2.1
    - 534c984 Merge branch '2019.2.1' into fix_pywin32_2019.2.1
    - 382c637 Merge branch '2019.2.1' into fix_pywin32_2019.2.1
    - fb4090d update py3 script
    - 0ea70ba Don’t remove pythonwin directory
      - ba37276 Use string_types instead of text_types
      - f60084 Add some unit tests, raise error on non-string types
      - 35ed8be Create function for encoding string values
      - c4c1082 Return encoded null when string value is None

• **PR #53627**: (dmurphy18) Cherry pick pr 53370 from 2018.3 into 2019.2.1 @ 2019-06-28 19:54:13 UTC
  - 164aaeb Merge pull request #53627 from dmurphy18/cherry-pick-pr-53370
  - 450d23d Merge branch '2019.2.1' into cherry-pick-pr-53370

• **ISSUE #53411**: (cro) Events can grow stale when event_listen_queue is set. (refs: #53587, #53412)

• **PR #53587**: (cro) Forward port from 2018.3 Add event_listen_queue_max_seconds to fix #53411 @ 2019-06-28 16:49:46 UTC
  - 53412: (cro) Stale events 53411 (refs: #53587)
  - 6559e4c Merge pull request #53587 from cro/53412-2019.2.1
  - 9e69bd4 Merge branch '2019.2.1' into 53412-2019.2.1
  - 949a026 Merge branch '2019.2.1' into 53412-2019.2.1
  - f5d81c9 Merge branch '2019.2.1' into 53412-2019.2.1
- d74c313 Merge branch '2019.2.1' into 53412-2019.2.1
- b3c3f52 Make doc build test pass.
- 8001130 Add event-listen_queue_max_seconds to fix #53411
- 34e38d7 Merge branch '2019.2.1' into cherry-pick-pr-53370

• ISSUE #53283: (Ch3LL) integration.states.test_file.FileTest.test_directory_broken_symlink (refs: #53295)
• PR #53295: (DmitryKuzmenko) Recurse kwarg of state.directory state shall be a list or None @ 2019-06-27 23:20:10 UTC
  - 14efced Merge pull request #53295 from DSRCorporation/bugs/test_file_recurse_set
  - 2927b78 Merge branch '2019.2.1' into bugs/test_file_recurse_set
  - 9c01670 Merge branch '2019.2.1' into bugs/test_file_recurse_set
  - 571d82a Merge branch '2019.2.1' into bugs/test_file_recurse_set
  - ee8f0e3 Merge branch '2019.2.1' into bugs/test_file_recurse_set
  - 013e04c Recurse kwarg of state.directory state shall be a list of None

• ISSUE #52926: (waynew) integration.states.test_beacon.BeaconStateTestCase.test_present_absent - Beacon "diskusage" is not available (refs: #53493, #53466)
• ISSUE #52245: (twangboy) integration.states.test_beacon.BeaconStateTestCase.test_present_absent (refs: #53493, #53466)
• PR #53466: (dwoz) More robust beacon state test @ 2019-06-27 23:17:01 UTC
  - 75175bb Merge pull request #53466 from dwoz/test_pres_abs
  - f24bf06 Use new pipeline format
  - a74580b Clean up cruft
  - 68958f5 Do not create duplicate minion ids
  - c47eeb4 Add amazon 2 to PR tests
  - dc90b47 More robust beacon state test
    - 95b1819 Initial working tests for gpg fixes and import keys, signing
    - b2c9ae2 Update access to str/bytes with to_unicode/to_bytes for Python 3

• PR #53609: (s0undt3ch) CI Pipelines. Timeout after getting a node. Report exit code. @ 2019-06-27 16:09:54 UTC
  - 582ac5f Merge pull request #53609 from s0undt3ch/hotfix/fix-nox-bypass-2019.2.1
  - 024be84 CI Pipelines. Timeout after getting a node. Report exit code.

• PR #53574: (s0undt3ch) [2019.2.1] Minor fixes/adjustments to the new CI pipelines @ 2019-06-25 18:48:25 UTC
  - f568796 Merge pull request #53574 from s0undt3ch/hotfix/fix-nox-bypass-2019.2.1
  - e85e2f4 Minor fixes/adjustments to the new CI pipelines

• PR #53584: (dwoz) Add unit tests for recent SaltCacheLoader changes @ 2019-06-24 23:40:43 UTC
  - PR #53563: (twangboy) SaltCacheLoader does not create multiple FileClients (refs: #53584)
  - 77b7fc4 Merge pull request #53584 from dwoz/client_cache
  - e9b61dc Add unit tests for recent SaltCacheLoader changes
* 5558a0a Add reg to the whitelist

- **PR #53563**: (twangboy) SaltCacheLoader does not create multiple FileClients (refs: #53584) @ 2019-06-22 23:23:03 UTC
  - 6ed6c31 Merge pull request #53563 from twangboy/py3_windows_hang
  - 369720e Allow the file_client to be overridden
  - f6c592c Don't instantiate the file_client every time

- **PR #53432**: (garethgreenaway) [2019.2.1] Various fixes for 2019.2.1 to ensure tests pass on Mac OS X @ 2019-06-22 23:23:03 UTC
  - c606952 Merge pull request #53432 from garethgreenaway/2019_2_1_mac_fixes
  - 1974f11 Disabling a couple more tests in integration.modules.test_cp that hang on OS X and Py2.
  - 7721151 Fixing lint.
  - 1d4e228 Updating various skips for tests to only skip if OS is OS X and Python is Python2.
  - 01dafdc Skipping integration.modules.test_cp.CPModuleTest.test_get_file_str_https on OS X
  - c02db20 Disabling integration.modules.test_state.StateModuleTest.test_parallel_state_with_long_tag
  - 8788877 Skip integration.states.test_file.FileTest.test_issue_11003_immutable_lazy_proxy_sum and integration.states.test_pip_state.PipStateTest.test_22359_pip_installed_unless_does_not_trigger_warnings when running on OS X.
  - cf78627 Removing wrong import of skipIf
  - b10e1e7 Moving the skipIf for OS X from the beacon state tests to the renderer state tests.
  - d2fe9a Disabling beacon state tests on OS X for the time being.
  - 1741bb0 Adding some timeouts to see if it helps the tests pass on OS X.
  - fd0ba0a Ensure the user and group used by @with_system_user_and_group are consistent.
  - e03ab81 Using salt.utils.path.which to find false, on OSX it lives under /usr/bin/
  - 353f9d4 Fixing the beacons.reset function. Once the reset has taken place in beacons/__init__.py we need to fire an event back to complete the loop and ensure that everything worked as expected.
  - ee3bc7 fix to how the depends decorator works. Only run the dependancy commands for the module we're checking.
  - 8440176 Fixing a log issue that pops up after test_gen_thin_compression_fallback_py3 on "OS X, need to ensure that salt.utils.thin.os.close is mocked.
  - 9767ddd Format for the sqlite3 database used for the assistive information changed in Mojave, additional columns added.
  - 9c8a7e6 Fixing a bug when the roots fileserver and the location is a symlink to another location. This fix ensures that when fsroot is referenced we are using the real path and not the symlink path.

- **PR #53210**: (Ch3LL) Cherry-Pick #52787 into 2019.2.1 @ 2019-06-20 13:33:13 UTC
  - PR #52787: (garethgreenaway) [2018.3] Fixes to test_pip state sls files (refs: #53210)
  - f5f80af Merge pull request #53210 from Ch3LL/cp-52787
- f27c434 Merge branch '2019.2.1' into cp-52787

- **PR #53467**: (twangboy) Check valid username first (fixes failing symlink test) @ 2019-06-19 17:04:30 UTC
  - fd6cb35 Merge pull request #53467 from twangboy/fix_test_win_file
  - 92950c5 Merge branch '2019.2.1' into fix_test_win_file
  - 6a21ed3 Merge branch '2019.2.1' into fix_test_win_file
  - 31ce1fb Fix some lint, skip some tests
  - 6de46be Monkeypatch in the class instead of globally
  - d663a1f Fix the failing BlockReplace test cases on Windows
  - 299f88f Update test_managed_contents
  - 81110e5 Fix test_file_copy_make_dirs that was failing on Linux
  - 8d0529d Fix some lint
  - 4a9c020 Fix issues with win_runas
  - bcefa1 Remove privs message
  - 54be0a6 Verify username early in win_runas

- **PR #53475**: (Ch3LL) Add pypsexec requirement for cloud tests @ 2019-06-19 13:30:25 UTC
  - 3230078 Merge pull request #53475 from Ch3LL/add_pypsexec
  - ab59a55 Merge branch '2019.2.1' into add_pypsexec
  - f954363 Merge branch '2019.2.1' into add_pypsexec
  - 8f7cbfc Merge branch '2019.2.1' into add_pypsexec
  - fa22b39 Add pypsexec requirement for cloud tests

- **PR #53491**: (Ch3LL) Update test_gen_hash for macosx @ 2019-06-19 13:16:04 UTC
  - bdd7c2c Merge pull request #53491 from Ch3LL/crypt_test_mac
  - 85e96bd Merge branch '2019.2.1' into crypt_test_mac
  - 700338e Merge branch '2019.2.1' into crypt_test_mac
  - 4ce7fb1 Merge branch '2019.2.1' into crypt_test_mac
  - 832ded6 Merge branch '2019.2.1' into crypt_test_mac
  - 775fb8c Merge branch '2019.2.1' into crypt_test_mac
  - 0832b49 Update test_gen_hash for macosx

- **PR #53494**: (Ch3LL) Always delete digital ocean key for test_key_management test @ 2019-06-19 13:14:51 UTC
  - 8c2e952 Merge pull request #53494 from Ch3LL/do_cloud_test
  - 5053ab Merge branch '2019.2.1' into do_cloud_test
  - 64a3e8d Merge branch '2019.2.1' into do_cloud_test
  - 45c0c43 Merge branch '2019.2.1' into do_cloud_test
  - 3826c56 Allows delete digital ocean key for test_key_management test
  - 6b6dc6e Merge branch '2019.2.1' into cp-52787

- **PR #53434**: (weswhet) Update documentation for newer mac_service module. @ 2019-06-19 01:15:19 UTC
- 2e3778b Merge pull request #53434 from weswhet/patch-2
- 89398a9 Update salt.modules.service.rst
- b9c1b1a Update salt.modules.service.rst
- a962a64 Merge branch '2019.2.1' into patch-2

**PR #53498: (amendlik) Fix broken documentation links @ 2019-06-18 23:44:05 UTC**
- f72ebba Merge pull request #53498 from amendlik/links
- e360a70 Fix broken documentation links for service virtual module
- 56f65ec Fix broken documentation links for pkg virtual module
  * 010a2c5 Update documentation for newer mac_service module.
  * 1bbdc7f Merge branch '2019.2.1' into cp-52787

**PR #53514: (Ch3LL) Revert logging changes from #53492 @ 2019-06-18 20:49:04 UTC**
- PR #53492: (dwoz) Fix syndic connection when using tcp transport (refs: #53514)
- 0793272 Merge pull request #53514 from Ch3LL/disable_py3_logging
- 8c8f0ac import six runtests log handler
- f442b33 Revert "Enable logging for test runs on py3"
  * b62be16 Merge branch '2019.2.1' into cp-52787

**PR #53485: (s0undt3ch) [2019.2.1] Workaround nox's install only flag @ 2019-06-18 09:35:34 UTC**
- 98285f9 Merge pull request #53485 from s0undt3ch/hotfix/fix-nox-bypass-2019.2.1
- 69e1d84 Workaround nox's install only flag
  * 8622bba Merge branch '2019.2.1' into cp-52787

**PR #53369: (Akm0d) Added refs to AIX module documentation @ 2019-06-17 20:29:01 UTC**
- ff7370e Merge pull request #53369 from Akm0d/aix_docs
- 2ece253 Merge branch '2019.2.1' into aix_docs
- f2eda45 Merge branch '2019.2.1' into aix_docs
- e793ac Merge branch '2019.2.1' into aix_docs
- e800641 Merge branch '2019.2.1' into aix_docs
- 0ef9892 Merge branch '2019.2.1' into aix_docs
- 65cb718 Merge branch '2019.2.1' into aix_docs
- 32f4d7e Merge branch '2019.2.1' into aix_docs
- a59f45e Merge branch '2019.2.1' into aix_docs
- 29f89a4 Merge branch '2019.2.1' into aix_docs
- e74345c Merge branch '2019.2.1' into aix_docs
- 28fbd11 Merge branch '2019.2.1' into aix_docs
- 60129f0 Merge branch 'aix_docs' of github.com:Akm0d/salt into aix_docs
  * a1c4abc Merge branch '2019.2.1' into aix_docs
  * e2c9fcc Merge branch '2019.2.1' into aix_docs
- fd197d3 Merge branch '2019.2.1' of https://github.com/saltstack/salt into aix_docs
- 6d42cf7 Merge branch 'aix_docs' of github.com:Akm0d/salt into aix_docs
  - fae6045 Merge branch '2019.2.1' into aix_docs
- 97145b0 Merge branch '2019.2.1' of https://github.com/saltstack/salt into aix_docs
- 6d16343 Updated 'used for' description of aixpkg
- 6092683 Added aixpkg to index
- 2867d07 Added refs to AIX module documentation
  - 458fe9f Merge branch '2019.2.1' into cp-52787

- **PR #53461**: (waynew) Update file.chattr @ 2019-06-14 21:16:52 UTC
  - 8df7684 Merge pull request #53461 from waynew/fi-chattr-problems
  - a8d8174 Merge branch '2019.2.1' into fi-chattr-problems

- **ISSUE #52926**: (waynew) integration.states.test_beacon.BeaconStateTestCase.test_present_absent - Beacon 'diskusage' is not available (refs: #53493, #53466)

- **ISSUE #52245**: (twangboy) integration.states.test_beacon.BeaconStateTestCase.test_present_absent (refs: #53493, #53466)

- **PR #53493**: (dwoz) Cherry-pick and merge beacon event change @ 2019-06-14 20:36:10 UTC
  - cfe866d Merge pull request #53493 from dwoz/cherry_pick_test_fix
  - fb104bb Cherry-pick and merge beacon event change

- **PR #53492**: (dwoz) Fix syndic connection when using tcp transport (refs: #53514) @ 2019-06-14 19:23:41 UTC
  - a1f4136 Merge pull request #53492 from dwoz/tcp_syndic_fix
  - 17c983b Fix linter
  - 9393425 Enable logging for test runs on py3
  - f1b65d1 Fix syndic connection when using tcp transport

- **PR #53437**: (twangboy) Fix failing symlink test @ 2019-06-12 22:53:32 UTC
  - e852596 Merge pull request #53437 from twangboy/fix_test_win_file
  - 8c30dbd Add priv info to error message
  - a7d41a8 Make them non-destructive tests
  - d8bede0 Remove duplicate test
  - 89aaf2e Remove duplicate test
  - 184ec4a Skip test on linux
  - c97ea99 Mark it a destructive test
  - 9da7090 Fix failing symlink test

- **PR #53408**: (s0undt3ch) [2019.2.1] Fix static requirements @ 2019-06-12 22:52:33 UTC
  - 19629a0 Fix unit.templates.test_jinja.TestCustomExtensions.test_http_query
  - 5aae99b Take into account the packaging requirements for OSX
  - b9618f6 Take into account the packaging requirements for windows

30.2. Previous Releases
- ff63ae4 Stop compiling static TCP requirements.
  * 62e590b Update file.chattr

- **PR #53165**: (Ch3LL) Update ami's used for windows cloud tests @ 2019-06-11 15:54:41 UTC
  - ab9fe46 Merge pull request #53165 from Ch3LL/ami_window_cloud
  - 1d0b0a6 Merge branch '2019.2.1' into ami_window_cloud
  - a77a05c Merge branch '2019.2.1' into ami_window_cloud
  - a1204dc Merge branch '2019.2.1' into ami_window_cloud
  - d15c8f2 Merge branch '2019.2.1' into ami_window_cloud
  - 941778f Update ami's used for windows cloud tests
  - PR saltstack/salt#53332: (s0undt3ch) Non optional full test runs for 2019.2.1 (refs: #53431)

- **PR #53431**: (dwoz) Revert "Non optional full test runs for 2019.2.1" @ 2019-06-10 21:44:30 UTC
  - d806b58 Merge pull request #53431 from saltstack/revert-53332-hotfix/full-test-run-2019.2.1
  - 701218c Revert "Non optional full test runs for 2019.2.1"

- **ISSUE #52174**: (amendlik) file.stat function not working under Python 3 (refs: #53430)
  - PR #53430: (Akm0d) Cherry-pick #52174 into 2019.2.1
    * 7811971 Merge branch '2019.2.1' into cp-52787

- **PR #53389**: (bryceml) only keep last 10 builds of every pr on jenkins to reduce disk usage @ 2019-06-10 17:18:48 UTC
  - 6b800a2 Merge pull request #53389 from bryceml/2019.2.1
  - 05368a1 Merge branch '2019.2.1' into 2019.2.1

- **PR #53332**: (s0undt3ch) Non optional full test runs for 2019.2.1 @ 2019-06-10 15:51:41 UTC
  - fe18c40 Merge pull request #53332 from s0undt3ch/hotfix/full-test-run-2019.2.1
  - 2372733 Merge branch '2019.2.1' into hotfix/full-test-run-2019.2.1
  - f8bd47b Merge branch '2019.2.1' into hotfix/full-test-run-2019.2.1
  - 45c3c06 Non optional full test runs for 2019.2.1
    * 928b05f only fetch pr target branch instead of all branches to save time and disk space
    * ccc6106 only keep last 10 builds of every pr on jenkins to reduce disk usage
      - b970bde Merge branch '2019.2.1' into cp-52787

- **PR #53287**: (twangboy) Fix win system @ 2019-06-06 23:35:47 UTC
  - d0810d7 Merge pull request #53287 from twangboy/fix_win_system
  - 0fc88fb Add TypeError
  - 5b4160d Try NumberOfEnabledCores
  - 49cbfd4 Add a note about skipping unavailable items
  - 044b56b Fix get_system_info for older versions of Windows

- **ISSUE #52173**: (amendlik) file.directory fails to check directory permissions correctly (refs: #53385)
  - PR #53385: (Akm0d) Check dir_mode recursively in file.directory
• PR #53386: (dwoz) Fix missing import @ 2019-06-06 20:45:59 UTC
  - cf98b83 Merge pull request #53386 from dwoz/missing_import
  - a23d6d9 Fix missing import

• ISSUE #49559: (zyguy) Salt-cloud - proxmox driver - returns AttributeError: 'generator' object has no attribute 'next' (refs: #53240)
  - PR #53240: (FireGrace) change .next() to next() py2=>py3 leftover

• ISSUE #53274: (Ch3LL) integration.states.test_pkg failing on amazon 1 py2 (refs: #53323)
• PR #53323: (dmurphy18) Fix for issue #53274, test on Amazon Linux 1 @ 2019-06-06 17:31:18 UTC
  - 18991f9 Merge pull request #53232 from dmurphy18/fixed_53274
  - 6814852 Merge branch '2019.2.1' into fixed_53274
  - bb6c97a Merge branch '2019.2.1' into fixed_53274
  - b84833d Merge branch '2019.2.1' into fixed_53274
  - 7085f36 Fixed pylint issue on PR not showing when run pylint locally
  - 1200031 Updated to use package bash-doc if Amazon Linux 1 after review comments
  - b2a4a5e Fix for issue #53274, test on Amazon Linux 1
  - PR #53356: (Akm0d) Updated paramiko to version 2.2.3 for python3.7 support

• ISSUE #53137: (bryceml) update doc pr's to be built using python3 and sphinx 2.0.1 (refs: #53273)
• PR #53273: (s0undt3ch) [2019.2.1] Switch docs building under Py3 @ 2019-06-05 10:01:03 UTC
  - 1cf57e9 Merge pull request #53273 from s0undt3ch/hotfix/py3-nox-docs-2019.2.1
  - 98653c0 Allow docs to be built on Python >= 3.5, not just Python 3.6
  - c54f06f Have sphinx turn errors into warnings
  - 07f4327 Switch docs building under Py3

• PR #53361: (s0undt3ch) [2019.2.1] Only make a new log record if it's a dictionary. @ 2019-06-05 09:56:15 UTC
  - dfd36a2 Merge pull request #53361 from s0undt3ch/hotfix/fix-mp-logging-2019.2.1
  - d70d61f Fully revert 962b11687

• ISSUE #53171: (twangboy) integration.states.test_network.NetworkTest.test_managed (refs: #53351)
• PR #53351: (waynew) Add checks for Amazon Linux to ip module @ 2019-06-04 19:25:58 UTC
  - 5efb670 Merge pull request #53351 from waynew/53171-fix-network-managed
  - e801afe Add checks for Amazon Linux to ip module

• PR #53242: (s0undt3ch) [2019.2.1] newer msgpack ipc fixes @ 2019-06-03 23:39:09 UTC
  - PR #52934: (twangboy) Update msgpack calls for newer msgpack (refs: #53242)
  - PR #52755: (dwoz) Fix non raw msg pack msg decoding (refs: #53242)
  - PR #52488: (terminalmage) Fix deprecation warning in msgpack >= 0.5.2 (2018.3) (refs: #52755)
  - PR #52487: (terminalmage) Fix deprecation warning in msgpack >= 0.5.2 (develop) (refs: #53242)
  - ce5d79a Merge pull request #53242 from s0undt3ch/hotfix/msgpack-ipc-2019.2.1
  - d27a524 Merge branch '2019.2.1' into hotfix/msgpack-ipc-2019.2.1
• **PR #53289**: (cmcmarrow) stops pylint E1120 from showing @ 2019-06-01 04:57:27 UTC
  - df448c2 Merge pull request #53289 from cmcmarrow/test_kubernetes_lint_failures_silenced
  - 03ec4ac Merge branch '2019.2.1' into test_kubernetes_lint_failures_silenced

• **PR #53304**: (s0undt3ch) [2019.2.1] Refactor Jenkins PR pipelines to download artifacts after timeout @ 2019-05-31 17:10:19 UTC
  - 6fac22b Merge pull request #53304 from s0undt3ch/hotfix/jenkins-pipelines-refactor-2019.2.1
  - 6e778ef Refactor Jenkins PR pipelines to download artifacts after timeout

• **PR #53297**: (s0undt3ch) [2019.2.1] The TCP transport needs the exact same requirements as the ZeroMQ one @ 2019-05-30 19:42:29 UTC
  - d359513 Merge pull request #53297 from s0undt3ch/hotfix/tcp-transport-tests
  - bec7fa5 The TCP transport needs the exact same requirements as the ZeroMQ one
  - f93e7d3 stops pylint E1120 from showing
  - cbe6423 stops pylint E1120 from showing
  - c5a5d43 test_kubernetes_lint_failures_silenced
  - b838395 test_kubernetes_lint_failures_silenced
  - 997da08 stops pylint E1120 from showing
    - 5542fa8 Add the missing, and required, top pillar file.
    - 0ae2ef0 Under Py2 we still want raw to be set to True
    - 714d663 Re-submit #52934 fixed after being reverted in #52755
    - 243b512 Update msgpack calls for newer msgpack
      - 0f9077b Merge branch '2019.2.1' into cp-52787

• **PR #53264**: (s0undt3ch) [2019.2.1] Minion blackout tests - Add the missing, and required, top pillar file @ 2019-05-29 07:30:45 UTC
  - 50e31ec Merge pull request #53264 from s0undt3ch/2019.2.1
  - acabb70 Merge branch '2019.2.1' into 2019.2.1

• **PR #52966**: (s0undt3ch) Always run the full test suite on the 2019.2.1 release branch @ 2019-05-28 15:43:12 UTC
  - 749c626 Merge pull request #52966 from s0undt3ch/hotfix/full-test-run
  - 247c461 Always run the full test suite on the 2019.2.1 release branch

• **PR #53138**: (frogunder) vultr cloudtest fix @ 2019-05-28 14:34:22 UTC
  - a7af3d1 Merge pull request #53138 from frogunder/fix_vultr_cloudtest
  - 9f4550c vultr cloudtest fix
    - 912b9b3 Add the missing, and required, top pillar file.
      - 9d21b75 Merge branch '2019.2.1' into cp-52787

• **PR #53258**: (s0undt3ch) [2019.2.1] Fix multiprocessing logging queue dict changing during iteration errors @ 2019-05-27 19:26:27 UTC
  - d011beb Merge pull request #53258 from s0undt3ch/2019.2.1
  - ad01dd2 More robust minion blackout tests
- a0346d1 Try harder to get the minion grains
- 36717bd Try and address the test flakyness
- ce07d8c Add more information when the assertion fails
- b99e914 Attempt to fix mine tests
- fca981c One more known to return None
- 951df48 One more known to return None
- eb5fd3e Fix integration.modules.test_mine.MineTest.test_get for sub_minion
- 26314f5 Fix multiprocessing logging queue dict changing during iteration errors

• PR #53153: (s0undt3ch) [2019.2.1] Add Amazon Linux 2018.3 and 2 static requirements @ 2019-05-27 12:02:20 UTC
  - b69e080 Merge pull request #53153 from s0undt3ch/2019.2.1
  - 166067c Use currentBuild.resultIsBetterOrEqualTo instead
  - ceffd90 Stop error messages about missing roster file on syndic master
  - 6b8f46 Don't complain when attempting to close sockets at this stage
  - e3f3cc9 Add Amazon Linux 2018.3 and 2 static requirements
  - 872acc0 Switch the ubuntu-14.04 exception with amzn-1
  - PR saltstack/salt#52934: (twangboy) Update msgpack calls for newer msgpack (refs: #53235)

• PR #53235: (s0undt3ch) Revert "Update msgpack calls for newer msgpack" @ 2019-05-24 13:35:20 UTC
  - 14ae6ea Merge pull request #53235 from saltstack/revert-52934-fix_msgpack
  - 3295aea Revert "Update msgpack calls for newer msgpack"

• PR #53131: (s0undt3ch) [2019.2.1] Update to salt-bootstrap v2019.05.20 @ 2019-05-24 07:45:57 UTC
  - 6923a27 Merge pull request #53131 from s0undt3ch/hotfix/update-bootstrap-2019.2.1
  - 4ce4f4 Merge branch '2019.2.1' into hotfix/update-bootstrap-2019.2.1
  - 6751e1e Merge branch '2019.2.1' into hotfix/update-bootstrap-2019.2.1
  - 6988e07 Update to salt-bootstrap v2019.05.20

• PR #52934: (twangboy) Update msgpack calls for newer msgpack (refs: #53242) @ 2019-05-23 23:18:23 UTC
  - a61d2b0 Merge pull request #52934 from twangboy/fix_msgpack
  - f02a12e Merge branch '2019.2.1' into fix_msgpack
  - 7e2cd34 Merge branch '2019.2.1' into fix_msgpack
  - bc9ce8e Merge branch '2019.2.1' into fix_msgpack
  - 0abd1ec Update msgpack calls for newer msgpack
    - 3366d59 update pylint exceptoin
    - 6c452b3 removing unwanted commits from this branch
    - e0b0ba8 Handling in flaky when maximum number of attempts raised and the exception should be raised. Different approaches depending on Py2 vs Py3.
    - 434dcda Disabling two tests when using Python 3 and OS X

30.2. Previous Releases
Disabling integration.shell.test_minion.MinionTest.test_issue_7754 test on OS X because it hangs the test suite.

Dropping the version check for InstallationError down to anything 1.0 or greater. Removing the test that simulates versions of pip below 1.0.

Adding an if statement to only the python parameter if the result from get_python_executable is a valid value. Maintaining backwards compatibility to run tests without Nox.

PR #53192: (twangboy) Skip test_gen_hash test on Windows @ 2019-05-23 05:33:13 UTC
  - 8a57270 Merge pull request #53192 from twangboy/skip_test_gen_hash
  - 758d020 Skip test on Windows

PR #53157: (twangboy) Fix unit.modules.test_win_file.WinFileTestCase.test_issue_52002_check_file_remove_symlink @ 2019-05-22 22:32:26 UTC
  - 446e70c Merge pull request #53157 from twangboy/fix_test_win_file_symlink
  - 5672076 Merge branch '2019.2.1' into fix_test_win_file_symlink

PR #53141: (Ch3LL) Check for all non-word characters when calling secure_password @ 2019-05-22 17:24:54 UTC
  - 6fbe9aa Merge pull request #53141 from Ch3LL/shadow_fed_fix
  - a3c4066 Merge branch '2019.2.1' into shadow_fed_fix

PR #53161: (Ch3LL) Add HAS_REQUIRED_CRYPTO var for m2crypto in joyent @ 2019-05-22 13:36:07 UTC
  - fb29512 Merge pull request #53161 from Ch3LL/joyent_m2crypto
  - 08d03c0 Add HAS_REQUIRED_CRYPTO var for m2crypto in joyent
  - 16ef3d2 Merge branch '2019.2.1' into shadow_fed_fix
  - 09ff867 Check for all non-word when calling secure_password
    - 334c93b Elevate token before creating symlink

PR #53073: (Ch3LL) salt-ssh: python binary exists before version check @ 2019-05-20 22:36:34 UTC
  - 85e9b2f Merge pull request #53073 from Ch3LL/ssh_py3_log
  - 383e781 Improve logging in salt-ssh gen_thin
  - 4371434 salt-ssh: python binary exists before version check

PR #52957: (Ch3LL) Set default_flow_style=None in yaml.dump calls @ 2019-05-16 19:42:35 UTC
  - bd02ea6 Merge pull request #52957 from Ch3LL/yaml_flow_style
  - 5f6581a Merge branch '2019.2.1' into yaml_flow_style

PR #53072: (Ch3LL) Backport #52754 into 2019.2.1 @ 2019-05-16 19:29:22 UTC
  - PR #52754: (garethgreenaway) [2018.3] Fixes to multiprocesssing queue when using MacOS (refs: #53072)
    - f410346 Merge pull request #52754 from Ch3LL/bp-52754-2019.2.1
  - 13e5e55 The maximum for the multiprocessing queue on MacOS is 32767, so if we running on MacOS then we use that maximum.

ISSUE #52817: (waynew) unit.modules.test_telegram.TelegramModuleTest.test_post_message (refs: #52972)

PR #52972: (garethgreenaway) [2019.2.1] Fix to unit.modules.test_telegram @ 2019-05-15 07:50:13 UTC
- 06fa91b Merge pull request #52972 from garethgreenaway/52817_unit_modules_test_telegram_telegrammoduletest_test_post_message
- cea7131 Removing global declaration.
- 5bf9a95 Fixing lint.
- 4d3c46d fixing broken unit.modules.test_telegram test.
- PR #53025: (Ch3LL) Change package name for suse pkg tests @ 2019-05-15 07:41:44 UTC
  - d340cbe Merge pull request #53025 from Ch3LL/suse15_pkg_test
  - 0a213ee Change package name for suse pkg tests
- PR #53020: (Ch3LL) Change ssh tops log message to debug @ 2019-05-14 16:56:42 UTC
  - c56bb0 Merge pull request #53020 from Ch3LL/ssh_tops
  - cbbc764 Merge branch ’2019.2.1’ into ssh_tops
  - ce099aa Merge pull request #52973 from twangboy/fix_test_pip_state
  - 21838a1 Merge branch ’2019.2.1’ into fix_test_pip_state
- PR #52986: (Ch3LL) Revert ”Make sure --run-expensive runtests.py arg works” @ 2019-05-13 19:38:17 UTC
  - 055d374 Merge pull request #52986 from Ch3LL/expensive_revert
  - 368c012 Revert ”Make sure --run-expensive runtests.py arg works”
  - cce263e Merge branch ’2019.2.1’ into fix_test_pip_state
  - 351d415 Return path to Python instead of None
    * c0538d2 Change ssh tops log message to debug
    * e317186 Merge branch ’2019.2.1’ into yaml_flow_style
- PR #52968: (s0undt3ch) [2019.2.1] Salt >= 2018.3.x supports Py3.7 @ 2019-05-12 21:44:57 UTC
  - ee05da5 Merge pull request #52968 from s0undt3ch/2019.2.1
  - 73c3726 Salt >= 2018.3.x supports Py3.7
- ISSUE #50310: (xuhcc) acme.cert falsely reports changes (refs: #50400)
- PR #52796: (Ch3LL) Backport #50400 and #50402 into 2019.2.1 @ 2019-05-10 19:30:12 UTC
  - PR #50402: (xuhcc) Fix typo in salt.modules.acme (refs: #52796)
  - PR #50400: (xuhcc) Fix incorrect change reporting in acme.cert (refs: #50402, #52796)
    - cae51c2 Merge pull request #52796 from Ch3LL/bp-50400
    - 0c2e5e7 Merge branch ’2019.2.1’ into bp-50400
    - 1268e3e Merge branch ’2019.2.1’ into bp-50400
    - 09fa9e3 Fix typo
    - 9be5e0c Fix incorrect change reporting in acme.cert
      * 9a27fb3 Merge branch ’2019.2.1’ into yaml_flow_style
- PR #52770: (twangboy) Fix test_file_managed_should_fall_back_to_binary on Windows @ 2019-05-09 20:35:02 UTC
  - 20cccd8 Merge pull request #52770 from twangboy/fix_test_file
- ac27e69 Merge branch '2019.2.1' into fix_test_file
- 30a5093 Merge branch '2019.2.1' into fix_test_file
- c08b10d Merge branch '2019.2.1' into fix_test_file
- 340ee23 Pass encoding to _validate_str_list
  - 0d0e354 Fix yamldumper test for both py2/py3
  - 20bc954 Update docs for yamldumper test
  - bf648e5 Update tests/unit/utils/test_yamldumper.py
  - 70d578a Set default_flow_style=None in yaml.dump calls

• PR #52943: (Ch3LL) Fix elasticsearch state module: allow user to define empty aliases @ 2019-05-09 15:46:38 UTC
  - 4437764 Merge pull request #52943 from Ch3LL/fix_elasticsearch
  - 451fb7e Merge branch '2019.2.1' into fix_elasticsearch
  - ebff9b9 Fix elasticsearch state module: allow user to define empty aliases

• PR #52952: (stundt3ch) [2019.2.1] More nox changes and test fixes @ 2019-05-09 15:03:07 UTC
  - 9b290b6 Merge pull request #52952 from stundt3ch/merge-forward/2018.3-to-2019.2.1-cherry
  - a06d7ce We need to call the decorator
  - 77185af Partial revert since this is a class method
  - f5c5771 Lint fixes
  - 3e43c87 Revert "fix compare_versions method"
  - 0e139bf Fix GOLDEN_IMAGES_CI_BRANCH value
  - 12a9408 Add Py3.7 static requirements
  - 8e50f5fb Move tests to existing test modules
  - 4681609 tests/unit/config/__init__.py -> tests/unit/config/test_config.py
  - b1dc7f6 Pin to moto<=1.3.7 because of https://github.com/spulec/moto/pull/1952
  - 0ffe7ca We no longer test against Ubuntu 14.04 which reached EOL
  - 33743fc Don't traceback when trying to close a closed socket
  - da2e147 Always cleanup the changed environ
  - 087c74d No globals in tests, specially dictionaries!
  - a814fc0 Fix underscore wart (and linter)
  - 74b8f5f Fix deprecation warning in msgpack >= 0.5.2
  - 962b116 Try to address dict changing during iteration
  - c58af57 Tweak codeclimate settings for less noise
  - 5bb786f fix linter
  - 0b81841 Cherry-pick test fix
  - 99f9e1c fix compare_versions method

• PR #52853: (stundt3ch) [2019.2.1] Bring nox into 2019.2.1 @ 2019-05-09 09:52:42 UTC
- a510edf Merge pull request #52853 from s0undt3ch/merge-forward/2018.3-to-2019.2.1-cherry
- a8f7b46 Test is not destructive.
- 63663cf We no longer test against Ubuntu 14.04 which reached EOL
- 62574ee Typo
- e3e3761 Proper english in requirements comments
- e9f6a12 identical_signature_wrapper adds __wrapped__ to function globals
- 10283b4 Upload coverage reports on full test runs
- 6e0b61b Less flaky mine tests
- 3709ed7 msgpack returns string_types
- a36b15e Add regression test
- ce782ff Fix non raw msg pack msg decoding
- f193f0f Update Issue Template: questions removed
- 4417095 Fix underscore wart (and linter)
- e6c2ae4 Fix deprecation warning in msgpack >= 0.5.2
- 6375944 Add ubuntu1804 to pr tests
- 8fdb04d SIGKILL is not always available use a local variable
- 4d6b8da Fix linter
- 759bccc Fix test_doc on windows by using grep yay!
- 0ce086d Fix remaining failures on ubuntu 1404 and add to PR tests
- fdf80fd Change py3 windows timeout from 6 to 8 hours
- b0aa287 Fix missing class wart
- 21ecb74 fix linter
- 62c0f9f Skip tests when no libcloud
- 1d92290 Fix unused import
- 72dc891 Fix linter
- 7cfc9e8 Fix NOX_ENV_NAME
- 2087c91 Fix NOX_ENV_NAME
- 2f1aff5 Rename kitchen-centos6-py3 to kitchen-centos6-py2
- 1eea990 Fix linter
- 89533ba Fix NOX_ENV_NAME
- 7cfc9e8 Fix NOX_ENV_NAME
- 34ce86c Ignore super not called
- b7ace9c Fix linter

30.2. Previous Releases
- aceb6d3 Skip libcloud unit tests when no libcloud
- f73420b Install mock on Python < 3.6
- 28f8de1 Add moto to the windows dependencies
- 8cbcc1 Pin kubernetes to < 4.0
- 2acb0f3 Make sure --run-expensive runtests.py arg works
- 22c2e0 Remove ref restriciton from kitche-salt
- 67095df Add ‘runFull’ build parameter for PR tests
- 12d8d35 Stop w32time before and start after testing
- 7f1c22c Skip tests that fail on Windows
- f4ae7f5 Upgrade etcd to > 0.4.2
- 381f5fe Limit and reduce the amount of log records sent over the wire
- 0c94b5d More entries to ignore
- c3a21f5 As a script, not as a module
- 8948b69 Include COVERAGE_FILE as an env variable.
- 0af561e Each generated script is now prepared for code coverage
- 294d6f4 Use the system’s path separator
- e52ab87 Always combine and generate the XML coverage report
- 666ca9f Fix proxy minion startup issue on the test suite
- 7838ace impacket does not support Py3
- ba8d0fe Allow --install-only to gather the required information
- eed7d68 Create nox lint virtualenvs before running them
- e9e57cf Syndic roster not in 2017.7.9
- 111c63a4d Create the roster even when not running ssh
- 11c02a0 Fix unit.test_loader.LoaderGlobalsTest.test_states
- 8694db1 Fix windows tests
- 82e9ac5 Avoid race condition in even assertions
- 9443451 Revert part of 927219c since it is not a fix
- 5fee762 Fix timeout logic
- 517650f check timeout when queue empty
- 7c0a9af fix linter
- 961de40 Ignore missing variable in six module
- 0f5a7f0 Fix typo
- 6c8c418 Do not limit event assert to first event
- 3042292 Wait longer for ping reaction
- 8e10f5f Fix xml block causing docs to fail
- 6e5768a Add a nox session for the Jenkins tornado jobs
- 43321e8 Add a cloud nox session for both runtests and pytest
- b6b4e95 Lint cleanup
- 0670614 Add tests for wraps
- 1670b5d Use functools.wraps with decorators
- 5ae263c Update static requirements for 2018.3 branch
- 3482c4d Disable code coverage uploads.
- 0e5bc67 Lint fixes
- 337c737 Update CI jobs to point to 2018.3
- 72e8603 Skip test if required crypto libs are not available
- e6bc9f8 Default to Cryptodome, fallback to PyCrypto
- b2b0764 Be aware of the different path separators
- 7e79b18 We need to make sure the virtualenv path entry is removed when searching
- ff6d3c6 We don't need to be root to run these tests
- 5965ab4 Disable progress bars on pip installs
- 86a44e Use the real python executable path when running within a virtualenv
- 3d407e8 Add a helper to return the path to the real python executable
- ea9d246 We must also provide venv_bin when running within a virtualenv
- 31e91b0 Fix pip tests, in particular under windows
- 493f493 Don't fail if pkg_resources is not importable
- a1eb400 Specify the SHA we need
- 0b01f21 Let's fully unload pip
- 0b6f848 Fix docker entries
- 870b899 Remove unused argument
- 1656cb4 Disable re-running failed tests for now
- 6db4141 Also ignore multiprocessing coverage files
- 83dc97d Actually write the lint reports.
- 5f97270 Try to make sure some pip internal functions are always present in sys.modules after reloads
- 0090c55 Try and address the fact that some python packages are only provided by the distro
- 4a072fe These tests aren't destructive
- 5c7a956 Don't fail the build if the issue was sending a slack notification
- 361ef6e Don't try to change ownership on non existing paths
- 7b17352 More insight(context) on failure reports
- 93b6b95 Lock supervisor to 3.3.5, last known working(passing tests) version
- 51114aa Watch out for too long shebang's
- d97fe82 The output is important to know why it failed.
- 9f6f385 Strings and integers are not comparable under Python 3
- d308dce Be verbose in a CI context
- 8b7105e Fix failed tests re-run logic
- d6d8db1 Blacklist `enum34` on Py>=3.4. Update requirements.
- 1cd00c0 Update PR CI jobs for nox
- 19a83d5 Blacklist pycrypto and install pycryptodome instead
- 91376b3 Ignore the generated docs archive
- 207b83a Update compiled requirements
- 535e7a7 Add TCP transport nox sessions
- 680b3e5 Compile requirements for the TCP transport
- 49a1ebe Throw error when running either on Py<2.7 or Py>=3.7
- 10528b9 Don't repeat filed tests on missing/empty failed test files file
- 4886809 We currently only support running lint under Py2.7
- a76981b Remove dead code
- 7b2c1ce Don't require six
- a27ed35 Add nox env to build docs
- e1b3f1d Lock docs python requirements
- c8de644 Fix lint issues under tests
- 0372718 Fix lint issues on salt
- 9eab9f4 Add nox session/env/target to run lint against Salt and its test suite
- 123f771 Lock lint requirements
- 8df33ad Back to `+apache-libcloud==1.0.0` and skip windows for now
- 43e3ae6 Bump apache-libcloud requirement because 1.0.0 fails to install on windows
- d5f7813 Remove requiremens for platforms which aren't tested under Py3
- 8f02ee9 Recompile requirements
- 66626f2 Remove pycryptodome from compiled requirements files
- 75693e5 Use pycryptodomex on windows and PyCrypto on the rest
- 4a9c19c Update(fix) requirements
- 33a3467 We don't test OSX nor Windows under Py3.4
- fd44fce We want a more verbose pip-compile output
- c2ae2d5 We now compile requirements for each of the supported minor version
- 6ee1260 Static requirements are now placed on `py<major>..<minor>` subdirectories
- 3504804 The required crypto library is pulled in from zeromq.txt or raet.txt
- 3ffe03c PyZMQ is pulled in from zeromq.txt
- 7c2fe16 Instead of quoting session parameters, proxy nox sessions
- d3ae77b Add separate crypto sessions
- 0399620 Parametrize the transport
- d33fd03 Update/Generate static requirements to new layout
- 52ac533 Add pre-commit config to generate static requirements
- 3cfcb13 Be aware of the new static requirements layout
- dc7e16a Don’t lock the docker requirement. It’s not locked on the other platforms
- 5476ba2 Kubernetes 3.0.0 does include the requirements files. pip-compile chokes on that
- 79a8261 Previously generated requirements were py2 only
- 1e29666 IOFLO is pulled in from the raet requirements
- 4945e35 Fix pylint on 2017.7.9
- 036bf68 Rerun failed tests
- 03a9601 Ignore .nox directory
- 50cb630 We have long files
- db2392f Update CodeClimate settings
- 899c80e Fix integration.client.test_kwarg test timeouts

• ISSUE #52836: (Ch3LL) unit.utils.test_args.ArgsTestCase.test_argspec_report failing (refs: #52852)

• PR #52852: (garethgreenaway) [2019.2.1] Fixes to unit.utils.test_args.test_argspec_report @ 2019-05-07 19:25:48 UTC
  - 77355e2 Merge pull request #52852 from garethgreenaway/52836_test_argspec_report_failing
  - eee5a38 Merge branch '2019.2.1' into 52836_test_argspec_report_failing

• PR #52845: (Ch3LL) Backport #52780 into 2019.2.1 @ 2019-05-07 16:27:21 UTC
  - PR #52780: (sbrennan4) Handle ipv6 in _netlink_tool_remote_on (refs: #52845)
  - dcc5fde Merge pull request #52845 from Ch3LL/bp-52780
  - dff09b Merge branch '2019.2.1' into bp-52780

• PR #52851: (Ch3LL) Reload matcher loader when ext_pillar_first set @ 2019-05-07 13:12:07 UTC
  - 2e4f296 Merge pull request #52851 from Ch3LL/matcher_ext_pillar
  - bdca5d Add docs for new reload kwarg
  - fc70884 Reload matcher loader when ext_pillar_first set
  - 8ac74e2 Merge branch '2019.2.1' into bp-52780
  - 226c7ce Merge branch '2019.2.1' into bp-52780
  - c1eae84 Add test
  - 69fe65b Use rsplit
    * 8fde48c Removing create_autospec and having salt.utils.args.argspec_report run against the
      _test_spec function directly. Depending on the python version, create_autospec gives different
      results and cause the test to fail. The test is now more accurate at testing the arguments for the
      function.

• PR #52842: (s0undt3ch) libcrypto.OpenSSL_version_num might be a callable @ 2019-05-06 17:00:37 UTC
  - cc7a0d1 Merge pull request #52842 from s0undt3ch/2019.2.1
  - a944017 libcrypto.OpenSSL_version_num might be a callable
• PR #52839: (twangboy) Add support for EC2 @ 2019-05-04 17:28:54 UTC
  - b625a6a Merge pull request #52839 from twangboy/fix_test_grain
  - 1c9b372 Add support for EC2

• ISSUE #51982: (arsiesys) topic (minion_id) need to be encoded before being hash and sent using zeroMQ (refs: #51983)

• PR #52767: (Ch3LL) [2019.2.1] Add tests to PR #51983 @ 2019-05-03 08:35:27 UTC
  - PR #51983: (arsiesys) encode topic before using hashlib (refs: #52767)
  - 6002939 Merge pull request #52767 from Ch3LL/zmq_filter_test
  - 1ee8f37 Merge branch '2019.2.1' into zmq_filter_test
  - d74b6ee Merge branch '2019.2.1' into zmq_filter_test
  - 3210274 Fix linter warnings
  - e7c9d6e increase timeout when gathering results
  - 784786d Add zmq_filter unit tests
  - 805cSee encode topic before using hashlib

• PR #52827: (twangboy) Add pymssql dependency for Windows builds @ 2019-05-03 08:21:40 UTC
  - 5996932 Merge pull request #52827 from twangboy/add_pymssql
  - 6f0b8e2 Add pymssql dependency for Windows builds

• ISSUE #52717: (Ch3LL) debian9 tests segmentation fault (refs: #52797)

• PR #52797: (garethgreenaway) [2019.2.1] Only run the libcrypto init if less than OpenSSL 1.1.0 @ 2019-05-03 05:12:31 UTC
  - e3918c5 Merge pull request #52797 from garethgreenaway/52717_debian_tests_segmentation_fault
  - 7ab0961 Merge branch '52717_debian_tests_segmentation_fault' of github.com:garethgreenaway/salt into 52717_debian_tests_segmentation_fault
    * f8d816e Merge branch '2019.2.1' into 52717_debian_tests_segmentation_fault

• PR #52771: (twangboy) Fix test_gpg tests on Windows @ 2019-05-02 13:30:18 UTC
  - b68544f Merge pull request #52771 from twangboy/fix_test_gpg
  - c7f45c2 Pass encoding to stringutils.to_unicode

• PR #52783: (Ch3LL) Fix boto_apigateway tests for PyYAML 5.1 @ 2019-05-02 13:26:34 UTC
  - 316d05b Merge pull request #52783 from Ch3LL/fix_boto_yaml
  - cde29cb Fix boto_apigateway tests for PyYAML 5.1
  - 6ffba5 Fixing lint.
  - e24f2f8 Only run the libcrypto init if less than OpenSSL 1.1.0.

• PR #52769: (twangboy) Remove domain grain from tests for Windows @ 2019-04-30 21:14:26 UTC
  - 3509465 Merge pull request #52769 from twangboy/fix_test_core
  - 0049f85 Remove domain grain from tests

• PR #52768: (twangboy) Remove pchanges… again… @ 2019-04-30 20:24:27 UTC
  - 30dc14b Merge pull request #52768 from twangboy/fix_test_win_dacl
- 123b607 Remove pchanges... again...

- **PR #52753**: (twangboy) Skip test_gen_thin_compression_fallback_py3 @ 2019-04-30 03:36:27 UTC
  - 3e46f51 Merge pull request #52753 from twangboy/skip_test_gen_thin
  - 811b381 Skip test_gen_thin_compression_fallback_py3

- **ISSUE #52721**: (Ch3LL) unit.cloud.clouds.test_ec2 test failing (refs: #52736)

- **PR #52736**: (dwoz) Skip password decryption test when no libraries available @ 2019-04-29 17:07:56 UTC
  - 6bfc9a4 Merge pull request #52736 from dwoz/ec2test
  - 04ad027 Merge branch '2019.2.1' into ec2test

- **PR #52624**: (tanlingyun2005) fix TypeError: argument of type int is not iterable @ 2019-04-29 13:15:42 UTC
  - 9a1ed78 Merge pull request #52624 from tanlingyun2005/2019.2.1
  - 2c6867e add test case to tests/unit/cli/test_batch.py
  - cb7742e Merge branch '2019.2.1' into 2019.2.1
  - c943900 Merge branch '2019.2.1' into 2019.2.1
  - d4abddd fix TypeError: argument of type int is not iterable
  - ed908b3 Merge branch '2019.2.1' into 2019.2.1
  - 463b60e Merge branch '2019.2.1' into 2019.2.1
  - 65ee219 Merge branch '2019.2.1' of https://github.com/tanlingyun2005/salt into 2019.2.1
    * f71168d Merge branch '2019.2.1' into 2019.2.1
  - 509c797 bug fix salt/cli/batch.py
  - 211915c fix salt/cli/batch.py TypeError: argument of type int is not iterable
  - 070ae84 fix TypeError: argument of type int is not iterable
    * b770f96 Skip test requiring crypto when none available
    * e52b390 Warn when password decryption requested but not possible

- **PR #52696**: (Ch3LL) Backport #50087 into 2019.2.1 @ 2019-04-25 20:33:13 UTC
  - PR #50087: (rbthomp) Fix applying of attributes for returner rawfile_json (refs: #52696)
  - 806307a Merge pull request #52696 from Ch3LL/bp-50087
  - 66e97e7 Fix applying of attributes for returner rawfile_json

- **PR #52659**: (twangboy) Fix issues with the win_file tests @ 2019-04-22 23:34:36 UTC
  - 174f558 Merge pull request #52659 from twangboy/fix_test_win_file
  - 915c780 Fix issues with the win_file tests

- **PR #52655**: (dwoz) Parse chattr version and fix test case @ 2019-04-22 01:46:29 UTC
  - d1a61a6 Merge pull request #52655 from dwoz/cron_test_fix
  - e69fccc Fix typo
  - 859d088 Merge remote-tracking branch 'origin/cron_test_fix' into cron_test_fix
    * 7f7bb90 Merge branch '2019.2.1' into cron_test_fix

- **PR #52601**: (Ch3LL) Cherry-Pick #52415 into 2019.2.1 @ 2019-04-21 19:33:03 UTC
- PR #52415: (Ch3LL) Backport #49832 into 2018.3 (refs: #52601)
- PR #49832: (terminalmage) Replace pchanges with changes to make onchanges/prereq work in test mode (refs: #52415)
- f7d823c Merge pull request #52601 from Ch3LL/cp-52415
- ecd6802 Merge branch '2019.2.1' into cp-52415
- 538d5cf Remove pchanges from win_dacl
- 81b865f use same newfile message on linux for windows file state
- 93bdd08 Update dict correctly in file state
- f3c7f27 remove pchanges for windows file modules
- fb3b75d Fix tests for changes backport into 2018.3
- 0f296bb Update kernelpkg test to reflect pchanges removal
- 885d0ff Update file.touch unit tests to reflect addition of changes in test mode
- 4bc5fd0 Add integration tests for test mode onchanges/prereq
- ed214c4 Make it possible to use prereq with test and saltmod state mods
- ceb3f4d Add repack_state_returns to TestCase
- 982e93 Add exception logging in flaky decorator
- 0ba0df0 Add test mode changes to file.touch state
- 6db2beb Replace "pchanges" with "changes" to fix onchanges/prereq requisites
  * 169c2d5 Chattr version py3 fix
  * cf88c27 Fix linter issues
  * 0ea007d Parse chattr version and fix test case

- ISSUE #52508: (Ch3LL) integration.modules.test_publish test failures (refs: #52645)
- PR #52645: (dwoz) Fix salt.modules.publish and salt.states.x509 tests @ 2019-04-20 08:17:19 UTC
  - af4f204 Merge pull request #52645 from dwoz/test_fixes
  - 9b6f9f9 Clean up cruft
  - c3971a5 Fix salt.modules.publish and salt.states.x509 tests
- PR #52629: (dwoz) Fix event assertion race condition @ 2019-04-19 19:03:20 UTC
  - PR #52540: (dwoz) Fix race condition in event assertion (refs: #52629)
  - 0a4d2d9 Merge pull request #52629 from dwoz/ping_wait_2019.2.1
  - c001022 Fix linter
  - 423f6f9 Fix vent assertion race condition
- PR #52619: (dwoz) Remove unused method from pytest engine @ 2019-04-18 23:45:35 UTC
  - 4859e6c Merge pull request #52619 from dwoz/pytest_engine_2019.2.1
  - 105784a Remove unused method from pytest engine
- PR #52614: (Ch3LL) [2019.2.1] Update integration.modules.test_network.NetworkTest.test_network_ping... @ 2019-04-18 21:54:28 UTC
  - 77943e5 Merge pull request #52614 from Ch3LL/cp-test_network-2019.2.1
- `27c79d2` Update integration.modules.test_network.NetworkTest.test_network_ping test address

- **ISSUE #32245:** (tkwilliams) git_pillar should permit automatic mapping of environment to branch a-la gitfs (refs: #50768)

- **PR #52615:** (twangboy) Bring 51661 into 2019.2.1 @ 2019-04-18 21:53:35 UTC
  - **PR #51661:** (sathieu) git_pillar: Fix all_saltenvs on base env (refs: #52615)
  - **PR #51597:** (sathieu) git_pillar: Fix all_saltenvs on base env (refs: #51661)
  - **PR #50768:** (sathieu) git_pillar: Add support for all_saltenvs parameter (refs: #51597, #51661)
  - c6b4986 Merge pull request #52615 from twangboy/gitfs_2019.2.1
  - d952674 Merge branch '2019.2.1' into gitfs_2019.2.1

- **ISSUE #52547:** (cbosdo) virt.purge throws a libvirt exception on Xen hypervisor (refs: #52548)

- **PR #52548:** (cbosdo) Virt purge fix @ 2019-04-18 20:07:36 UTC
  - 8ee15a9 Merge pull request #52548 from cbosdo/virt-purge-fix
  - 6ca8f6b Try/except undefineFlags() as this operation is not supported on bhyve
    - 5a0464b Bring 51661 into 2019.2.1

- **PR #52591:** (Ch3LL) [2019.2.1] Update test_schema to mirror the new ValidationErrors in 3.0.0 @ 2019-04-18 16:34:22 UTC
  - e03aed5 Merge pull request #52591 from Ch3LL/fix_jsonschema_2019.2
  - e09be842 Update test_schema to mirror the new ValidationErrors in 3.0.0

- **ISSUE #52525:** (lomeroe) deserializer_opts are not passed the serializer in file.serialize (refs: #52526)

- **PR #52526:** (lomeroe) Fix use of deserializer_opts in file.serialize @ 2019-04-17 14:08:52 UTC
  - 21d6365 Merge pull request #52526 from lomeroe/deserializer_opts_fix
  - ea0520c update test for serialization opts
  - 84ff03a Correct attempting to use the serializer_name to pull deserializer_opts when deserializer_name is used as the key in the deserializer_options dict.

- **ISSUE #49147:** (furgerf) Log filled with "Exception occurred while Subscriber handling stream: Already reading" (refs: #51963)

- **PR #52570:** (DmitryKuzmenko) Simplify IPCClient and prevent corrupt messages (Turn 2) 2019.2 @ 2019-04-17 14:03:02 UTC
  - **PR #52564:** (DmitryKuzmenko) Simplify IPCClient and prevent corrupt messages (Turn 2) (refs: #52570)
  - **PR #52445:** (dwoz) Simplify IPCClient and prevent corrupt messages (refs: #52564)
  - **PR #51963:** (DmitryKuzmenko) Allow multiple instances of IPCMessageSubscriber in one process (refs: #52564)
  - e522ffe Merge pull request #52570 from DSRCorporation/bugs/revert_51963_2019.2
  - fabbcac A couple of race conditions fixes and a test update.
  - 9c85734 Drop singleton from IPCClient
  - 7cf6d54 Revert "Support parallel work of multiple IPCMessageSubscribers in one process"
  - 7f26e76 Revert "Update doc conf with the new import tornado.queues"
  - 69e9416 Revert "Minor: Fix typo in docstring"
• ISSUE #52449: (Ch3LL) integration.cloud.clouds.test_gce.GCETest.test_instance_extra failure (refs: #52551)
  • PR #52551: (garethgreenaway) [2019.2] Marking the two tests in test_gce as flaky @ 2019-04-17 14:00:39 UTC
    - b173406 Merge pull request #52551 from garethgreenaway/52449_test_gce_random_failures
    - 28af717 Marking the two tests in test_gce as flaky.
• ISSUE #51842: (mattLLVW) salt.auth.django docs use wrong model name (refs: #52553)
  • PR #52553: (mattLLVW) fix: #51842 @ 2019-04-17 13:59:45 UTC
    - 8352362 Merge pull request #52553 from mattLLVW/fix_django_auth_docs
    - 3baedf fix: #51842
• ISSUE #52134: (sploenix) Regression: Include list of pillar files under different keys in 2019.2 (refs: #52490)
• ISSUE #22063: (jeanpralo) Wildcard inside top.sls file for pillar (refs: #52490)
  • PR #52490: (dwoz) Fix pillar include regression @ 2019-04-17 13:54:39 UTC
    - 9faa49c Merge pull request #52490 from dwoz/issue_52134
    - 876dd18 Fix merge wart
    - 2ed650b Merge remote-tracking branch 'saltstack/2019.2' into issue_52134
    - b0af11f Run include tests when pillar source changes
    - 307cec6 Fix pillar tests
    - 1a33bde import __future__.absolute_import
    - 5dc5de9 Use file encoding and add docstring
    - e84cd41 Fix pillar include wart
    - c79f496 Add pillar include tests
    - 7745242 Revert "Fix #22063: pillar wildcard support include"
• PR #52552: (twangboy) Bring 52170 into 2019.2 @ 2019-04-17 13:54:17 UTC
  • PR #52170: (twangboy) Fix issue when task doesn't have delay_random defined (refs: #52552)
    - b0c0237 Merge pull request #52552 from twangboy/fix_win_task_2019.2
    - fd19cca Remove some warts in the docs
    - deb0b10 Fix some lint
    - a279d45 Final doc fixes
    - 58f0cd2 Fix docs... attempt 6
    - a66716e Fix docs... attempt 5
    - f6f3381 Fix docs... attempt 4
    - 18fc15 Fix docs... attempt 3
    - c691e0d More doc fixes
    - e01077b Fix docs issue... maybe...
    - b649495 Honor 80 character line limit
    - eba4507 Bring 52170 into 2019.2
• PR #52528: (Ch3LL) [2019.2] Merge forward from 2018.3 to 2019.2 @ 2019-04-17 13:53:46 UTC
- cc0cd5d Merge pull request #52528 from Ch3LL/merge-2019.2
- 87cf385 increase timeout on test_state for windows
- 3442202 Increase timeout for test_kwarg tests
- 2c3f2f Merge branch '2019.2' into merge-2019.2

**PR #52534:** (twangboy) Add TLS support up to TLS 1.2 @ 2019-04-13 22:56:41 UTC
- e91240b Merge pull request #52534 from twangboy/tls_support_2019.2
- 9ec54c4 Add TLS support up to TLS 1.2
  - 474efa1 Fix pylint and state test failure
  - 048a82e Merge branch '2019.2’ into merge-2019.2

**PR #52536:** (twangboy) Bring #52191 into 2019.2 branch @ 2019-04-12 21:31:23 UTC
- 795a7f6 Fix windows tests - increase timeout
- c70772c Fix linux state tests- add new comment
- 2941567 Merge branch '2018.3' into '2019.2'
- 262516c Merge pull request #52209 from twangboy/fix_choco_retcode
  - 7a4408c Merge branch '2018.3’ into fix_choco_retcode
- b394d50 Handle new enhanced retcode 2
- dd7a4ba Merge pull request #52046 from twangboy/use_reg_timezone
  - 3b4f870 Merge branch '2018.3’ into use_reg_timezone
  - 59ba1d9a Revert back to using reg to get timezone
- 57e478c Merge pull request #52396 from dmurphy18/fix_aix_ssh
  - 8b9a240 Correct typo
- 6d98577 Altered code to support salt-ssh on AIX
- 576478e Merge pull request #52473 from Ch3LL/bp-49437
  - 781385f Merge branch '2018.3’ into bp-49437
  - 3a3114d Fix merge conflict wart
  - bbfd412 Merge branch '2018.3’ into bp-49437
  - 48ee82d Merge branch '2018.3’ into bp-49437
  - f66d474 Add support to avoid calling refresh_db in opkg.del_repo
- d830bc6 Merge pull request #52493 from dwoz/ping_reaction_test
  - 8b05e77 Merge branch '2018.3' into ping_reaction_test
  - 7083d21 Merge branch '2018.3' into ping_reaction_test
  - 7c963c1 Merge branch '2018.3' into ping_reaction_test
  - 75dde3 fix linter
  - e3e1d2f fix reactor ping test
- 9b7a0d1 Merge pull request #52505 from bloomberg/2018_zmq_uri
  - b682ec5 transport.zmq: fix bug introduced by b7df7e75cf2
- 452b2eb Merge pull request #52512 from dwoz/supervisord_2018.3
  - cd5cd7d The exit code matters.
- 53228ae Merge pull request #52475 from Ch3LL/bp-49464
  - a891fd3 Make opkg.del_repo be compatible with pkrepo state module
- 6e79e24 Merge pull request #52500 from terminalmage/invalid-archive-source
  - e9d175b Fix traceback when invalid source passed to archive.extracted
- 2df74ca Merge pull request #52476 from bloomberg/win_cmd_2018
  - 0e0c42e 2018 backport: modules.cmdmod: handle windows environ better
- 4dfb2f8 Merge pull request #52474 from Ch3LL/bp-49984
  - c8d547e Use prune option in PyGit2 provider when fetching
- d699485 Merge pull request #52393 from waynew/52087-mine-delete-test-enhancements
  - e3f5be3 Use uncommon item in mine delete test
- 89bd258 Merge pull request #52445 from dwoz/ipc_fixes_2018.3
  - 1bdaf29 Ensure exceptions in service future are handled
  - c7ad732 Use six.reraise for py3 compatibility
  - 29999b0 Close message service on subscriber close
  - 47203f7 Fix ipc unit tests
  - 2b35437 Fix linter issues
  - 503cdd2 Remove IPCClient singleton
  - f2aebf9 Assume file contents are binary

• ISSUE #51879: (whytwolf) 2019.2.0 binary pillar unicode error returns. (refs: #52334)
• PR #52334: (waynew) 51879 fix binary pillar return error @ 2019-04-12 03:45:17 UTC
  - 6eb2bce Merge pull request #52334 from waynew/51879-fix-binary-pillar-return-error
  - ead856e Merge branch '2019.2' into 51879-fix-binary-pillar-return-error
  - 2aa971d lint cleanup
  - 28e2945 keep_pillar not needed
  - fb010c0 Add binary pillar to the docs
  - f2aebf9 Assume file contents are binary
- 2b8c782 Test gpg render with replace newlines
- c4b385b Allow binary pillar data
- 604b671 Return binary data from gpg renderer
- 32aafab Ignore vscode and fix swap ignore

- **ISSUE #52041:** (arsiesys) 2019.2 influxdb_retention_policy.present broken when used extra arguments (refs: #52043)

- **PR #52043:** (arsiesys) fix missing client_args in influxdb module @ 2019-04-12 03:43:03 UTC
  - 2d59705 Merge pull request #52043 from arsiesys/fix_influxdb_state_rp
  - e617ce5b Merge branch '2019.2' into fix_influxdb_state_rp
  - 7661860 fix missing client_args in influxdb module

- **PR #52146:** (twangboy) Add missing symlink test @ 2019-04-12 00:51:16 UTC
  - 1b969c3 Merge pull request #52146 from twangboy/fix_test_symlink_2019.2
  - 8e1c882 Merge branch '2019.2' into fix_test_symlink_2019.2
  - a429542 Merge branch '2019.2' into fix_test_symlink_2019.2
  - 401c253 Merge branch '2019.2' into fix_test_symlink_2019.2
  - cce6200 Fixing lint
  - c7cb009 Merge branch '2019.2' into fix_test_symlink_2019.2
  - 3eae05a Merge branch '2019.2' into fix_test_symlink_2019.2
  - 83bed46 Add missing symlink test

- **PR #52341:** (cbosdo) virt.pool_running: fix pool start @ 2019-04-12 00:14:52 UTC
  - 7a1b8ca Merge pull request #52341 from cbosdo/virt-state-fixes
  - 89f0bd8 Merge branch '2019.2' into virt-state-fixes
  - 25b9681 virt.pool_running: fix pool start
  - 30981d2 Remove unneeded kwargs in virt states
  - 0871e02 virt: allow defining the VM type and arch when creating it
  - 1c65d25 Updating running domains in virt.running
  - 13d7819 Add missing virt states unit tests
  - 0681d86 virt.running support for all virt.init options
  - c6a444b Add test case for virt.running
  - 2db7a98 Let virt running state provide errors

- **ISSUE #52350:** (Ch3LL) Re-Add Python 2 unicode string literals in YAML renderer (refs: #52427)

- **PR #52427:** (garethgreenaway) [2019.2] Support for old yaml render @ 2019-04-12 00:06:37 UTC
  - 6040282 Merge pull request #52427 from garethgreenaway/52350_read_and_gate_unicode_string_literal_support
  - 82f010a Merge branch '2019.2' into 52350_read_and_gate_unicode_string_literal_support
  - ae81ffe Merge branch '2019.2' into 52350_read_and_gate_unicode_string_literal_support
  - b618d44 Merge branch '2019.2' into 52350_read_and_gate_unicode_string_literal_support
1950 Chapter 30. Release Notes

- b191bc0 Merge branch ‘2019.2’ into 52350_readd_and_gate_unicode_string_literal_support
- 38a9818 Merge branch ‘2019.2’ into 52350_readd_and_gate_unicode_string_literal_support
- 2767984 Removing logging entry
- 71cd303 Adding missing yamloader_old.py
- f848aa4 Adding support back in with, a gated configuration option, for the old YAML Loader.

• ISSUE #51865: (magenbrot) salt.match.search_by resulting in 'None' since 2019.2 (refs: #52234)
  - PR #52234: (garethgreenaway) [2019.2] Fixes to matchers when used in pillar @ 2019-04-12 00:05:48 UTC
  - 05ba7c5 Merge pull request #52234 from garethgreenaway/51865_match_search_by_master
  - 1760245 Merge branch ‘2019.2’ into 51865_match_search_by_master
  - d50f111 Merge branch ‘2019.2’ into 51865_match_search_by_master
  - b0cbb60 Merge branch ‘2019.2’ into 51865_match_search_by_master
  - 799a08b Merge branch ‘2019.2’ into 51865_match_search_by_master
  - 21891d6 Merge branch ‘2019.2’ into 51865_match_search_by_master
  - a2173d7 Fixing a typo where attempting to get a list from __opts__ instead of an individual item
  - 6a5b5b2 swapping out if...else approach for __opts__.get approach.
  - aa2c626 With the change/addition of the matcher subsystem in 2019.2, the match.search_by when used in pillar broke when targeting the minion that was also the salt master. This was caused by the id in __opts__ being used in all cases. This change updates the glob_match function to use the preserved minion_id of the master if it is available so that targeting works as expected.

• PR #52160: (cbosdo) Virt whitespace fix @ 2019-04-12 00:04:25 UTC
  - 80d7aea Merge pull request #52160 from cbosdo/virt-whitespace-fix
  - fd1f539 Merge branch ‘2019.2’ intovirt-whitespace-fix
  - b297e7d virt: handle whitespaces in VM names

• ISSUE #51832: (nocturo) pillar include stopped working (refs: #52008)

• PR #52008: (waynew) Allow / in pillar includes @ 2019-04-12 00:02:40 UTC
  - b551bbd Merge pull request #52008 from waynew/51832-re-allow-slash-includes
  - ee3115f Allow leading dots and / as pillar separators
  - 29c676d Ensure _closing exists
  - eb517e1 Swap ‘/’ for ‘:’ when matching

• ISSUE #51821: (OrangeDog) 'comment' is an invalid keyword argument for 'test.fail_without_changes' (refs: #51937)

• PR #51937: (garethgreenaway) [2019.2] Fix to test state functions to allow arguments that mod_watch uses @ 2019-04-11 23:57:44 UTC
  - d3159cb Merge pull request #51937 from garethgreenaway/51821_ensure_result_comment_changes_valid_arguments
  - 866c65b5 Merge branch ‘2019.2’ into 51821_ensure_result_comment_changes_valid_arguments
  - 0966d61 Merge branch ‘2019.2’ into 51821_ensure_result_comment_changes_valid_arguments
  - 5527dff Ensure the comment, changes, and result are valid arguments for various test state functions as they are valid arguments for mod_watch.
• ISSUE #51818: (syphernl) salt.nacl.dec: expected str, bytearray, or unicode (refs: #51913)
• PR #51913: (garethgreenaway) [2019.2] Fixes to utils/nacl.py @ 2019-04-11 23:56:57 UTC
  - 7be0428 Merge pull request #51913 from garethgreenaway/51818_fix_when_sk_is_empty
  - 55d7488 Merge branch '2019.2' into 51818_fix_when_sk_is_empty
  - b2128e8 Merge branch '2019.2' into 51818_fix_when_sk_is_empty
  - cb01a1b Merge branch '2019.2' into 51818_fix_when_sk_is_empty
  - 1a1e333 Merge branch '51818_fix_when_sk_is_empty' of github.com:garethgreenaway/salt into 51818_fix_when_sk_is_empty
    - 102f0a3 Merge branch '2019.2' into 51818_fix_when_sk_is_empty
    - 7fd04ec Merge branch '2019.2' into 51818_fix_when_sk_is_empty
  - dd23069 Adding tests for NACL changes.
  - c314f51 Correctly handle the situation when with the secret key or public key values are empty.
• ISSUE #52116: (lordcirth) host.present always returns None when in test=True (refs: #52399)
• PR #52399: (waynew) Bring host.present in line with Salt's test conventions @ 2019-04-11 23:32:28 UTC
  - d6f0971 Merge pull request #52399 from waynew/52116-fix-host-present-fail
  - 8440ae1 Merge branch '2019.2' into 52116-fix-host-present-fail
  - dd002fd Fix linter
  - 9d1b2a0 Only return None on host.present changes when test
• PR #52477: (mattp-) 2019.2 backport #52472 modules.cmdmod: handle windows environ better @ 2019-04-11 23:13:34 UTC
  - PR #52472: (mattp-) modules.cmdmod: handle windows environ better (refs: #52476, #52477)
  - 7c709cf Merge pull request #52477 from bloomberg/win_cmd_2019
  - 736a437 2019.2 backpport: modules.cmdmod: handle windows environ better
• ISSUE #49661: (ephreal) Issues starting salt-master or salt-minion with openssl-1.1.1-1 (refs: #51655)
• PR #52423: (bbinet) Remove unused salt.crypt import @ 2019-04-11 21:44:41 UTC
  - PR #51655: (garethgreenaway) [2017.7] Removing unused salt.crypt imports (refs: #52423)
  - b0d3e76 Merge pull request #52423 from bbinet-unused-salt-crypt
  - dc330e7 Merge branch '2019.2' into unused-salt-crypt
  - 4b26dea Merge branch '2019.2' into unused-salt-crypt
  - 9607c38 Also remove unused salt.crypt import in pillar/__init__.py
  - 49f2631 Remove unused salt.crypt import
• PR #52506: (mattp-) 2019.2: transport.zmq: fix bug introduced by b7df7e75cf2 @ 2019-04-11 21:12:51 UTC
  - 4bb9185 Merge pull request #52506 from bloomberg/2019_zmq_uri
  - 1e9dd7f transport.zmq: fix bug introduced by b7df7e75cf2
• ISSUE #52462: (Ch3LL) integration.states.test_supervisord test failing (refs: #52513, #52512)
• PR #52513: (dwoz) [2019.2] Fix supervisord @ 2019-04-11 21:09:17 UTC
  - 1532642 Merge pull request #52513 from dwoz/supervisord_2019.2
Salt Documentation, Release 3002.5

- dc9ace6 The exit code matters.

- **PR #52496**: (dwoz) Fix wart in IPC merge forward @ 2019-04-11 05:19:02 UTC
  - PR #52482: (dwoz) lpc fixes 2019.2 (refs: #52496)
  - 978084d Merge pull request #52496 from dwoz/ipc_wart
  - 9805f38 Fix wart in IPC merge forward

- **PR #52482**: (dwoz) lpc fixes 2019.2 (refs: #52496) @ 2019-04-10 19:53:58 UTC
  - 791b646 Merge pull request #52482 from dwoz/ipc_fixes_2019.2
  - 0141b7f Fix merge wart
  - 82150f0 Remove un-needed test
  - c9ec8b1 Ensure exceptions in service future are handled
  - 25f5a90 Use six.reraise for py3 compatability
  - 6d80789 Fix ipc unit tests
  - c80da32 Fix linter issues
  - 024b4b6 Remove IPCClient singleton
  - f1d0e02 Re-raise queued exceptions with traceback

- **ISSUE #51932**: (tomlaredo) [REGRESSION]--output-diff doesn't display changes anymore with test=True since v2019.2.0 (refs: #51992)

- **PR #51992**: (garethgreenaway) [2019.2] Swapping pchanges for changes in file state. @ 2019-04-09 19:38:57 UTC
  - 3173673 Merge pull request #51992 from garethgreenaway/51932_show_diff_when_test_True
  - 7c4abd6 changes needs to be a dictionary.
  - ac950b3 Merge branch '2019.2' into 51932_show_diff_when_test_True

- **PR #52413**: (Ch3LL) [2019.2] Merge forward from 2018.3 to 2019.2 @ 2019-04-08 16:19:49 UTC
  - bd3ad7b Merge pull request #52413 from Ch3LL/merge-2019.2
  - 30783f4 Merge branch '2019.2' into merge-2019.2

- **PR #52151**: (simonflood) Fix typo in actual 2019.2.0 release notes @ 2019-04-08 13:36:28 UTC
  - PR #51861: (simonflood) Fix typo in 2019.2.0 release notes (refs: #52151)
  - a18abf2 Merge pull request #52151 from simonflood/patch-2
  - a4a5521 Merge branch '2019.2' into patch-2
  - 3d31102 Fix typo in actual 2019.2.0 release notes
    * 16733da Merge branch '2019.2' into merge-2019.2
    * fe13214 Merge branch '2018.3' into '2019.2'
      - b6028b9 Merge pull request #52403 from bdrung/fix-test-conditions
      - e74f78f Skip ExtendTestCase if templates directory is missing
      - 0473683 Skip SampleConfTest if sample conf directories are missing
      - e5a755d Merge pull request #52250 from twangboy/fixed_grains
· a77ec81 Merge branch '2018.3' into fix_grains
· b405391 Refer to the windowsdomain grain
· e103561 Add some documentation about the domain grain on Windows
· c874831 Don't set the domain grain to windowsdomain
· 65eb461 Add a test for windows grains
· 173d1e7 Fix the domain grain on Windows
· 0ce0c04 Merge branch '2019.2' into 51932_show_diff_when_test_True

• ISSUE #51869: (eimantaszd) x509.sign_remote_certificate not working after upgrade to 2019.2.0 (refs: #52381)
• PR #52381: (dwoz) Fix issue #51869 and add cert signing test @ 2019-04-05 20:36:11 UTC
  – 6bae227 Merge pull request #52381 from dwoz/issue_51869
  – cd78485 Merge branch '2019.2' into issue_51869

• ISSUE #21927: (jfindlay) network.traceroute intermittently stacktraces (refs: #52370)
• PR #52370: (jfindlay) Fix network.traceroute exec module function @ 2019-04-03 16:39:20 UTC
  – c1063cf Merge pull request #52370 from jfindlay/traceroute
  – 2f49231 modules.network: update unit test
  – 5b64fc0 modules.network: log and skip problematic traceroute lines
  – e33f5c1 modules.network: standardize util check

• PR #52397: (garethgreenaway) [2019.2] Merge forward from 2018.3 to 2019.2 @ 2019-04-02 22:12:45 UTC
  – 3675f1e Merge pull request #52397 from garethgreenaway/merge-2019.2
  – 28e76b1 Merge branch '2018.3' into merge-2019.2
  – 28f947e Merge pull request #52213 from garethgreenaway/beacon_state_dont_save_test_true
    * 7f83b4b Swapping out if state looking for test in opts for a __opts__.get
    * e1cf599 Merge branch '2018.3' into beacon_state_dont_save_test_true
    * b751122 Merge branch '2018.3' into beacon_state_dont_save_test_true
    * a901ec4 Don't save beacons when test=True
  – 10d041b Merge pull request #52344 from twangboy/os_release_embedded
    * 74ab4d3 Use old way to get osrelease if new way fails
  – e88d3ba Merge pull request #52345 from garethgreenaway/52197_incron_cannot_have_comments
    * 070837a Merge branch '2018.3' into 52197_incron_cannot_have_comments
    * 8461608 Updating the incron module, state module and tests to remove use of comments.
      * 855f31a Remove un-used file
      * affdbb Fix setup/teardown methods
      * 215bf93 Refresh after modifying tmp pillars
      * 95c3aba Add config for listener
      * 5d231f4 remove unused import
      * 8c1b1db Use tmp pillar for signing policies
- a0e2458 fix unused import
- 7f5f7dd Fix requisite path
- 5630498 Fix signing policies path
- 0bd0826 Fix issue #51869 and add cert signing test

- PR #52347: (Ch3LL) [2019.2] Merge forward from 2018.3 to 2019.2 @ 2019-03-28 16:41:53 UTC
  - 2766cbf Merge pull request #52347 from Ch3LL/merge-2019.2
  - 63962b5 Merge branch '2018.3' into '2019.2'
  - bda3ca2 Merge pull request #51749 from terminal-labs/salt-cloud-map-alt-update
    * 9ca0f72 Changed where to mention the map files compatibility for minion configuration options. This is a result of @Ch3LL suggestion on the PR itself for this doc change.
    * 364ef06 Added mention of map file alternative for minion configuration options.
  - a743fff Merge pull request #52113 from twangboy/fix_lgpo
    * bb4a704 Merge branch '2018.3' into fix_lgpo
    * 7186405 Merge branch '2018.3' into fix_lgpo
    * 7656331 Change default language from 1033 to en_US
  - 7040643 Merge pull request #52172 from garethgreenaway/51959_fix_acl_present_output
    * 8c53890 Merge branch '2018.3' into 51959_fix_acl_present_output
    * 0bdde94 Merge branch '2018.3' into 51959_fix_acl_present_output
    * c5337e1 Merge branch '2018.3' into 51959_fix_acl_present_output
    * 889660f Fixing lint.
    * bfd669 Updating the reverse octal lookup dictionary. Updating tests.
    * 24e907b Adding additional permissions to the lookup.
    * 4b99afa Fixing the output when there are changes for the ACL state so the permissions are shown and not the octal number.
  - 45d6cad Merge pull request #52283 from dmurphy18/fix_cpe_name_amzn2
    * cbe5f7d Update to allow for malformed CPE_NAME from some OS's
  - 14a6b9d Merge pull request #52306 from terminal-labs/replace-ping-with-version
    * c04b6ae Changed a text artifact from the ping function to supporting text for the version function.
    * 0b1eb00 Replaced test.ping with test.version Result of issue #52277
  - 7b2b521 Merge pull request #51963 from DSRCorporation/bugs/49147_ipc_subscriber
    * 37aeb3a Minor: Fix typo in docstring
    * cc46e9c Merge branch '2018.3' into bugs/49147_ipc_subscriber
    * 23733bd Regression test for parallel IPCMessageSubscriber support
    * 2bc2a7d Merge branch '2018.3' into bugs/49147_ipc_subscriber
    * 684bf58 Update doc conf with the new import tornado.queues
    * 008cf49 Merge branch '2018.3' into bugs/49147_ipc_subscriber
    * 01e9a3d Merge branch '2018.3' into bugs/49147_ipc_subscriber
710ab50 Support parallel work of multiple IPCMessageSubscribers in one process
- 87bb513 Fix failing symlink test (#52145)
- 8255901 document `regex_replace` Jinja filter (#52326)
- 3211397 Merge pull request #52310 from garethgreenaway/merge-2018.3
  - 9324b83 Merge branch '2018.3' into merge-2018.3
- 71e9b66 Merge pull request #52312 from terminal-labs/zone-clarification
  - ae0e18f Merge branch '2018.3' into zone-clarification
- e8c8dba Added in an explanation of the `--zone` flag approved in #52251
  - 4908ed3 Merge branch '2017.7' into merge-2018.3
  - b6a0161 Merge remote-tracking branch 'upstream/2017.7.9' into 2017.7
  - 1f99e28 Let's not include raet by default
  - 4306779 Merge branch '2017.7.9' into 2017.7
  - 36ed50d Lock to unittest-xml-reporting 2.2.1
  - 3e6cb79 Merge branch '2017.7.9' into 2017.7
  - 57348ca Add static requirements for Arch linux
  - cc6fb46 Additionally ignore files in nox virtualenvs and CI artifacts directories
  - bf9c55e Previously have setuptools-git installed if ioflo is to be installed
  - 973e1ca Merge remote-tracking branch 'upstream/2017.7.9' into 2017.7
  - 981335a Revert "Avoid a traceback on tornado.testing test classes"
  - f48ba6a Merge remote-tracking branch 'upstream/2017.7.9' into 2017.7
  - b039cee Windows now has a static requirements file and no longer needs hacks
  - a86af2b Merge pull request #52226 from dwoz/jenkins_build
  - 8c0f46b Use windows state to bootstrap windows builds
  - 7263956 Lock coverage and xml-unittest-reporting versions
  - dce44fa Avoid a traceback on tornado.testing test classes

- PR #52314: (twangboy) Add the ability to pass a timeout to beacons @ 2019-03-27 19:11:13 UTC
  - d3f4c9d Merge pull request #52314 from twangboy/fix_beacon_tests
  - a5fa99a Add missing **kwargs
  - 7e88d04 Add the ability to pass a timeout to beacons

- PR #52311: (garethgreenaway) [2019.2] Merge forward from 2018.3 to 2019.2 @ 2019-03-26 18:31:32 UTC
  - bad4e47 Merge pull request #52311 from garethgreenaway/merge-2019.2
  - 11ed485 Merge branch '2018.3' into merge-2019.2
  - 582d306 Merge pull request #52307 from Akm0d/doc_fix
    - 4da0fd6 Fix x509 inconsistent file name in state example
  - 2c8f8e Merge pull request #52276 from terminal-labs/replace-github-dead-link
    - a2fbb2c Merge branch '2018.3' into replace-github-dead-link

30.2. Previous Releases
Chapter 30. Release Notes

- 8fa0e51 Merge pull request #52290 from Akm0d/doc_fix
  * ca00e4b Merge branch '2018.3' of github.com:saltstack/salt into doc_fix
  * 8e1ec15 Add missing master/minion docs for log_rotate*
    - 08728cf Merge branch '2018.3' into replace-github-dead-link
- d2fd84f Merge pull request #51724 from clinta/docker-create-with-ip
  * c933663 Merge branch '2018.3' into docker-create-with-ip
- 838a7aa Merge pull request #51753 from terminal-labs/docs-sphinx-ref-deadlink-fix
  * f2b6abd Merge branch '2018.3' into docs-sphinx-ref-deadlink-fix
  * 9857f53 Merge branch '2018.3' into docs-sphinx-ref-deadlink-fix
  * 8a11d27 Merge branch '2018.3' into docs-sphinx-ref-deadlink-fix
  * 842ec84 Merge branch '2018.3' into docs-sphinx-ref-deadlink-fix
  * 9275207 Merge branch '2017.7' into docs-sphinx-ref-deadlink-fix
    - 2330c2a makefile had an old sphinx-doc link, updated to new general front page of sphinx docs.
    - 8d70e3b Replaced all bad sphinx links with ones from the new sphinx doc site.
    - ebdfb0d replaced two python sphinx deadlinks with sphinx new relevant documentation pages.
      - a4e3e34 Merge branch '2018.3' into docker-create-with-ip
- eb9ec0 Merge pull request #52215 from garethgreenaway/bp-52212
  * 65857ef Merge branch '2018.3' into bp-52212
  * a96bf24 Back-port PR #52212 to 2018.3
    - 5ce553c add networking_config to container_create for custom network_mode
    - 5c99dbd add test to expose ip not added to custom network #51723
- 679c4b2 Merge pull request #52269 from garethgreenaway/merge-2018.3
  * ee58560 Merge branch '2018.3' into merge-2018.3
- 418e543 Merge pull request #52261 from dwoz/update_kitchen
  * a87c6ea Use windows state to bootstrap windows builds
  * 1aa1bd8 Merge branch '2017.7' into merge-2018.3
  * 2962e94 Lock coverage and xml-unittest-reporting versions
  * 595303b Merge remote-tracking branch 'upstream/2017.7.9' into 2017.7
    - 55e150c Proper setup and teardown
    - b9b6009 Don't run distro on windows
    - 3cb5c82 Merge pull request #52208 from s0undt3ch/2017.7.9
  * b14db9c Merge branch '2017.7.9' into 2017.7
    - 6a78941 Update static requirements
    - cee9480 Lock PyYAML to < 5.1
    - a4f241d The kitchen nox verifier already takes care of the single -v flag.
    - 0cb641e Fix static requirements search bad logic
- 45a3e4a distro reports Opensuse 15 as Opensuse Leap 15
- de7bb24 Ubuntu 18.04 locked requirements files
- bc08e3c Ubuntu 16.04 locked requirements files
- 0d353d2 Ubuntu 14.04 locked requirements files
- 1186122 Opensuse 42 locked requirements files
- fa6888b Opensuse 15 locked requirements files
- b6578b8 Fedora 29 locked requirements files
- 777dbb0 Fedora 28 locked requirements files
- 4388fa9 Debian 9 locked requirements files
- 2f9030f Debian 8 locked requirements files
- 1b18ec5 CentOS 7 locked requirements files
- 6e9f0c0 CentOS 6 locked requirements
- 7415846 Start handling static(and platform specific) requirements files
- ea4d370 Allow overriding some requirements based on distro information
- 17017a1 Merge pull request #51361 from olipovch/cloud-sync-after-install
- 8fde3a0 Merge branch '2017.7' into cloud-sync-after-install
- ab00151 Fix salt-cloud sync_after_install functionality
  - ff54f53 The kitchen nox verifier already takes care of the sinlge -v flag.
  - a2aa708 Fix static requirements search bad logic
  - 621b047 distro reports Opensuse 15 as Opensuse Leap 15
  - bc00a26 Ubuntu 18.04 locked requirements files
  - d5ed9e1 Ubuntu 16.04 locked requirements files
  - 03879bf Ubuntu 14.04 locked requirements files
  - c3d7a18 Opensuse 42 locked requirements files
  - b29d986 Opensuse 15 locked requirements files
  - 73154d0 Fedora 29 locked requirements files
  - bf36cd4 Fedora 28 locked requirements files
  - 52cc5bb Debian 9 locked requirements files
  - cb4a823 Debian 8 locked requirements files
  - 2128a79 CentOS 7 locked requirements files
  - 4a29e93 CentOS 6 locked requirements
  - 0d96e64 Start handling static(and platform specific) requirements files
- 0fc82bd Merge pull request #52193 from Ch3LL/bp-47005
  - 1a54fd1 Merge branch '2018.3' into bp-47005
- 0f3cd2a Merge pull request #52194 from Ch3LL/bp-52149
  - bff3f3c Merge branch '2018.3' into bp-52149

30.2. Previous Releases
- 7e459a1 example names parameter in file.managed state
  - f68caa6 Merge branch '2018.3' into bp-47005
- 85be178 Merge pull request #52201 from max-arnold/rename-beacon-validate
  - e1e9a2b Merge branch '2018.3' into rename-beacon-validate
- 0383ac3 Merge pull request #52189 from Ch3LL/merge-2018.3
  - 9972980 Merge branch '2018.3' into merge-2018.3
  - 79962ab Merge branch '2017.7' into '2018.3'
    - fd6068e Allow overriding some requirements based on distro information
    - 659ec11 Merge remote-tracking branch 'upstream/2017.7.9' into 2017.7
    - 18bbbec We need to nest require req_win.txt
    - 956a84c Merge pull request #51995 from s0undt3ch/2017.7
    - 0bf9d62 Merge remote-tracking branch 'upstream/2017.7.9' into 2017.7
    - ba6fd9 Merge pull request #51974 from s0undt3ch/features/nox-2017.7
    - ee4df3a Lint fixes
    - 56f841f Windows needs special treatment
    - c3cb447 Requirements fixes
    - 6a67531 We need a fixed winrm-fs so that dotfiles are also included
    - 15c6a53 use kitchen-salt from my fork for now
    - b745332 Merge pull request #51800 from dwoz/typo_fix
    - 5bbe5e0 Fix up docstring
    - 9f3c583 Fix typo in docstring
    - 75accce1 Rename obsolete beacon validation function
    - d1700f3 Merge branch '2018.3' into bp-47005
- 03f228d Merge pull request #52112 from Ch3LL/proxy_gs
  - 7ad4758 Update device names in proxy getting started docs
    - 25ae7c8 remove freebsd-upstream reference
    - b70c45c Remove salt FreeBSD repo which is now 2 years out of date
    - 62e5404 github issue tracker link and sends you to the url for listed issues.
    - cc6a506 Replaced a dead link for github issue tracker with another github link for the issue tracker and added a link to show more options for closing issues in commit messages.

- PR #52190: (Ch3LL) [2019.2] Merge forward from 2018.3 to 2019.2 @ 2019-03-23 01:09:33 UTC
  - 3ac6dbd Merge pull request #52190 from Ch3LL/merge-2019.2
  - 68c02b9 Merge branch '2019.2' into merge-2019.2
- PR #52240: (soer7022) Fix Typos "swtich" to "switch" @ 2019-03-23 00:08:50 UTC
  - f5fc807 Merge pull request #52240 from soer7022/patch-2
  - d130832 Merge branch '2019.2' into patch-2
- 3b6fd8 Merge branch '2019.2' into patch-2
- 5db7a3f Fix Typos "swtich" to "switch"
  * 34d601e Merge branch '2019.2' into merge-2019.2

- **ISSUE #52036:** (ghost) rsync.synchronized: "An exception occurred in this state: 'Changes' should be a dictionary." (refs: #52040)
- **PR #52040:** (garethgreenaway) [2019.2] Fix to rsync state @ 2019-03-21 19:08:19 UTC
  - a00245e Merge pull request #52040 from garethgreenaway/52036_rsync_state_no_changes_when_error
  - 09d1672 Merge branch '2019.2' into 52036_rsync_state_no_changes_when_error
- **PR #51962:** (Ch3LL) Update 2019.2.0 release notes with other tojson example @ 2019-03-21 16:37:43 UTC
  - 5387821 Merge pull request #51962 from Ch3LL/rn_update
  - f63bae9 Merge branch '2019.2' into rn_update
- **PR #52262:** (dwoz) Use windows state to bootstrap windows builds @ 2019-03-20 22:12:25 UTC
  - 0fe7f28 Merge pull request #52262 from dwoz/update_kitcen_2019.2
  - 49d529d Use windows state to bootstrap windows builds
  - e2c3f93 Merge branch '2019.2' into rn_update
  - 164398f Merge branch '2019.2' into rn_update
  - c04b2a0 Merge branch '2019.2' into rn_update
  - 9ca6e50 Update doc/topics/releases/2019.2.0.rst
  - 052f193 add additional formatting to 2019.2.0 release notes
  - a6ca59a Update 2019.2.0 release notes with other tojson example
  * 84cd46c Merge branch '52036_rsync_state_no_changes_when_error' of github.com:garethgreenaway/salt into 52036_rsync_state_no_changes_when_error
    * 4a126b3 Merge branch '2019.2' into 52036_rsync_state_no_changes_when_error
  * d5d3117 Removing debugging statements
  * 0fb859d Adding a test for the rsync state
  * 4c678e6 When the retcode is non-zero, there are no changes so should include the default empty dictionary.
  * c6ba2e6 Fix lint for test_win_file
  * 9ada8d9 Merge branch '2018.3' into '2019.2'
  * f8c0266 Allow overriding some requirements based on distro information
  * c58c775 Merge pull request #52035 from Ch3LL/bp-52012
    * 37666bd Merge branch '2018.3' into bp-52012
  * 54ff3fe Merge pull request #51935 from Ch3LL/py3_doc
    * b217f94 Merge branch '2018.3' into py3_doc
    * 605bfaf Update futures dependency for python2 only
    * 072cd84 Update supported python versions in installation docs
  * 892cdae Merge pull request #52038 from terminalmage/docs
- 4d82146 Minor documentation tweak for file.replace state
- a7a9754 Merge pull request #51896 from twangboy/win_disks
  - 057d415 Merge branch '2018.3' into win_disks
  - 0d419e3 Fix some lint
  - aa61dab Add tests
  - 9f6ec53 Add all attached drives to the disks grain
- 48d298c Merge pull request #51918 from twangboy/fix_compat
  - a791901 Fix compat, add tests
  - 2837bb9 Fix _compat for py3
- 02328a6 Merge pull request #52030 from Ch3LL/bp-52004
  - b4e3183 Fixed comparison of None with constants
- aa82fcc Merge pull request #52029 from Ch3LL/bp-52003
  - fcac9f3 Skip Test on Non-Windows systems
  - f42d17d Derive from LoaderModuleMockMixin
  - 5052017 Define __opts__ dict
  - b7b571e Define __opts__ dict
  - ee3ad08 Define __opts__ dict
  - 64d8451 Use default file module
  - 886ef19 Fix name of makedirs_method
  - 4cc5f77 Check for path to be a symlink
- 5ff1725 Merge pull request #52028 from Ch3LL/bp-50384
  - 6493eb0 Fix issue #50381
  - f2b4ec8 Don't log debug messages during close
- 7ab1281 Merge pull request #51936 from gtmanfred/2018.3
  - faa3471 Merge branch '2018.3' into 2018.3
- 2ebfa22 Merge pull request #51967 from twangboy/add_compat_tests
  - 2056578 Merge branch '2018.3' into add_compat_tests
  - e85f004 Merge branch '2018.3' into add_compat_tests
  - ea69062 Fix lint
  - eb984f5 Add unit tests for _compat.py
- c8e2971 Merge pull request #51980 from Ch3LL/merge-2018.3
  - 9ad19e Merge branch '2017.7' into '2018.3'
  - bfba6a9 Merge pull request #51895 from twangboy/win_update_2017.7
  - b2cb1eb Merge branch '2017.7' into win_update_2017.7
  - 76d280d Merge pull request #51875 from dwoz/avoid_ssl_race
  - e99654d Merge branch '2017.7' into avoid_ssl_race
30.2. Previous Releases

- c0bb1f7 Merge pull request #51850 from waynew/cherry-pick-ping-fix
- 6da495f Fix linter
- f78b360 fix reactor ping test
- ad7a9ec Merge pull request #51893 from twangboy/gate_zfs_2017.7
- e0d58eb Gate zfs module on Windows
- f758a10 Avoid race condition when initializing OpenSSL
- 0f125db Add __virtual__ to win_update
- 864d4be Merge pull request #51770 from Ch3LL/doc_conf_2017
- 25d9ca2 Update release versions for the 2017.7 branch
- 3cf3099 Merge pull request #51774 from terminal-labs/py3-server-docs-update
- 1f00ec89 Added in python 3 server according to the consensus from #51748
- bb9d87 added the python3 command for startign the python http server.
- b4153d3 Merge pull request #51757 from twangboy/fixed_case_2017.7
- 6b0b5d2 Fix failing py3 tests
- feb29f3 Make recurse and directory case sensitive
  - 2c4dff6 Merge pull request #51905 from aplanas/fixtures
    - ac68df mount: fix extra -t parameter
  - 4b2e8cc Merge pull request #51815 from garethgreenaway/51673_multiple_file_sections_with_excludes
    - 58ef51d Merge branch '2018.3' into 51673_multiple_file_sections_with_excludes
    - 8c4485d Merge branch '2018.3' into 51673_multiple_file_sections_with_excludes
    - b55a894 Fixing some code that was not working correctly with Python 3.
    - 63da8be Fixing a bug that caused excludes to not work as expected when multiple file options were in place, the excludes of the last file section were being used over any previous ones. Including a test to ensure excludes work as expected when multiple file sections are in place.
  - 1bf3fc8 Merge pull request #51867 from Oloremo/mysql-module-fix-for-python3
    - dfcebd Merge branch '2018.3' into mysql-module-fix-for-python3
    - b6d217c Merge branch '2018.3' into mysql-module-fix-for-python3
    - 9745b0a Fixed typo
    - 8149e9e Merge branch '2018.3' into mysql-module-fix-for-python3
    - 58d8a2e Merge branch '2018.3' into mysql-module-fix-for-python3
    - 964962 Added handling of empty server_version
    - 58791e9 Decode mysql_version for python3 compatibility
  - 7f05a8 Merge pull request #51908 from garethgreenaway/51862_icinga_fixes
    - 233dbaf Adding __salt__ to utils/icinga so cmd.run_all is available.
    - 1e7490c update kubernetesmod in index.rst
    - 1f3be1c fix import in test
• 8572c17 rename kubernetes module to kubernetesmod

• PR #52032: (Ch3LL) Add azure state and execution modules to doc index @ 2019-03-11 15:46:49 UTC
  - 7d6b53c Merge pull request #52032 from Ch3LL/fix_azure_docs
  - 8a8a5fa Add azure module ref pages and fix doc errors
  - 6a1d06a fix additional azure state module doc errors
  - 65d8f27 Update doc failures in azure modules
  - 92dbe2a Merge branch ‘2019.2’ into fix_azure_docs

• PR #52037: (Ch3LL) Backport #51201 into 2019.2 @ 2019-03-07 19:45:18 UTC
  - PR #51201: (terminalmage) Lint: Fix str-format-in-logging, len-as-condition, etc. (2) (refs: #52037)
  - 96935c9 Merge pull request #52037 from Ch3LL/bp-51201
  - 1fb0697 Remove develop modules not needed in 2019.2
  - e3adc2f Lint: Fix str-format-in-logging, len-as-condition, etc. (2)

• PR #52034: (terminalmage) fileclient: Fix traceback when template file cannot be cached @ 2019-03-07 19:41:24 UTC
  - 75398e4 Merge pull request #52034 from terminalmage/fixed-get-template
  - 744dfd9 fileclient: Fix traceback when template file cannot be cached

• PR #51984: (Ch3LL) [2019.2] Merge forward from 2018.3 to 2019.2 @ 2019-03-07 17:58:42 UTC
  - 7af4f5c Merge pull request #51984 from Ch3LL/merge-2019.2
  - 54ea40a Merge branch '2019.2' into merge-2019.2
  - 227ddbb Fix linter
  - a168913 Merge branch '2018.3' into '2019.2'
    * c68744a Merge pull request #51975 from s0undt3ch/features/nox-2018.3
      - af4ae91 Lint fixes
      - 33955c9 Windows needs special treatment
      - d4f899f Requirements fixes
      - e550c60 We need a fixed winrm-fs so that dotfiles are also included
      - ada1ef3 use kitchen-salt from my fork for now
    * a689177 Merge pull request #51807 from Ch3LL/2018.3.5_rn
      - 2c0b85c Add 2018.3.5 release notes
    * 6aee2c4 Merge pull request #51806 from twangboy/fixed_beacon
      - 2bf6179 Fix some lint
      - 0f38eea Add lowercase test
      - 1459985 Make sure drive letter is uppercase for re compare
      - 7cdc660 Add some tests
      - 48ae8c6 Fix disk.usage beacon on Windows
    * da815ba Merge pull request #51966 from twangboy/use_winapi_com
· a38300b Use winapi.com instead of coinitialize
· 7673c69 Merge pull request #51920 from twangboy/add_zabbix
  · e2d496c Add zabbix to the Windows builds
· 77c2796 Merge pull request #51802 from garethgreenaway/merge-2018.3.4
  · 2e20939 Merge branch '2018.3' into merge-2018.3.4
  · 769f002 Merge branch '2018.3.4' into merge-2018.3.4
  · b53a843 Merge pull request #51713 from dwoz/gemstestagain_2018.3.4
  · f2c6631 Merge branch '2018.3.4' into gemstestagain_2018.3.4
  · 1c82d24 Fix ruby gems tests, again
· 496525d Merge pull request #51930 from Ch3LL/release_docs
  · 9a68136 Update release documentation
· a027c97 Merge pull request #51931 from Ch3LL/bp_51298
  · 873cabd Roll back some changes to _compat.py
  · 1fc0ff Fix edge case when minion ID is a 16-character string
· 1fa2072 Merge pull request #51892 from twangboy/gate_zfs
  · fbc2c0c Gate zfs grain on Windows
· 89b0991 Merge pull request #51836 from stratusjerry/backport_49039_2018.3
  · 35fd4c4 Update win_pkg.py
· c1ab63d Merge pull request #51771 from Ch3 LL/doc_conf_2018
  · 904beb3 [2018.3] change build_type and release in doc/conf.py
  · 3efcea5 Update release versions for the 2018.3 branch
· 98f1b03 Merge pull request #51775 from garethgreenaway/merge-2017.7
  · 92ffe03 fixing lint
  · 73b601d Merge branch '2017.7' into merge-2017.7
  · e04f735 Merge pull request #51502 from ogd-software/51501-states-boto3_route53.py-fails-to-validate-ALIAS-A-records
  · e69ce9d Merge branch '2017.7' into 51501-states-boto3_route53.py-fails-to-validate-ALIAS-A-records
  · 5093406 Implement PEP8 E711 styling fix
  · 7640e90 Ensure boto3_route53 correctly validates existing ALIAS records
  · ff63b30 Ensure boto3route53 survives attempts to validate ALIAS records
  · 9c128aa Merge pull request #51732 from s0undt3ch/features/nox-2017.7
  · 328989d Add initial nox configuration. Tell tox'ers to use nox'.
  · 99c4e8d Merge pull request #51712 from dwoz/gemstestagain
  · 0d3b227 Fix ruby gems tests, again
  · 18452c4 Merge pull request #51528 from twangboy/backport_51471
  · 8c79f02 Merge branch '2017.7' into backport_51471
- 20a7ee5 Backport 51471
- ee80ce3 Merge pull request #51655 from garethgreenaway/49661_starting_salt_master_openssl
- f647b95 Merge branch '2017.7' into 49661_starting_salt_master_openssl
- 1831e64 Removing options from libcrypto.OPENSSL_init_crypto so it will simply use the defaults.
- 8d0f801 removing salt.crypt from payload.py which is not used and causing salt-key to break.
- a5a54c4 Removing unused import which is causing salt-master to not start when using openssl 1.1.1-1.
- c9c082c Fix azurearm field list doc error
- af0537f Add azure state and execution modules to doc index
- **PR #52004**: (chdamianos) Fixed comparison of None with constants (refs: #52030) @ 2019-03-06 17:41:52 UTC
  - 01bcca0 Merge pull request #52004 from chdamianos/fix-constants-comparison
  - 6fd60af Fixed comparison of None with constants
- **PR #51981**: (bryceml) Fix typo in 2019.2.0 release notes @ 2019-03-05 23:59:33 UTC
  - 8d6bb5d Merge pull request #51981 from bryceml/2019.2
  - ecf0ef0 Fix typo in 2019.2.0 release notes
    - a65e621 Adding an additional note warning that the file will not be changed because test=True, but could be changed by other states.
    - 6c0dcf2 Swapping pchanges for changes in file state.
- **ISSUE #51825**: (OrangeDog) schedule.disable doesn't work in 2019.2.0 (refs: #51855)
- **PR #51855**: (garethgreenaway) [2019.2] Global enable/disable was being ignored @ 2019-03-05 19:40:34 UTC
  - c3105df Merge pull request #51855 from garethgreenaway/51825_scheduled_global_enabled
  - 301e773 Merge branch '51825_scheduled_global_enabled' of github.com:garethgreenaway/salt into 51825_scheduled_global_enabled
    - ae7ab66 Merge branch '2019.2' into 51825_scheduled_global_enabled
    - ff13833 Merge branch '2019.2' into 51825_scheduled_global_enabled
  - 9e7e4ed Fixing broken add_job test.
  - 72466a5 Global enable/disable was being ignored
- **ISSUE #51745**: (fayak) Systemd update 241 on archlinux breaks systemd.py version() function (refs: #51946)
- **PR #51946**: (Ethyling) Fix retrieve systemd version using regex @ 2019-03-05 19:20:19 UTC
  - be28623 Merge pull request #51946 from Ethyling/fix-systemd-version
  - b557707 Add test for systemd version from git describe
  - 94809d0 Fix retrieve systemd version using regex
- **ISSUE #51816**: (jkrauz) pillar_ldap broken in 2019.2.0 (refs: #51964)
- **PR #51964**: (dwoz) [2019.2] Make sure ldap attrs are string types on python 2 @ 2019-03-05 19:18:30 UTC
  - c310022 Merge pull request #51964 from dwoz/issue_51816
- a879140 Merge branch '2019.2' into issue_51816
- 0e61cf3 Fix linter errors/warnings
- 171217a Revert debug logging
- 8c641c6 make LDAP attr defaults string types on py2

**PR #51976:** (s0undt3ch) [2019.2] Nox fixes @ 2019-03-05 18:56:49 UTC
- cb817f1 Merge pull request #51976 from s0undt3ch/features/nox-2019.2
- 0b4e68c Lint fixes
- 257b3fc Windows needs special treatment
- 2b98da0 Requirements fixes
- 4f45a7e We need a fixed winrm-fs so that dotfiles are also included
- fa70af2 use kitchen-salt from my fork for now

**PR #51761:** (sdodsley) Add new module to release notes for 2019.2.0 @ 2019-03-05 09:44:56 UTC
- PR #51681: (sdodsley) Add new module to release notes for 2019.2.0 (refs: #51761)
- f867e6e Merge pull request #51761 from sdodsley/cheery_pick_fb_releasenotes
- 80192c8 Add new module to release notes for 2019.2.0

**PR #51799:** (s0undt3ch) Catch attribute error @ 2019-03-05 09:38:08 UTC
- 08e3956 Merge pull request #51799 from s0undt3ch/2019.2
- 342244a Merge branch '2019.2' into 2019.2
- 3e8a17e Catch attribute error

**PR #51810:** (Ch3LL) Add 2019.2.1 release notes @ 2019-03-05 09:26:47 UTC
- ff5d7d6 Merge pull request #51810 from Ch3LL/2019.2.1_rn
- aae5fa Add 2019.2.1 release notes

**ISSUE #51824:** (OrangeDog) schedule.present state not idempotent in 2019.2.0 (refs: #51849)

**PR #51849:** (garethgreenaway) [2019.2] Fix to schedule.list function to filter out attributes that are None @ 2019-03-01 19:56:17 UTC
- PR #51647: (dwoz) [develop] increase batch test timeout on windows (refs: #51849)
- 3732004 Merge pull request #51849 from garethgreenaway/51824_splay_breaking_schedule_present
- a0af441 Merge branch '2019.2' into 51824_splay_breaking_schedule_present

**PR #51878:** (Ch3LL) Add new terraform salt-ssh roster feature to release notes @ 2019-02-27 19:18:49 UTC
- 3fd5b56 Merge pull request #51878 from Ch3LL/terraform_rn
- 502d197 fix spelling error in release notes
- 4d53b41 Add new terraform salt-ssh roster feature to release notes

**PR #51837:** (stratusjerry) Update win_pkg.py @ 2019-02-26 16:51:35 UTC
- PR #49039: (stratusjerry) Update win_pkg.py (refs: #51836, #51837)
- e63c872 Merge pull request #51837 from stratusjerry/backport_49039_2019.2
- 531b23d Update win_pkg.py

30.2. Previous Releases
- 39b5645 Splay defaulting to None internally, broke schedule.present causing it to always report differences when a state is run. Updating the schedule.list function to check if an attribute is None and remove it.

- **PR #51772**: (Ch3LL) Update release versions for the 2019.2 branch @ 2019-02-25 14:16:40 UTC
  - 27dd9fb Merge pull request #51772 from Ch3LL/doc_conf_2019
  - f28ec9b [2019.2] change build_type and release in doc/conf.py
  - 4c670e2 Update release versions for the 2019.2 branch

- **PR #51776**: (garethgreenaway) [2019.2] Merge forward from 2018.3 to 2019.2 @ 2019-02-24 22:08:58 UTC
  - 45425a4 Merge pull request #51776 from garethgreenaway/merge-2018.3
  - 186306a reverting change in release notes, adding change to doc/ref/modules/all/index.rst.
  - 1ef140a Fixing lint.
  - 6173578 Fixing lint errors
  - 38dca99 fixing lint
  - e37fc20 Merge branch '2018.3' into merge-2018.3
  - 7e3e71c Merge pull request #51756 from twangboy/fix_case_sensitive
    - 4c55040 Fix failing py3 tests
    - 64f45f8 Make recurse and directory case sensitive
  - e75fc1c Merge pull request #51747 from ymasson/fix_mysql_grants
    - f614dd0 Fix escaping for special characters
  - b1f7e85 Merge pull request #51387 from chrillux/make-binarydata-output-possible
    - 010393e Make binary data output possible
  - 3475813 Merge pull request #51694 from assafShapira/2018.3
    - 895b97a Merge branch '2018.3' into 2018.3
    - bc2d27 Fix minion bootstrapping issue "/usr/lib/python2.7/site-packages/salt/utils/cloud.py", line 472 Configuration value u'provider' needs to be set
  - c7136cb Merge pull request #51738 from garethgreenaway/nftables_cleanup
    - 8201d1e Fixing lint.
    - d681064 Merge branch '2018.3' into nftables_cleanup
    - e37458e Fixing a couple tests.
    - ed1b743 Additional cleanup. Adding additional documentation for state module.
    - dc4afbb More updates to nftables module, state modules, and unit tests.
    - 3ec96c3 initial work to cleanup the nftables module, state module, and the unit tests.
  - 2121049 Merge pull request #51733 from s0undt3ch/features/nox-2018.3
    - 97532c2 Add initial nox configuration. Tell tox’ers to use nox’.
  - f4adf33 Merge pull request #51728 from gtmanfred/virtualnames
    - 61b4390 fix modulenames from virtualnames tests
  - d681fb9 Merge pull request #51721 from dwoz/solarisipstests
30.2. Previous Releases

- 3263d31 Merge remote-tracking branch ‘saltstack/2018.3’ into solarisipstests
  - fb0a538 Merge pull request #51676 from Ch3LL/merge-2018.3.4
    - 8111479 Merge branch '2018.3' into merge-2018.3.4
  - e08f08d Merge pull request #50812 from gtmanfred/virtualnames
    - d59952f Merge branch '2018.3' into virtualnames
    - 33bb5bf fix use of virtualname
    - 2ca1253 Merge branch 'merge-2018.3.4' of github.com:Ch3LL/salt into merge-2018.3.4
    - 6d6910a Merge branch '2018.3' into merge-2018.3.4
    - b5a6265 Fix ruby gems tests, again
    - 05f2797 Merge branch '2018.3' into merge-2018.3.4
    - 9f0999f Merge branch '2018.3' into merge-2018.3.4
    - 139daa8 Merge branch '2018.3.4' into 2018.3
    - 9741289 Merge pull request #51646 from dwoz/batch_exit_2018.3.4
    - a8f25bb increase batch test timeout on windows
    - 9caafec Skip solarisips when not on solaris
  - 31c6785 Merge pull request #51714 from dwoz/gemstestagain_2018.3
    - fab74bb Fix ruby gems tests, again
  - 39aaddb Merge pull request #51689 from gtmanfred/2018.3
    - 8c35d51 fix import
    - 6a55cfdf specify minimum version of shade module
  - a475b70 Merge pull request #51469 from s0undt3ch/hotfix/fix-suse-locale-docker
    - 14f49b5 Don't prevent get/locale from working when running under docker
  - a59585d Merge pull request #51671 from Ch3LL/merge-2018.3
    - 64322db Fix _windows utils call
    - a5c8df0 Fix pylint
    - 547889b Merge branch ’2017.7’ into ’2018.3’
      - bcc13db Merge pull request #51562 from gilbrechbuhler/fix_rabbitmq_policy_change_check
      - ed2b1e1 Fix RabbitMQ policy definition update check
      - cafaa98 Merge pull request #51648 from dwoz/increase_wait
      - e2377a9 Merge branch ’2017.7’ into increase_wait
      - e3d28d9 Merge pull request #51643 from dwoz/batch_exit
      - 42d1d02 increase batch test timeout on windows
      - 7c2d7a4 Increase minion wait for slow boxes
      - b5ae53a Merge pull request #51631 from Ch3LL/lint-2017
      - c0aa4dc Fix linter by ignoring async await check.
• 396622c Merge branch '2017.7' into lint-2017
• ba8d0ea Merge pull request #51547 from s0undt3ch/2017.7
• 8e009e0 Allow NOT to install pip dependencies
• 30ce509 Merge pull request #51182 from lmf-mx/darwin-plist-update
• 4297c0d Merge branch '2017.7' into darwin-plist-update
• 68ac07f Merge pull request #51442 from dwoz/multi_master
• 40cb4db Merge branch '2017.7' into multi_master
• 2dc5171 Hanlde multi_master failover when daemonized
• 8df083c Merge pull request #51608 from dwoz/wait_minions_2017.7
• c55359f fix linter
• 4702e22 Wait for minions to be pingable before starting tests
• 5afa0a1 Merge branch '2017.7' into darwin-plist-update
• 4f6e8be Fix service name in minion plist
• 1da9cd9 Fix pylint on 2017.7
• 39122ca Merge pull request #51589 from dwoz/script_fix_2017.7
• 8697ce7 Disable pylint checks, only for 2017.7
• e5972f5 Use the code directory instead of cwd for python path
  – b8764fd Merge pull request #51680 from Ch3LL/bp-50336
    • 3502dbb states.gpg: fix missing existing keys; modules.gpg: fix set trust level command
• PR #51734: (s0undt3ch) [2019.2] Add initial nox configuration. Tell tox'ers to use nox'. @ 2019-02-21 17:39:29 UTC
  – 1894082 Merge pull request #51734 from s0undt3ch/features/nox-2019.2
  – 01b74c0 Add initial nox configuration. Tell tox'ers to use nox'.
• PR #51707: (isbm) Bugfix: pillar refresh @ 2019-02-21 15:12:49 UTC
  – 74db589 Merge pull request #51707 from isbm/isbm-pillar-refresh-fix
  – 269ac76 Refresh matchers and beacons on pillar refresh
• PR #51674: (Ch3LL) [2019.2] Merge forward from 2018.3 to 2019.2 @ 2019-02-20 17:35:07 UTC
  – 82cbd98 Merge pull request #51674 from Ch3LL/merge-2019.2
  – 4171271 Fix pylint, remove unused import
  – 3f14619 Remove skipif and change expected return for solarisips test
  – d3660d5 Merge branch '2019.2' into merge-2019.2
• PR #51715: (dwoz) [2019.2] Fix ruby gems tests, again @ 2019-02-19 21:44:21 UTC
  – 7a82c65 Merge pull request #51715 from dwoz/gemstestagain_2019.2
  – 95ce288 Fix ruby gems tests, again
  – 043efa0 Skip solarisips when not on solaris
  – 7ed0d7d Fix ruby gems tests, again
- b46eac3 Merge branch '2019.2' into merge-2019.2

- **PR #51561**: (isbm) SaltSSH: fix delay when creating thin TAR @ 2019-02-19 10:15:47 UTC
  - 0bd2d6e Merge pull request #51561 from isbm/isbm-saltssh-thintar-delay-fix
  - 2b02975 Give up on sync for Py3 because of the way tests for py2 are written here
  - f79c81a Update UT mocking, adjusting for temporary file
  - 2f90054 Use temporary filename instead of output directly to the "thin.tgz"
  - d841164 Copy over the result, cleanup afterwards
  - c6792ee Add a function that reserves temporary filename for further tarball generation

- **PR #51678**: (Ch3LL) [2019.2] Merge forward from 2019.2.0.rc1 to 2019.2 @ 2019-02-17 19:02:33 UTC
  - 5f9764a Merge pull request #51678 from Ch3LL/merge-2019.2.0.rc
  - f8372ca Merge branch '2019.2' into merge-2019.2.0.rc

- **ISSUE #51503**: (garethhowell) smartos.image_present fails with "does not exist" (refs: #51383)

- **ISSUE #51351**: (garethhowell) Exception using smartos.vm_present to create docker zone (refs: #51383)

- **PR #51679**: (Ch3LL) Backport #51383 into 2019.2 @ 2019-02-16 00:31:06 UTC
  - **PR #51383**: (sjorge) imgadm module should deal with invalid images better (refs: #51679)
  - 2036ca8 Merge pull request #51679 from Ch3LL/bp-51383
  - e4971fc imgadm module should deal with invalid images better
  - 58f2407 Merge branch '2019.2.0.rc1' into 2019.2
    - 6292f86 Revert "Remove custom grains module from 2018.3 branch"
    - 92bd6b9 Fix salt.utils.is_windows call
    - ffa2f5f Merge branch '2018.3' into '2019.2'
    - a8898f6 Merge pull request #51635 from lomeroe/lgpo_boolean_element_fix
      - b97c2b2 Merge branch '2018.3' into lgpo_boolean_element_fix
      - 5a98f9b Merge branch '2018.3' into lgpo_boolean_element_fix
    - abd3760 Merge pull request #51610 from garethgreenaway/51266_schedule_enable_disable_break_save
      - fbacb35 Merge branch '2018.3' into 51266_schedule_enable_disable_break_save
    - 6765eea Merge pull request #51649 from dwoz/increase_wait_2018.3
      - 9e964ef Merge branch '2018.3' into increase_wait_2018.3
    - 852a6be Merge pull request #51644 from dwoz/batch_exit_2018.3
      - 1087d10 increase batch test timeout on windows
      - 918030e Increase minion wait for slow boxes
    - 3d52b26 Merge branch '2018.3' into 51266_schedule_enable_disable_break_save
    - dadf414 Merge pull request #51637 from twangboy/backport_50887_2018.3
      - d8d2b86 backport #50887
    - a55e8f6 Merge pull request #51626 from twangboy/fix_lgpo_2018.3
      - b2c9c3b Use makedirs instead of mkdir
Chapter 30. Release Notes

- 2be2f42 Merge branch '2018.3' into 51266_schedule_enable_disable_break_save
- 0f1a411 Merge pull request #51187 from menglong81/fix-broken-thing
  - 298ad5c Merge branch '2018.3' into fix-broken-thing
  - d879d18 fix broken network.py
  - 76770f3 ss commmand replace to netstat command
  - 241707e ss commmand replace to netstat command
  - deeefc7 Merge branch '2018.3' into 51266_schedule_enable_disable_break_save
- 7ed5189 Merge pull request #51613 from twangboy/fix_51566
  - 1206a94 Merge branch '2018.3' into fix_51566
- 8b06d06 Merge pull request #51630 from twangboy/add_tests_51534
  - ddc017c Merge branch '2018.3' into add_tests_51534
- c4bbe1a Merge pull request #51177 from nullify005/51069-ri-and-rdoc-removed
  - 6b1a201 Merge branch '2018.3' into 51069-ri-and-rdoc-removed
  - f339608 Merge branch '2018.3' into 51069-ri-and-rdoc-removed
  - e586370 Merge branch '2018.3' into 51069-ri-and-rdoc-removed
  - 13d3288 Fix lint issues
  - 5de5e64 Update tests
  - 22eda16 Fix lint violations
  - 2e6252c Support rubygems 3 cli param changes
  - 9e3a01b Use existing file instead of tzutil
  - 30c1832 Use tempfile to get temp dir
  - e3d3c5a Add tests for issue 51309
  - 1168141 Add test for explicit lists
  - 84f5d63 Merge branch '2018.3' into fix_51566
  - 7376cb9 Handle explicit lists properly
  - 28fc070 Merge branch '2018.3' into 51266_schedule_enable_disable_break_save
  - 0760133 adding integration.scheduler.test_helpers to various files to by pass the test_module_name_source_match check.
  - 1552fba lint cleanup
  - 086066b Adding a test to ensure _get_schedule which is used by the save functionality works when there is an enabled attribute.
  - 1c6d4fb When looping through the schedule to remove hidden attributes, we should only do that if the item in question is a dictionary. It could be the attribute that determines if the entire schedule is enabled or disable.
  - 5ed8eb6 Properly create the value for a "True" boolean element item
- f1e29c8 Merge pull request #51548 from s0undt3ch/2018.3
  - 611065e Merge branch '2018.3' into 2018.3
* 00a6246 Merge pull request #51622 from brejoc/2018.3-empty-job-workaround
  - d263410 Prevents crash when there is no job entry
  - 5342305 Allow NOT to install pip dependencies
* fdb13a3 Merge pull request #51523 from lomeroe/solarisips_fixes
  - e8e91e3 Merge branch '2018.3' into solarisips_fixes
  - b7bfe17 lint fixes
  - cdaccf4 add tests to validate command being sent to cmd.run_all
  - eaa229d add unit test
  - 432428d Don't assume that each item in "pkgs" is a dict (as packed by pkg.installed state).
* e3d5fbe Merge pull request #51577 from garethgreenaway/merge-2017.7
  - e060b97 Merge branch '2018.3' into merge-2017.7
  - 3eee038 Fixing a couple issues that did not merge properly.
  - 25b2ca6 Merge branch '2018.3' into merge-2017.7
  - c337fce Merge branch '2018.3' into merge-2017.7
  - f9d6828 Fixing missed merge.
  - a041775 Merge branch '2017.7' into merge-2017.7
  - 61889ba Merge pull request #51452 from terminalmage/bp-50963
  - 54d2e02 Merge branch '2017.7' into bp-50963
  - 0c989f0 Merge pull request #51437 from twangboy/fix_raise_2017.7
  - ecd1637 Merge branch '2017.7' into fix_raise_2017.7
  - f3c9cd4 Add missing raise statement
  - d06526c Allow for kwargs to be used in object initialization
  - 0e760b5 pip states: Use case-insensitive dictionaries for pip.list return
  - 5ca9f82 Add a CaseInsensitiveDict implementation
  - 2aaa9f9 pip.installed: Fix traceback when _find_key doesn't return a match
  - 67b7d28 Merge pull request #51370 from dwoz/setup_py_req_fix
  - e1e06a0 Fix python 3 path for shell test cases
  - 09cd5fc Merge branch '2017.7' into setup_py_req_fix
  - 0de189d Handle pipenv like version restrictions
  - e9b3d94 Merge pull request #51367 from dwoz/cloud_config_2017
  - 3f4c5ae Merge branch 'cloud_config_2017' of github.com:dwoz/salt into cloud_config_2017
  - 8bb8d41a Merge branch '2017.7' into cloud_config_2017
  - 7bb4ceb Fix python 3 path for shell test cases
  - a2bbf6d Fix linter issues
  - 004d9b8 Cloud provider and profile configs are merged
  - 3a21afa Coverage on windows chokes with the tox env var COVERAGE_PROCESS_START

30.2. Previous Releases
1c62e27 Switch required PyTest dependency
b80320d Merge pull request #51402 from dwoz/win_test_fix
21359e6 Merge branch '2017.7' into win_test_fix
1199530 Merge pull request #51397 from dwoz/gemtest
43ac36e Use gems.github.com no longer exists, use gemcutter.org
bac652f Add testing path to run_script commands
f511ad2 Merge pull request #51227 from astronouth7303/doc-modules-additional-globals
cbe1e17 Merge branch '2017.7' into doc-modules-additional-globals
2a9bf17 Merge pull request #51312 from s0undt3ch/features/tox-runtests
3840af8 "Tell" coverage to track subprocesses.
f67a529 Remove unused imports
15ab061 Show objects on assertion failure
0281fc5 Don't fail the test because of order
9a31be7 Don't call .keys() on dictionaries
97ced3a Add pytest-salt-from-filenames to pytest requirements
8d2c4d2 Remove duplicate dependency
5eecc4a Add .coveragerc
80a3826 Run tests from tox, wether runtests or pytest
1945c30 Document the client-defined dunders
5bb9b32 Merge pull request #51393 from garethgreenaway/various_documentation_fixes
8bb7535 Merge branch '2018.3' into various_documentation_fixes
c15406a Merge branch '2018.3' into various_documentation_fixes
33bb4e4 Merge branch '2018.3' into various_documentation_fixes
3582f6e Fixing the underline.
a8f42a0 Various documentation fixes.
884981f Merge pull request #51465 from ezh/50556
a3ee70c fix #50556 state.orchestrate_show_sls
231d6e2 Merge pull request #51541 from bdrung/silence-linux_distribution-deprecation-warning
c4feca1 Merge branch '2018.3' into silence-linux_distribution-deprecation-warning
e1dcb5 Silence linux_distribution deprecation warning
f87d5ec Merge pull request #51558 from bdrung/test-zypp-plugin
c34967d Merge branch '2018.3' into test-zypp-plugin
edb1093 Merge pull request #51609 from dwoz/wait_minions_2018.3
d794edf fix linter
d6720d2 Wait for minions to be pingable before starting tests
• 8d79359 Merge pull request #51599 from terminalmage/bp-51510
  - ed194c7 grains: assign os_family Debian to Debian derivative TurnKey Linux
• 24aa083 Merge pull request #51598 from terminalmage/add-grain-option-documentation
  - 4ee9440 Improve ec2 pillar documentation
  - 9c02104 Add link to metadata grain module docs
  - 997ce26 Add documentation for the metadata_server_grains config option
• d89e489 Merge pull request #51491 from terminalmage/issue51268
  - 550e9ab Don't log shell warning if output_loglevel is quiet
  - 7678c28 Do not load zyppnotify file on module import
• c6dfed Merge pull request #51588 from dwoz/script_fix_2018.3
  - cbac390 Use the code directory instead of cwd for python path
• PR #51658: (dwoz) [2019.2] Let memcopy make the null bytes, better py3 support @ 2019-02-15 05:42:37 UTC
  - PR #51586: (garethgreenaway) [2019.2] Merge forward from 2018.3 to 2019.2 (refs: #51658)
  - 1ea6f4b Merge pull request #51658 from dwoz/pip_test_fix
  - c811a70 Let memcopy make the null bytes, better py3 support
• PR #51650: (dwoz) [2019.2] Increase minion wait for slow boxes @ 2019-02-14 16:31:59 UTC
  - 22a04c1 Merge pull request #51650 from dwoz/increase_wait_2019.2
  - ad294f3 Merge branch '2019.2' into increase_wait_2019.2
• PR #51645: (dwoz) [2019.2] increase batch test timeout on windows @ 2019-02-14 16:29:26 UTC
  - a0982f7 Merge pull request #51645 from dwoz/batch_exit_2019.2
  - 1a882d7 Merge branch '2019.2' into batch_exit_2019.2
• PR #51586: (garethgreenaway) [2019.2] Merge forward from 2018.3 to 2019.2 (refs: #51586) @ 2019-02-14 16:25:29 UTC
  - 705a62d Merge pull request #51586 from garethgreenaway/merge-2018.3
  - 09fb3e7 Merge branch '2019.2' into merge-2018.3
  - 95c505a Merge branch '2019.2' into merge-2018.3
  - 4abd9d0 Merge branch '2019.2' into merge-2018.3
  - 6c99cb1 Merge branch '2018.3' into merge-2018.3
  - 41e25a6 Merge pull request #51580 from garethgreenaway/merge-2018.3.4
    - 84e15ce Fixing lint
    - e891b3f Merge branch '2018.3.4' into merge-2018.3.4
    - d0cad3e Merge pull request #51553 from twangboy/update_libsodium
    - 477f6a9 Update url to libsodium for mac builds
    - 564a65a Merge pull request #51544 from twangboy/fix_test_ssh_2018.3.4
    - 7771632 Fix ssh on Windows
    - b4299a3 Merge pull request #51532 from frogunder/new_releasenotes
1974 Chapter 30. Release Notes

09fa0b Merge branch '2018.3.4' into new_releasenotes

c6bfe53 2018.3.4 releasenotes

c37dbd7 Merge pull request #51534 from twangboy/fix_51309

3ad5b Convert data to string using salt util

5b41af3 Merge pull request #51530 from garethgreen-away/48204_mysql_module_handle_mariadb_versions

cdf5298 Later versions of MariaDB still support "ALL PRIVILEGES"

d31c902 Updating the mysql module to handle MariDB versions.

f3f345c Merge pull request #51529 from frogunder/releasenotes

fb678ee fix escaped asterisks

6a4f0da 2018.3.4 releasenotes

a37fb7d Merge pull request #51525 from twangboy/backport_51095_2018.3.4

b6acc92 Backport 51095

602dcd8 Merge pull request #51520 from frogunder/man_pages

0ce3f Update man pages for 2018.3.4

1f981c6 Merge pull request #51429 from yosnoop/replace-noclass-with-nocl-for-dig

5231e73 Merge branch '2018.3.4' into replace-noclass-with-nocl-for-dig

14e6b7 In case the test machine can't resolve

95e8a2f The +nocl is supported much wider than +noclass

a00d708 Test dig options for salt.utils.dns.lookup

209ef32 Merge pull request #51441 from Ch3LL/bp-51366

5bc466e Fix python 3 path for shell test cases

5351e5c Add testing path to run_script commands

2d8a364 Fix linter issues

9b8718a Cloud provider and profile configs are merged

90a8682 Merge pull request #51458 from twangboy/add_py2_warning

0552c0 Merge branch '2018.3.4' into add_py2_warning

b492021 Merge pull request #51460 from twangboy/update_installer_mac_2018.3.4

3c92688 Merge branch '2018.3.4' into update_installer_mac_2018.3.4

892d98c Merge pull request #51471 from twangboy/fix_test_win_dns_client

c9f6b01 Merge branch '2018.3.4' into fix_test_win_dns_client

a5505d Merge pull request #51462 from ShantonRU/fix-insecure-sql-queries-in-mysql-module-1

d3ef2cb Merge branch '2018.3.4' into fix-insecure-sql-queries-in-mysql-module-1

f47eda6 Fix improper use of socket authentication in mysql.user_chpass

ed62a2f Fix insecure SQL queries in mysql.user_chpass

33922e9 Fix the failing dns test on Windows
- 48936c2 Merge pull request #51445 from terminalmage/fix-custom-grains-traceback
- 191235d Remove custom grains module from 2018.3 branch
- 72fd1a2 Roll back icon change
- 7dd1704 Add welcome_py2.rtf
- c93e9e3 Add Py2 Warning to installer package
- b658900 Add Py2 Warning for Py2 Installer
- a880e42 Merge pull request #51438 from twangboy/fix_raise_2018.3.4
- 5830fad Add missing raise statement
- 28b898c Merge pull request #51432 from Ch3LL/bp-51324
- bd41ff0 Fixing various bits in x509 module and unit test to ensure tests are passing on python2 & python3
- 01717d2 Merge pull request #51377 from twangboy/fix_auditpol_2018.3.4
- 19e5181 Fix issue when directory doesn't exist
- 43a9d2f Merge pull request #51338 from Ch3LL/bp-51207
- 345ae67 Backport PR# 50771 to 2018.3 branch
- 3dcd11d Merge pull request #51337 from Ch3LL/bp-51170
- 4e85505 Merge branch '2018.3.4' into bp-51170
- 7656aa5 Merge pull request #51340 from Ch3LL/bp-51252
- e74a6c6 Fix py3 managed.file test failure
- 6f2c7cf Remove un-needed log statement
- 824950c Fix 50221 regression test on Windows
- 1840af9 Preserve newlines from pillar data for file.managed
- e90ca1d Merge pull request #51290 from s0undt3ch/hotfix/fix-network
- da3aace Merge branch '2018.3.4' into hotfix/fix-network
- 04f16b8 Fix tests. We no longer get ipaddress instances back.
- c3fa82a Fix minion start issue
- c893dc4 Fix saltmod roster test
- b61854f Roster defines the roster system not a file
- 484bab4 Fix linter
- 5e2db2f Honor roster file for ssh orchestrations
- c8db7e3 Merge pull request #51317 from terminalmage/fix-pr-50417
- 4be2891 Merge branch '2018.3.4' into fix-pr-50417
- e246db Merge pull request #51311 from twangboy/fix_test_file.test_managed
- f4177e0 Remove mode parameter on Windows
- 4c4ded3 Fix regression in dynamic pillarenv
- 40b20126 Merge pull request #51292 from Ch3LL/bp-51226
· aba114e Merge branch '2018.3.4' into bp-51226
· fc0bec5 Merge pull request #51295 from Ch3LL/bp-51279
· 5c4a7a4 Merge branch '2018.3.4' into bp-51279
· dacd1ea Merge pull request #51293 from Ch3LL/bp-51233-2
· a155fd7 Accounting for when permissions are not returned from file.check_perms, eg. windows systems.
· 53ba068 When test=True and there are permissions changes, report it.
· d2eba77 Remove network.py patch
· d431c71 Add __context__ support
· de6c13d Handle spaces in fstab opts, similar fix to #39593
· 1abfb2 Merge pull request #51278 from dwoz/issue51248
· c614198 Use pillar roots validation method
· 0d2b0c6 Fix linter warnings
· 5b98895 Fix wart in pillar_roots validation
* f7d50b1 Merge pull request #50784 from sathieu/dynamic_file_roots
  · 7ca2aa4 Allow dynamic file_roots
* 5e84oa5 Merge pull request #51527 from garethgreenaway/bp-51475
  · 801abf2 Fix Elasticsearch retuner
* 1f6da6a Merge pull request #50921 from terminalmage/issue49894
  · a35c023 Don’t use a decorator that assumes /etc/apt/sources.list.d exists
  · 6a62e79 Add integration test for architecture support
  · 67ae5a5 Add support for architectures for APT pkgrepo.managed states
* 3f17776 Actually, remove python-ldap. It needs system deps. Have salt-jenkins do it.
* afcb6bd Fix the ldap package name in requirements/tests.txt
* 588cb87 Merge pull request #51454 from terminalmage/fix-deprecation-warning
  · 529cce0 Fix deprecation warning in nested outputter
* 13de0b8 Merge pull request #50963 from terminalmage/issue50942
  · c84be3f Allow for kwargs to be used in object initialization
  · 2bf93fd pip states: Use case-insensitive dictionaries for pip.list return
  · 792f054 Add a CaseInsensitiveDict implementation
  · 1410164 pip.installed: Fix traceback when _find_key doesn’t return a match
* 60953b7 Merge pull request #51366 from dwoz/cloud_config_merge
  · ae351eb Fix python 3 path for shell test cases
  · 48062c8 Merge branch '2018.3' into cloud_config_merge
  · eeeea289 Add testing path to run_script commands
  · 542d857 Fix linter issues
a8af3ba Cloud provider and profile configs are merged

9ab2ec6 Coverage on windows choking with the tox env var

4994c38 Switch required PyTest dependency

89710a7 Merge pull request #51401 from dwoz/run_script_win
  - 77fd3f5 Add testing path to run_script commands

1438a62 Merge pull request #51389 from terminalmage/proxy-fixes
  - 3ecce85 Normalize results if test proxy is enabled

8acda9e Merge pull request #51368 from s0undt3ch/hotfix/tests
  - f4e1692 Fix test

ab60782 Merge pull request #51319 from terminalmage/issue51255
  - 04eb66b Merge branch '2018.3' into issue51255

fd2cf4 Merge pull request #51250 from yosnoop/fixed-salt-utils-dns-lookup
  - 0ddfad1 Merge branch '2018.3' into fixed-salt-utils-dns-lookup
  - 9fb4abe Merge branch '2018.3' into fixed-salt-utils-dns-lookup
  - 67e4131 Merge branch '2018.3' into fixed-salt-utils-dns-lookup
  - 9a34bcd Unit test for lookup with servers option
  - 9498fde Fix _lookup_host to make it work when server specified

af867e1 Remove excessive whitespaces
  - 0d074a4 Fix a comment
  - 1363d2b Proper way to specify _server_ to query with _host_
  - 7b2facb Fix broken lookup in salt/utils/dns.py

73528a5 Merge pull request #51339 from dwoz/aws_role_backport
  - 156f532 Backport aws role support

7908875 Merge pull request #51341 from Ch3LL/bp-51299
  - e3080f1 Add sleep before sending stop over UDP

326425c Merge pull request #51352 from garethgreenaway/fixing_service_beacon_documentation
  - 021fe85 Fixing the documentation for the service beacon. If no options are provided for the service then there needs to be an empty dictionary.

14a84e8 Merge pull request #51333 from Ch3LL/merge-2018.3
  - 27d7a89 Merge branch '2018.3' into merge-2018.3

31b921f Merge pull request #51304 from terminalmage/issue51270
  - 36673fb Merge branch '2018.3' into issue51270

2c3ae7f Merge pull request #51313 from s0undt3ch/features/tox-runtests-2018.3
  - 2eaf5c5 "Tell" coverage to track subprocesses.
  - f6baeb7 Remove unused imports
  - ff6824c Don't fail the test because of order
- 4d12ccb Show objects on assertion failure
- ee2f10a Add `pytest-salt-from-filenames` to pytest requirements
- 4f4d019 Remove duplicate dependency
- 1d4b9f5 Add `.coveragerc`
- 78c6d68 Run tests from tox, wether runtests or pytest
- c02757d gitfs: Fix use of deprecated pygit2 function
- ae62ebc Merge branch '2017.7' into '2018.3'
- 9309639 Merge pull request #51305 from s0undt3ch/2017.7
- 09b20df Add 2017.7 codecov config
- 4fa2a02 Merge pull request #51267 from ethframe/fix-file-directory
- c108825 Fix missing file error in file.directory.
- ad17ac5 Fix mocks to reflect changes to git.latest state
- c817213 Don’t try to run git.config_get_regexp from nonexistant cwd
- f8c3e44 git.latest: add auth to merge/reset calls when LFS used with SSH auth
- 4b11d6b increase batch test timeout on windows
- a5af9c5 Increase minion wait for slow boxes

**PR #51549:** (s0undt3ch) [2019.2] Allow NOT to install pip dependencies @ 2019-02-13 18:16:52 UTC
- e7ee04e Merge pull request #51549 from s0undt3ch/2019.2
- d2125aa Allow NOT to install pip dependencies

**PR #51595:** (mirceaulinic) Fix ipaddress imports @ 2019-02-13 17:33:08 UTC
- c96464b Merge pull request #51595 from mirceaulinic/mircea/port-824e0e5
- 91bcf4f Merge branch '2019.2' into mircea/port-824e0e5
- 84fc76d Fix ipaddress imports

**PR #51517:** (damianosSemmle) Fixed string format index out of range error @ 2019-02-13 08:18:38 UTC
- e3c9a3e Merge pull request #51517 from damianosSemmle/fixed-string-format-index
- c0959e2 Merge branch '2019.2' into fix-string-format-index

**PR #51581:** (garethgreenaway) [2019.2] Merge forward from 2019.2.0rc1 to 2019.2 @ 2019-02-13 04:11:15 UTC
- 8250bb Merge pull request #51581 from garethgreenaway/merge-2019.2.0rc1
- b00e7e8 Merge branch '2019.2' into merge-2019.2.0rc1

**PR #51607:** (dwoz) [2019.2] Wait for minions to be pingable before starting tests @ 2019-02-13 00:48:47 UTC
- edb5e94 Merge pull request #51607 from dwoz/wait_minions_2019.2
- ab0a6a3 fix linter
- f2e4a30 Wait for minions to be pingable before starting tests

**PR #51584:** (dwoz) [2019.2] Use the code directory instead of cwd for python path @ 2019-02-12 18:43:46 UTC
- 1e0275e Merge pull request #51584 from dwoz/script_fixes
- dbf4356 Use the code directory instead of cwd for python path
- cd24006 Merge branch '2019.2' into merge-2019.2.0rc1
- 6e55164 Merge branch '2019.2.0.rc1' into merge-2019.2.0rc1
  * ac73745 Merge branch '2019.2' into fix-string-format-index

- PR #51583: (dwoz) Add testing path to run_script commands @ 2019-02-11 21:38:51 UTC
  - f446c52 Merge pull request #51583 from dwoz/scriptfix
  - e49ba86 Add testing path to run_script commands
  - 788f7e0 Fixed string format index out of range error

- PR #51405: (aplanas) Documentation: fix typo in "equivalent" @ 2019-02-01 21:11:12 UTC
  - c3e27be Merge pull request #51405 from aplanas/backport_49669
  - 58279b4 Documentation: fix typo in "equivalent"

- PR #51406: (aplanas) states_pt3: fix rST link format @ 2019-02-01 21:10:43 UTC
  - 5c26652 Merge pull request #51406 from aplanas/backport_49670
  - 204432d Merge branch '2019.2' into backport_49670

- PR #51426: (aplanas) mount: cache blkid information @ 2019-02-01 21:09:51 UTC
  - fb70bd3 Merge pull request #51426 from aplanas/backport_51135
  - ac790a6 Merge branch '2019.2' into backport_51135
  - 66743d6 mount: cache blkid information

- PR #51425: (aplanas) cmdmod: add sysfs into the chroot @ 2019-02-01 21:09:00 UTC
  - 2e8bf05 Merge pull request #51425 from aplanas/backport_51094
  - 9193106 cmdmod: add sysfs into the chroot

- PR #51419: (aplanas) file: update attributes for lsattr and chattr @ 2019-02-01 21:04:54 UTC
  - d7a47f0 Merge pull request #51419 from aplanas/backport_50607
  - ab8a8b8 file: update attributes for lsattr and chattr

- PR #51414: (aplanas) service: SUSE is not based on sysvinit anymore @ 2019-02-01 21:02:33 UTC
  - 7e020dd Merge pull request #51414 from aplanas/backport_50396
  - b5cfe17 service: SUSE is not based on sysvinit anymore

- PR #51408: (aplanas) parted: fix the ordering of list command @ 2019-02-01 21:00:19 UTC
  - PR #50473: (aplanas) parted: support variable length output for print (refs: #51408)
  - PR #49804: (aplanas) parted: fix the ordering of list command (refs: #51408)
  - 9fb7dda Merge pull request #51408 from aplanas/backport_49804
  - 467da2f parted: support variable length output for print
  - da2e632 parted: fix the ordering of list command

- ISSUE #50097: (aplanas) lowpkg.diff refers to a package name, but a package file is required (refs: #51410)

- PR #51410: (aplanas) Fix lowpkg.diff documentation and parameter name @ 2019-02-01 20:57:50 UTC
  - 7e14499 Merge pull request #51410 from aplanas/backport_50126
  - d38622e Fix lowpkg.diff documentation and parameter name

30.2. Previous Releases

1979
- e61a077 states_pt3: fix rST link format
- **PR #51404** (aplanas) blockdev: fix url from comment @ 2019-01-30 20:05:54 UTC
  - a16461b Merge pull request #51404 from planas/backport_49668
  - da2e30d blockdev: fix url from comment
- **PR #51407** (aplanas) parted: fix _validate_partition_boundary @ 2019-01-30 20:05:02 UTC
  - 756c367 Merge pull request #51407 from planas/backport_49803
  - b004b33 parted: fix _validate_partition_boundary
- **PR #51435** (damianosSemmle) Fixed not raised exceptions @ 2019-01-30 18:32:57 UTC
  - 1d45664 Merge pull request #51435 from damianosSemmle/fix-raise-exception
  - 7a9ff59 Fixed not raised exceptions
- **PR #51336** (Ch3LL) [2019.2] Merge Forward from 2019.2.0.rc1 to 2019.2 @ 2019-01-27 23:55:08 UTC
  - d4b9093 Merge pull request #51336 from Ch3LL/merge-2019.2.0.rc1
  - 62a20b1 Remove unused import
  - 2284a5 Merge branch '2019.2' into merge-2019.2.0.rc1
  - 18bbf26 Merge branch '2019.2.0.rc1' into 2019.2
- **PR #51334** (Ch3LL) [2019.2] Merge forward from 2018.3 to 2019.2 @ 2019-01-27 23:49:32 UTC
  - 02b43a0 Merge pull request #51334 from Ch3LL/merge-2019.2
  - 25ec653 Merge branch '2018.3' into '2019.2'
    - f62cc11 Merge pull request #51324 from garethgreenaway/1257_something_something_bytes_argh_python2
      - bd7072f Merge branch '2018.3' into 1257_something_something_bytes_argh_python2
    - b44cd84 Merge pull request #51323 from garethgreenaway/network_dns_check_test
      - 055eadc Merge branch '2018.3' into network_dns_check_test
    - be57a0f Merge pull request #51321 from terminalmage/issue51256
      - d9c4462 Fix 500 error when using wheel_async
      - c847f54 Swap passed addr for string rather than ipaddress object.
      - 87f3972 removing another debugging log.
      - ad64efb Use MagicMock
      - 172ad2e removing debugging
      - 5812eae Adding a test to ensure dns_check works as expected.
      - 0e542c5 Fixing various bits in x509 module and unit test to ensure tests are passing on python2 & python3
    - 85e7ac6 Merge pull request #51306 from s0undt3ch/2018.3
      - 5f0f296 Add 2018.3 codecov config
    - 5a3983 Merge pull request #51207 from twangboy/fix_test_pkg
      - d4ab6d8 Merge branch '2018.3' into fix_test_pkg
    - 7a97cb4 Merge pull request #51252 from dwoz/issue-50221
* 8a89cb2 Merge pull request #51279 from twangboy/backport_lgpo
  
  * 6b1545 Remove network.py patch
  * 2356f25 Add __context__ support
  * a5255f0 Merge remote-tracking branch 'saltstack/2018.3' into issue-50221

* 6796e65 Merge pull request #51276 from garethgreenaway/merge-2018.3
  
  * 42ddc43 Merge branch '2018.3' into merge-2018.3

* 0adde9b Merge pull request #51220 from sathieu/artifactory-classifier-2018.3
  
  * a85f146 fixes #31179 by applying the same logic as used in the nexus module

* f6a7cad Merge pull request #51225 from astronouth7303/loader-docs-2018.3
  
  * e67da95 Add the tokens system.
  * 7e2838c Add reference to the execution module docs
  * f30f9e8 Remove search system
  * f0cc183 Fileserver modules can be loaded from the fileserver.

* 1a2f680 Merge pull request #51239 from garethgreenaway/51208_file_manage_escaped_double_quotes
  
  * 4251c0c Merge branch '2018.3' into 51208_file_manage_escaped_double_quotes
  * 6a9daa7 Merge branch '2018.3' into 51208_file_manage_escaped_double_quotes
  * 0bf468c Fixing lint. Using a constant instead of looking for the condition in the string.
  * a233dbc Ensuring we can handle a string that contains single quote + an escaped double quote.

* d614127 Merge pull request #51261 from OrangeDog/patch-2
  
  * d809b9b Avoid double-counting errors and ignore test runs
  * 6ca7deb Remove unused host parameter and average/disaster keys
  * 2d44527 Just let zabbix_sender use the config file
  * 6404e2c Fix fallback command so it's actually run
  * b79a55a Fix KeyError in Zabbix returner
  * 0971035 Merge branch '2018.3' into merge-2018.3
  * 243dc06 Merge branch '2017.7' into merge-2018.3
• acfb7d8 Update pytest requirements
• c19479b Move all of PyTest requirements to its own requirements file
• 39e633f Merge pull request #51246 from garethgreenaway/bp-50358
• c33c558 Backport #50358 to 2017.7
• c1ea10f Fix py3 managed.file test failure
• 5371114c Remove un-needed log statement
• ac978f0 Fix 50221 regression test on Windows
• 65f38b5 preserve newlines from pillar data for file.managed
• 464d813 Merge branch '2018.3' into fix_test_pkg
* 276d621 Merge pull request #51197 from Ch3LL/tag_manager
  • b9a0705 Merge branch '2018.3' into tag_manager
  • 210238b Merge branch '2018.3' into tag_manager
  • 827d6c3 Merge branch '2018.3' into tag_manager
  • fcdf69 Add Google Tag Manager to Docs
• c8e70a9 Merge pull request #51206 from terminalmage/fixed-reload
  • 8e23a6c Add missing import
  • 31ca7c6 Fix usage of reload for PY3 compatibility
* 41ae390 Merge pull request #51231 from terminalmage/issue51056
  • 4a61477 Clarify documentation for the use of the gitfs "all_saltenvs" config param
  • 0574476 Merge branch '2018.3' into fix_test_pkg
  • b91b2c6 Backport PR# 50771 to 2018.3 branch
• PR #51314: (s0undt3ch) [2019.2] Allow running runtests.py using tox @ 2019-01-25 18:56:01 UTC
  – 95607d1 Merge pull request #51314 from s0undt3ch/features/tox-runtests-2019.2
  – 39fb981 "Tell" coverage to track subprocesses.
  – f27589a Remove unused imports
  – 3000d20 Fix tests. We no longer get ipaddress instances back.
  – 8fcf235 Fix minion start issue
  – a26ba7f Don't fail the test because of order
  – 138ca2e Show objects on assertion failure
  – 840b3d2 Add pytest-salt-from-filenames to pytest requirements
  – 716bda4 Remove duplicate dependency
  – 6d62156 Add .coveragerc
  – 6bb56ce Run tests from tox, whether runtests or pytest
• PR #51307: (s0undt3ch) Add 2019.2 codecov config @ 2019-01-24 13:34:25 UTC
  – b348034 Merge pull request #51307 from s0undt3ch/2019.2
  – 495aa5c Add 2019.2 codecov config
• **PR #51280:** (garethgreenaway) [2019.2] Merge forward from 2019.2.0rc1 to 2019.2 @ 2019-01-23 07:08:32 UTC
  - d224096 Merge pull request #51280 from garethgreenaway/merge-2019.2-rc
  - e78ede2 Merge branch '2019.2' into merge-2019.2-rc
  - a425de6 Merge branch '2019.2.0.rc1' into merge-2019.2-rc

• **PR #51277:** (garethgreenaway) [2019.2] Merge forward from 2018.3 to 2019.2 @ 2019-01-23 07:01:29 UTC
  - 8596ee4 Merge pull request #51277 from garethgreenaway/merge-2019.2
  - f05e754 Merge branch '2019.2' into merge-2019.2

• **ISSUE #51273:** (isbm) How to properly fix API? (refs: #51285)

• **PR #51285:** (garethgreenaway) [2019.2] Add metadata to accepted keyword arguments @ 2019-01-22 23:07:44 UTC
  - 8cca51b Merge pull request #51285 from garethgreenaway/51273_metadata_auth_keyword_argument
  - bd82d80 Ensure metadata is an accepted keyword argument for authentication functions.
  - d0d5726 Merge branch '2018.3' into merge-2019.2
  - a6a9040 Merge pull request #51179 from terminalmage/fix-regex-chars
    - 9951b8d Fix possible oversight in nodegroup modifications
  - d5ac55b Merge pull request #51170 from dwoz/issue51158
    - b69c002 Fix saltmod roster test
    - 2594f24 Roster defines the roster system not a file
    - 05836b3 Merge branch '2018.3' into issue51158
    - bf47f6f Fix linter
    - 6223596 Honor roster file for ssh orchestrations
  - 5543a53 Update pytest requirements
  - f958df5 Move all of PyTest requirements to its own requiremnts file
  - 8f8ebbc Merge pull request #51226 from garethgreenaway/51195_handle_spaces_in fstab_opts
    - 1902ce8 Merge branch '2018.3' into 51195_handle_spaces_in fstab_opts
  - e3a9e99 Merge pull request #51233 from Ch3LL/bp-51105
    - eef49e8 Merge branch '2018.3' into bp-51105
  - e53e9b1 Merge pull request #51230 from Ch3LL/merge-2018.3
    - 0ef7675 Merge branch '2017.7' into '2018.3'
    - 4a12c5f Merge pull request #50852 from mirceaulinic/fix-capirca
      - fa91267 Merge branch '2017.7' into fix-capirca
      - 71913ff Merge branch '2017.7' into fix-capirca
      - 6fc3484 Lint?
      - 3d56750 Extra newline for lint
      - 5176cd8 Improve the Capirca and related modules for ACL config generation
    - 3f4759b Merge pull request #50923 from astronouth7303/patch-2
• 4f631a6 Document [% include %]
  • 210e817 Merge pull request #51111 from s0undt3ch/2017.7
    • 08e0ae7 Update to salt-bootstrap v2019.01.08
    • c3520aa Accounting for when permissions are not returned from file.check_perms, eg. windows systems.
    • cd80548 When test=True and there are permissions changes, report it.
    • 89345eb Handle spaces in fstab opts, similar fix to #39593
• ISSUE #50538: (sjorge) salt.modules.pdbedit broken on Samba 4.9.x (refs: #50540, #51221)
• PR #51221: (Ch3LL) Backport #50538 into 2019.2 @ 2019-01-18 22:42:36 UTC
  • PR #50540: (sjorge) Fix pdbedit module on samba 4.9 (Fixes #50538)
  • 0ccd5c3 Merge pull request #51221 from Ch3LL/bp-50540
  • 223e7c0 Merge branch '2019.2' into bp-50540
• PR #51232: (Ch3LL) [2019.2] Merge forward from 2018.3 to 2019.2 @ 2019-01-18 20:51:37 UTC
  • 3eda1f8 Merge pull request #51232 from Ch3LL/merge-2019.2
  • 3b966f3 Merge branch '2019.2' into merge-2019.2
  • ffe23fa Merge branch '2018.3' into '2019.2'
  • 26008ef Merge pull request #51212 from sathieu/file_roots_slash
    • b769f18 Allow slash in file_roots envs
    • f9437e2 Test for file_roots envs with slash leads to "No such file or directory"
  • 591e828 Merge pull request #51209 from garethgreenaway/bp-51124
    • 82acce4 Handle encoding when opening file for both py2/py3
  • 094bd33 Merge pull request #51184 from twangboy/fix_auditpol
    • 2e68d35 directly call cmd.run_all
• ac71922 Merge pull request #51191 from Ch3LL/bp-50918
  • 7300d84 Skip debian tests on Windows
  • 4622433 Fix test_debian_ip on Windows
• e7f53a3 Merge pull request #51144 from jgleissner/2018.3-azurearm-py3
  • 3178f1a msazure.py: remove unused imports
  • 99a4b9d azurearm: fix list_locations
  • aebe34b azurearm: fix show_instance function
  • d80669f msazure: fix object_to_dict for python 3
• 1206f92 Merge pull request #51171 from twangboy/fix_crypt
  • 6caaa93b Add random sleep time to avoid overloading Windows
• a96deed Merge pull request #51174 from jpsv/2018.3
  • 055823e Update opsgenie.py
  • 501c8df Merge branch '2018.3' into 2018.3
- 220aa8a Update opsgenie.py
- 5dc21cc Update to from V1 API to V2
- f93ce7c Update to V2 API
- 563d487 Merge pull request #51010 from amendlik/ldap-groups
  - cd336ed Merge branch '2018.3' into ldap-groups
  - 94f8ee4 Update unit tests for auth.ldap
  - 08e36d0 Allow unauthenticated bind for listing LDAP groups
- 6dc3752 Merge pull request #51112 from s0undt3ch/2018.3
  - 4f1d846 Update to salt-bootstrap v2019.01.08
- b19e990 Merge pull request #51097 from terminalmage/fix-keyerror-raise
  - a3c0b49 Fix poorly-written test
  - c0ff7b1 Fix more incorrect exception raises
  - f11dbcc Fix improper KeyError raise
- 8920a86 Merge pull request #51169 from twangboy/fix_git_state
  - f2d1180 More descriptive error when missing GitPython or PyGit2
- 58ee666 Merge pull request #51173 from dwoz/issue51160
  - 11cc7b3 Remove un-needed test
  - 0f87812 Merge develop, Revert exception handling
  - 73651a1a Pass bytes to idna
- 83c38c6 Revert "wordsmithing"
- a40739c wordsmithing
- b348ace Make sure blackout tests clean up after themselves. Properly.
- 68a12d5 These should not be considered destructive tests
- 475404d fix docstring quote style
- 71c3574 Revert "backport test improvements from develop"
- e32d219 backport test improvements from develop Bogus random test failures forklifted from develop at 414bfe61a4fbeb684be32242924f23c7126c24d6
- 42654d8 socket.connect needs a tuple TypeError
  http://docs.python.org/2/library/socket.html
  RTFD "Note This method has historically accepted a pair of parameters for AF_INET addresses instead of only a tuple. This was never intentional and is no longer available in Python 2.0 and later."
- 27254fc syntax error bad parentheses
- 24bb94f Don’t ip_bracket addresses returned by check_dns.
- 02b825e expose error in tests
- 0a92c46 Need more detail on test failure
- 3574698 ip_address does not need str() and parse_host_port handles ipv6 or ipv4
- 7a6bc57 avoid TypeError by not constructing an ip_address from an ip_address
- 35410dd try to debug error in tests (revert me)
- 2f8ca47 wordsmithing
- 1dd1f7d parsing logic error
- 9804c1 revert me minimize diff
- c92a247 don’t try to handle/log test exception
- eb60586 remove bad extra test assertion inside exception handler
- e1e5d87 checking for truthiness better than len
- a984a43 typo in ipaddress.IPv6Address()
- 5fc6c60 clear up lint, disambiguation
- 8c6dea lint pep8 whitespace
- f954b8 don’t test invalid combination
- de82f3d fix good_host_ports iteration
- c5a5b34 test assertion correction
- e169e0d fixup rebase merge goof
- d28bab6 fix test setup
- 42c710e lint pep8
- 15c6deb fix horrible mistakes
- c92baf fix indentation doh
- 9080745 debug ipaddress.ip_address TypeError
- 8bd82f4 debug ipaddress.ip_address TypeError
- 080ab70 fix parse_host_port() parse error on hostname only arg
- 571603c coverage for master host-port ipv4 and ipv6 config value support fix test_parse_host_port bad values lint
- f14f16 fix minion zmq connecting to master configured as IPv6 address
- 9d72f13 pylint E741 triggers error in salt-pylint E8741 (unhandled)
- 2052838 avoid error on (redundant) is_ip check
- 0eaeb1e avoid error on (redundant) is_ip check
- f8bd08e fix parse_host_port() is_ip call
- 89519fe fix parse_host_port() parse error on hostname only arg
- 1417528 fix parse_host_port() bad exception on hostname only arg
- 194a024 coverage for master host-port ipv4 and ipv6 config value support fix test_parse_host_port bad values lint
- df73388 fix minion zmq connecting to master configured as IPv6 address
- 06854cf Merge pull request #51147 from Ch3LL/merge-2018.3
  - d39d8b7 Merge branch `2018.3` into merge-2018.3
- b79c09e Merge pull request #51161 from amendlik/long-hostname
  - 6fccc4ad Merge branch `2018.3` into long-hostname
* 1424734 Merge pull request #51159 from rkiereger/fixed-issue-51067
  - 1440ccf Prevent crash by testing for 'manufacturer' in osdata on OpenBSD
  - 1a4e307 Ignore exceptions when generating the minion ID
* 5e37326 Merge pull request #51146 from terminalmage/fixed-vsphere-tuple-issue
  - 5d60022 Fix invalid assignment in vsphere module
* fad8621 Merge pull request #51154 from twangboy/auditpol
  - 9064376 Add support for Advanced Audit policies
* f7a100c Merge pull request #51151 from Ch3LL/bp_51061
  - ffdac27 When writing output to stdout we want to ensure that the data is a string not bytes.
    Under py2 the salt.utils.data.encode function results in a string but under py3 the result is a bytestring.
    Swapping out salt.utils.data.encode for salt.utils.stringutils.to_str.
* 3a50a57 Merge pull request #51150 from Ch3LL/bp-49508
  - 7ae53ad Do not silently ignore errors.
  - deb0134 Convert to string before sending via 'publish'.
  - 651c551 Use to_str salt.utils when writing to a file.
* 8bb589d Merge pull request #51152 from garethgreenaway/50433_handle_grants_better
  - f7ca4d Fixing lint
  - e8c8c0f Adding some tests to ensure "ALL PRIVILEGES" is handled correctly in 8.0 and 5.6
  - b4bdf9f Add additional grants. Adding logic to handle when ALL or ALL PRIVILEGES is passed for the grant, including some logic to handle the fact that the grants are split when show grants is run for a particular user.
  - 74edfd9 Fix pylint
  - 81a3d4f Merge branch '2017.7' into '2018.3'
  - 8a76a19 Merge pull request #50858 from jasonarewhy/bugfix-2017.7/ubuntu-networking-searchdomain
  - 3395a3d Merge branch '2017.7' into bugfix-2017.7/ubuntu-networking-searchdomain
  - 69d25aa update debian_ip test
  - a6b896c get searchdomain in Ubuntu 12+
* dda1ebb Merge pull request #51133 from SuperShoot/issue-#50849
  - ec14e13 Fixes mysql server version comparison.
* 9d4321d Merge pull request #50878 from max-arnold/output-docs
  - d7403da Fix profile outputter docs
* ce87504 Merge pull request #51076 from OrangeDog/patch-1
  - 568e4fb Revert add - check
  - 4d7be7c7 Typos in index_template_present documentation
* d08abf4 Merge pull request #51081 from garethgreenaway/merge-2018.3
  - 027804a Merge branch '2018.3' into merge-2018.3
* 335088b Merge pull request #51080 from garethgreenaway/50966_nxos Ensure kwarg list

30.2. Previous Releases

1987
• PR #51234: (KChandrashekhar) Added a note in Release notes about py 2.7 EOL @ 2019-01-18 15:53:51 UTC
  - e6ab913 Merge pull request #51234 from KChandrashekhar/2019.2-docs
  - e4af81 Addressing Megan’s comment to fix the py2.7 deprecation message in release notes
  - 8ec0296 Added a note in Release notes about py 2.7 EOL

• PR #51198: (Ch3LL) [2019.2] Merge forward from 2019.2.0.rc1 to 2019.2 @ 2019-01-17 21:23:34 UTC
  - 644ef8c Merge pull request #51198 from Ch3LL/merge-2019.2-rc
  - 810c611 Merge branch '2019.2.0.rc1' into 2019.2
  - 3f61e77 Fix pdbedit module on samba 4.9 (Fixes #50538)

• PR #51148: (Ch3LL) [2019.2] Merge forward from 2018.3 to 2019.2 @ 2019-01-14 22:49:02 UTC
  - 12901c3 Merge pull request #51148 from Ch3LL/merge-2019.2
  - 1d7329a Fix pylint
  - 5271636 Fixes mysql server version comparison.
  - b53f171 Ensure kwargs is a list before we attempt to loop through. Similar fix to https://github.com/rallytime/salt/commit/430c462f34eb4eedf2384e06fbee8dc19b8026f6 in the proxy module.
  - d0f2d15 Revert add -> check
  - 437d8b5 Typos in index_template_present documentation
  - 3bf189e Add unit test to ensure we don’t diff bare repos
  - 2f8e391 Fix profile outputter docs

• PR #51100: (dwoz) Fix typo in method name (2019.2) @ 2019-01-08 18:12:23 UTC
  - 4c2d76d Merge pull request #51100 from dwoz/cloud_typo
  - 60f53d0 Fix typo in method name

• PR #51099: (terminalmage) Fix improper exception raises (2019.2) @ 2019-01-08 17:55:53 UTC
  - 39b28f4 Merge pull request #51099 from terminalmage/fix-exception-raise
  - 2a25530 Fix improper exception raise

• PR #51084: (s0undt3ch) [fluorine] Cleanup the singleton instances map. @ 2019-01-07 22:03:29 UTC
  - 8827193 Merge pull request #51084 from s0undt3ch/merge-singleton-last-ref-close-fluorine
  - 979fbac Merge branch '2019.2' into merge-singleton-last-ref-close-fluorine
  - 63f051a Merge branch '2019.2' into merge-singleton-last-ref-close-fluorine
  - bd6c46d Cleanup the singleton instances map.
30.2.25 Salt 2019.2.2 Release Notes

Version 2019.2.2 is a bugfix release for 2019.2.0.

Statistics

- Total Merges: 26
- Total Issue References: 12
- Total PR References: 26
- Contributors: 13 (Akm0d, Ch3LL, Oloremo, OrlandoArcapix, bryceml, dhiltonp, dwoz, frogunder, gareth-greenaway, javierbertoli, pizzapanther, s0undt3ch, twangboy)

Changelog for v2019.2.1..v2019.2.2

Generated at: 2019-10-11 20:54:15 UTC

- PR #54919: (twangboy) Add missing docs for win_wusa state and module (2019.2.1) @ 2019-10-11 18:28:11 UTC
  - 7d253bc Merge pull request #54919 from twangboy/update_docs
  - 57ff199 Add docs for win_wusa

- ISSUE #54941: (UtahDave) Pillar data is refreshed for EVERY salt command in 2019.2.1 and 2019.2.2 (refs: #54942)

- PR #54942: (dwoz) Fix for 54941 pillar_refresh regression @ 2019-10-11 18:27:31 UTC
  - 2f817bc Merge pull request #54942 from dwoz/fix-54941
  - cb5d326 Add a test for 54941 using test.ping
  - 348d1c4 Add regression tests for issue 54941
  - 766f3ca Initial commit of a potential fix for 54941

- PR #54897: (bryceml) update version numbers to be correct @ 2019-10-05 01:59:14 UTC
  - f783108 Merge pull request #54897 from bryceml/2019.2.1_fix_docs
  - e9a2a70 update version numbers to be correct

- PR #54894: (bryceml) 2019.2.1 fix docs @ 2019-10-04 22:31:26 UTC
  - 3233663 Merge pull request #54894 from bryceml/2019.2.1_fix_docs
  - 2456aaa Porting PR #52948 to 2019.2.1
  - 94a1e3b Porting PR #52752 to 2019.2.1
  - c7b7474 modifying saltconf ads
  - d48057b add new saltconf ads

- PR #54858: (frogunder) remove in progress from releasenotes 2019.2.2 @ 2019-10-02 20:42:59 UTC
  - 4b06eca Merge pull request #54858 from frogunder/releasenotes_remove2019.2.2
  - a697abd remove in progress from releasenotes 2019.2.2

- PR #54854: (frogunder) releasenotes 2019.2.2 @ 2019-10-02 18:58:21 UTC
  - aaf2d1c Merge pull request #54854 from frogunder/release_notes_2019.2.2
• PR #54852: (frogunder) Update man pages for 2019.2.2 @ 2019-10-02 18:27:07 UTC
  - 10d433f Merge pull request #54852 from frogunder/man_pages_2019.2.2
  - 92bc4b2 Update man pages for 2019.2.2

• PR #54845: (s0undt3ch) Remove debug print @ 2019-10-02 17:38:21 UTC
  - 8ca6b20 Merge pull request #54845 from s0undt3ch/hotfix/event-return-fix-2019.2.1
  - 3937890 Remove debug print

• ISSUE #54755: (Reiner030) 2019.2.1/2019.2.0 pip failures even when not using pip (refs: #54826)

• PR #54826: (dwoz) Fix issue 54755 and add regression tests @ 2019-10-01 20:07:46 UTC
  - 9e3914a Merge pull request #54826 from dwoz/issue_54755
  - 0bad9cb Handle locals and globals separately
  - bcbe9a2 Only purge pip when needed
  - d2f98ca Fix issue 54755 and add regression tests

• PR #54830: (frogunder) Add known issues to 2019.2.1 release notes @ 2019-10-01 16:23:30 UTC
  - ba569d0 Merge pull request #54830 from frogunder/update_relasenotes_2019.2.1
  - 8cdb27b Update 2019.2.1.rst
  - 14f955c Add known issues to 2019.2.1 release notes

• ISSUE #54521: (Oloremo) [Regression] Failhard, batch and retcodes (refs: #54806)

• PR #54806: (Oloremo) [Regression] Batch with failhard fix @ 2019-10-01 14:51:47 UTC
  - 433b6fa Merge pull request #54806 from Oloremo/failhard-batch-fix-2019.2.1
  - 6684793 Merge branch '2019.2.1' into failhard-batch-fix-2019.2.1
  - 3e0e928 Added tests for cli and runner
  - 2416516 Made batch work properly with failhard in cli and runner

• ISSUE #54820: (OrangeDog) schedule.present not idempotent when scheduler disabled (refs: #54828)

• PR #54828: (garethgreenaway) [2019.2.1] Fix global disabling code in scheduler @ 2019-10-01 09:27:49 UTC
  - ed94aa5 Merge pull request #54828 from garethgreenaway/54820_fix_schedule_disabled_job_enabled_bug
  - be15a28 Rework code that handles individual jobs being disabled and scheduler being globally being disabled. Previously disabling the schedule would result in individual jobs being disabled when they were run through eval. This change does not change schedule items.

• PR #54778: (Akm0d) fix broken salt-cloud openstack query @ 2019-10-01 09:23:27 UTC
  - 435b40c Merge pull request #54778 from Akm0d/master_openstack_query_fix
  - ba4ba2a fixed pylint errors in openstack test
  - d9a8517 Added openstack tests for openstack --query fix
  - 59214ad Fallback to image id if we don't have an image name
  - 3a42a4d fixed pylint error
  - 0074d18 created unit tests for openstack
- 4255e3e Merge branch '2019.2.1' of https://github.com/saltstack/salt into HEAD
- 1c2821b Return a configured provider, not a bool
- c585550 fix broken salt-cloud openstack query

**ISSUE #54762**: (margau) 2019.2.1: Breaks Minion-Master Communication (refs: #54823, #54784, #54807)

**PR #54823**: (dhiltonp) ip_bracket can now accept ipv6 addresses with brackets @ 2019-10-01 01:13:34 UTC
  - 93b1c4d Merge pull request #54823 from dhiltonp/maybe-bracket
  - faa1d98 ip_bracket can now accept ipv6 addresses with brackets

**ISSUE #54762**: (margau) 2019.2.1: Breaks Minion-Master Communication (refs: #54823, #54784, #54807)

**PR #54807**: (dwoz) Fix pip state pip >=10.0 and <=18.0 @ 2019-09-30 09:20:14 UTC
  - PR #54772: (OrlandoArcapix) Fix import of pip modules (refs: #54807)
  - b61b30d Merge pull request #54807 from dwoz/patch-2
  - 664806b Add unit test for pip state fix
  - e637658 Revert change to pip version query
  - 42810a2 Fix import of pip modules

**ISSUE #54741**: (kjkeane) Schedulers Fail to Run (refs: #54799)

**PR #54799**: (garethgreenaway) Fix to scheduler when job without a time element is run with schedule.run_job @ 2019-09-30 00:19:43 UTC
  - 4ee1ff6 Merge pull request #54799 from garethgreenaway/54741_run_job_fails_without_time_element
  - 44caa81 Merge branch '54741_run_job_fails_without_time_element' of github.com:garethgreenaway/salt into 54741_run_job_fails_without_time_element
    * 3ae4f75 Merge branch '2019.2.1' into 54741_run_job_fails_without_time_element
  - 8afdd8 Fixing test_run_job test to ensure the right data is being asserted. Updating unit/test_module_names.py to include integration.scheduler.test_run_job.
  - 7d716d6 Fixing lint.
  - ec68591 If a scheduled job does not contains a time element parameter then running that job with schedule.run_job fails with a traceback because data['run'] does not exist.

**PR #54785**: (Ch3LL) Fix state.show_states when sls file missing in top file @ 2019-09-30 00:00:34 UTC
  - b90c3f2 Merge pull request #54785 from Ch3LL/fix_show_states
  - 96540be Clean up files after state.show_states test
  - ad265ae Fix state.show_states when sls file missing

**ISSUE #54768**: (paul-palmer) 2019.2.1 Some Jinja imports not found (refs: #54780)

**ISSUE #54765**: (awerner) 2019.2.1: Jinja from import broken (refs: #54780)

**PR #54780**: (dwoz) Fix masterless jinja imports @ 2019-09-29 22:12:48 UTC
  - b9459e6 Merge pull request #54780 from dwoz/fix-masterless-jinja-imports
  - 5d873cc Merge branch '2019.2.1' into fix-masterless-jinja-imports
  - e901a83 Add regression tests for jinja import bug
- 3925bb7 Fix broken jinja imports in masterless salt-call

- **ISSUE #54776**: (javierbertoli) Setting `ping_interval` in salt-minion’s config (version 2019.2.1) prevents it from starting (refs: #54777)

- **PR #54777**: (javierbertoli) Fix minion's remove_periodic_callback() @ 2019-09-29 21:33:53 UTC
  - 4c240e5 Merge pull request #54777 from netmanagers/2019.2.1
  - 459c790 Merge branch ‘2019.2.1’ into 2019.2.1

- **PR #54805**: (bryceml) improve lint job @ 2019-09-29 21:24:05 UTC
  - 83f8f5c Merge pull request #54805 from bryceml/2019.2.1_update_lint_salt
  - ffa4ed6 improve lint job
  - fa1a767 Merge branch ‘2019.2.1’ into 2019.2.1

- **ISSUE #54751**: (jnmatlock) NXOS_API Proxy Minions Error KeyError: ‘proxy.post_master_init’ after upgrading to 2019.2.1 (refs: #54783)

- **PR #54783**: (garethgreenaway) Ensure metaproxy directory is included in sdist @ 2019-09-29 02:17:23 UTC
  - 6b43fbc Merge pull request #54783 from garethgreenaway/54751_fixing_missing_metaproxy_directory
  - 67d9938 Merge branch ‘2019.2.1’ into 54751_fixing_missing_metaproxy_directory
  - a35e609 Adding __init__.py to metaproxy directory so that metaproxy is included when running setup.py.

- **ISSUE #54762**: (margau) 2019.2.1: Breaks Minion-Master Communication (refs: #54823, #54784, #54807)

- **PR #54784**: (dhiltonp) fix dns_check to return uri-compatible ipv6 addresses, add tests @ 2019-09-28 08:36:51 UTC
  - 7912b67 Merge pull request #54784 from dhiltonp/ipv46
  - 042a101 Merge branch ‘2019.2.1’ into ipv46

- **PR #54779**: (frogunder) Add 2019.2.2 release notes @ 2019-09-27 17:45:46 UTC
  - 2f94b44 Merge pull request #54779 from frogunder/releasenotes_2019.2.2
  - 67f564b Add 2019.2.2 release notes
  - ac6b54f Merge branch ‘2019.2.1’ into ipv46
  - 93ebd09 update mock (py2) from 2.0.0 to 3.0.5
  - 37bcc4c fix dns_check to return uri-compatible ipv6 addresses, add tests
    - dd86c46 Merge pull request #1 from waynew/pull/54777-callback-typo
      - a57f7d0 Add tests
    - c19d0b0 Fix minion’s remove_periodic_callback()

- **PR #54731**: (pizzapanther) Fix returners not loading properly @ 2019-09-26 17:24:27 UTC
  - 46bcb3c Merge pull request #54731 from pizzapanther/not-so-__new__-and-shiny
  - bdf24f4 Make sure we tests salt-master’s `event_return` setting
  - 5499518 remove unnecessary import
  - 3f8a382 fix module import
  - 0746aa7 remove __new__ method since it was removed from parent class
30.2.26 Salt 2019.2.3 Release Notes

Version 2019.2.3 is a CVE-fix release for 2019.2.0.

Security Fix

CVE-2019-17361

With the Salt NetAPI enabled in addition to having a SSH roster defined, unauthenticated access is possible when specifying the client as SSH. Additionally, when the raw_shell option is specified any arbitrary command may be run on the Salt master when specifying SSH options.

30.2.27 Salt 2019.2.4 Release Notes

Version 2019.2.4 is a CVE-fix release for 2019.2.0.

Security Fix

CVE-2020-11651

An issue was discovered in SaltStack Salt before 2019.2.4 and 3000 before 3000.2. The salt-master process ClearFuncs class does not properly validate method calls. This allows a remote user to access some methods without authentication. These methods can be used to retrieve user tokens from the salt master and/or run arbitrary commands on salt minions.

CVE-2020-11652

An issue was discovered in SaltStack Salt before 2019.2.4 and 3000 before 3000.2. The salt-master process ClearFuncs class allows access to some methods that improperly sanitize paths. These methods allow arbitrary directory access to authenticated users.

Known Issue

Part of the fix for CVE-2020-11651 added better validation of the methods allowed to be called by remote clients. Both AESFuncs and ClearFuncs now have an explicit list of methods that can be called. The name of one of these whitelisted methods on AESFuncs had a typo. The _minion_runner method should be minion_runner (without the underscore prefix). This typo breaks the publish module’s runner method. Calling runners, for example:

```
salt minion publish.runner manage.down
```

Will not work, and you will receive an empty reply from the salt master.

This will be addressed in the 3001 release of Salt set for mid-June 2020.
30.2.28 Salt 2019.2.5 Release Notes

Version 2019.2.5 is a bug-fix release for 2019.2.0.

Statistics

- Total Merges: 2
- Total Issue References: 2
- Total PR References: 2
- Contributors: 2 (dwoz, frogunder)

Changelog for v2019.2.4..v2019.2.5

Generated at: 2020-05-05 22:43:12 UTC

- PR #57096: (frogunder) Update man_pages 2019.2.5 @ 2020-05-05 22:10:46 UTC
  - 6877b7259a Merge pull request #57096 from frogunder/man_pages_2019.2.5
  - 58ea351a59 Update man_pages 2019.2.5

- ISSUE #57027: (ecarson) [BUG] Master running 2019.2.4 or 3000.2 unable to synchronize files using saltutil.sync_all to 2017.7.1 minion due to CVE fix (refs: #57090)

- ISSUE #57016: (idontwanttosignin) [BUG] Requested method not exposed: minion_runner (refs: #57090)

- PR #57090: (dwoz) Address Issues in CVE Release @ 2020-05-05 22:09:25 UTC
  - 8fe0f66f94 Merge pull request #57090 from dwoz/bugs_n_stuff
  - f3e8590bac Describe SEPs
  - aa1a9d340d Update hardening doc to mention 4505/4506
  - ca303f7c0c Add link to salt-announce to documentation
  - c63253ef9c Address issues in cve release

30.2.29 Salt 2019.2.6 Release Notes

Version 2019.2.6 is a CVE fix release for 2019.2.0.

Fixed

- Prevent shell injections in netapi ssh client (cve-2020-16846)
- Prevent creating world readable private keys with the tls execution module. (cve-2020-17490)
30.2.30 Salt 2019.2.7 Release Notes

Version 2019.2.7 is a CVE fix release for 2019.2.0.

Fixed

- Properly validate eauth credentials and tokens along with their ACLs. Prior to this change eauth was not properly validated when calling Salt ssh via the salt-api. Any value for 'eauth' or 'token' would allow a user to bypass authentication and make calls to Salt ssh. (CVE-2020-25592)

30.2.31 Salt 2019.2.8 Release Notes

Version 2019.2.8 is a bugfix release for 2019.2.0.

Fixed

- Fixes salt-ssh authentication when using tty (#58922)

30.2.32 Salt 2018.3.0 Release Notes - Codename Oxygen

**Warning**: If you are using Jinja to dump lists or dictionaries in your SLS files, this will now cause errors in Python 2 since Jinja does not produce YAML-compatible output when strings in the data structures contain unicode types. The dictionary must be passed through a Jinja filter to produce YAML-compatible strings.

The below is an example of invalid SLS:

```plaintext
/etc/foo.conf:
  file.mangaged:
    - source: salt://foo.conf
    - template: jinja
    - defaults: {{ mydict }}
```

To make it valid, use either one of Salt's own json or yaml filters:

```plaintext
/etc/foo.conf:
  file.mangaged:
    - source: salt://foo.conf
    - template: jinja
    - defaults: {{ mydict | json }}
```

**Unicode/Python 3 Compatibility Improvements**

This release fixes a number of nagging issues with Unicode strings in Salt under Python 2 (ex. 'ascii' codec can't decode byte 0xd0). For best results, use a UTF-8 locale (such as by setting the LANG environment variable to one which supports UTF-8. For example en_US.UTF-8, de_DE.UTF-8, ru_RU.UTF-8, C.UTF-8). Additionally, a number of Python 3 compatibility fixes have been made, many of them having to do with file I/O and str/bytes mismatches.

We continue to work toward improving both Unicode and Python 3 compatibility and welcome any feedback.
Lots of Docker Improvements

Much Improved Support for Docker Networking

The `docker_network.present` state has undergone a full rewrite, which includes the following improvements:

Full API Support for Network Management

The improvements made to input handling in the `docker_container.running` state for 2017.7.0 have now been expanded to `docker_network.present`. This brings with it full support for all tunable configuration arguments.

Custom Subnets

Custom subnets can now be configured. Both IPv4 and mixed IPv4/IPv6 networks are supported. See here for more information.

Network Configuration in `docker_container.running` States

A long-requested feature has finally been added! It is now possible to configure static IPv4/IPv6 addresses, as well as links and labels. See here for more information.

Note: While the `containers` argument to `docker_network.present` will continue to be supported, it will no longer be the recommended way of ensuring that a container is attached to a network.

Improved Handling of Images from Custom Registries

Rather than attempting to parse the tag from the passed image name, Salt will now resolve that tag down to an image ID and use that ID instead.

Important: Due to this change, there are some backward-incompatible changes to image management. See below for a full list of these changes.

Backward-incompatible Changes to Docker Image Management

Passing image names to the following functions must now be done using separate `repository` and `tag` arguments:

- `docker.build`
- `docker.commit`
- `docker.import`
- `docker.load`
- `docker.tag`
Additionally, the `tag` argument must now be explicitly passed to the `docker_image.present` state, unless the image is being pulled from a docker registry.

**State and Execution Module Support for `docker run` Functionality**

The `docker_container.running` state is good for containers which run services, but it is not as useful for cases in which the container only needs to run once. The `start` argument to `docker_container.running` can be set to `False` to prevent the container from being started again on a subsequent run, but for many use cases this is not sufficient. Therefore, the `docker.run_container` remote-execution function was added. When used on the Salt CLI, it will return information about the container, such as its name, ID, exit code, and any output it produces.

State support has also been added via the `docker_container.run` state. This state is modeled after the `cmd.run` state, and includes arguments like `onlyif`, `unless`, and `creates` to control whether or not the container is run.

**Full API Support for `docker.logs`**

This function now supports all of the functions that its Docker API counterpart does, allowing you to do things like include timestamps, and also suppress stdout/stderr, etc. in the return.

**`start` Argument Added to `docker.create` Function**

This removes the need to run `docker.start` separately when creating containers on the Salt CLI.

```
salt myminion docker.create image=fedora:24 command=/path/to/command start=True
```

**Use SaltSSH Minions like regular Master-Minions**

The Master process can now also call SSH minions as if they were connected to the master using ZeroMQ. By setting `enable_ssh_minions: True` in the master config file, the master will create a Salt SSH client process which connects to the minion and returns the output for the `salt` CLI to use like a regular minion. This can be used anywhere the LocalClient is used.

**Exceptions Raised for Authentication/Authorization Errors**

When sending `publish` commands via `master.py` and `masterapi.py` and an authorization or authentication problem is encountered, Salt will now raise the appropriate exceptions instead of returning an empty string: `''.

The reasoning behind this change is to make it easier to debug various scenarios surrounding authentication and authorization issues more effectively.
Comparison Operators in Package Installation

Salt now supports using comparison operators (e.g. \texttt{>=1.2.3}) when installing packages on minions which use \texttt{yum/dnf} or \texttt{apt}. This is supported both in the \texttt{pkg.installed} state and in the \texttt{pkg.install} remote execution function.

Master Tops Changes

When both \texttt{Master Tops} and a \texttt{Top File} produce SLS matches for a given minion, the matches were being merged in an unpredictable manner which did not preserve ordering. This has been changed. The top file matches now execute in the expected order, followed by any master tops matches that are not matched via a top file.

To make master tops matches execute first, followed by top file matches, set the new \texttt{master_tops_first} minion config option to \texttt{True}.

Several Jinja Filters Renamed

The following Jinja filters (originally added in 2017.7.0) have been renamed due to the fact that they were inaccurately named when initially added. The original names will be supported until the 3000 release of Salt.

- \texttt{rand_str} renamed to \texttt{random_hash}
- \texttt{jinja_decode_dict} renamed to \texttt{jinja_encode_dict}
- \texttt{jinja_decode_list} renamed to \texttt{jinja_encode_list}

Return Codes for Runner/Wheel Functions

When using \texttt{orchestration}, runner and wheel functions used to report a \texttt{True} result if the function ran to completion without raising an exception. It is now possible to set a return code in the \texttt{__context__} dictionary, allowing runner and wheel functions to report that they failed. Here's some example pseudocode:

```python
def myrunner():
    ...
    # do stuff
    ...
    if some_error_condition:
        __context__["retcode"] = 1
    return result
```

Variable Update Intervals for Fileserver Backends

Prior to this release, fileservers would be updated as part of a dedicated "maintenance" process, in which various routine maintenance tasks were performed. This tied the update interval to the \texttt{loop_interval} config option, and also forced all fileservers to update at the same interval.

2018.3.0 adds the following configuration options for the various fileserver backends:

- \texttt{roots_update_interval}
- \texttt{azurefs_update_interval}
- \texttt{gitfs_update_interval}
- \texttt{hgfs_update_interval}
• `minionfs_update_interval`
• `s3fs_update_interval`
• `svnfs_update_interval`

These allow for update intervals to be set for each individual backend. The default value for each of these is 60 seconds.

In addition, for `GitFS` it is also possible to apply intervals to individual remotes. See [here](#) for examples.

**Note:** `git_pillar` does not yet support variable update intervals, this is targeted for the next feature release (2019.2.0).

**LDAP via External Authentication Changes**

In this release of Salt, if LDAP Bind Credentials are supplied, then these credentials will be used for all LDAP access except the first authentication when a job is submitted. The first authentication will use the user’s credentials as passed on the CLI. This behavior is to accommodate certain two-factor authentication schemes where the authentication token can only be used once.

In previous releases the bind credentials would only be used to determine the LDAP user’s existence and group membership. The user’s LDAP credentials were used from then on.

**Stormpath External Authentication Removed**

Per Stormpath’s announcement, their API will be shutting down on 8/17/2017 at noon PST so the Stormpath external authentication module has been removed.

https://stormpath.com/oktaplusstormpath

**New (Proxy) Minion Configuration Options**

To be able to connect the Minion to the Master using a certain source IP address or port, the following options have been added:

• `source_interface_name`
• `source_address`
• `source_ret_port`
• `source_publish_port`

**environment** config option renamed to **saltenv**

The `environment` config option predates referring to a salt fileserver environment as a `saltenv`. To pin a minion to a single environment for running states, one would use `environment`, but overriding that environment would be done with the `saltenv` argument. For consistency, `environment` is now simply referred to as `saltenv`. There are no plans to deprecate or remove `environment`, if used it will log a warning and its value will be used as `saltenv`. 

---

30.2. Previous Releases
lock_saltenv config option added

If set to True, this option will prevent a minion from allowing the saltenv argument to override the value set in saltenv when running states.

Failed Minions for State/Function Orchestration Jobs Added to Changes Dictionary

For orchestration jobs which run states (or run remote execution functions and also use a fail function to indicate success or failure), minions which have False results were previously included as a formatted string in the comment field of the return for that orchestration job. This made the failed returns difficult to parse programatically. The failed returns in these cases are now included in the changes dictionary, making for much easier parsing.

Grains

- fc_wwn - Show all fibre channel world wide port names for a host, must be enabled with fibre_channel_grains
- iscsi_iqn - Show the iSCSI IQN name for a host
- swap_total - Show the configured swap_total for Linux, *BSD, OS X and Solaris/SunOS
- virtual:
  - identifies reports KVM and VMM hypervisors when running an OpenBSD guest
  - for detecting Solaris Logical Domains (LODMs) running on T-Series SPARC hardware. The virtual_subtype grain is populated as a list of domain roles.

Salt Minion Auto-discovery

Using auto-discovery, the Salt Minion now no longer needs to be configured against a specific DNS name or IP address of a Master.

For this feature Salt Master now requires port 4520 for UDP broadcast packets to be opened and the Salt Minion be able to send UDP packets to the same port.

Configuration

By default, automatic discovery is disabled.

**Warning:** Due to the current limitations that will be changing in a future release, before you turn on auto-discovery, make sure your network is secured and trusted.

Auto-discovery is configured on Master and Minion. Both of them are configured via the discovery option as follows:

**Master configuration**

To use the default configuration, which accepts any minion, simply set discovery to True:

```
discovery: true
```

A sub-option called mapping allows auto-discovery to help find the proper Master. The mapping contains an arbitrary set of key/value pairs, which the Minion configuration can target. By default, no mappings are set.

Example:
It is also possible to change the port used from the default of 4520, by setting a `port` option under the Master's `discovery` configuration:

```yaml
discovery:
  port: 4567
```

Note: When using a port number other than the default, the Minion's `discovery` configuration must also have a port specified, otherwise the Minion will still attempt to contact the Master on port 4520.

Minion configuration

In addition to the `mapping` and `port` options, the following additional options are available to Minions:

- **attempts** - This option specifies how many broadcast requests should be sent to the network, waiting for any Master response. Each attempt takes a couple of seconds, so raising this value may result in a slower Minion startup. Note that, on a properly-configured network, autodiscovery should succeed on the first attempt. By default, this value is set to 3.
- **match** - This option can be set to either `all` or `any`, and it determines how the values configured in `mapping` are matched. If set to `all`, then all of the key/value pairs in the Minion's `mapping` must match a given Master. If set to `any` (the default), then any match to a key/value mapping will constitute a match.
- **pause** - The interval in seconds between attempts (default: 5).
- **fibre_channel_grains** - Enables the `fc_wwn` grain. (Default: False)
- **iscsi_grains** - Enables the `iscsi_iqn` grain. (Default: False)

Connection to a type instead of DNS

By now each Minion was connecting to a Master by DNS or IP address. From now on it is possible also to connect to a _type_ of a Master. For example, in a network there are three different Masters, each corresponds for a particular niche or environment or specific role etc. The Minion is supposed to connect only to one of those Masters that is described appropriately.

To achieve such an effect, each `/etc/salt/master` configuration should have a `discovery` option, which should have a `mapping` element with arbitrary key/value pairs. The same configuration should be on the Minion, so then when mapping matches, Minion recognises Master as its connection target.

Example for Master configuration (/etc/salt/master):

```yaml
discovery:
  mapping:
    description: SES 5.0
    node: 1
```

The example above describes a system that is running a particular product, where `description` is an arbitrary key and `SES 5.0` is just a string. In order to match exactly this Master, the following configuration at Minion should be present:
discovery:
  match: all  # Can be "all" or "any"
  mapping:
    description: SES 5.0
    node: 1

Notice match criteria is set to all. This would mean that from all found Masters select only that, which description is set to SES 5.0 and node is set to 1. All other Masters will be ignored.

Limitations

This feature has a couple of _temporary_ limitations that are subject to change in the future:

- Only one Master on the network is supported. Currently the Minion cannot select which Master out of few the same to choose. This will change to choosing the Master that is least loaded.
- Minions will accept _any_ master that matches connection criteria without any particular security applied (priv/pub key check, signature, fingerprint etc). That implies that administrator is expected to know his network and make sure it is clean.

New Modules

- salt.modules.purefa

New NaCl Renderer

A new renderer has been added for encrypted data.

New support for Cisco UCS Chassis

The salt proxy minion now allows for control of Cisco USC chassis. See the cimc modules for details.

New support for Cassandra v3

The cassandra_cql module now supports Cassandra v3 which has changed its internal schema to define keystaces and columns.

New salt-ssh roster

A new roster has been added that allows users to pull in a list of hosts for salt-ssh targeting from a ~/.ssh configuration. For full details, please see the sshconfig roster.
New GitFS Features

Two new features which affect how GitFS maps branches/tags to fileserver environments (i.e. saltenvs) have been added:

1. It is now possible to completely turn off Salt's default mapping logic (aside from the mapping of the base saltenv). This can be triggered using the new `gitfs_disable_saltenv_mapping` config option.

   **Note:** When this is disabled, only the base saltenv and any configured using `per-saltenv configuration parameters` will be available.

2. The types of refs which Salt will use as saltenvs can now be controlled. In previous releases, branches and tags were both mapped as environments, and individual commit SHAs could be specified as saltenvs in states (and when caching files using `cp.cache_file`). Using the new `gitfs_ref_types` config option, the types of refs which are used as saltenvs can be restricted. This makes it possible to ignore all tags and use branches only, and also to keep SHAs from being made available as saltenvs.

Additional output modes

The `state_output` parameter now supports `full_id`, `changes_id` and `terse_id`. Just like `mixed_id`, these use the state ID as name in the highstate output. For more information on these output modes, see the docs for the Highstate Outputter.

Windows

Python Version

Python 2 Windows API was design when Windows did not support Unicode. Windows now supports Unicode however to keep backwards compatibility Python 2 Windows API has not been changed. Python 3 Windows API supports Unicode. Salt Python 3 installer is the recommend choice for users who need characters other than Non-ASCII (7bit) characters.

pkg Execution module changes

Significant changes have been made to the `win_pkg` execution module. Users should test this release against their existing package sls definition files. These changes are also in 2016.11.9 & 2017.7.3.

- `pkg.list_available` no longer defaults to refreshing the winrepo meta database.
- `pkg.install` without a `version` parameter no longer upgrades software if the software is already installed. Use `pkg.install version=latest` or in a state use `pkg.latest` to get the old behavior.
- `pkg.list_pkgs` now returns multiple versions if software installed more than once.
- `pkg.list_pkgs` now returns 'Not Found' when the version is not found instead of '{value not set}' which matches the contents of the sls definitions.
- `pkg.remove()` will wait up to 3 seconds (normally about a second) to detect changes in the registry after removing software, improving reporting of version changes.
- `pkg.remove()` can remove `latest` software, if `latest` is defined in sls definition.
- Documentation was update for the execution module to match the style in new versions, some corrections as well.

30.2. Previous Releases
All install/remove commands are prefix with cmd.exe shell and cmdmod is called with a command line string instead of a list. Some sls files in saltstack/salt-winrepo-ng expected the commands to be prefixed with cmd.exe (i.e. the use of &).

Some execution module functions results, now behave more like their Unix/Linux versions.

**Installer**

**Changes to config handling**

Behavior with existing configuration has changed. With previous windows installers the existing config was used and the master and minion id could be modified via the installer. It was problematic in that it didn't account for configuration that may be defined in the minion.d directory. This change gives you the option via a drop-down list to use one of the following:

- Default Config: Use the config that comes with the installer
- Existing Config: Use the current config without changes
- Custom Config: Select a custom config using the file picker

The existing config option will only be available if the installer detects an existing config. If there is an existing config, and you choose Default or Custom, the existing config will be deleted, including the minion.d directory, and replaced by your selection.

The Default Config and Custom Config options will allow you to modify the Master and the Minion ID. Existing Config will leave the existing configuration unchanged.

These settings can be defined on the command line using the following switches:

- /default-config
- /custom-config=C:\Path\To\Custom\Config\minion

If neither option is passed and there is an existing config, the default is to use the existing config. If there is no existing config (new install) the default config will be used.

**Multi-master configuration**

The installer now has the ability to apply a multi-master configuration either from the GUI or the command line. The master field in the GUI can accept either a single master or a comma-separated list of masters. The command-line switch (/master=) can accept the same.

**Command-line help**

The Windows installer will now display command-line help when a help switch (/?) is passed.
New utils module `salt.utils.pkg.win`  

A new utils module has been added, which gathers information about windows installed software. This is currently not used by any salt execution module or state at this time. Users are encouraged to run this and report any issues. Running the command with the `detail` option will be useful for anyone developing windows package definitions. With salt installed in the default location the following command will print the help message.

```
chcp 65001
\c:\salt\bin\python.exe \c:\salt\bin\lib\site-packages\salt\utils\pkg\win.py
c:\salt\bin\python.exe c:\salt\bin\lib\site-packages\salt\utils\pkg\win.py detail
```

Salt Cloud Features

OpenStack Revamp

The OpenStack Driver has been rewritten mostly from scratch. Salt is now using the `shade` driver <https://docs.openstack.org/shade/latest/>.

With this, the `nova` driver is being deprecated.

Openstack driver

There have also been several new modules and states added for managing OpenStack setups using shade as well.

```bash
keystone keystone role grant keystone group keystone role keystone service
keystone user keystone domain keystone project keystone endpoint glance
glance_image neutron neutron subnet neutron secgroup neutron secgroup rule
neutron network
```

Pre-Flight Commands

Support has been added for specified "preflight commands" to run on a VM before the deploy script is run. These must be defined as a list in a cloud configuration file. For example:

```
my-cloud-profile:
  provider: linode-config
  image: Ubuntu 16.04 LTS
  size: Linode 2048
  preflight_cmds:
    - whoami
    - echo 'hello world!'
```

These commands will run in sequence before the bootstrap script is executed.
New salt-cloud Grains

When salt-cloud creates a new minion, it will now add grain information to the minion configuration file, identifying the resources originally used to create it.

The generated grain information will appear similar to:

```yaml
grains:
salt-cloud:
  driver: ec2
  provider: my_ec2:ec2
  profile: ec2-web
```

The generation of salt-cloud grains can be suppressed by the option `enable_cloud_grains: 'False'` in the cloud configuration file.

Upgraded Saltify Driver

The salt-cloud Saltify driver is used to provision machines which are not controlled by a dedicated cloud supervisor (such as typical hardware machines) by pushing a salt-bootstrap command to them and accepting them on the salt master. Creation of a node has been its only function and no other salt-cloud commands were implemented.

With this upgrade, it can use the salt-api to provide advanced control, such as rebooting a machine, querying it along with conventional cloud minions, and, ultimately, disconnecting it from its master.

After disconnection from ("destroying" on) one master, a machine can be re-purposed by connecting to ("creating" on) a subsequent master.

New Vagrant Driver

The salt-cloud Vagrant driver brings virtual machines running in a limited environment, such as a programmer's workstation, under salt-cloud control. This can be useful for experimentation, instruction, or testing salt configurations.

Using salt-api on the master, and a salt-minion running on the host computer, the Vagrant driver can create (`vagrant up`), restart (`vagrant reload`), and destroy (`vagrant destroy`) VMs, as controlled by salt-cloud profiles which designate a Vagrantfile on the host machine.

The master can be a very limited machine, such as a Raspberry Pi, or a small VagrantBox VM.

Python PyWinRM Module

Versions of `pywinrm>=0.2.1` are finally able to disable validation of self signed certificates. Here for more information.
DigitalOcean

The DigitalOcean driver has been renamed to conform to the company name. The new driver name is digitalocean. The old name digital_ocean and a short one do will still be supported through virtual aliases, this is mostly cosmetic.

Azure Cloud

The azure sdk used for the azurearm cloud driver now depends on azure-cli>=2.0.12

New saltclass pillar/master_tops modules

This module clones the behaviour of reclass (http://reclass.pantsfullofunix.net/), without the need of an external app, and add several features to improve flexibility. Saltclass lets you define your nodes from simple yaml files (.yml) through hierarchical class inheritance with the possibility to override pillars down the tree.

Features

- Define your nodes through hierarchical class inheritance
- Reuse your reclass data with minimal modifications
  - applications => states
  - parameters => pillars
- Use Jinja templating in your yaml definitions
- Access to the following Salt objects in Jinja
  - __opts__
  - __salt__
  - __grains__
  - __pillars__
  - minion_id
- Chose how to merge or override your lists using ^ character (see examples)
- Expand variables $[] with possibility to escape them if needed $[] (see examples)
- Ignores missing node/class and will simply return empty without breaking the pillar module completely - will be logged

An example subset of data is available here: https://git.mauras.ch/salt/saltclass/src/branch/master/examples

<table>
<thead>
<tr>
<th>Terms usable in yaml files</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>classes</td>
<td>A list of classes that will be processed in order</td>
</tr>
<tr>
<td>states</td>
<td>A list of states that will be returned by master_tops function</td>
</tr>
<tr>
<td>pillars</td>
<td>A yaml dictionary that will be returned by the ext_pillar function</td>
</tr>
<tr>
<td>environment</td>
<td>Node saltenv that will be used by master_tops</td>
</tr>
</tbody>
</table>

A class consists of:

- zero or more parent classes
- zero or more states

30.2. Previous Releases
• any number of pillars

A child class can override pillars from a parent class. A node definition is a class in itself with an added environment parameter for saltenv definition.

Class Names

Class names mimic salt way of defining states and pillar files. This means that default.users class name will correspond to one of these:

- `<saltclass_path>/classes/default/users.yml`
- `<saltclass_path>/classes/default/users/init.yml`

Saltclass Tree

A saltclass tree would look like this:

```
<saltclass_path>
  └── classes
      ├── app
      │   ├── borgbackup.yml
      │   └── ssh
      │       └── server.yml
      └── default
          │   ├── init.yml
          │   └── motd.yml
          └── users.yml
      └── roles
          ├── app.yml
          │   └── nginx
          │       └── init.yml
          │       └── server.yml
          └── subsidiaries
              ├── gnv.yml
              └── qls.yml
        └── nodes
            └── zurich
                ├── zrh.node1.yml
                └── zrh.node2.yml
```

Examples

```
<saltclass_path>/nodes/lausanne/qls.node1.yml
```

```
environment: base
classes:
```
(continues on next page)
- subsidiaries.{{ __grains__["id"].split(\'\')[0] }}

<saltclass_path>/classes/default/init.yml

```yaml
classes:
  - default.users
  - default.motd

states:
  - openssh

pillars:
  default:
    network:
      dns:
        srv1: 192.168.0.1
        srv2: 192.168.0.2
        domain: example.com
      ntp:
        srv1: 192.168.10.10
        srv2: 192.168.10.20
```

<saltclass_path>/classes/subsidiaries/gnv.yml

```yaml
pillars:
  default:
    network:
      sub: Geneva
      dns:
        srv1: 10.20.0.1
        srv2: 10.20.0.2
        srv3: 192.168.1.1
        domain: gnv.example.com
    users:
      adm1:
        uid: 1210
        gid: 1210
        gecos: 'Super user admin1'
        homedir: /srv/app/adm1
      adm3:
        uid: 1203
        gid: 1203
        gecos: 'Super user adm
```

Variable expansions:

Escaped variables are rendered as is - $\{test\}$

Missing variables are rendered as is - $\{net:dns:srv2\}$
srv1: ${default:network:dns:srv1}
srv2: ${net:dns:srv2}
uri: https://application.domain/call?$\{test\}
prod_parameters:
- p1
- p2
- p3
pkg:
- app-core
- app-backend

List override:
Not using ^ as the first entry will simply merge the lists

pillar:
app:
  pkg:
    - ^
    - app-frontend

Known limitation
Currently you can’t have both a variable and an escaped variable in the same string as the escaped one will not be correctly rendered - ‘${xx}’ will stay as is instead of being rendered as ‘${xx}’

Lists of comments in state returns
State functions can now return a list of strings for the comment field, as opposed to only a single string. This is meant to ease writing states with multiple or multi-part comments.

Beacon configuration changes
In order to remain consistent and to align with other Salt components such as states, support for configuring beacons using dictionary based configuration has been deprecated in favor of list based configuration. All beacons have a validation function which will check the configuration for the correct format and only load if the validation passes.

avahi_announce

Old behavior:

```yaml
beacons:
avahi_announce:
  run_once: True
  servicetype: _demo._tcp
  port: 1234
  txt:
    ProdName: grains.productname
    SerialNo: grains.serialnumber
    Comments: 'this is a test'
```

New behavior:

```yaml
beacons:
avahi_announce:
  run_once: True
  servicetype: _demo._tcp
  port: 1234
  txt:
    ProdName: grains.productname
    SerialNo: grains.serialnumber
    Comments: 'this is a test'
```
beacons:
   avahi_announce:
      - run_once: True
      - servicetype: _demo._tcp
      - port: 1234
      - txt:
          ProdName: grains.productname
          SerialNo: grains.serialnumber
          Comments: 'this is a test'

Bonjour_announce

Old behavior:
beacons:
   bonjour_announce:
      run_once: True
      servicetype: _demo._tcp
      port: 1234
      txt:
         ProdName: grains.productname
         SerialNo: grains.serialnumber
         Comments: 'this is a test'

New behavior:
beacons:
   bonjour_announce:
      - run_once: True
      - servicetype: _demo._tcp
      - port: 1234
      - txt:
          ProdName: grains.productname
          SerialNo: grains.serialnumber
          Comments: 'this is a test'

btmp

Old behavior:
beacons:
   btmp: {}

New behavior:
beacons:
   btmp: []
glxinfo

Old behavior:

```yaml
beacons:
  glxinfo:
    user: frank
    screen_event: True
```

New behavior:

```yaml
beacons:
  glxinfo:
    - user: frank
    - screen_event: True
```

haproxy

Old behavior:

```yaml
beacons:
  haproxy:
    - www-backend:
      threshold: 45
      servers:
      - web1
      - web2
    - interval: 120
```

New behavior:

```yaml
beacons:
  haproxy:
    - backends:
        www-backend:
          threshold: 45
          servers:
          - web1
          - web2
        - interval: 120
```

inotify

Old behavior:

```yaml
beacons:
  inotify:
    /path/to/file/or/dir:
      mask:
      - open
      - create
      - close_write
      recurse: True
      auto_add: True
```

(continues on next page)
**exclude:**
- /path/to/file/or/dir/exclude1
- /path/to/file/or/dir/exclude2
- /path/to/file/or/dir/regex[a-m]*$:

  **regex:** True

  **coalesce:** True

New behavior:

**beacons:**

  **inotify:**
  - **files:**
    - /path/to/file/or/dir:
      **mask:**
      - open
      - create
      - close_write
      **recurse:** True
      **auto_add:** True
      **exclude:**
      - /path/to/file/or/dir/exclude1
      - /path/to/file/or/dir/exclude2
      - /path/to/file/or/dir/regex[a-m]*$:
        **regex:** True
        **coalesce:** True

**journald**

Old behavior:

**beacons:**

  **journald:**
  - **sshd:**
    **SYSLOG_IDENTIFIER:** sshd
    **PRIORITY:** 6

New behavior:

**beacons:**

  **journald:**
  - **services:**
    - **sshd:**
      **SYSLOG_IDENTIFIER:** sshd
      **PRIORITY:** 6
load

Old behavior:

```yaml
beacons:
  load:
    1m:
      - 0.0
      - 2.0
    5m:
      - 0.0
      - 1.5
    15m:
      - 0.1
      - 1.0
  emitatstartup: True
  onchangeonly: False
```

New behavior:

```yaml
beacons:
  load:
    - averages:
      1m:
        - 0.0
        - 2.0
      5m:
        - 0.0
        - 1.5
      15m:
        - 0.1
        - 1.0
        - emitatstartup: True
        - onchangeonly: False
```

log

Old behavior:

```yaml
beacons:
  log:
    file: <path>
    <tag>:
      regex: <pattern>
```

New behavior:

```yaml
beacons:
  log:
    - file: <path>
    - tags:
      <tag>:
        regex: <pattern>
```
network_info

Old behavior:

```yaml
beacons:
  network_info:
    - eth0:
      type: equal
      bytes_sent: 100000
      bytes_recv: 100000
      packets_sent: 100000
      packets_recv: 100000
      errin: 100
      errout: 100
      dropin: 100
      dropout: 100
```

New behavior:

```yaml
beacons:
  network_info:
    - interfaces:
      eth0:
        type: equal
        bytes_sent: 100000
        bytes_recv: 100000
        packets_sent: 100000
        packets_recv: 100000
        errin: 100
        errout: 100
        dropin: 100
        dropout: 100
```

network_settings

Old behavior:

```yaml
beacons:
  network_settings:
    eth0:
      ipaddr:
      promiscuity:
        onvalue: 1
    eth1:
      linkmode:
```

New behavior:

```yaml
beacons:
  network_settings:
    - interfaces:
      - eth0:
        ipaddr:
        promiscuity:
          onvalue: 1
```

(continues on next page)
- eth1:
  linkmode:

proxy_example

Old behavior:

```yaml
beacons:
  proxy_example:
    endpoint: beacon
```

New behavior:

```yaml
beacons:
  proxy_example:
    - endpoint: beacon
```

ps

Old behavior:

```yaml
beacons:
  ps:
    - salt-master: running
    - mysql: stopped
```

New behavior:

```yaml
beacons:
  ps:
    - processes:
      salt-master: running
      mysql: stopped
```

salt_proxy

Old behavior:

```yaml
beacons:
  salt_proxy:
    - p8000: {}
    - p8001: {}
```

New behavior:

```yaml
beacons:
  salt_proxy:
    - proxies:
      p8000: {}
p8001: {}
```
sensehat

Old behavior:

```yaml
beacons:
    sensehat:
        humidity: 70%
        temperature: [20, 40]
        temperature_from_pressure: 40
        pressure: 1500
```

New behavior:

```yaml
beacons:
    sensehat:
        sensors:
            humidity: 70%
            temperature: [20, 40]
            temperature_from_pressure: 40
            pressure: 1500
```

service

Old behavior:

```yaml
beacons:
    service:
        salt-master:
        mysql:
```

New behavior:

```yaml
beacons:
    service:
        services:
            nginx:
                onchangeonly: True
                delay: 30
                uncleanshutdown: /run/nginx.pid
```

sh

Old behavior:

```yaml
beacons:
    sh: {}
```

New behavior:

```yaml
beacons:
    sh: []
```
status

Old behavior:
```
beacons:
    status: {}
```

New behavior:
```
beacons:
    status: []
```

telegram_bot_msg

Old behavior:
```
beacons:
    telegram_bot_msg:
        token: "<bot access token>"
        accept_from:
            - "<valid username>"
        interval: 10
```

New behavior:
```
beacons:
    telegram_bot_msg:
        - token: "<bot access token>"
        - accept_from:
            - "<valid username>"
        - interval: 10
```

twilio_txt_msg

Old behavior:
```
beacons:
    twilio_txt_msg:
        account_sid: "<account sid>"
        auth_token: "<auth token>"
        twilio_number: "+15555555555"
        interval: 10
```

New behavior:
```
beacons:
    twilio_txt_msg:
        - account_sid: "<account sid>"
        - auth_token: "<auth token>"
        - twilio_number: "+15555555555"
        - interval: 10
```
wtmp

Old behavior:

```
beacons:
  wtmp: {}
```

New behavior:

```
beacons:
  wtmp: []
```

New requisites available in state compiler

**require_any**

The use of require_any demands that one of the required states executes before the dependent state. The state containing the require_any requisite is defined as the dependent state. The states specified in the require_any statement are defined as the required states. If at least one of the required state's execution succeeds, the dependent state will then execute. If all of the executions by the required states fail, the dependent state will not execute.

**watch_any**

The state containing the watch_any requisite is defined as the watching state. The states specified in the watch_any statement are defined as the watched states. When the watched states execute, they will return a dictionary containing a key named "changes".

If the "result" of any of the watched states is True, the watching state will execute normally, and if all of them are False, the watching state will never run. This part of watch mirrors the functionality of the require requisite.

If the "result" of any of the watched states is True and the "changes" key contains a populated dictionary (changes occurred in the watched state), then the watch requisite can add additional behavior. This additional behavior is defined by the mod_watch function within the watching state module. If the mod_watch function exists in the watching state module, it will be called in addition to the normal watching state. The return data from the mod_watch function is what will be returned to the master in this case; the return data from the main watching function is discarded.

If the "changes" key contains an empty dictionary, the watch requisite acts exactly like the require requisite (the watching state will execute if "result" is True, and fail if "result" is False in the watched state).

**onchanges_any**

The onchanges_any requisite makes a state only apply one of the required states generates changes, and if one of the watched state's "result" is True. This can be a useful way to execute a post hook after changing aspects of a system.
onfail_any

The onfail_any requisite allows for reactions to happen strictly as a response to the failure of at least one other state. This can be used in a number of ways, such as executing a second attempt to set up a service or begin to execute a separate thread of states because of a failure.

The onfail_any requisite is applied in the same way as require_any and watch_any.

Basic Slots support in state compiler

Slots extend the state syntax and allows you to do things right before the state function is executed. So you can make a decision in the last moment right before a state is executed.

Slot syntax looks close to the simple python function call. Here is a simple example:

```python
# Example

# Using Slots

# Function

copy-some-file:

file.copy:
    - name: __slot__:salt:test.echo(text=/tmp/some_file)
    - source: __slot__:salt:test.echo(/etc/hosts)
```

Read more [here](#).

Cryptographic layer changes

M2Crypto is coming back. We are making the crypto backend modular but in this release M2Crypto is enabled if it's importable by Python. If not Cryptodome or PyCrypto is used as it was in the previous releases. M2Crypto is used in the same way as PyCrypto so there would be no compatibility issues, different nodes could use different backends.

NaCL Module and Runner changes

In addition to argument changes in both the NaCL module and runner for future removal in the 3000 release, the default "box_type" has changed from secretbox to sealedbox. SecretBox is data encrypted using private key sk and Sealedbox is encrypted using public key pk.

utils functions reorganized into separate modules

The Salt utility functions from salt.utils (typically used by those developing extension modules for Salt) have been moved into different modules, grouped logically based on their functionality. The old function names will continue to work until the 3000 release of Salt (due around Q1 2019).

The renamed functions are:

- `salt.utils.appendproctitle`: use `salt.utils.process.appendproctitle` instead.
- `salt.utils.daemonize`: use `salt.utils.process.daemonize` instead.
- `salt.utils.daemonize_if`: use `salt.utils.process.daemonize_if` instead.
- `salt.utils.reinit_crypto`: use `salt.utils.crypt.reinit_crypto` instead.
- `salt.utils.to_bytes`: use `salt.utils.stringutils.to_bytes` instead.
- `salt.utils.to_str`: use `salt.utils.stringutils.to_str` instead.
- `salt.utils.to_unicode`: use `salt.utils.stringutils.to_unicode` instead.
• `salt.utils.str_to_num`: use `salt.utils.stringutils.to_num` instead.
• `salt.utils.is_quoted`: use `salt.utils.stringutils.is_quoted` instead.
• `salt.utils.dequote`: use `salt.utils.stringutils.dequote` instead.
• `salt.utils.is_hex`: use `salt.utils.stringutils.is_hex` instead.
• `salt.utils.is_bin_str`: use `salt.utils.stringutils.is_bin_str` instead.
• `salt.utils.rand_string`: use `salt.utils.stringutils.random` instead.
• `salt.utils.contains_whitespace`: use `salt.utils.stringutils.contains_whitespace` instead.
• `salt.utils.build_whitespace_split_regex`: use `salt.utils.stringutils.build_whitespace_split_regex` instead.
• `salt.utils.expr_match`: use `salt.utils.stringutils.expr_match` instead.
• `salt.utils.check_whitelist_blacklist`: use `salt.utils.stringutils.check_whitelist_blacklist` instead.
• `salt.utils.check_include_exclude`: use `salt.utils.stringutils.check_include_exclude` instead.
• `salt.utils.print_cli`: use `salt.utils.stringutils.print_cli` instead.
• `salt.utils.clean_kwargs`: use `salt.utils.args.clean_kwargs` instead.
• `salt.utils.invalid_kwargs`: use `salt.utils.args.invalid_kwargs` instead.
• `salt.utils.shlex_split`: use `salt.utils.args.shlex_split` instead.
• `salt.utils.arg_lookup`: use `salt.utils.args.arg_lookup` instead.
• `salt.utils.argspec_report`: use `salt.utils.args.argspec_report` instead.
• `salt.utils.split_input`: use `salt.utils.args.split_input` instead.
• `salt.utils.test_mode`: use `salt.utils.args.test_mode` instead.
• `salt.utils.format_call`: use `salt.utils.args.format_call` instead.
• `salt.utils.which`: use `salt.utils.path.which` instead.
• `salt.utils.which_bin`: use `salt.utils.path.which_bin` instead.
• `salt.utils.path_join`: use `salt.utils.path.join` instead.
• `salt.utils.check_or_die`: use `salt.utils.path.check_or_die` instead.
• `salt.utils.sanitize_win_path_string`: use `salt.utils.path.sanitize_win_path` instead.
• `salt.utils.rand_str`: use `salt.utils.hashutils.random_hash` instead.
• `salt.utils.get_hash`: use `salt.utils.hashutils.get_hash` instead.
• `salt.utils.is_windows`: use `salt.utils.platform.is_windows` instead.
• `salt.utils.is_proxy`: use `salt.utils.platform.is_proxy` instead.
• `salt.utils.is_linux`: use `salt.utils.platform.is_linux` instead.
• `salt.utils.is_darwin`: use `salt.utils.platform.is_darwin` instead.
• `salt.utils.is_sunos`: use `salt.utils.platform.is_sunos` instead.
• `salt.utils.is_smartos`: use `salt.utils.platform.is_smartos` instead.
- `salt.utils.is_smartos_globalzone`: use `salt.utils.platform.is_smartos_globalzone` instead.
- `salt.utils.is_smartos_zone`: use `salt.utils.platform.is_smartos_zone` instead.
- `salt.utils.is_freebsd`: use `salt.utils.platform.is_freebsd` instead.
- `salt.utils.is_netbsd`: use `salt.utils.platform.is_netbsd` instead.
- `salt.utils.is_openbsd`: use `salt.utils.platform.is_openbsd` instead.
- `salt.utils.is_aix`: use `salt.utils.platform.is_aix` instead.
- `salt.utils.safe_rm`: use `salt.utils.files.safe_rm` instead.
- `salt.utils.is_empty`: use `salt.utils.files.is_empty` instead.
- `salt.utils.fopen`: use `salt.utils.files.fopen` instead.
- `salt.utils.flopen`: use `salt.utils.files.flopen` instead.
- `salt.utils.fpopen`: use `salt.utils.files.fpopen` instead.
- `salt.utils.rm_rf`: use `salt.utils.files.rm_rf` instead.
- `salt.utils.mkstemp`: use `salt.utils.files.mkstemp` instead.
- `salt.utils.istextfile`: use `salt.utils.files.is_text_file` instead.
- `salt.utils.is_bin_file`: use `salt.utils.files.is_binary` instead.
- `salt.utils.list_files`: use `salt.utils.files.list_files` instead.
- `salt.utils.safe_walk`: use `salt.utils.files.safe_walk` instead.
- `salt.utils.st_mode_to_octal`: use `salt.utils.files.st_mode_to_octal` instead.
- `salt.utils.normalize_mode`: use `salt.utils.files.normalize_mode` instead.
- `salt.utils.human_size_to_bytes`: use `salt.utils.files.human_size_to_bytes` instead.
- `salt.utils.backup_minion`: use `salt.utils.files.backup_minion` instead.
- `salt.utils.str_version_to_evr`: use `salt.utils.pkg.rpm.version_to_evr` instead.
- `salt.utils.parse_docstring`: use `salt.utils.doc.parse_docstring` instead.
- `salt.utils.compare_versions`: use `salt.utils.versions.compare` instead.
- `salt.utils.version_cmp`: use `salt.utils.versions.version_cmp` instead.
- `salt.utils.warn_until`: use `salt.utils.versions.warn_until` instead.
- `salt.utils.kwvars_warn_until`: use `salt.utils.versions.kwars_warn_until` instead.
- `salt.utils.get_color_theme`: use `salt.utils.color.get_color_theme` instead.
- `salt.utils.get_colors`: use `salt.utils.color.get_colors` instead.
- `salt.utils.gen_state_tag`: use `salt.utils.state.gen_tag` instead.
- `salt.utils.search_onfail_requisites`: use `salt.utils.state.search_onfail_requisites` instead.
- `salt.utils.check_state_result`: use `salt.utils.state.check_result` instead.
- `salt.utils.get_user`: use `salt.utils.user.get_user` instead.
- `salt.utils.get_uid`: use `salt.utils.user.get_uid` instead.
• salt.utils.get_specific_user: use salt.utils.user.get_specific_user instead.
• salt.utils.chugid: use salt.utils.user.chugid instead.
• salt.utils.chugid_and_umask: use salt.utils.user.chugid_and_umask instead.
• salt.utils.get_default_group: use salt.utils.user.get_default_group instead.
• salt.utils.get_group_list: use salt.utils.user.get_group_list instead.
• salt.utils.get_group_dict: use salt.utils.user.get_group_dict instead.
• salt.utils.get_gid_list: use salt.utils.user.get_gid_list instead.
• salt.utils.get_gid: use salt.utils.user.get_gid instead.
• salt.utils.enable_ctrl_logoff_handler: use salt.utils.win_functions.enable_ctrl_logoff_handler instead.
• salt.utils.traverse_dict: use salt.utils.data.traverse_dict instead.
• salt.utils.traverse_dict_and_list: use salt.utils.data.traverse_dict_and_list instead.
• salt.utils.filter_by: use salt.utils.data.filter_by instead.
• salt.utils.subdict_match: use salt.utils.data.subdict_match instead.
• salt.utils.substr_in_list: use salt.utils.data.substr_in_list instead.
• salt.utils.is_dictlist: use salt.utils.data.is_dictlist instead.
• salt.utils.repack_dictlist: use salt.utils.data.repack_dictlist instead.
• salt.utils.compare_dicts: use salt.utils.data.compare_dicts instead.
• salt.utils.compare_lists: use salt.utils.data.compare_lists instead.
• salt.utils.decode_dict: use salt.utils.data.encode_dict instead.
• salt.utils.decode_list: use salt.utils.data.encode_list instead.
• salt.utils.exactly_n: use salt.utils.data.exactly_n instead.
• salt.utils.exactly_one: use salt.utils.data.exactly_one instead.
• salt.utils.is_list: use salt.utils.data.is_list instead.
• salt.utils.is_iter: use salt.utils.data.is_iter instead.
• salt.utils.isorted: use salt.utils.data.sorted_ignorecase instead.
• salt.utils.is_true: use salt.utils.data.is_true instead.
• salt.utils.mysql_to_dict: use salt.utils.data.mysql_to_dict instead.
• salt.utils.simple_types_filter: use salt.utils.data.simple_types_filter instead.
• salt.utils.ip_bracket: use salt.utils.zeromq.ip_bracket instead.
• salt.utils.gen_mac: use salt.utils.network.gen_mac instead.
• salt.utils.mac_str_to_bytes: use salt.utils.network.mac_str_to_bytes instead.
• salt.utils.refresh_dns: use salt.utils.network.refresh_dns instead.
• salt.utils.dns_check: use salt.utils.network.dns_check instead.
• salt.utils.get_context: use salt.utils.stringutils.get_context instead.
• salt.utils.get_master_key: use salt.utils.master.get_master_key instead.
Deprecations

Configuration Option Deprecations

- The requests_lib configuration option has been removed. Please use backend instead.

Profitbricks Cloud Updated Dependency

The minimum version of the profitbrick python package for the profitbricks cloud driver has changed from 3.0.0 to 3.1.0.

Execution Module Deprecations

- The blockdev execution module has been removed. Its functions were merged with the disk module.
- The lxc execution module has been changed as follows:
  - The dnsservers option to lxc.cloud_init_interface no longer defaults to 4.4.4.4 and 8.8.8.8.
  - The dns_via_dhcp option to lxc.cloud_init_interface now defaults to True instead of False.
- The win_psget module has been changed as follows:
  - The psget.psversion function was removed. Please use cmd.shell_info instead.
- The win_service module (which provides the service module on Windows platforms) has been changed as follows:
  - The config function was removed. Please use service.modify instead.
  - The following arguments to the service.create function have been renamed:
    * binpath has been renamed to bin_path
    * depend has been renamed to dependencies
* DisplayName has been renamed to display_name
* error has been renamed to error_control
* group has been renamed to load_order_group
* obj has been renamed to account_name
* password has been renamed to account_password
* start has been renamed to start_type
* type has been renamed to service_type

- The nacl module has been changed as follows:
  - The following arguments have been renamed in the nacl.keygen, nacl.enc, and nacl.dec:
    * key_file has been renamed to sk_file
    * key has been renamed to sk

**Runner Deprecations**

- The manage runner has been changed as follows:
  - root_user argument was removed from the manage.bootstrap function. Please use salt-ssh roster entries for the host instead.

- The nacl runner has been changed as follows:
  - The following arguments have been renamed in the nacl.keygen, nacl.enc, and nacl.dec:
    * key_file has been renamed to sk_file
    * key has been renamed to sk

**State Deprecations**

- In the archive state, the tar_options and zip_options options were removed. Please use options instead.

- The cmd state had the following changes:
  - The user and group options were removed from the following functions (please use runas instead):
    * cmd.run
    * cmd.script
    * cmd.wait
    * cmd.wait_script

- In the file states, the show_diff option was removed in all states where it was previously supported. Please use show_changes instead.
Grain Deprecations

- For `smartos`, some grains have been deprecated. These grains will be removed in 3000:
  - The `hypervisor_uuid` grain has been replaced with `mdata:sdc:server_uuid`
  - The `datacenter` grain has been replaced with `mdata:sdc:datacenter_name`

Pillar Deprecations

The legacy configuration for `git_pillar` has been removed. Please use the new configuration for `git_pillar` which was added in 2015.8.0, which is documented here.

Utils Deprecations

- In `salt.utils.cloud`, the `fire_event` function now requires a `sock_dir` argument. It was previously optional.

Other Miscellaneous Deprecations

- In `version.py`, the `rc_info` function was removed. Please use `pre_info` instead.
- Warnings for moving away from the `env` option were removed. `saltenv` should be used instead. The removal of these warnings does not have a behavior change. Only the warning text was removed.

Minion Blackout

During a blackout, minions will not execute any remote execution commands, except for `saltutil.refresh_pillar`. Previously, support was added so that blackouts are enabled using a special pillar key, `minion_blackout` set to `True` and an optional pillar key `minion_blackout_whitelist` to specify additional functions that are permitted during blackout. This release adds support for using this feature in the grains as well, by using special grains keys `minion_blackout` and `minion_blackout_whitelist`.

Sentry Log Handler

Configuring sentry raven python client via `project, servers, public_key` and `secret_key` is deprecated and won't work with sentry clients > 3.0. Instead, the `dsn` config param must be used.

RAET transport

We haven't been doing development on RAET for quite some time and decided that 2018.3.0 is the time to announce the deprecation. RAET support will be removed in 3000. Please consider to move to `zeromq` or `tcp` transport instead of `raet`.
30.2.33 Salt 2018.3.1 Release Notes

Version 2018.3.1 is a bugfix release for 2018.3.0.

Statistics

- Total Merges: 525
- Total Issue References: 74
- Total PR References: 255
- Contributors: 55 (Ch3LL, DmitryKuzmenko, Giandom, Kimol, L4rS6, LukeCarrier, OrlandoArcapix, TamCore, The-Loeki, UtahDave, aesposito91, bbinet, bdrung, boltronics, bosatsu, clan, corywright, damon-atkins, dincamihai, dmurphy18, dnABic, douglasjreynolds, dwoz, edgan, ejparker12, esell, ezh, femnad, folti, garethgreenaway, gtmanfred, isbm, jasperla, johnj, mateiw, mcalmer, mirceaulinic, morganwillcock, opdude, pcn, pruiz, psagers, psyer, rallytime, robinro, s0undt3ch, samodid, shengis, skjaro, tankywoo, terminalmage, twangboy, vutny, yannj-fr, zmedico)

Warning: If you are using Jinja to dump lists or dictionaries in your SLS files, this will now cause errors in Python 2 since Jinja does not produce YAML-compatible output when strings in the data structures contain unicode types. The dictionary must be passed through a Jinja filter to produce YAML-compatible strings.

The below is an example of invalid SLS:

```
/etc/foo.conf:
  file.mangaged:
    - source: salt://foo.conf
    - template: jinja
    - defaults: {{ mydict }}
```

To make it valid, use either one of Salt's own json or yaml filters:

```
/etc/foo.conf:
  file.mangaged:
    - source: salt://foo.conf
    - template: jinja
    - defaults: {{ mydict | json }}
```

Tornado 5.0 Support for Python 2 Only

Tornado 5.0 moves to using asyncio for all python3 versions. Because of this and changes in asyncio between python 3.4 and 3.5 to only be able to use one ioloop, which requires some rearchitecting, support for tornado 5.0 and python3 versions of salt has been delayed to a later release.

For now, to use tornado 5.0, the python 2 version of salt must be used.
Changes to Slack Engine pillars

When using `groups_pillar_name` for the slack engine, the engine should be used as part of a salt-minion process running on the master. This will allow the minion to have pillars assigned to it, and will still allow the engine to create a LocalClient connection to the master ipc sockets to control environments.

Changes to Automatically Updating the Roster File

In 2018.3.0 salt-ssh was configured to automatically update the flat roster file if a minion was not found for salt-ssh. This was decided to be undesireable as a default. The `--skip-roster` flag has been removed and replaced with `--update-roster`, which will enable salt-ssh to add minions to the flat roster file. This behavior can also be enabled by setting `ssh_update_roster: True` in the master config file.

Changes to `file.blockreplace` State

The `append_newline` argument was added to this state. Additionally, to improve idempotence, if the string represented by `marker_end` is found in the middle of the line, the content preceding the marker will be removed when the block is replaced. This allows one to remove `append_newline: False` from the SLS and have the block properly replaced if the end of the content block is immediately followed by the `marker_end` (i.e. no newline before the marker).

Note: This will require changes to your SLS if your `marker_end` does not include the very beginning of the content you want to keep.

See the `file.blockreplace` state documentation for further information.

Changelog for v2018.3.0..v2018.3.1

Generated at: 2018-06-06 17:43:01 UTC

- **ISSUE** #47955: (frogunder) 2018.3.1 Creating Windows machine in Amazon using salt-cloud fails. (refs: #47989)
- **PR** #47998: (rallytime) Back-port #47989 to 2018.3.1 @ 2018-06-06 17:08:04 UTC
  - **PR** #47989: (dwoz) Properly decode password from aws using m2crypto (refs: #47998)
  - 605463ca0d Merge pull request #47998 from rallytime/bp-47989
  - 1b7e9ac2d3 Lint fixes
  - 0545152ddd Properly decode password from aws using m2crypto
- **PR** #47965: (Ch3LL) Add PR 47924 from 2018.3 branch @ 2018-06-06 13:54:09 UTC
  - dbc798ac68 Merge pull request #47965 from Ch3LL/gitpy_mac_3.1
  - bf608bd44 Catch all exceptions in git import for salt.utils.gitfs
- **PR** #47973: (terminalmage) salt.modules.testinframod: fix TypeError invoking types.FunctionType @ 2018-06-06 13:53:46 UTC
  - 864d640633 Merge pull request #47973 from terminalmage/fix-testinfra
  - 4518c89484 Lint: Remove unused six import
  - c6816b2149 salt.modules.testinframod: fix TypeError invoking types.FunctionType
- **ISSUE** #47236: (MorphBonehunter) x509.private_key_managed broken after upgrade to 2018.3.0 (refs: #47957)
• PR #47967: (rallytime) Back-port #47957 to 2018.3.1 @ 2018-06-06 13:53:28 UTC
  - PR #47957: (garethgreenaway) [2018.8] Ensure x509 passphrase is a string (refs: #47967)
  - 5ddcfff420 Merge pull request #47957 from rallytime/bp-47957
  - 9a55579af1 removing unnecessary change
  - 329b2e5956 Ensuring that when a passphrase is passed in, it is returned as a string from the passphrase callback.

• PR #47902: (Ch3LL) Remove In Progress for 2018.3.1 Release Notes @ 2018-05-30 18:26:49 UTC
  - 9c964fdbe Merge pull request #47902 from Ch3LL/rn_in_progress

• PR #47897: (Ch3LL) Add changelog to 2018.3.1 release notes @ 2018-05-30 15:04:42 UTC
  - ea7b4fdce Merge pull request #47897 from Ch3LL/rn_2018
  - e27ece273a7 Add == line to changelog line for release notes
  - 61e56d275d Add changelog to 2018.3.1 release notes

• ISSUE #47784: (jpsv) win_lgpo.py line 5368; AttributeError: 'OrderedDict' object has no attribute 'lower' (refs: #47848)

• PR #47848: (twangboy) Fix some major issues with the LGPO module @ 2018-05-30 13:37:32 UTC
  - f15e636d5e Merge pull request #47848 from twangboy/fix_47784
  - 98facf8dc8 Remove log.debug statement in __virtual__
  - f037fa4064 Fix some major issues with the LGPO module

• PR #47881: (gtmanfred) quote python_version in requirements.txt @ 2018-05-29 21:12:05 UTC
  - 92b84c08e Merge pull request #47881 from gtmanfred/2018.3.1
  - 3d874b5529 quote python_version in requirements.txt

• PR #47874: (gtmanfred) Tornado 5.0 is only supported on python 2 for now @ 2018-05-29 19:45:44 UTC
  - 705bf8172d Merge pull request #47874 from gtmanfred/2018.3.1
  - 13f920415a add tornado5 note to 2018.3.1
  - aeacd2b49 allow tornado 5.0 to be installed only for python2

• PR #47820: (Ch3LL) Remove output_loglevel in mac_system module @ 2018-05-25 13:10:36 UTC
  - 09e85f0cd Merge pull request #47820 from Ch3LL/mac_system
  - 362414e53b Remove output_loglevel in mac_system module

• PR #47798: (rallytime) Back-port #47776 to 2018.3.1 @ 2018-05-23 15:10:43 UTC
  - PR #47776: (garethgreenaway) [2018.3] Fixes to failing _before_connect tests (refs: #47798)
  - 7e314c2dc8 Merge pull request #47776 from rallytime/bp-47776
  - ae881547d2 Fixing unit.test_minion.MinionTestCase.test_beacons_before_connect and unit.test_minion.MinionTestCase.test_scheduler_before_connect.

• PR #47782: (rallytime) Back-port #47775 to 2018.3.1 @ 2018-05-22 20:56:37 UTC
  - PR #47775: (gtmanfred) catch UnsupportedOperation with AssertionError (refs: #47782)
  - 9c610da0bc Merge pull request #47782 from rallytime/bp-47775
- `bab9c966c5` catch UnsupportedOperation with AssertionError

- **PR #47770**: (rallytime) Back-port #47769 to 2018.3.1 @ 2018-05-22 17:27:20 UTC
  - PR #47769: (gtmanfred) skip test that breaks test suite (refs: #47770)
  - 4adf10b20b Merge pull request #47770 from rallytime/bp-47769
  - 3cfb95c7bc skip test that breaks test suite

- **PR #47724**: (terminalmage) 2 master_tops/ext_nodes fixes @ 2018-05-21 15:59:04 UTC
  - bbe8e62a98 Merge pull request #47724 from terminalmage/master_tops_fixes
  - 48b8c5acd1 Merge branch '2018.3.1' into master_tops_fixes
  - 89b3070d4c Change deprecation warning to debug logging
  - ceb6e10f87 Fix spurious "Malformed request" error

- **ISSUE #47484**: (whytwolf) Windows: pkg.latest state not updating packages. (refs: #47702)

- **PR #47739**: (rallytime) Back-port #47702 to 2018.3.1 @ 2018-05-21 15:37:03 UTC
  - PR #47702: (damon-atkins) State pkg.latest called win pkg.install with list of pkgs and the required versions (refs: #47739)
  - 97d6fe7434 Merge pull request #47739 from rallytime/bp-47702
  - f79da64bb0 Update is_windows path to use platform
  - f04b19bb56 Ensure targeted_pkgs always contains value for non-windows.
  - 14659f9cad Adjusted based on feed back.
  - 9f18f7cdf5 Whitespace lint issues
  - 2a29b28ee6 pkg.install execution module on windows ensures the software package is installed when no version is specified, it does not upgrade the software to the latest. This is per the design. pkg.latest must provide the versions to install to pkg.install

- **PR #47730**: (rallytime) Back-port #47700 to 2018.3.1 @ 2018-05-21 15:36:16 UTC
  - PR #47700: (yamnj-fr) fix roots modification time check (refs: #47730)
  - cfbe0ba73e Merge pull request #47730 from rallytime/bp-47700
  - 9bc35b88ea fix roots modification time check

- **PR #47727**: (Ch3LL) Fix salt.utils.versions.warn_until spelling @ 2018-05-21 13:41:00 UTC
  - 3614d3d83a Merge pull request #47727 from Ch3LL/spelling
  - 47a8de5b73 Fix salt.utils.versions.warn_until spelling

- **PR #47736**: (Ch3LL) mac_utils test: patch __salt__['cmd.run*'] @ 2018-05-21 13:38:59 UTC
  - bb45daef Merge pull request #47736 from Ch3LL/fix_util_mac_test
  - ee9077a8 mac_utils test: patch __salt__['cmd.run*']

- **PR #47641**: (gtmanfred) fix _create_stream and tornado 5.0 @ 2018-05-18 14:25:36 UTC
  - 43930f8bac Merge pull request #47641 from gtmanfred/2018.3.1
  - 037f92f59 fix pylint
  - 75d42d8963 Fix last test for tornado
  - a046512287 allow using tornado 5.0
- 05e651f038 fix _create_stream and tornado 5.0

**ISSUE #47532**: (edgan) roster auto-add feature in salt-ssh-2018.3.0 (refs: #47541)

**PR #47541**: (gtmanfred) switch skip-roster to update-roster @ 2018-05-18 13:29:50 UTC
- 9f926bed1a Merge pull request #47541 from gtmanfred/2018.3
- 8c5c78292 switch skip-roster to update-roster

**PR #47719**: (rallytime) Back-port #47692 to 2018.3.1 @ 2018-05-18 13:22:02 UTC
- PR #47692: (dwoz) Default windows to m1.small for ec2-classic (refs: #47719)
- a963f1b558 Merge pull request #47719 from rallytime/bp-47692
- 1df9247f7 Default windows to m1.small for ec2-classic

**PR #47706**: (Ch3LL) Add cmd._run_all_quiet to mac_utils and __utils__ in mac_service @ 2018-05-18 01:11:46 UTC
- c9108893ab Merge pull request #47706 from Ch3LL/mac_service_util
- 3611af699f remove added space
- 9921ca143 fix pylint
- 317e41d3c0 use cmd._run_quiet and cmd._run_all_quiet instead of importing minion_mods in __salt__
- a78652515a Add __salt__ to mac_utils and __utils__ in mac_service

**PR #47664**: (rallytime) Back-port #47645 to 2018.3.1 @ 2018-05-15 18:25:27 UTC
- PR #47645: (Ch3LL) query the pip path for test test_issue_2087_missing_pip (refs: #47664)
- fb3bf1ff3e Merge pull request #47645 from rallytime/bp-47645
- 0a732d8e66 query the pip path for test test_issue_2087_missing_pip

**PR #47647**: (rallytime) Back-port #47601 and #47643 to 2018.3.1 @ 2018-05-15 14:07:54 UTC
- PR #47643: (dwoz) Remove unwanted file (refs: #47647)
- PR #47601: (dwoz) Skip tests when we can not use runas (refs: #47647)
- 9039fee104 Merge pull request #47647 from rallytime/bp-47601-and-47643-2018.3.1
- 7214fe17c8 Fix typo
- 506dced17 Remove unwanted file
- b6a21fdfa3 use ignore-undefined-variable
- 242f9fe8a Ignore pylint WindowsError
- 2d63682f6a Better doc string
- ec2add699 Skip tests when we can not use runas

**PR #47596**: (rallytime) Back-port #47568 to 2018.3.1 @ 2018-05-10 22:09:09 UTC
- PR #47568: (terminalmage) salt.serializers.yaml/yamlex: remove invalid multi_constructor (refs: #47596)
- 17b5265d95 Merge pull request #47596 from rallytime/bp-47568
- ecf5dc8b9f Add exception logging on serialize/deserialize exceptions
- 9659b19819 salt.serializers.yaml/yamlex: remove invalid multi_constructor

**PR #47595**: (rallytime) Back-port #47569 to 2018.3.1 @ 2018-05-10 22:08:53 UTC
- **PR #47569**: (Ch3LL) Update salt.utils.path mock in virtual core test (refs: #47595)
- `c4c400f3e9` Merge pull request #47595 from rallytime/bp-47569
- `0763f96458` update salt.utils.platform path for virt core test
- `71825c1ef` Update salt.utils.path mock in virtual core test

- **PR #47599**: (rallytime) Back-port #47570 to 2018.3.1 @ 2018-05-10 22:06:44 UTC
  - **PR #47570**: (gtmanfred) Update dependency to msgpack (refs: #47599)
  - `ec7de14b0e` Merge pull request #47599 from rallytime/bp-47570
  - `9334c03da9` Update dependency to msgpack

- **PR #47571**: (rallytime) [2018.3.1] Update man pages @ 2018-05-10 16:21:57 UTC
  - `2a10d92669` Merge pull request #47571 from rallytime/man-pages
  - `ade5f664` [2018.3.1] Update man pages

- **PR #47550**: (pcn) Fixes a bad deletion I did that only surfaced in 2018.3 @ 2018-05-09 13:36:33 UTC
  - `85284caaf9` Merge pull request #47550 from pcn/fix-disable-term-protect-in-2018.3
  - `d58a56877c` Fixes a bad deletion I did that only surfaced in 2018.3

- **ISSUE #47553**: (douglasjreynolds) Unicode version error in lxc (refs: #47554)
  - **PR #47554**: (douglasjreynolds) Converted unicode str version to a LooseVersion; matching line 2080. @ 2018-05-09 13:34:13 UTC
    - `f9083ff77e` Merge pull request #47554 from douglasjreynolds/lxc_unicode_fix
    - `e6bce581c6` Converted unicode str version to _LooseVersion to match line 2080.

- **PR #47518**: (Ch3LL) Fix 47364: ensure we are not caching zfs.is_supported @ 2018-05-09 13:29:07 UTC
  - `fe4e7f1fde` Merge pull request #47518 from Ch3LL/zfs_support
  - `d19f963e` remove unnecessary patch in zfs.is_supported test
  - `58c4f29f96` Fix 47364: ensure we are not caching zfs.is_supported

- **PR #47159**: (terminalmage) Fix for whitelist/blacklist checking for non-list iterables @ 2018-05-08 20:43:51 UTC
  - `332e9f13a6` Merge pull request #47159 from terminalmage/whitelist_blacklist-iter-fix
  - `ca93de37e` Treat empty whitelist/blacklist as no whitelist/blacklist
  - `bc4afe2621` Raise a TypeError when invalid input passed to check_whitelist_blacklist
  - `75480158b3` Lint: remove duplicate function in helpers.py
  - `5565d4e9b1` Update old utils paths with new utils paths
- 786076ac03 Merge branch '2017.7' into '2018.3'
  - 611ca1fc03 Merge pull request #47476 from gtmanfred/2017.7
    - 1f91a85587 specify cache dir for pip install
    - 99e150e09c check for kitchen-vagrant gem before loading windows tests
  - 7c3f2c56da Merge pull request #47412 from twangboy/fix_47125
    - c9bab0b8e3 Merge branch '2017.7' into fix_47125
    - 2600e404d5 Fix overly long line
    - 5c8db05769 Fix issue where the cwd was being removed
  - 4846957c4 Merge pull request #47467 from twangboy/cleanup_settings
    - 9d498293b1 Remove unused settings, update NSIS
  - da9871d36b Merge pull request #47196 from twangboy/fix_47024
    - 14ee5537b9 Add @with_tempdir helper
    - 6c3b5fa6fa Fix typo
    - f031710af2 Merge branch '2017.7' into fix_47024
    - 7c46d9d0d4 Fix integration.modules.test_pip
    - 22ac81df63 Fix integration.modules.test_pip
    - 57d98224d4 Merge pull request #9 from terminalmage/twangboy/fix_47024
    - 37a13d8004 Update pip unit tests to reflect changes
    - 7f86779be0 Lint fix
    - c48d8f4f61 DRY and other fixes in pip module
    - b1117896a0 Change from global variable to __context__``
    - 3e6e524eca Fix some tests``
    - c94f0f20e4 Fix lint error
    - fd47b21530 Fix merge conflict
  - e8c4524bae Merge pull request #47455 from Ch3LL/unreleased_rn
    - b6d0cc2ab7 Add In Progress Warning for 2017.7.6 Release Notes
  - 2c7a4b6179 Merge pull request #47459 from gtmanfred/2017.7
    - d228e72477 update ubuntu-rolling to 18.04
  - 64a64c0ed7 Merge pull request #47462 from terminalmage/docs
    - 6d7803ece0 Fix docs build on Sphinx 1.7+
  - 6cd0d31c03 Merge pull request #47438 from lomeroe/double_admx_test
    - 4902f1e2ba check if a policy has either an enabled value or enabled list entry or a disabled value or disabled list entry when determining the state of the policy
  - ed69821d19 Merge pull request #47433 from s0undt3ch/2017.7
    - 5abafdf25d6 Add missing requirements files not committed in #47106

• ISSUE #47443: (skylerberg) Input validation does not raise SaltInvocationError in win_dsc.py (refs: #47505)
- **PR #47516**: (rallytime) Back-port #47505 to 2018.3 @ 2018-05-08 13:32:33 UTC
  - **PR #47505**: (dwoz) Raise proper invocation errors (refs: #47516)
  - 9559ac7679 Merge pull request #47516 from rallytime/bp-47505
  - 7c60e4071e Raise proper invocation errors
- **ISSUE #47502**: (psagers) service.enable (and .disable) destroys /etc/rc.conf on FreeBSD (refs: #47503)
- **PR #47515**: (rallytime) Back-port #47503 to 2018.3 @ 2018-05-08 13:32:03 UTC
  - **PR #47503**: (psagers) Fix #47502: Remove an extraneous (accidentally introduced?) call to rstrip() (refs: #47515)
  - bf79acbf8c Merge pull request #47515 from rallytime/bp-47503
  - 821dbb88a0 Fix #47502: Remove an extraneous (accidentally introduced?) call to rstrip.
- **ISSUE #47511**: (joesusecom) sshconfig salt-ssh roster is missing in the documentation (refs: #47531)
- **PR #47531**: (gtmanfred) add ssh config doc for rosters @ 2018-05-07 22:26:30 UTC
  - 779b3ed056 Merge pull request #47531 from gtmanfred/2018.3
  - 92ded7162c add ssh config doc for rosters
- **PR #47520**: (rallytime) Cleanup weird spaces @ 2018-05-07 19:50:58 UTC
  - 95b2f9db30 Merge pull request #47520 from rallytime/cleanup-spaces
  - e9cb08a000 Cleanup weird spaces
- **PR #47495**: (dwoz) Fix crufty nssm.exe reference @ 2018-05-07 19:12:49 UTC
  - 05fc52f124 Merge pull request #47495 from dwoz/uninstall_wart
  - caa36c9064 Merge branch '2018.3' into uninstall_wart
- **ISSUE #47322**: (masau) lxc clone not working (refs: #47494)
- **PR #47494**: (ejparker12) Fixed lxc.clone unhandled exception in salt/modules/lxc.py @ 2018-05-07 19:03:58 UTC
  - 3cc7d3ae7c Merge pull request #47494 from ejparker12/lxc-clone
  - e0e2c9782d Fixed lxc.clone unhandled exception in salt/modules/lxc.py
- **ISSUE #47496**: (mateiw) salt-ssh --extra-filerefs doesn't include any files if no refs in state files (refs: #47497)
- **PR #47497**: (mateiw) Fix salt-ssh --extra-filerefs to include files even if no refs in states to apply @ 2018-05-07 19:02:50 UTC
  - adde83f639 Merge pull request #47497 from mateiw/2018.3-fix-ssh-extra-files-refs-issue-47496
  - d67239aae7 --extra-filerefs include files even if no refs in states to apply
- **ISSUE #47404**: (shengis) Localized version of yum breaks pkg.install (refs: #47441)
- **PR #47441**: (shengis) Fix _run to reset LANGUAGE env variable @ 2018-05-07 18:29:25 UTC
  - 34b1b1ee53 Merge pull request #47441 from shengis/fixed-run-env-reset
  - 62fc16b721 Merge branch '2018.3' into fix-run-env-reset
  - 3b02bbbdc1 Merge branch '2018.3' into fix-run-env-reset
  - ee2ab38c8c Fix _run to reset LANGUAGE env variable
- **ISSUE #47479**: (whytwolf) win_task.info on py3 throwing error, but works in py2 (refs: #47507)
- **PR #47507**: (gtmanfred) fix win_task for py3 @ 2018-05-07 17:41:21 UTC
- 17cfd4f7cf Merge pull request #47507 from gtmanfred/2018.3
- 19db39f402 fix win_task for py3

- **PR #47472**: (terminalmage) salt.utils.hashutils: Fix UnicodeEncodeError in several funcs @ 2018-05-07 13:31:07 UTC
  - 4ac2d8fb2 Merge pull request #47472 from terminalmage/hashutils
  - 7266e9984d salt.utils.hashutils: Fix UnicodeEncodeError in several funcs

- **PR #47485**: (gtmanfred) add openstack modules to doc index.rst @ 2018-05-07 13:11:42 UTC
  - 8b0a370189 Merge pull request #47485 from gtmanfred/2018.3
  - c86163d79f add openstack modules to doc index.rst
    * PR #47482: (gtmanfred) add all autodoc for new salt openstack modules @ 2018-05-04 21:03:38 UTC
      - 8df37f734a Merge pull request #47482 from gtmanfred/2018.3
      - 1f65d5cb73 add all autodoc for new salt openstack modules
    * PR #47447: (dwoz) Fix failing test due to windows console encoding @ 2018-05-04 16:41:29 UTC
      - d20ca15c5d Merge pull request #47447 from dwoz/strv
      - 8c01773833 Use the same non decodable bytes for all tests
      - 983881a2a1 Add bytes that will not decode using cp1252
    * PR #47466: (dwoz) bytes file that decodes the same utf-8 and cp1252 @ 2018-05-04 15:54:24 UTC
      - 8c5b30b541 Merge pull request #47466 from dwoz/randbytes
      - fd9bc06aab bytes file that decodes the same utf-8 and cp1252
    * ISSUE #46660: (mruepp) top file merging same does produce conflicting ids with gitfs (refs: #47354, #46751)
    * PR #47435: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-05-04 13:05:32 UTC
      - fa293f8fac Merge pull request #47435 from rallytime/merge-2018.3
      - be0731da5f Add skipIfs back in for rest_tornado tests
      - fd98ee3dct Lint: Add missing blank line
      - 561718b20b Update old is_windows utils path to new utils path
      - a94cf8a0d Merge branch '2017.7' into '2018.3'
        * 7ae3497b0c Merge pull request #47429 from gtmanfred/2017.7
          - 8ae32033cc server_list_min should use state, not status
        * 2f5fc4ecccc Merge pull request #47399 from isbm/isbm-zeromq17-deprecationwarning-2017.7.2-v2
          - a36e49fd27 fix pylint
- 98b5629b36 Fix imports
- d94c0f0152 Remove unnecessary variable
- 8e377b5653 Lintfix: E0203 and attribute access
- 2aab70b1b8 Install ZMQ handler if <15 version
- 296c589f4b Use ZMQ switch utility in the integration tests
- ab5fa34d7c Use ZMQ_VERSION_INFO constant everywhere
- 43b5558b82 Add trace logging on ZMQ sockets communication
- 16420a9fe Remove duplicate code for ZMQ monitor handling
- 834b1e4ff0 Remove obsolete ZMQIOLoop direct instance
- 1c90c5db3c Remove an empty line
- ef2e0acd66 Add logging on ZMQ socket exception
- 38ceed371d Lintfix: ident
- 1ece6a5f52 Lintfix: line too long
- 4e650c0b44 Remove code duplicate by reusing utilities functions
- 57da54b676 Fix imports
- 948368e9a1 Add libzmq version info builder
- 0b4a17b859 Update log exception message
- 116e1809fc Put a message alongside the exception to the logs
- 4bc43124b7 Remove unnecessary ZMQ import and check for its presence
- 05fd40269 Use utility for ZMQ import handling in SSH client
- 457ef7d9a5 Use utility for ZMQ import handling in flo/zero
- 08dee65bd Use utility for ZMQ import handling
- e2a353cb0 Remove unnecessary ZMQ extra-check for cache utils
- c8f2cc271d Remove unnecessary ZMQ extra-check for master utils
- 3940677bb9 Remove old ZMQ import handling
- f34a53eb29 Use ZMQ utility for version check
- cbb26dcb28 Use ZMQ installer for master
- 453e83210a Add ZMQ version build
- af960e21d Use ZMQ importer utility in async
- d50b2b2023 Incorporate tornado-5 fixes
- 1fd9af0653 Add ZMQ backward-compatibility tornado installer for older versions
- ad4b4015cf Add one place for handling various ZMQ versions and IOLoop classes
  - b14e974b5f Merge pull request #47343 from Ch3LL/win_srv_test
  - 2173b6f549 ensure we are enabling/disabling before test
  - d58be06751 Add additional service module integration tests and enable for windows
  - b0f3fb577f Merge pull request #47375 from terminalmage/issue47310
· fa2bea52bb Remove extra blank line to appease linter
· f8ab2be81c Add debug logging if we fail to detect virtual packages
· 67c4fc56ac Warn on use of virtual packages in pkg.installed state

* 56235032f4 Merge pull request #47415 from kstreee/fix-local-client-tgt-bug
  · b8d37e0a1e To add a test case for the syndic environment, copies the test case which was
    written by @matt-p that was already merged into develop branch, related pr is #46692.
    · 4627bad1fd Realizes 'tgt' field into actual minions using ckminions to subscribe results of
      the minions before publishing a payload.
* d65ceaae03 Merge pull request #47286 from baniobloom/vpc_peering_connection_name_fix
  · a968965087 Merge branch '2017.7' into vpc_peering_connection_name_fix
* 8a5d4437bb Merge pull request #47270 from meaksh/2017.7-fix-retcode-on-schedule-utils
  · d299cf3385 Merge branch '2017.7' into 2017.7-fix-retcode-on-schedule-utils
  · b6da600ff Initialize __context__ recode for functions handled via schedule util module
* 5b51075384 Merge pull request #47371 from rallytime/fix-47264
  · a43485b49c Fix "of pass" typo in grains.delval docs: change to "or pass"
* a86e53be66 Merge pull request #47389 from dwoz/moregittestfix
  · 67745c1362 Older GitPython versions will not have close
* a5367ea6f3 Merge pull request #47388 from dwoz/test_pip_fix
  · eb26321e8b Fix missing import
* 9b59b991c2 Merge pull request #47380 from gtmanfred/2017.7
  · 93d144ec1 add io_loop handling to runtests engine
* 37822c0cb bb Merge pull request #47384 from dwoz/test_pip_fix
  · a37a9da1fb Fix py2 version of pip test
* eefd96732e Merge pull request #47382 from dwoz/gitfs_tests
  · 1570708fac Close the repo and fix multiple tests
* 57c75ff660 Merge pull request #47369 from terminalimage/ldap_pillar
  · 085883ae2d Return an empty dict if no search_order in ldap ext_pillar config file
* bcc66dd9bf Merge pull request #47363 from DSRCorporation/bugs/replace_exc_info_with_exception
  · 3f7b93a23c Tornado5.0: Future.exc_info is dropped
* bcefb34f7e1 Merge pull request #47334 from terminalimage/ldap_pillar
  · 0175a8687c pillar_ldap: Fix cryptic errors when config file fails to load
  · 65c3ba7ff1 Remove useless documentation
  · 5d67cb27de Remove unnecessary commented line
  · 8de3d41adb fixed vpc_peering_connection_name option

* PR #47464: (dwoz) Skip tests not applicable to windows @ 2018-05-04 13:04:38 UTC
  · 51d21af4d4f Merge pull request #47464 from dwoz/skiP_syslog_tests
Salt Documentation, Release 3002.5

- ca9393b7f Skip tests not applicable to windows

- **PR #47456**: (dwoz) Sysname returns text type @ 2018-05-04 02:57:50 UTC
  - 3219430dc Merge pull request #47456 from dwoz/sysname
  - 559ee1961f Sysname returns text type

- **PR #47458**: (Ch3LL) Add In Progress Warning for 2018.3.1 Release Notes @ 2018-05-03 20:40:46 UTC
  - f3918514a7 Merge pull request #47458 from Ch3LL/unreleased_rn_2018
  - 6a261e5e3a Add In Progress Warning for 2018.3.1 Release Notes

- **PR #47448**: (dwoz) Fix missing import in test suite @ 2018-05-03 14:30:23 UTC
  - 9fd6cbe994 Merge pull request #47448 from dwoz/transport_import
  - 7e04eb82e1 Fix missing import in test suite

- **ISSUE #47260**: (mew1033) disable_saltenv_mapping not working as expected (refs: #47410)

- **PR #47410**: (terminalmage) gifs: Fix identification of base env when saltenv mapping is disabled @ 2018-05-03 14:12:27 UTC
  - 157a32a7f Merge pull request #47410 from terminalmage/issue47260
  - 3ab332a9f Update tests to reflect bugfix
  - 7b8127f336 gifs: Fix identification of base env when saltenv mapping is disabled

- **PR #47413**: (dmurphy18) Repobuild improvements for Ubuntu 18.04 lack of gpg2 and better error checking @ 2018-05-02 16:21:31 UTC
  - 0914cf99a6 Merge pull request #47413 from saltstack/relobuild_improv
  - c0640321f0 Removed extra spaces for pylint
  - 20e50b33f0 Minor cleanup due to review comments
  - 143b39e9a0 Update for Ubuntu 18.04 lack of gpg2 and enhanced error checking

- **PR #47216**: (twangboy) Reg docs @ 2018-05-02 13:33:27 UTC
  - 5e5774fd37 Merge pull request #47216 from twangboy/reg_docs
  - 0bee85b1f Fix lint, add bytes
  - bad441f8de Fix some lint`
  - af5139f2f Add additional examples
  - 24df6ec1b7 Additional docs formatting
  - ff46b27a06 Update reg docs, fix formatting issues

- **PR #47417**: (gtmanfred) revert instantiating a Caller Client in the engine @ 2018-05-01 18:56:06 UTC
  - 63ba4c4f8 Merge pull request #47417 from gtmanfred/slack
  - 5c8ea7f506 Update slack.py
  - ee8a5eeb10 revert instantiating a Caller Client in the engine

- **ISSUE #45790**: (bdarnell) Test with Tornado 5.0b1 (refs: #46066, #47106, #47433)

- **PR #47368**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-05-01 18:56:20 UTC
  - PR #47106: (DmitryKuzmenko) Tornado50 compatibility fixes (refs: #47374, #47368, #47433)
  - PR #46002: (ismb) Pyzmq 17.0.0 proper handling (refs: #47374, #47368)
- 0bdfaa5ffe Merge pull request #47368 from rallytime/merge-2018.3
- 46806e595b Update test assertion comment for pip pkgs
- d9d24d49e Lint: Add missing import
- c7b73d132e Merge branch '2017.7' into '2018.3'
  - 31db8ca7ad Merge pull request #47347 from dwoz/test_mysql_fix_again
    - add78fb618 Fix linter warnings
    - 2644cc7553 Fix linter nits
    - 799c601184 Proper fix for mysql tests
- fefc0cc3ca Update old utils paths to use new utils paths
- 13e8124031 Merge branch '2017.7' into '2018.3'
  - e573236848 Merge pull request #47359 from gtmanfred/2017.7
    - 6214ed8133 add mention of the formulas channel to the formulas docs
  - 629503b2a8 Merge pull request #47317 from dwoz/threadshutdown
    - 6db2a0e4d3 Log exceptions at exception level
    - d4ae787595 Do not join a thread that is stopped
  - aacd5cfe3 Merge pull request #47304 from cachedout/test_cli_timeout_arg
    - 85025a83c Pass timeout to salt CLI for tests
  - 55534fb659 Merge pull request #47311 from Ch3LL/firewall_windows
    - 4e16c18c16 Add firewall module windows tests to whitelist
    - 4b2f4ec66 Add windows firewall execution modules integration tests
  - 1667375a80 Merge pull request #47348 from dwoz/no_symlinks
    - 94a70ee847a Ignore gitfs tests when symlinks not enabled
  - dac04261b5 Merge pull request #47342 from dwoz/test_mysql_fix
    - 7496f4c5a8 Fix mysql test cases
  - 34e78ef564 Merge pull request #47341 from dwoz/inet_pton_fix
    - 85451f48d4 Fix python 3 support for inet_pton function
  - e4779f3246 Merge pull request #47339 from dwoz/ssh_key_test_fix
    - e37a931ca Remove redundant close call
    - b2ae5889b7 Close the temporary file handle
    - 9f7f83a975 Use salt.utils.fopen for line ending consistancy
  - b221860151 Merge pull request #47335 from dwoz/pip_test_fix
    - dcb6a22c00 Remove un-needed string-escape
  - 1c527bfd3a Merge pull request #47331 from dwoz/py3_wingroup_fix
    - cc154ef857 Do not encode usernames
  - 708078b152 Merge pull request #47329 from cachedout/frank_credit
    - 33c064ac4 Credit Frank Spierings
* a545e55543 Merge pull request #47281 from Ch3LL/system_test
  - c9181a75a6 Add destructivetest decorator on tests
  - 0d0c8987fc Add win_system integration module tests
* b64d930df0 Merge pull request #47283 from Ch3LL/ntp_test
  - ced7f86546 Add windows ntp integration module tests
* 910aff910f Merge pull request #47314 from Ch3LL/net_mac_test
  - 67be1451c Skip netstat test on macosx as its not supported
* 0549ef7c16 Merge pull request #47307 from rallytime/bp-47257
  - 6c5b2f92bc Role is not a list but a dictionary
* d6ff4689f6 Merge pull request #47312 from rallytime/update-bootstrap-release
  - 765ce06a2 Update bootstrap script to latest release: 2018.04.25
* e0765f5719 Merge pull request #47279 from dwoz/py3_build_fix
  - 21dc1bab91 Pep-8 line endings
  - 717abeda7 Fix comman wart
  - 4100dc64c Close might get called more than once
  - dbe671f943 Stop socket before queue on delete
  - 95875c69e Silence pylint import-error for six.moves
  - 4b0c7d3b34 Fix typo
  - 05ad7c2b1 Use six.moves for queue import
  - fe340778fa Gracefully shutdown worker threads
* 44f19b2f94 Merge pull request #47113 from jfindlay/iptables_state
  - 8d08012ee modules,states.iptables support proto for policy ext
* b7a6206330 Merge pull request #47302 from Ch3LL/dead_code
  - daa68b4877 Add virtual grains test for core grains
  - a59dd2785d Remove dead code in core grains file for virt-what
* e29362acfc Merge pull request #47303 from baniobloom/bug_fix_doc
  - b97c9df5f3 added clarity on how to figure out what is the oldest supported main release branch
* 0d9d55e013 Merge pull request #47106 from DSRCorporation/bugs/tornado50
  - 39e403b18d Merge branch '2017.7' into bugs/tornado50
  - 6706b3a2d1 Run off of a temporary config
  - d6873800d5 Allow running pytest>=3.5.0
  - 2da3983740 Tornado 5.0 compatibility fixes
* 2e014f4746 Merge pull request #47271 from gtmanfred/amazon
  - 8a53908908 Do not load rh_service module when booted with systemd
  - e4d1d5bf11 Revert "support amazon linux 2 for service module"
59b0ed1e9 Merge pull request #47246 from cloudflare/fix-44847-2017.7
  * ad80028104 This way, we can pass flags such as `debug` into the state, but also `test`.
4e2e1f0719 Merge pull request #47220 from benediktwerner/fix-pip-2017.7
  * 0197c3e973 Fix pip test
  * 34bf6c09f Fix pip.installed with pip>=10.0.0
92e606251f Merge pull request #47272 from rallytime/reg-windows-codeowners
  * 9445af0185 Add windows tests and reg module/state to CODEOWNERS file for team-windows
9dca5c0221 Merge pull request #47252 from rallytime/codeowners-fixes
  * 204b6af92b Fix the matching patterns in the CODEOWNERS file to use fnmatch patterns
3de1bb49c8 Merge pull request #47177 from fpicot/fix_47173_pkg_normalize
  * 149f846f34 fix normalize parameter in pkg.installed
10e30515dc Merge pull request #47251 from Ch3LL/pub_fix_rn
  * fa4c2e6575 Update Docs to remove unnecessary + sign
bb7850a431 Merge pull request #47249 from Ch3LL/pub_fix_rn
  * 24dea2497e Add CVE number to 2016.3.6 Release
56933eb0b2 Merge pull request #47227 from pruiz/pruiz/zfs-dataset-present-slow-2017.7
  * fded61f19b Fix issue #47225: avoid zfs.filesystem_present slowdown when dataset has lots of snapshots
9825065048 Merge pull request #47167 from smitty42/vbox-skd-fix
  * 5de53139cd Merge branch '2017.7' into vbox-skd-fix
976f031170 Merge pull request #47213 from dwoz/py3win
  * ad9c7f63f0 Fix coverate on py3 windows builds
  * 91252ac95 Adding updates for python3 compatibility and new virtualbox SDK version support.
cebcd6d069 Merge pull request #47197 from dwoz/testfix
  * 25803c9176 Move process target to top level module namespace
d4269c2b70 Merge pull request #47193 from Ch3LL/network_test
  * bbff987c19 Add network module integration tests
c777248a78 Merge pull request #47189 from Ch3LL/autoruns
  * 6a88bedb7a Add autoruns to windows whitelist
  * e9e444af70 Add autoruns.list integration test for Windows

- **PR #47403:** (rallytime) Back-port #47356 to 2018.3 @ 2018-05-01 15:19:06 UTC
  - **PR #47356:** (robinro) Fix sysctl translate (refs: #47403)
- 4e6870305c Merge pull request #47403 from rallytime/bp-47356
- 9b682bc48e Fix sysctl translate
- **PR #47407:** (terminalmage) Reduce severity of missing X_update_interval key @ 2018-05-01 15:18:46 UTC
- 7e0cdd6145 Merge pull request #47407 from terminalmage/update-interval-log
- abc592bfff Reduce severity of missing X_update_interval key

**ISSUE #47042**: (valentin2105) [ERROR] Unable to manage file: 'utf8' codec can't decode byte (refs: #47061)

**PR #47405**: (terminalmage) Fix file.get_diff regression in 2018.3 branch @ 2018-05-01 15:16:46 UTC
  - PR #47061: (terminalmage) Fix diffing binary files in file.get_diff (refs: #47405)
  - 1377942bcc Merge pull request #47405 from terminalmage/binary-diff
  - 89ddb08026 Use a lambda instead of defining a one-line function
  - b79f04fda Remove no-longer-used enumerate
  - e03b865359 Add unit test for file.get_diff
  - 5bdc9e9bd5 Fix UnboundLocalError in file.get_diff

**ISSUE #47325**: (robertodocampo) docker_container.running creates containers using the image ID as the image name (refs: #47367)

**PR #47367**: (terminalmage) Start docker containers with image name instead of ID @ 2018-04-30 18:46:13 UTC
  - c267e6083e Merge pull request #47367 from terminalmage/issue47325
  - 798134c6a9 Add regression test for creating images with image name instead of ID
  - 4ed47839c Start docker containers with image name instead of ID

**ISSUE #47006**: (cedwards) marathon & fx2 grain modules cause master and minion failure (refs: #47401)

**PR #47401**: (gtmanfred) fix proxy virtual checks for marathon and fx2 @ 2018-04-30 18:44:46 UTC
  - 3bb00cb55 Merge pull request #47401 from gtmanfred/proxy
  - 99f9231759 fix proxy virtual checks for marathon and fx2

**PR #47397**: (rallytime) Add 2018.3.1 Release Notes @ 2018-04-30 14:44:38 UTC
  - c160fe36ce Merge pull request #47397 from rallytime/2018.3.1-release-notes
  - 3b40cdad2a Add 2018.3.1 Release Notes

**ISSUE #45790**: (bdarnell) Test with Tornado 5.0b1 (refs: #46066, #47106, #47433)

**PR #47374**: (DmitryKuzmenko) tornado50 merge forward for 2018.3 @ 2018-04-29 16:29:12 UTC
  - PR #47106: (DmitryKuzmenko) Tornado50 compatibility fixes (refs: #47374, #47368, #47433)
  - PR #46002: (isbm) Pyzmq 17.0.0 proper handling (refs: #47374, #47368)
  - 3400f829c4 Merge pull request #47374 from DSRCorporation/bugs/tornado50-2018.3
  - 400999c54f fix pyzmq
  - 47b6d409d1 add io_loop handling to runtests engine
  - fd074fbd7d use salt.utils.zeromq
  - 4ae33c5d9a Run off of a temporary config
  - 7913bb906e Allow running pytest>=3.5.0
  - 34058c181c Tornado 5.0 compatibility fixes

**ISSUE #47124**: (mchugh19) Vault module problem in 2018.3.0 (refs: #47379)

**PR #47379**: (dwoz) Properly encode messages when creating/validating signatures with m2crypto @ 2018-04-28 08:38:23 UTC
- 2afe4bee95 Merge pull request #47379 from dwoz/m2crypto_regression
- 068f2d430d Always sign and verify bytes
- 7810ebab9 Add sign regression tests
- f4441c3a1c Adding regression test for 47124

- **PR #47277:** (morganwillcock) Fix minion crash on NetBSD @ 2018-04-27 15:02:21 UTC
  - 7390b72808 Merge pull request #47277 from morganwillcock/netbsdswap
  - 0bcb1a079a Merge branch '2018.3' into netbsdswap
  - 30478e8c9c Use swapctl for NetBSD

- **PR #47320:** (twangboy) Change from NSSM to SSM @ 2018-04-27 14:37:50 UTC
  - 2b7c7ef704 Merge pull request #47320 from twangboy/win_ssm
  - 5549d83aee Use ssm instead of nssm

- **PR #47308:** (rallytime) Back-port #47287 to 2018.3 @ 2018-04-27 13:50:49 UTC
  - **PR #47287:** (esell) convert unicode ssh pass to str for azure (refs: #47308)
  - b6df5facee Merge pull request #47308 from rallytime/bp-47287
  - 5f392a23fe convert unicode ssh pass to str for azure

- **ISSUE #47324:** (rlschilperoort) archive.extracted keep and/or keep_source not working (refs: #47332)

- **PR #47332:** (garethgreenaway) [2018.3] Removing duplicate code from state/archive.py @ 2018-04-27 13:12:51 UTC
  - efa3aab800 Merge pull request #47332 from garethgreenaway/47324_archive_extracted_keep_keep_source
  - cc10bfe6b Removing redundant code which is preventing keep & keep_source from being set.

- **PR #47326:** (The-Loeki) Some Redis fixes @ 2018-04-26 17:12:47 UTC
  - 245d62ca16 Merge pull request #47326 from The-Loeki/redis-cache-sockets
  - d868b5dbd redis_return: add unix_socket_path to docs
  - ee9f533765 redis_cache: document UNIX socket access
  - 5337558a5a redis_return: Let redis handle pool creation, add UNIX socket support
  - c90f83b0f9 redis_return: cluster_mode default to False in __virtual__ to prevent KeyError stacktraces
  - 71e3286829 redis_return: Fix code blocks in docs
  - e660f1c78e redis_cache fix code blox in docs
  - 40e67747ee redis_cache: add socket to options

- **PR #47319:** (dwoz) Skip unix group tests on windows. @ 2018-04-26 15:59:35 UTC
  - 27a438f0ff Merge pull request #47319 from dwoz/skip_tests
  - d9442d043e Skip tests not applicable to windows

- **PR #47293:** (dwoz) The grp module is not available on windows @ 2018-04-25 20:22:34 UTC
  - 057f668788 Merge pull request #47293 from dwoz/win_build_fix
  - 0386216005 Fix sneaky indentation
  - 082b8d0b3d Use salt.utils.platform
• ISSUE #46862: (kivoli) Setting locale.system fails in 2018.3 (refs: #47280, #46869)
• PR #47280: (gtmanfred) make sure not to send invalid information @ 2018-04-25 17:46:45 UTC
  – ff4f8c1a5 Merge pull request #47280 from gtmanfred/localectl
  – 7c212cb2d fix pylint
  – 6754787e8e update locatemod tests
  – 9075070573 make sure not to send invalid information
• ISSUE #46977: (gtmanfred) [2018.3.0] Backwards compatibility breaking change in 2018.3.0 (refs: #47038)
• PR #47038: (garethgreenaway) [2018.3] fix to fileclient.py @ 2018-04-25 14:57:04 UTC
  – 205701dcb0 Merge pull request #47038 from garethgreenaway/46977_fixing_fileclient_forward_compatibility
  – ba01d2133a Updating version.py to include Magnesium.
  – 10c823dd79 The _ext_nodes master function has been renamed to _master_tops. To ensure compatibility when using older Salt masters we continue to pass the function as _ext_nodes until the Magnesium release.
• ISSUE #47059: (OrlandoArcapix) Some states incorrectly return None instead of an empty dict when there are no changes (refs: #47060)
• ISSUE #46985: (OrlandoArcapix) grafana4_user.present and grafana4_org.present states not working in 2018.3.0 (refs: #47048)
• PR #47060: (OrlandoArcapix) Return an empty dict for 'changes' instead of 'None' @ 2018-04-25 14:55:24 UTC
  – PR #47048: (OrlandoArcapix) Issue46985 fix grafana4 state (refs: #47060)
  – 89dafbfc75 Merge pull request #47060 from OrlandoArcapix/issue47059-return_dict_from_state
  – 5378ef4d07 Update grafana datasource test to check for empty dict being returned on no changes, rather than None
  – f115452653 Return an empty dict for 'changes' instead of 'None'
• ISSUE #47089: (syphernl) UnicodeDecodeError: 'ascii' codec can't decode byte 0xc3 in position 404: ordinal not in range(128) (refs: #47153)
• PR #47153: (terminalmage) salt.modules.ssh: properly encode/decode I/O @ 2018-04-25 14:53:51 UTC
  – 100cd312b Merge pull request #47153 from terminalmage/salt.modules.ssh: properly encode/decode I/O
• ISSUE #47199: (tkaczn) Targeting by list (-L) broken for minions behind syndic? (refs: #47275)
• PR #47275: (terminalmage) Fix false failure events sent when using syndic @ 2018-04-25 13:56:47 UTC
  – b5d64f1a70 Merge pull request #47275 from terminalmage/issue47199
  – 8012ad128 Fix false failure events sent when using syndic
• ISSUE #47267: (skjaro) Problem with beacon diskusage on windows platform in 2018.3 (refs: #47284)
• PR #47284: (skjaro) Fix beacon diskusage documentation for the new beacon behavior mentioned in issue #47267 @ 2018-04-25 13:52:30 UTC
  – 6215a995d8 Merge pull request #47284 from skjaro/beacon_diskusage_doc_fix
  – f0c042a56 Fix beacon documentation for the new behavior mentioned in issue #47267
• PR #47291: (bosatsu) Fix proxy minion beacon doc @ 2018-04-25 13:42:36 UTC
  - 3ef4fe6ed2 Merge pull request #47291 from bosatsu/fix-proxy-minion-beacon-doc
  - 01980b4c43 Fix topics/releases/2018.3.0.rst to include correct example of proxy_example beacon yaml configuration.
  - 9682e26eee Fix topics/proxyminion/beacon.rst to include correct example of salt_proxy beacon yaml configuration.

• ISSUE #47239: (bosatsu) Unable to load salt_proxy beacon on minion in 2018.3.0 (refs: #47255)

• PR #47255: (garethgreenaway) [2018.3] Fixes to salt_proxy beacon and beacon tests @ 2018-04-25 13:41:51 UTC
  - ea2d68b865 Merge pull request #47255 from garethgreenaway/47239_fixes_to_salt_proxy_beacon
  - a2a8d78cb0 Fixing status beacon tests.
  - c87d6cae23 Ensure the salt_proxy is returning the correct tuple when the configuration is valid. Update various beacon unit tests to ensure they are testing the results of the validate function for a True result.

• PR #47292: (dwoz) Fix decorator wart @ 2018-04-25 04:25:23 UTC
  - PR #47290: (dwoz) Run cache_master test in tmp dir (refs: #47292)
  - 19f9e8258f Merge pull request #47292 from dwoz/cp_fix_again
  - 7d045eb235 Fix decorator wart

• PR #47285: (dwoz) Fix reg grains test @ 2018-04-25 00:16:56 UTC
  - da532aa1ac Merge pull request #47285 from dwoz/core_test_fix
  - 884f4c1829 Fix extra space
  - 8a9027c0c9 Fix reg grains test

• PR #47290: (dwoz) Run cache_master test in tmp dir (refs: #47292) @ 2018-04-24 23:37:21 UTC
  - f591cf643 Merge pull request #47290 from dwoz/test_cp_fix
  - 5ff51affbd Run cache_master test in tmp dir

• ISSUE #47092: (syphernl) [2018.3.0] pkg.installed breaks with virtual packages (refs: #47250)

• ISSUE #38838: (Zorlin) Failing to remove nginx (refs: #44455)

• PR #47250: (terminalmage) Fix virtual package detection @ 2018-04-24 19:22:24 UTC
  - PR #44455: (samodid) Fix for #38838 (refs: #47250)
  - 6d323aa8f0 Merge pull request #47250 from terminalmage/issue47092
  - b8630a70bc Fix virtual package detection

• ISSUE #47225: (pruiz) zfs.filesystem_present takes forever on a dataset with lots (10k+) of snapshots (refs: #47228, #47227, #47226)

• PR #47228: (pruiz) Fix issue #47225: avoid zfs.filesystem_present slowdown when dataset has lots of snapshots (2018.3 branch) @ 2018-04-24 13:35:21 UTC
  - PR #47226: (pruiz) Fix issue #47225: avoid zfs.filesystem_present slowdown when dataset has lots of snapshots (refs: #47228, #47227)
  - 428e915d6a Merge pull request #47228 from pruiz/pruiz/zfs-dataset-present-slow-2018.3
  - cbff136ab2 Fix issue #47225: avoid zfs.filesystem_present slowdown when dataset has lots of snapshots

• ISSUE #46943: (Auha) Slack.Engine could not start (refs: #47262, #47109)
• **PR #47262:** (garethgreenaway) [2018.3] Fixes to targeting in Slack engine @ 2018-04-24 13:18:36 UTC
  - 0b836106b9 Merge pull request #47262 from garethgreenaway/slack_engine_target_fix
  - bcede61e8 Removing target and tgt_type from the cmdline that is passed along to Salt, the target is used elsewhere and including it in the cmdline causes problem when it is passed along. Adding an additional test to ensure we are getting the right target.

• **ISSUE #47047:** (Giandom) Pillars aren’t evaluated when alias is passed in Slack Engine (refs: #47142)

• **PR #47142:** (garethgreenaway) [2018.3] pillar and output formatting fixes to Slack engine @ 2018-04-23 19:55:07 UTC
  - 2ed4b38b02 Merge pull request #47142 from garethgreenaway/47047_passing_pillar_to_slack_aliases
  - 6f183e1d80 Initial commit for unit/engines/test_slack_engine
  - a2840fc230 Only include the rest of the cmdline if the cmd is an alias.
  - e846df7409 Fixing a bug when passing pillar values to aliases for the Slack engine. Cleaned up the formatting of the results, color codes don’t translate well into Slack output. For any state runs, eg. highstate, apply, sls, we run the output through the highstate formater. For anything else run it through the yaml outputer. Running it though highstate causes errors when the output does match what the highstate output is expecting.

• **PR #47245:** (terminalmage) Ensure we pass hexid as bytes when zmq_filtering enabled @ 2018-04-23 16:54:57 UTC
  - 42a0e655dc Merge pull request #47245 from terminalmage/zeromq-bytes
  - a7acc0548 Ensure we pass hexid as bytes when zmq_filtering enabled

• **PR #47242:** (aesposito91) PY3 fix for zeromq setsockopt @ 2018-04-23 16:38:09 UTC
  - 73525d1460 Merge pull request #47242 from aesposito91/2018.3
  - b225351e6d Update napalm_syslog.py

• **ISSUE #47117:** (prashanthtuttu) Napalm / Capirca Issue (refs: #47241)

• **PR #47241:** (mirceaaulinic) Fix the imports into the netacl execution and state modules @ 2018-04-23 14:56:32 UTC
  - b78295ae9 Merge pull request #47241 from cloudflare/fix-47117
  - 26c558326d #47117: fix the napalm imports in the netacl state module
  - 48396467c1 #47117: fix the napalm imports in the netacl execution module

• **PR #47219:** (garethgreenaway) [2018.3] Fixing a backward compatibility issue with vault module & runner @ 2018-04-23 14:10:19 UTC
  - 88557ea991 Merge pull request #47219 from garethgreenaway/vault_backward_compatibility
  - 1758081f8 When using the vault module on a 2018.3 minion against a 2017.7 master, the 2018.3 minion is expecting a verify element in the results from the Salt runner on the master. The runner in 2017.7 did not include a verify element, which results in an error. This change accounts for this by using the default in 2018.3 which is not to verify if not configured.

• **PR #47186:** (dmurphy18) backport of issue 46933, updated ZFS handling to Salt 2018.3.x @ 2018-04-23 14:07:06 UTC
  - 370feedbd2 Merge pull request #47186 from dmurphy18/zfs_backport_46933
  - 283359f315 Corrected typo in comma-separated and 2018.3.0 -> 2018.3.1
  - b7f8d5a2f Replace use of Fluorine with 2018.3.0 for comma-separated warnings
- 3f30ab2ed6 ZFS backport of 46933 to 2018.3.1
- **PR #47217**: (twangboy) Remove installation of pywin32 from setup.py @ 2018-04-23 13:32:54 UTC
  - bf3a67d11b Merge pull request #47217 from twangboy/fix_setup
  - eb3d45bb08 Remove installation of pywin32 from setup.py
- **PR #47195**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-04-20 19:25:30 UTC
  - 8e21703f13 Merge pull request #47195 from rallytime/merge-2018.3
  - f90fd8c663 Test fix: file strings must be unicode in master config
  - bee4948df1 Lint: use full path for event utils function
  - 120c5446b7 Update old utils paths to new utils paths
  - 4718d31e53 Merge branch '2017.7' into '2018.3'
  - 65f344e371 Merge pull request #47184 from Ch3LL/status_test
    - 25a84428b8 Add status module integration modules tests for Windows
  - 965600ad6c Merge pull request #47163 from rallytime/jenkins-autodoc
    - 0039395017 Update jenkins module autodocs to use jenkinsmod name instead
  - 0a43d6e5fc Merge pull request #47185 from twangboy/add_tests
    - 345daa0423 Add additional integration tests to whitelist
  - 1a600bb9a4 Merge pull request #47172 from dwoz/cover_without_admin
    - cadd759727 Use warnings to warn user
    - 144c68e214 Allow non admin name based runs on windows
  - d59972301 Merge pull request #47110 from kstreee/fix-misusing-of-timeout
    - 062aee0ed Fixes misusing of the timeout option.
  - 87ca2b4003 Merge pull request #40961 from terminalmage/issue40948
    - 6ba66cc4a1 Fix incorrect logic in exception check
    - fed5041c5f Make error more specific to aid in troubleshooting
    - 8c67ab53b4 Fix path in log message
    - 3198ca8b19 Make error more explicit when PKI dir not present for salt-call
  - f5e63584d4 Merge pull request #47134 from Ch3LL/user_win_test
    - e7c9bc4038 Add user integration tests for windows OS
  - da2f6a3fac Merge pull request #47131 from gtmanfred/cli
    - 1b1c29bf62 add __cli for master processes
  - 9b8e6ff8c Merge pull request #47129 from rallytime/bp-47121
    - 11da526b21 add ImportError
    - bd0c2339c6 fix pip.req import error in pip 10.0.0
  - eb5ac51a48 Merge pull request #47102 from gtmanfred/2017.7
    - 3dc93b310b fix tests
    - 8497e08f8e fix pip module for 10.0.0
- 4c07a3d1e9 fix other tests
- b71e3d8a04 dont allow using no_use_wheel for pip 10.0.0 or newer
  * c1dc42e67e Merge pull request #47037 from twangboy/fix_dev_scripts
    * 990a24d7ed Fix build_env scripts
- **ISSUE #46906**: (whytwolf) Windows failure with PR 46541 (refs: #47168)
- **PR #47168**: (gtmanfred) fix metadata grain for py3 and windows @ 2018-04-20 19:07:50 UTC
  - a56eb7e05d Merge pull request #47168 from gtmanfred/metadata
  - 396f7906e3 fix metadata grain for py3 and windows
- **ISSUE #46918**: (AmbicaY) napalm/capirca issue (refs: #47202)
- **PR #47202**: (mirceaaulinic) Fix #46918: add the TTL field @ 2018-04-20 14:34:09 UTC
  - 6135b76e2c Merge pull request #47202 from cloudflare/fix-46918
  - 1e74141cc0 Fix #46918
- **ISSUE #47150**: (srkunze) [Regression] ip_to_host and SSH._expand_target require missing reverse-lookup (refs: #47191)
- **PR #47191**: (terminalmage) salt-ssh: Do not attempt to match host/ip to minion ID if reverse lookup fails @ 2018-04-20 14:20:05 UTC
  - 7f1115e611 Merge pull request #47191 from terminalmage/issue47150
  - 95a6f075cb Add debug logging when ip_to_host fails
  - 4569e622b salt-ssh: Do not attempt to match host/ip to minion ID if reverse lookup fails
- **PR #47122**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-04-19 20:44:18 UTC
  - 1947ffdf56 Merge pull request #47122 from rallytime/merge-2018.3
  - 878fa06134 Test fix: remove tornado testing lib from class
  - a40f007962 lint: get_context is in stringutils.py now
  - 3416e398c6 Update old utils paths references to use new paths
  - 94c2a12be6 Merge branch '2017.7' into '2018.3'
    * 6a4c0b8a1a Merge pull request #47108 from dwoz/async_test_fix
      * 3d85e30ce5 AsyncTestCase is required for AsyncEventPublisher
    * 03892ea0f0 Merge pull request #47068 from cachedout/catch_value_error_socket_test
      * 7db5625632 Catch an operation on a closed socket in a test
    * 1ea2885ec2 Merge pull request #47065 from dwoz/jinja_test_fix
      * 673cd31c65 Merge branch '2017.7' into jinja_test_fix
    * 5293b5b5ca Merge pull request #47077 from dwoz/test_state_fix
      * 444da3f893 Fix py3 wart (chr vs bytesstring)
      * e8aca01c2 Fix failing state test by normalizing line endings
    * ca967de5da Merge pull request #47067 from gtmanfred/2017.7
      * 990a24d7ed Fix build_env scripts
    * 7fddad6cd9 Merge pull request #47064 from dwoz/roots_tests_fix
- 25fd7c0694 fix py3 wart, encode os.linesep
- d79f1a1961 Fix fileserver roots tests
- 977c6939c4 Merge pull request #47069 from cachedout/match_timeout_arg
  - b8990f5258 Pass the timeout variable to the CLI when calling salt in tests
- 2c4c19c622 Merge pull request #47074 from dwoz/ignore_artifacts
  - c3941efad0 Kitchn should ignore artifacts directory
- c484c0bd71 Merge pull request #47055 from bloomberg/GH-47000
  - 8af3f5b874 GH-47000: add proper handling of full_return in cmd_subset
- f3496030cc Merge pull request #47039 from twangboy/win_fix_winrm_script
  - 6635b9003f Fix winrm powershell script
  - 46fa2c04de Fix py3 os.linesep wart
  - 3c565d7e54 Use salt.utils.fopen
  - aa965310f1 Clean up cruft
  - efc9866580 Jinja test fixes

- PR #47162: (terminalmage) Partial backport of #47161 to 2018.3 branch @ 2018-04-19 19:28:47 UTC
  - PR #47161: (terminalmage) Fix failing pillar unit test (refs: #47162)
  - 291cca7ed8 Merge pull request #47162 from terminalmage/bp-47161
  - d185f97a47 mocked file_roots and pillar_roots should be dicts

- ISSUE #47081: (sjorge) file.directory with recursion fails if there are non-ascii characters in the path (refs: #47165)

- PR #47165: (terminalmage) Make sure a str type is passed to os.walk @ 2018-04-19 14:59:16 UTC
  - 2ee8006da3 Merge pull request #47165 from terminalmage/issue47081
  - 9e29acbc77 Make sure a str type is passed to os.walk

- PR #47070: (terminalmage) Use decorators for temp files/dirs in test suite @ 2018-04-19 14:01:48 UTC
  - 6257862bbb Merge pull request #47070 from terminalmage/with_tempdir
  - 048728d2b7 Remove unused imports
  - 879e557264 Use decorators for temp files/dirs in test suite

- PR #47155: (mcalmer) Fix patchinstall for yumpkg @ 2018-04-18 19:24:17 UTC
  - b46365614b Merge pull request #47155 from mcalmer/fix-patchinstall
  - 382a6aa457 fix invalid string compare
  - 8c19368938 provide kwargs to pkg_resource.parse_targets required to detect advisory type

- ISSUE #47042: (valentin2105) [ERROR] Unable to manage file: 'utf8' codec can’t decode byte (refs: #47061)

- PR #47061: (terminalmage) Fix diffing binary files in file.get_diff (refs: #47045) @ 2018-04-18 18:52:10 UTC
  - 13ae1a2413 Merge pull request #47061 from terminalmage/issue47042
  - 87f6cefa3 Rewrite flaky utf8 state to make it easier to troubleshoot
  - df6e535f05 Fix diffing binary files in file.get_diff
• **PR #47058**: (terminalmage) Fix calls to file.lsattr when lsattr is not installed @ 2018-04-18 16:30:12 UTC
  - cbaf0f13cd9 Merge pull request #47058 from terminalmage/lsattr
  - eeb06e7910 Fix calls to file.lsattr when lsattr is not installed
• **ISSUE #46929**: (noelmcloughlin) 2018.3 regression file.managed.context parsing (refs: #47104)
• **PR #47104**: (terminalmage) yamlloader: Properly handle colons in inline dicts @ 2018-04-18 16:22:47 UTC
  - b96cea23b3f Merge pull request #47104 from terminalmage/issue46929
  - 33bf6463cd Add additional test for plain scalars
  - 508659b682 yamlloader: Properly handle colons in inline dicts
• **ISSUE #46887**: (julientravelaer) ldap.managed broken with 2018.3.0 (refs: #47029)
• **ISSUE #46859**: (cheribral) pillar_ldap causing TypeError exceptions in python-ldap with unicode objects (refs: #47029)
• **PR #47076**: (terminalmage) pillar_ldap: Load config options as str types @ 2018-04-18 16:16:22 UTC
  - PR #47029: (terminalmage) ldapmod.py/ldap3.py: Force modlist for search/modify/etc. to be str types (refs: #47076)
  - c12697b173 Merge pull request #47076 from terminalmage/issue46859
  - c06e859caf pillar_ldap: Load config options as str types
• **PR #47107**: (twangboy) Fix issues with reg state, add tests @ 2018-04-18 15:53:02 UTC
  - 50bd885ec7 Merge pull request #47107 from twangboy/fixed_46932
  - a8eab2ab1a Fix tests for py3, enable tearDown
  - 3cf4ac1475 Add integration tests for reg state
  - cc259b146f Cast vdata to appropriate type in reg state
• **ISSUE #46909**: (epelc) Binary contents_pillar with file.managed raises UnicodeDecodeError (refs: #47041)
• **PR #47041**: (terminalmage) Force null bytes to be str types @ 2018-04-18 14:08:25 UTC
  - d6c59696be Merge pull request #47041 from terminalmage/issue46909
  - e1482715be Special check specifically for bytes types
  - e900d5d95 Merge branch '2018.3' into issue46909
  - 0e99343a7f Use the same way of defining contents in both file.managed states
  - 5741d287b5 Move back to using null byte check for contents
  - 8e214c9fa9 file.managed: Add test to ensure binary contents work
  - 7b7dc94610 Use salt.utils.stringutils.is_binary to check if contents are binary
  - e3c969da81 PY3: Ensure binary contents work with file.managed
  - df98a8bedd Make salt.utils.stringutils.to_binary work for bytestrings
  - 1024000369 Force null bytes to be str types
• **PR #47007**: (twangboy) Fix some issues with the win_servermanager module @ 2018-04-17 20:57:04 UTC
  - 9a9f6524f8 Merge pull request #47007 from twangboy/fix_46968
  - 432db7c6ec Lint: Remove unused import
  - 10341e8f8b Remove erroneous pop statement
- 56582f293a Remove redundant try/except block from state`
- 6ad2427279 Remove unnecessary try/except blocks
- 92eeaa51bd Put some error checking in the shell command

- **ISSUE #46943**: (Auha) Slack.Engine could not start (refs: #47262, #47109)
- **PR #47109**: (garethgreenaway) [2018.3] fixes to Slack engine @ 2018-04-17 13:56:27 UTC
  - a52137ee36 Merge pull request #47109 from garethgreenaway/46943_slack_engine_fixes
  - 02baa76595 Fixing a bug that occurred when a comment was added to a message sent to Slack by Salt. Also making slack_engine:groups_pillar optional.
- **PR #47045**: (tankywoo) Fix ba7d00f5 for gentoo pkg.installed method @ 2018-04-17 13:55:45 UTC
  - 6c16a34c44 Merge pull request #47045 from tankywoo/fixed-gentoo-pkg-installed
  - 551f4e10cf Fix ba7d00f5 for gentoo pkg.installed
- **PR #47053**: (clan) handle jinja error in <module> level @ 2018-04-16 22:47:54 UTC
  - 86c7c7ef56 Merge pull request #47053 from clan/jinja-error
  - a847466946 handle jinja error in <module> level
- **PR #47062**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-04-16 19:58:32 UTC
  - 7bfa608e9f Merge pull request #47062 from rallytime/merge-2018.3
  - 59f5880e72 lint fix
  - 1dd8e584b Update old utils files to new new util files path
  - 28a79ebba4 Merge branch '2017.7' into '2018.3'
  - * 1700a10ebc Merge pull request #46326 from kstreee/fixed-client-local
    - 0f3589c9e9 Fixes a timing bug of saltnado's client local.
  - * c3c00316c5 Merge pull request #46913 from lomeroe/2017_7-fix46877
    - 369a0645ed move exception for clarity
    - 32ce5bfda5 Use configparser serializer object to read psscript.ini and script.ini startup/shutdown script files.
  - * 9e37cfc9d6 Merge pull request #47025 from terminalmage/fix-server_id-windows
    - cb0cf89ed3 Fix server_id grain in PY3 on Windows
  - * 2e193cb45 Merge pull request #47027 from rallytime/bp-44508
    - 8e72f362f4 Add priority field to support the latest capirca.
    - 112f92baab Add priority field to support the latest capirca.
  - * 385fe2bc1e Merge pull request #47020 from rallytime/bp-46970
    - 9373df52b Update test_pkgrepo.py
    - 13cf9eb5b1 Removing debugging.
    - a61a8593e5 Removing use from pkgrepo comments tests. the pkgrepo functions in SUSE pkg module do not support comments.
- **PR #47066**: (terminalmage) Fix regression in handling of environment/saltenv @ 2018-04-16 19:57:12 UTC
  - fa27e64a33 Merge pull request #47066 from terminalmage/issue46979

**30.2. Previous Releases**
- 5c4c0468ad Fix regression in handling of environment/saltenv

- **PR #47051**: (rallytime) Simplify LooseVersion check in __virtual__ check in mac_assistive module @ 2018-04-13 19:43:33 UTC
  - 8761b81a69 Merge pull request #47051 from rallytime/fix-lint
  - d52b3689d9 Simplify LooseVersion check in __virtual__ check in mac_assistive module

- **PR #47057**: (corywright) Fix copy/paste typo in minionfs tutorial @ 2018-04-13 19:43:01 UTC
  - bbb8018b55 Merge pull request #47057 from corywright/fix-minionfs-whitelist-docs
  - 9b7ee97d12 Fix copy/paste typo in minionfs tutorial

- **ISSUE #46931**: (anlutro) file.managed diff is switched when using template in salt-ssh 2018.3 (refs: #47046)

- **PR #47046**: (clan) switch order of file to be diffed @ 2018-04-13 13:40:13 UTC
  - d5afa4a2c5 Merge pull request #47046 from clan/file_diff
  - bb5860c54 switch order of file to be diffed

- **ISSUE #46985**: (OrlandoArcapix) grafana4_user.present and grafana4_org.present states not working in 2018.3.0 (refs: #47048)

- **PR #47048**: (OrlandoArcapix) Issue46985 fix grafana4 state (refs: #47060) @ 2018-04-12 19:43:01 UTC
  - ec9251ecd3 Merge pull request #47048 from OrlandoArcapix/Issue46985-fix-grafana4-state
  - 259d747414 Remove accidentally added copy of a file
  - 6c833da74d Return an empty dict instead of 'None' from grafana4 states

- **PR #47017**: (rallytime) Back-port #46919 to 2018.3 @ 2018-04-12 19:43:01 UTC
  - PR #46917: (rallytime) Replace failing is and is not tests with == and != (refs: #47017)
  - 5b7544eaa0 Merge pull request #46919 from rallytime/bp-46919
  - 68376c613e Replace failing is and is not tests with == and !=

- **ISSUE #46919**: (boltronics) mysql_grants.present broken with database: somedatabase.* (refs: #46919)

- **PR #47019**: (rallytime) Issue46887 fix grafana4 state (refs: #47060) @ 2018-04-13 13:33:29 UTC
  - 7691dee4ed Add to_str option to decode funcs

- **ISSUE #46887**: (julientravelaer) ldap.managed broken with 2018.3.0 (refs: #47029)

- **ISSUE #46859**: (cheribral) pillar_ldap causing TypeError exceptions in python-ldap with unicode objects (refs: #47029)

- **PR #47029**: (terminalmage) ldapmod.py/ldap3.py: Force modlist for search/modify/etc. to be str types (refs: #47076) @ 2018-04-12 19:41:29 UTC
  - ac2d54d78a Merge pull request #47029 from terminalmage/issue46859
  - ab631424b ldapmod.py/ldap3.py: Force modlist for search/modify/etc. to be str types
  - 7691dee4ed Add to_str option to decode funcs

- **ISSUE #46868**: (tiyang) 2017.7.4 to 2018.3.0 upgrade issue: Salt request timed out. The master is not responding (refs: #46930)

- **PR #46930**: (dwoz) Clean up bad public key headers @ 2018-04-12 18:57:37 UTC
  - e6e07720fa Merge pull request #46930 from dwoz/ctdomekeyfix
- f2e484ed54 Merge branch '2018.3' into cryptodomekeyfix
- e1995a92ee Fix verify signature test
- 0ba32118d9 Add test for bad public key without m2crypto
- a44c356233 Clean up bad public key headers

- **ISSUE #46951**: (Giandom) Slack engine error using aliases: TypeError unhashable type (refs: #47008)
- **PR #47008**: (garethgreenaway) [2018.3] Fixing aliases in slack engine @ 2018-04-12 15:24:40 UTC
  - 0e43becc12 Merge pull request #47008 from garethgreenaway/46951_fixing_slack_engine_aliases
  - dc2a72d44f Fixing aliases in slack engine

- **ISSUE #46947**: (Giandom) Slack engine groups error (refs: #47009)
- **PR #47009**: (garethgreenaway) [2018.3] fixes to slack engine documentation @ 2018-04-12 15:20:54 UTC
  - c33de7c82d Merge pull request #47009 from garethgreenaway/46947_slack_documentation_update_catch_non_dicts
  - f0fadbb4ce Fixing indentation for slack documentation. Updating try..except to ensure we catch when groups aren’t dicts.

- **PR #47023**: (rallytime) Back-port #46997 to 2018.3 @ 2018-04-12 15:05:24 UTC
  - **PR #46997**: (LukeCarrier) Fix respository (= repository) typo in sls_build (refs: #47023)
  - **PR #44638**: (terminalmage) Many improvements to docker network and container states (refs: #46997)
    - 68d17c71f1 Merge pull request #47023 from rallytime/bp-46997
    - c2c60f4fc Fix repository (= repository) typo in sls_build

- **PR #47026**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-04-12 14:39:41 UTC
  - 9cfc6406a Merge pull request #47026 from rallytime/merge-2018.3
  - ba70df9d62 Use msgpack utils for loads call, import msgpack for UnpackValueError
  - 34a478dfe5 Update old fopen path with new utils files path
  - 590c7fc13f Merge branch '2017.7' into '2018.3'
    - 8f994e7cf9 Merge pull request #46539 from jfoboss/patch-1
      - 6890122e41 Merge pull request #1 from twangboy/pull_46539
      - 19c3fadbe5 Fix unit test for win_ntp
      - 826a8d3099 Fixing #46504
    - 7d70e95a5 Merge pull request #46999 from gtmanfred/2017.7
      - 791a8f6ce switch pip test package
    - 8adaf7526 Merge pull request #46023 from bloomberg/parallel-orch
      - 0ac0b3ca29 Merge branch '2017.7' into parallel-orch
    - 39d65a39cf Merge pull request #46613 from myinitialsarepm/fixed_puppet.fact_and_puppet.facts
      - 44ec13abc Update tests to use cmd.run_all
      - 7d7d40f541 Merge branch '2017.7' into fix_puppet.fact_and_puppet.facts
      - 0ce1520bd0 Merge branch '2017.7' into fix_puppet.fact_and_puppet.facts
      - 69e1f6f681 Fix puppet.fact and puppet.facts to use stdout.
• 3d5e69600b address lint issues raised by @isbm
• a9866c7a03 fix parallel mode py3 compatibility
• 6d7730864a removing prereq from test orch
• 6c8a25778f add integration test to runners/test_state to exercise parallel
• 2c86f16b39 cherry-pick cdata KeyError prevention from #39832
• 26a96e8933 record start/stop duration for parallel processes separately
• e4844bdf2b revisit previous join() behavior in check_requisites
• f00a359cdf join() parallel process instead of a recursive sleep
• 6c7007a4dc add parallel support for orchestrations

• PR #47021: (garethgreenaway) [2018.3] Fixing integration.modules.test_state_jinja_filters.StateModuleJinjaFiltersTest.test_path_which
  @ 2018-04-12 13:12:39 UTC
    - d3be828696 Merge pull request #47021 from garethgreenaway/920_state_module_jinja_filters_test_test_path_which
    - 2ccf2c5fe0 Fixing test_path_which to check that the filter is available rather than results.

• PR #47022: (corywright) Add auth.file module to auth documentation page @ 2018-04-11 21:11:10 UTC
  - 66e8445b82 Merge pull request #47022 from corywright/add-auth-file-module-to-docs
  - bd0918fc40 Add auth.file module to auth documentation page

• PR #45774: (twangboy) Fix __virtual__ issue in mac_system.py @ 2018-04-11 14:26:13 UTC
  - 12ecfdee93 Merge pull request #45774 from twangboy/mac_add_service_util
  - 5796696617 Fix tests for Py3
  - 7b40218790 Fix lint, remove sentence from docstring
  - 781880f0fc Add _available_services function for testing
  - 6080633613 Add assert_called_with
  - 1bf70b2033 Add more tests for available_services
  - b429fc3e74 Add tests for mac_utils
  - b5f67130cc Used *args and **kwargs
  - ed061617a2 Fix unicode_literal issue in mac_assistive
  - 82e17e5fc8 Fix args/kwargs
  - 455146500a Move some functions into mac_utils
  - 125586264b Add utilsmac_service.py

• ISSUE #46953: (cskowronnek) salt-cloud azurearm [ERROR ] There was a profile error: Parameter 'subscription_id' must be str. (refs: #47012)

• PR #47012: (terminalmage) Azure: ensure subscription_id is a str type @ 2018-04-11 13:57:08 UTC
  - 79347f108a Merge pull request #47012 from terminalmage/issue46953
  - 5192622a32 Azure: ensure subscription_id is a str type

• PR #46526: (Ch3LL) Add tests for new source_* minion options @ 2018-04-10 19:56:45 UTC
  - 6503bf8dfe Merge pull request #46526 from Ch3LL/ip_conf
  - c01180ff47 Patch ZMQ versions for master_uri test
- da38f332a5 Change comment and salt.utils.network import
- e972ebdf1a Add for new source_* minion options

**PR #46993:** (L4rS6) Fix: tuple instead of string @ 2018-04-10 17:07:59 UTC
- 03907d3f0c Merge pull request #46993 from L4rS6/fix-broken-keystone-auth/2018.3
- e33ba1b3d5 Fix: tuple instead of string

**PR #46990:** (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-04-10 17:07:33 UTC
- ffaee26540 Merge pull request #46990 from rallytime/merge-2018.3
- ccc5bad2df Merge branch '2017.7' into merge-2018.3
  * ba5421d988 Merge pull request #46991 from gtmanfred/windows
    - 98588c1dc5 use saltstack salt-jenkins
  * 2f1cf3e511 Merge branch '2017.7' into '2018.3'
    * 00c4067585 Merge pull request #46975 from gtmanfred/windows
      - 1f69c0d78c make sure windows outputs xml junit files
      - 4a2ec1bb3 support new versions of winrm-fs
      - b9efec8526 remove libnacl on windows
      - 2edd5eaf9e fix path
      - b03e272e44 windows work
    * 3cf2353e41 Merge pull request #46945 from vutny/doc-faq-fix-jinja
      - b6df54e61d [DOC] Fix Jinja block in FAQ page
    * fc2f728665 Merge pull request #46925 from terminalimage/fix-file.patch-docstring
      - 97695657f0 Remove reference to directory support in file.patch state
    * eef6c518e1 Merge pull request #46900 from rallytime/bp-46801
      - 6a41e8b457 rename jenkins to jenkinsmod
    * 71839b0303 Merge pull request #46899 from rallytime/bp-45116
      - b2f908da4 fix adding parameters to http.query from sbd yaml

**PR #46339:** (DmitryKuzmenko) SSH State test failures @ 2018-04-10 17:06:51 UTC
- a34b92ae82 Merge pull request #46339 from DSRCorporation/bugs/ssh_state_test_failures
- bd98c49dc7 Merge branch '2018.3' into bugs/ssh_state_test_failures
- 6fd4c58a7f Increase timeout for run_run in ShellCase
- 8e60ccdbf Give background task more chance to start.
- e068678acf One more useful assert for better test results.
- 92a6e43c73 More logging and assertion fixes. Extended ssh ops timeout.
- 6ebdd17ac4 Advanced logging in the failing SSH State tests.

**PR #46989:** (Ch3LL) Fix redis cache log debug line @ 2018-04-10 16:35:12 UTC
- 9924100c44 Merge pull request #46989 from Ch3LL/redis_log
- 6160bc06c6 Fix redis cache log debug line
• ISSUE #46834: (oeufette) strftime filter not found in 2018.3.0 (refs: #46848)

• ISSUE #46668: (anlutro) Jinja2 filter strftime stopped working in salt-ssh 2018.3 (refs: #46848, #46744)

• PR #46848: (garethgreenaway) [2018.8] salt-ssh jinja filters tests @ 2018-04-10 16:19:51 UTC
  - c6431936cb Merge pull request #46848 from garethgreenaway/testing_jinja_filters_available_via_salt_ssh
  - 5fdf33ef78 Merge branch '2018.3' into testing_jinja_filters_available_via_salt_ssh
  - 0adfee9b11 Updating a couple tests. Fixing check_whitelist_blacklist to work with PY3 when non-iterables are passed. Adding warning about lst_avg results being wrong and future updates in Neon.
  - f3f42146ca Removing expected from strftime and hashsum tests since the results are always different and we are only concerned about the filter being available.
  - 86023ac045 Fixing lint.
  - 08916b580 fixing docstring
  - c894e4b2e cleaning up some imports.
  - 0597795ed5 cleaning up some test doc strings.
  - dced5eb88 Moving all jinja filter tests into support/jinja_filters.py. Updating integration/ss/test_jinja_filters.py to use those tests. Adding integration/modules/test_state_jinja_filters.py to also use the common jinja filter tests.
  - 07d7e3ca01 Adding a new integration test and corresponding state files to test availability of jinja filters when using salt-ssh.

• ISSUE #46880: (liquidgecka) rabbitmq_policy broken in 2018.3.0 (refs: #46973)

• PR #46973: (rallytime) New "apply_to" kwarg in rabbitmq module should be added at the end @ 2018-04-10 14:42:32 UTC
  - PR #41233: (dnABic) added parameter apply_to for rabbitmq policy (refs: #46973)
  - fbbcb7584c Merge pull request #46973 from rallytime/fix-46880
  - 8e1f982c New "apply_to" kwarg in rabbitmq module should be added at the end

• ISSUE #46934: (d601) GPG encrypted binary data in pillars breaks in 2018.3.0 (refs: #46966)

• PR #46966: (terminalmage) Fix traceback when attempting to decode binary data to unicode @ 2018-04-10 14:08:35 UTC
  - 58f59cfb8f Merge pull request #46966 from terminalmage/issue46934
  - df43f2b8f salt.payload.Serial: fix traceback when unpacking binary blob
  - 40a9358c9 gpg renderer: fix traceback when decrypted ciphertext contains binary data
  - 17a888f571 Include exc_info in pillar render errors to aid in troubleshooting

• ISSUE #46881: (SynPrime) Cron.file - source file not found (refs: #46944)

• PR #46944: (garethgreenaway) [2018.3] cron.file with salt source URL @ 2018-04-10 13:34:03 UTC
  - e3e0792e2a Merge pull request #46944 from garethgreenaway/46881_Cron_file_source_file_not_found
  - 438aaecb03 Adding kwargs to calls into file module functions
  - 14d12b1d6b Remove unused imports. Gating tests so they do not run on Windows
  - 623d96f21a Adding dummy cron file for integration/states/test_cron
  - c8e01871d6 Adding an integration test to test cron.file.
- ddc55d8f9b Fixing bug that made cron_file unable to use a file via a Salt URL.

- **PR #46937**: (gtmanfred) enable_ssh_minions does not work with subset yet @ 2018-04-07 02:54:56 UTC
  - 08e88782f6 Merge pull request #46937 from gtmanfred/2018.3
  - 3fb75e903c enable_ssh_minions does not work with subset yet

- **PR #46936**: (gtmanfred) don't copy __pycache__ or .pyc files for kitchen @ 2018-04-06 19:15:46 UTC
  - ac4e7cd73f Merge pull request #46936 from gtmanfred/2018.3
  - 91474878f8 don't copy __pycache__ or .pyc files for kitchen

- **ISSUE #46659**: (stamak) [salt-cloud] [new oxygen openstack driver ] no public_ips and floating_ips in salt-cloud output (refs: #46912)

- **PR #46912**: (gtmanfred) pull latest vm data after building for openstack shade driver @ 2018-04-06 13:46:42 UTC
  - 8105fd9715 Merge pull request #46912 from gtmanfred/openstack
  - 5ef35f8f8d pull latest vm data after building for openstack shade driver

- **PR #46908**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-04-05 21:27:03 UTC
  - 735ea12960 Merge pull request #46908 from rallytime/merge-2018.3
  - 102e966512 Remove redundant section in log setup
  - 177c686b52 Update old utils paths to new utils paths
  - 0a297e7319 Merge branch '2017.7' into '2018.3'
    - d05b43753 Merge pull request #44926 from frogunder/whitelisted_acl
      - 18e460fc30 Merge branch '2017.7' into whitelisted_acl
      - 1ad4d7d988 fix assert errors
      - e6a56016df update test
      - 9a224c8778 whitelist_acl_test
    - 7d822f99ec Merge pull request #46464 from gtmanfred/orchestration
      - 6373c6b7b fix pylint
      - 0151013d2b document cli option for cmd_subset
      - 4a3ed6607d add test for subset in orchestration
      - 3112359dd6 fix salt subset in orchestrator
    - 805ed1c964 Merge pull request #46879 from dwoz/cloudtestfix
      - dc54c53c3 Fix multiple typos causing tests to fail
    - f70f0ed2872 Merge pull request #46647 from twangboy/win_fix_test_grains
      - c179388b0e Fix the tear down function in integration.modules.test_grains.GrainsAppendTestCase
    - 91c078ce12 Merge pull request #46756 from nages13/bugfix-grain-virtual_subtype
      - 781f5030a4 Merge branch 'bugfix-grain-virtual_subtype' of https://github.com/nages13/salt into bugfix-grain-virtual_subtype
      - cd1ac4b7f9 Merge branch '2017.7' into bugfix-grain-virtual_subtype
- 0ace76c0e7 Merge branch '2017.7' into bugfix-grain-virtual_subtype
- 9eb6f5c0d0 Merge branch '2017.7' into bugfix-grain-virtual_subtype
- 73d6d9d365 Merge branch '2017.7' into bugfix-grain-virtual_subtype
- a4a17eba6a Merge branch '2017.7' into bugfix-grain-virtual_subtype
- bf5034dbdb Merge branch '2017.7' into bugfix-grain-virtual_subtype
- 8d12770951 Merge branch '2017.7' into bugfix-grain-virtual_subtype
- 7e704c0e81 Moved down container check code below hypervisors to validate containers type running in virtual environment. Fixes #46754 & #43405
- 710f74c4a6 fix grains['virtual_subtype'] to show Docker on xen kernels
* 058bbed221 Merge pull request #46799 from garethgreenaway/46762_prereq_shenanigans_tests
  - 13875e78cf Fixing documentation string for test.
  - 3d288c44d4 Fixing test documentation
  - 6cff02e6a Adding tests for #46788
* d9770bf3f8 Merge pull request #46867 from terminalmage/unicode-logging-normalization
  - 7652688e83 Backport string arg normalization to 2017.7 branch
* 9eb98b1f6e Merge pull request #46770 from twangboy/fix_46433
  - 89a0a6222 Merge branch '2017.7' into fix_46433
  - 6bd2697578 Remove unused import (ling)
  - 9302fa5ab0 Clean up code comments
  - b383b9b330 Change the order of SID Lookup
* 9c776cfff7 Merge pull request #46839 from gtmanfred/tupletarget
  - 3b7208ce27 match tuple for targets as well
* 7db251dc11 Merge pull request #46845 from rallytime/bp-46817
  - 36a06d8ca address filehandle/event leak in async run_job invocations
* e3d17ab7bc Merge pull request #46847 from dwoz/missing-strdup
  - 55845f4846 strdup from libc is not available on windows
* f2dd7df9c4 Merge pull request #46776 from gtmanfred/2017.7
  - edc1059ee0 fix shrinking list in for loop bug
* PR #46653: (terminalmage) Add back date_format filter @ 2018-04-05 20:33:50 UTC
  - 9a47af33b Merge pull request #4653 from terminalmage/date_format_filter
  - 266d13a665 Add back date_format filter
* PR #46882: (jasperla) Backport #46280 #46849 #46852 to 2018.3 @ 2018-04-05 14:29:12 UTC
  - PR #46852: (jasperla) fix creating a nic tag on a link with double 0 in the MAC (refs: #46882)
  - PR #46849: (jasperla) Unbreak creating etherstubs on SmartOS (refs: #46882)
  - PR #46280: (jasperla) Remove unneeded checks for binaries in SmartOS modules (refs: #46882)
  - a064a3e695 Merge pull request #46882 from jasperla/smartos/backports
- 47a66975ff fix creating a nic tag on a link with double 0 in the MAC
- a3cb0e576e Unbreak creating etherstubs on SmartOS
- e703254990 Remove unneeded checks for binaries in SmartOS modules

**PR #46873: (terminalmage)** Attempt UTF-8 first when decoding/encoding @ 2018-04-05 14:16:28 UTC
- 4e5e291c99 Merge pull request #46873 from terminalmage/utf8-first
- cf28eb74aa Don’t log command when output_loglevel == 'quiet'
- f59ee28db Remove hacky workarounds to get encode/decode tests to pass on Windows
- 76e5d81bb4 Remove hacky workaround to get Windows to decode deserialized data properly
- 0b5729e58a Remove hacky workaround to get git state/exec module to work properly on Windows
- 22ff48518f Attempt UTF-8 first when decoding/encoding

**ISSUE #43499: (tyeapple)** zmq setsockopt need to adapt python3 (refs: #46874)

**PR #46878: (terminalmage)** Backport #46874 to 2018.3 @ 2018-04-05 13:26:04 UTC
- PR #46874: (johnj) Use bytestrings for PY3 compatibility when running setsockopt for zmq.SUBSCRIBE (refs: #46878)
- 1518762465 Merge pull request #46878 from terminalmage/bp-46874
- d9511d04d4 #43499, zmq setsockopt need to adapt python3

**ISSUE #46862: (kivoli)** Setting locale.system fails in 2018.3 (refs: #47280, #46869)

**PR #46869: (gtmanfred)** Always return dictionary for _localectl_status @ 2018-04-05 13:25:14 UTC
- 67894e3ee9 Merge pull request #46869 from gtmanfred/2018.3
- 1496e985f7 fix pylint
- 75425fdd20 fix tests for localemod
- 2d7c7b5e33 Always return dictionary for _localectl_status

**PR #46870: (mirceaulinic)** Correct the documentation for two new proxy modules @ 2018-04-04 21:48:41 UTC
- 58c8ff18ec2 Merge pull request #46870 from cloudflare/proxy-doc
- f4b6184476 Corect and add the cimc proxy module to autodoc
- a99bce202b9 Correct & add Panos to autodoc

**PR #46729: (terminalmage)** Performance improvement/error catching in expr_match @ 2018-04-04 20:25:57 UTC
- d7e4b9d755 Merge pull request #46729 from terminalmage/expr_match
- 70cfae299 Add test case
- 250039b11f Restore original variable name
- ae0f112a49 Log an exception when non-string val/expr passed to expr_match
- dac42a672b Performance improvement/error catching in expr_match

**PR #46872: (terminalmage)** Backport #46863 to 2018.3 @ 2018-04-04 19:04:40 UTC
- PR #46863: (TamCore) fixed top function which was broken since commit 002aa88a97e (refs: #46872)
- e0b383af8c Merge pull request #46872 from terminalmage/bp-46863
- be284e5b99 Add skipIf when older mock present

30.2. Previous Releases 2059
- db8faae56 Add unit tests for ext_nodes master_tops module
- ee437f7c0f fixed top function which was broken since commit 002aa88a97e

- **PR #46850:** (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-04-04 18:07:44 UTC
  - 5c76d98d1a Merge pull request #46850 from rallytime/merge-2018.3
  - a0fd5c053 Fix test_cp failure: forgot to add tgt to test when @with_tempfile is present
  - d0202cab72 Resolve bad merge: there should only be one test_get_file_from_env_in_url test
  - e28f71b418 Lint: use full salt utils path
  - 4ad50bbdee Update old utils paths to new paths
  - 893196d3e6 Merge branch '2017.7' into '2018.3'
    - 1941426218 Merge pull request #46838 from gtmanfred/npm
      - bff61dd291 use http registry for npm
    - e54254e7b Merge pull request #46823 from rallytime/fix-42312
      - dafa820f93 Improve __virtual__ checks in sensehat module
    - 37fd2de35 Merge pull request #46641 from skizunov/develop3
      - c624aa4827 Make LazyLoader thread safe
    - 989508b100 Merge pull request #46837 from rallytime/merge-2017.7
      - 8522c1d634 Merge branch '2016.11' into '2017.7'
      - 3e844ed1df Merge pull request #46739 from rallytime/2016.11_update_version_doc
      - 4d9fc5c0df Update release versions for the 2016.11 branch
    - 307e7f35f9 Merge pull request #46740 from rallytime/2017.7_update_version_doc
      - 7edf98d224 Update 2018.3.0 information and move branch from "latest" to "previous"
      - 5336e866ac Update release versions for the 2017.7 branch
    - ebf5dd276b Merge pull request #46783 from twangboy/fix_46680
      - da5ce25ef3 Fix unit tests on Linux
      - b7fa377cd Add space I removed
      - f1c6b5a9b5 Fix network.managed test=True on Windows
    - f652f25cc1 Merge pull request #46821 from rallytime/fix-mantest-failures
      - 209a8029c3 Fix the new test failures from the mantest changes
    - c460f62081 Merge pull request #46800 from lomeroe/2017_7-46627
      - 2bee383e9d correct create list item value names if the valuePrefix attribute does not exist
        on the list item, the value is the value name, other wise, the valuename a number with the
        valuePrefix prepended to it
    - df26f2641e Merge pull request #46675 from dwoz/inspectlib-tests
      - d39f4652d8 Handle non-zero status exception
      - 83c005802b Handle cases where git can not be found
      - 628b87d5c4 Skip test when git symlinks are not configured
    - 4083e7c460 Merge pull request #46815 from terminalmage/bp-46809
71d5601507 Fix sharedsecret authentication
3bac9717f4 Merge pull request #46769 from dwoz/wincloudtest
   eabc234e5d Fix config override name
   5c22a0f88d Use absolute imports
   810042710d Set default cloud test timeout back to 500 seconds
   5ac89ad307 Use winrm_verify_ssl option causing tests to pass
   71858a709c allow not verifying ssl winrm saltcloud
   ba5f11476c Adding windows minion tests for salt cloud
f1be939763 Merge pull request #46786 from twangboy/fix_46757
   b0053250ff Remove int(), just return -1
   7d56126d74 Fixes some lint
   49b3e937da Return int(-1) when pidfile contains invalid data
89bf24b15c Merge pull request #46814 from terminalmage/bp-46772
   a9f26f2ab8 avoid breaking if AutoRemove is not found
   97779c965d fix container removal if auto_remove was enabled
5ea4f8b5d6 Merge pull request #46813 from terminalmage/event-debug-log
   5d6de3a2eb Get rid of confusing debug logging
5933b7182d Merge pull request #46766 from twangboy/win_fix_test_git
   5af66452c Remove unused/redundant imports
   88fd72c52c Use with_tempfile decorator where possible
69d450db84 Merge pull request #46778 from terminalmage/salt-jenkins-906
   bbfd35d3ea Replace flaky SPM man test
c935ff8740 Merge pull request #46788 from garethgreenaway/46762_prereq_shenanigans
   fa7aed6424 Ensure failed tags are added to self.pre.
395b78f8dc Merge pull request #46655 from dwoz/pyobjects-46350
   5aabd442f2 Fix up import and docstring syntax
   62d64c9230 Fix missing import
   18b1730320 Skip test that requires pywin32 on *nix platforms
   45dce1a485 Add reg module to globals
   09f9322981 Fix pep8 wart
   73d066f664b Fix linter error
   009a8f56ea Fix up environ state tests for Windows
   b4be10b8fc Fixing cleanUp method to restore environment
af45ec9c42 Merge pull request #46632 from dwoz/file-recurse-36802
   44db77ae79 Fix lint errors and typo
   cb5619537f Only change what is essential for test fix
• eb822f5a12 Fix file.recurse w/ clean=True #36802
  • 6e9f504ed1 Merge pull request #46751 from folti/2017.7
    • 7058f10381 same top merging strategy works again
  • d3623e0815 Merge pull request #46691 from Ch3LL/win_group_test
    • 7cda25e90 Add groupadd module integration tests for Windows
  • 14ab50d3f4 Merge pull request #46696 from dwoz/win_test_client
    • ec4634fc06 Better explanation in doc strings
    • d9ae2abb34 Fix spilling in docstring
    • b40efc5db8 Windows test client fixes
• PR #46581: (rallytime) Back-port #46844 to 2018.3 @ 2018-04-04 18:04:59 UTC
  - PR #46844: (UtahDave) Fix warning format in 2018.3.0 release notes (refs: #46851)
  - b808ba7049 Merge pull request #46851 from rallytime/bp-46844
  - ab2ce1afaf Merge pull request #46851 from rallytime/bp-46844
  - af7bad3c7f Fix warning format in 2018.3.0 release notes
• ISSUE #46864: (femnad) Attribute Error When Invoking Vault Module Method (refs: #46865)
• PR #46865: (femnad) Fix Log Line for Vault Token Generation Debug Line @ 2018-04-04 14:52:00 UTC
  - ea5677e03 Merge pull request #46865 from femnad/fix-log-in-vault-runner
  - 01a5b88e7b Fix Log Line for Vault Token Generation Debug Line
• PR #46836: (rallytime) [2018.3] Merge forward from 2018.3.0rc1 to 2018.3 @ 2018-04-03 16:54:53 UTC
  - a0e168ceee Merge pull request #46836 from rallytime/merge-2018.3
  - e75ba1f502 Merge branch '2018.3.0rc1' into '2018.3'
    • 392357156e Merge pull request #46792 from damon-atkins/patch-1
    • db5b9464e6 provided an example
    • 41e3e1e253 Update windows information in release notes
    • 99447fbf49 Added more windows information
    • d4241006f2 Update 2018.3.0.rst Windows Items, Group topics
• ISSUE #46808: (ezh) Sharedsecret authentication is broken (refs: #46809)
• PR #46809: (ezh) Fix sharedsecret authentication (refs: #46815) @ 2018-04-03 16:53:24 UTC
  - 4a358217a0 Merge pull request #46809 from ezh/2018.3-sharedsecret
  - 20db8f03f7 Merge branch '2018.3' into '2018.3-sharedsecret'
  - 9df6d18ec7 Fix sharedsecret authentication
• PR #46820: (rallytime) [2018.3] Update the latest release information for docs @ 2018-04-03 14:36:31 UTC
  - 1519d7d895 Merge pull request #46820 from rallytime/2018.3_update_version_doc
  - 274f8ee0dd [2018.3] Update the latest release information for docs
• PR #46731: (rallytime) Back-port #46024 to 2018.3 @ 2018-04-02 19:00:42 UTC
  - PR #46024: (zmedico) Trivial bug fixes for tagify and fire_args functions (refs: #46731)
• ISSUE #46779: (anlutro) salt-ssh 2018.3 states with "runas" fail with "Environment could not be retrieved for User" (refs: #46796)

• PR #46796: (terminalmage) Fix regression introduced in merge-forward @ 2018-04-02 18:10:22 UTC
  - PR #46503: (psyer) Fixes stdout user environment corruption (refs: #46796)
  - 4f31c1062d Merge pull request #46796 from terminalmage/issue46779
  - f8f9d045ac Add regression test
  - e04e19ba3 Include extra troubleshooting information
  - dcb0c67309 Fix regression introduced in merge-forward

• PR #46690: (dincamihai) Fix unicode handling in pkg.info_installed @ 2018-03-29 14:10:48 UTC
  - 4609a7dd85 Merge pull request #46690 from dincamihai/2018.3
  - 980ad8253 Fix unicode handling in pkg.info_installed

• PR #46746: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-03-28 21:13:07 UTC
  - e5b3c8fa91 Merge pull request #46746 from rallytime/merge-2018.3
  - e8846bb0b6 Merge branch '2017.7' into '2018.3'
    - 1222bd6bc0 Merge pull request #46732 from rallytime/bp-46032
      - b0b962dc0 Workaroung python bug in traceback.format_exc()
    - 50fe1e9480 Merge pull request #46749 from vutny/doc-deprecate-copr
      - 65b55da3d [DOC] Remove mentions of COPR repo from RHEL installation page
    - bd1e8b7c7d Merge pull request #46734 from terminalmage/busybox
      - 65026b4ff Make busybox image builder work with newer busybox releases
    - c96f8b91c Merge pull request #46742 from gtmanfred/2017.7
      - f0e649d1e only use npm test work around on newer versions
    - 3b6d5ec88 Merge pull request #46743 from Ch3LL/mac_auth
      - 4f1c42c0e3 Workaround getpwnam in auth test for MacOSX
  - d027b345fc Update old utils paths to new utils paths
  - e312e5b5e7 Merge branch '2017.7' into '2018.3'
    - b5483e742 Merge pull request #46171 from amaclean199/fix_mysql_grants_comparison
      - 97db3d9766 Merge branch '2017.7' into fix_mysql_grants_comparison
      - 0565b3980e Merge branch '2017.7' into fix_mysql_grants_comparison
      - 3a8f407173d Merge branch '2017.7' into fix_mysql_grants_comparison
      - 00d13f05c4 Fix mysql grant comparisons by stripping both of escape characters and quotes. Fixes #26920
    - 554400e667 Merge pull request #46709 from vutny/doc-faq-minion-master-restart
      - d0929280fc [DOC] Update FAQ about Salt self-restarting
merge pull request #46503 from psyer/fix-cmd-run-env-corrupt
  * e8582e80f2 Python 3-compatibility fix to unit test
  * 27f651906d Merge pull request #1 from terminalmage/fix-cmd-run-env-corrupt
  * 172d3b2e04 Allow cases where no marker was found to proceed without raising exception
  * 35ad828ab8 Simplify the marker parsing logic
  * a09f20ab45 fix repr for the linter
  * 4ee723ac0f Rework how errors are output
  * dc283940e0 Merge branch `2017.7` into fix-cmd-run-env-corrupt
  * a91926561f Fix linting problems
  * e8d3d017f9 fix bytes or str in find command
  * 0877cfc38f Merge branch `2017.7` into fix-cmd-run-env-corrupt
  * 86176d1252 Merge branch `2017.7` into fix-cmd-run-env-corrupt
  * 3a7cc44ade Add python3 support for byte encoded markers
  * 09048139c7 Do not show whole env in error
  * ed94700255 fix missing raise statement
  * 15868bc88c Fixes stdout user environment corruption
merge pull request #46432 from twangboy/win_locales_utf8
  * affa35c30d Revert passing encoding
  * a0ab27ef15 Merge remote-tracking branch `dw/win_locales_utf8` into win_locales_utf8
  * 9f95c50061 Use default SLS encoding, fall back to system encoding
  * 6548d550d0 Use salt.utils.to_unicode
  * 8c0164fb63 Add ability to specify encoding in sdecode
  * 2e7985a81c Default to utf-8 on Windows
  * 8017860dcc Use salt.utils.to_unicode
  * c10ed26eab Add ability to specify encoding in sdecode
  * 8d7e2d0058 Default to utf-8 on Windows
merge pull request #46669 from terminalmage/pillar-merge-order
  * b4a1d34b47 Add option to return to pre-2017.7.3 pillar include merge order
merge pull request #46711 from terminalmage/wildcard-versions-info
  * fc7d16f1af Add performance reminder for wildcard versions
merge pull request #46693 from dwoz/test_smtp_return
  * 5bf850e67f File and Pillar roots are dictionaries
merge pull request #46543 from dafenko/fix-add-saltenv-pillarenv-to-pillar-item
  * 6d5b2068aa Merge branch `2017.7` into fix-add-saltenv-pillarenv-to-pillar-item
  * 5219377313 Merge branch `2017.7` into fix-add-saltenv-pillarenv-to-pillar-item
  * b7d39caa86 Merge branch `2017.7` into fix-add-saltenv-pillarenv-to-pillar-item
25f1074a85 Add docstring for added parameters
973bc13955 Merge branch '2017.7' into fix-add-saltenv-pillarenv-to-pillar-item
164314a859 Merge branch '2017.7' into fix-add-saltenv-pillarenv-to-pillar-item
267ae9f633 Fix missing saltenv and pillarenv in pillar.item

f776040e25 Merge pull request #4679 from vutny/doc-state-pkg

4a730383bf [DOC] Correct examples in pkg state module

47409eaae Merge pull request #46646 from twangboy/win_fix_test_local_cache
8d93156604 Fix unit.returners.test_local_cache for Windows

0c2dce0416 Merge pull request #46649 from terminalmage/issue46595
e82a1aa1ec Make server_id consistent on Python 3
4e7466a21c Merge pull request #46588 from UtahDave/no_crash_winshell
b7842a1777 Update error message.
95dfdb91ca Don't stacktrace when salt-ssh w/o saltwinshell

33af3fc7c Merge pull request #46631 from rallytime/update-pillar-unit-tests
0f728186aa Fix pillar unit test failures: file_roots and pillar_roots environments should be lists
d329e7af8 Merge pull request #46640 from terminalmage/file.copy-docs
480c5f8faa Clarify the docs for the file.copy state
ff40590c06 Merge pull request #46642 from vutny/doc-cloud-index
51e6aa54a1 [DOC] Unify cloud modules index header

83ed40c06a Merge pull request #46619 from rallytime/merge-2017.7
bcbbdf5d07 Merge branch '2017.7.5' into '2017.7'
19bb725698 Merge pull request #46612 from Ch3LL/7.5_rn
6076bfa2ee Add changelog to 2017.7.5 release
31c78ae1f11 Merge pull request #46572 from dmurphy18/update_xxxbuild
c87511570d Merge branch '2017.7.5' into update_xxxbuild
cdd768fa4d Merge pull request #46577 from gtmanfred/2017.7.5
78cb7f75cd Fix npm issue
c76f7eb028 enable debug logging on the minionlog
e6682c660c Merge pull request #46551 from terminalmage/salt-jenkins-885
703b5e7e65 Change versionadded to show that 2018.3.0 will not have this function
010d260d06 Rewrite failing Suse pkg integration test
f3f5dec239 zypper.py: fix version argument being ignored
214f2d6ad3 Add pkg.list_repo_pkgs to zypper.py
0a541613f2 Additon of -sa flag to allow for revision numbers other than -0 or -1
bd62699c6c Merge pull request #46563 from gtmanfred/2017.7.5
- 8d5ab72983 virtualenv version too old for python3.6
- 2916708124 Merge pull request #46561 from gtmanfred/2017.7.5
- 2c39ac6dfb disable verbose
- ee3bf5e32 Merge pull request #46537 from rallytime/bp-46529
- 289c7a228f retry if there is a segfault
- 127156a89 Merge pull request #46519 from rallytime/man-pages-2017.7.5
- 782a5584f5 Update man pages for 2017.7.5
- df12135439 Merge pull request #46584 from twangboy/lgpo-46568
- 661017104b Detect disabled reg_multi_sz elements properly
- 2fd3aa47c Merge pull request #46624 from twangboy/win_fix_installer
- fa0b0efe46 Fix some installer script inconsistencies
- f038e3c452 Merge pull request #46571 from garethgreenaway/46552_onfail_and_require
  - 152c43c843 Accounting for a case when multiple onfails are used along with requires. Previously if you have multiple states using 'onfail' and two of those states using a 'require' against the first one state, the last two will run even if the 'onfail' isn't met because the 'require' is met because the first state returns true even though it didn't execute. This change adds an additional hidden variable that is used when checking requisities to determine if the state actually ran.
- 2677330e19 Merge pull request #46520 from gtmanfred/2017.7
  - caefedc095 make sure utils is empty for pickling for windows
  - 2883548e6b pass utils to the scheduler for reloading in modules
- 7bc3c2e588 Merge pull request #46531 from terminalmage/issue44299
  - b70c3389da Fix case where no comments specified
  - ce391c53f4 Add regression test for #44299
  - c3e36a6c94 Fix regression in yumpkg._parse_repo_file()
  - f0c79e3da3 Slight modification to salt.utils.pkg.rpm.combine_comments()
- b80ed5d26 Merge pull request #46567 from dwoz/runtest-n-wart
  - 3b6901e19d Honor named tests when running integration suites
- 1dcd2e767 Merge pull request #46580 from twangboy/win_update_docs_dism
  - d52b99d7a3 Clarify some issues with msu files in win_dism.py
- 0a68c22332 Merge pull request #46541 from gtmanfred/metadata
  - 19bd1d9db5 handle user-data for metadata grains
- ISSUE #46668: (anlutro) Jinja2 filter strftime stopped working in salt-ssh 2018.3 (refs: #46848, #46744)
- PR #46744: (garethgreenaway) [2018.3] Ensure salt.utils.dateutils is available for templates via salt-ssh @ 2018-03-28 21:09:46 UTC
  - ef68df7f3a Merge pull request #46744 from garethgreenaway/46668_jinja2_filter_strftime_unavailable
  - 0b30955c00 Including salt.utils.dateutils so various jinja_filters are available when using salt-ssh.
- ISSUE #46334: (sjorge) [2018.3.0rc1] Stacktrace on call to nacl.dec (refs: #46426)
• **PR #46720**: (rallytime) Bump deprecation notices in nacl module & runner to Neon @ 2018-03-27 21:15:46 UTC
  - **PR #46426**: (garethgreenaway) [2018.3.0rc1] fixes to nacl module & runner (refs: #46639, #46720)
  - 65bb37effd Merge pull request #46720 from rallytime/bump-nacl-deprecation
  - 51020310c Bump deprecation notices in nacl module & runner to Neon
• **PR #46733**: (rallytime) [2018.3] Merge forward from 2018.3.0rc1 to 2018.3 @ 2018-03-27 18:46:43 UTC
  - c83d9e66fe Merge pull request #46733 from rallytime/merge-2018.3
  - 0044eb26f3 Merge branch '2018.3.0rc1' into '2018.3'
• **PR #46565**: (twangboy) Create reg salt util (2018.3) @ 2018-03-26 22:03:33 UTC
  - 0faced1d54 Merge pull request #46565 from twangboy/win_fix_cmd_powershell_2018.3
  - 5ee64e9b0e Fix lint (spelling error)
  - 0de54ed953 Additional tests
  - fc9ecd75e2 Skip unit.state.test_reg unless on Windows
  - aa98bdf250 Fix some lint
  - e0d201a96f Make sure the docs are correct for the tests
  - f15f92318d Add tests for salt.utils.win_reg
  - f7112b19a2 Submit #46527 against 2018.3
• **ISSUE #46334**: (sjorge) [2018.3.0rc1] Stacktrace on call to nacl.dec (refs: #46426)
• **PR #46639**: (terminalmage) Use the correct path for nacl certificates in Windows @ 2018-03-26 19:20:10 UTC
  - **PR #46426**: (garethgreenaway) [2018.3.0rc1] fixes to nacl module & runner (refs: #46639, #46720)
  - dd52368f90 Merge pull request #46639 from terminalmage/nacl-default-path
  - 2f7660fe35 Use the correct path for nacl certificates in Windows
• **PR #46416**: (dincamihai) Fix cp.push empty file @ 2018-03-26 17:52:47 UTC
  - 2efef52a3e Merge pull request #46416 from dincamihai/fixed-cp.push-empty-file
  - 536ba0fa1e Fix cp.push empty file
• **PR #46643**: (mcalmer) fix docker return @ 2018-03-26 15:52:31 UTC
  - 84579e7652 Merge pull request #46643 from mcalmer/fix-docker-return
  - 3ceb63f607 fix checking test results
  - af64632bf3 add unit test for failed login
  - 0fc7989236 make it possible to use login, pull and push from module.run and detect errors
• **PR #46650**: (Ch3LL) Mirror libnacl imports in test from the nacl module @ 2018-03-26 14:48:40 UTC
  - c67a9ebe36 Merge pull request #46650 from Ch3LL/nacl_test
  - 9f6f8bc431 Mirror libnacl imports in test from the nacl runner
  - f11d58a8e9 Mirror libnacl imports in test from the nacl module
• **PR #46645**: (terminalmage) Add Unicode / Python 3 update to 2018.3.0 release notes @ 2018-03-26 14:43:53 UTC
  - 03b58a01cf Merge pull request #46645 from terminalmage/release-notes
  - 986c7bcd87 Rewrite unicode/py3 section

30.2. Previous Releases

2067
• ISSUE #46150: (whytwolf) With chocolately.version some packages don’t work with check_remote=True (refs: #46661)
  • PR #46661: (Kimol) Chocolatey - Lowered name of local and remote packages before comparing versions. @ 2018-03-26 14:35:39 UTC
    – 308c9ddf63 Merge pull request #46661 from Kimol/2018.3-fix_chocolatey_check_remote_packages
    – 52581e79f18 Removed trailing whitespace
    – 123a86947c Chocolatey - Added lowering local packages for unifying both local and remote names to lowercase for comparison.
    – 4be1a991c2 Lowered name of available packages before comparing with local packages
• PR #46569: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 (refs: #46631) @ 2018-03-21 20:57:04 UTC
  – 2e1f7c37f7 Merge pull request #46569 from rallytime/merge-2018.3
  – 46ba72fb1c Fix pillar unit test failures: file_roots and pillar_roots environments should be lists
  – fe2d4ed0c Better merge conflict resolution for setup.py windows changes
  – 8886b61576 Update old utils paths to new paths
  – 8d1e1e7f94 Merge branch ‘2017.7’ into ‘2018.3’
    * 048b2ba3f6 Merge pull request #46547 from garethgreenaway/46427_service_module_cumulus
      - edd0b11447 Merge branch ‘2017.7’ into 46427_service_module_cumulus
      - ea3c16080e Disable the service module on Cumulus since it is using systemd.
    * 98e3260b9a Merge pull request #46548 from Ch3LL/profit_test
      - db96c4e72e check for foo,bar username,password set in profitbrick config
    * 79f2a76609 Merge pull request #46549 from Ch3LL/dimension_test
      - bb338c464c Fix dimensionsdata test random_name call
    * 083846fe0e Merge pull request #46529 from gtmanfred/kitchen
      - 50d6e2c7be retry if there is a segfault
    * 5cc11129f1 Merge pull request #46511 from rallytime/bp-45769
      - a8ffceda53 Surpress boto WARNING during decode, reference: https://github.com/boto/boto/issues/2965
    * 0e90c8ca6f Merge pull request #46493 from terminalmage/issue46207
      - f06ff68f10 salt-call: don’t re-use initial pillar if CLI overrides passed
    * b11a8fc8e0 Merge pull request #46450 from gtmanfred/salt_runner
      - 7974ff7264 load grains for salt.cmd runner
    * 22d753364b Merge pull request #46337 from gtmanfred/2017.7
      - d69ec36359 add tests for names and listen/listen_in
      - 3f8e0db572 let listen_in work with names
      - 7161f4d4df fix listen to be able to handle names
    * b7191b8782 Merge pull request #46413 from meaksh/2017.7-explore-result-in-depth
- Add new unit test to check state.apply within module.run
- Rename and fix recursive method
- Fix Python3 and pylint issue
- Explore 'module.run' response to catch the 'result' in depth

- Merge pull request #46496 from gtmanfred/kitchen
  - da002f78d0 include virtualenv path for py3 windows
  - fe2ef03ea remove duplicate setup

- Merge pull request #46330 from bdrung/fix_kubernetes_test_create_deployments
  - Fix ValueError for template in AppsV1beta1DeploymentSpec

- Merge pull request #46482 from rongshengfang/fix-keyerror-in-instance_present
  - ed8c83e89a Fix KeyError in salt/states/boto_ec2.py when an EIP is being associated to an existing instance with the instance_present state.

- Merge pull request #46463 from terminalmage/mock-2.0
  - b958b4699c Update requirements files to depend on mock>=2.0.0

- Merge pull request #46422 from rallytime/bp-46300
  - 829dfe8e8e Change stringutils path to old utils path for 2017.7
  - 91db2e0782 Python 3 support

- Merge pull request #46320 from mcalmer/warn-kubernetes
  - c493ced415 add warning about future config option change

- Merge pull request #46449 from bdrung/make-doc-theme-configurable
  - 4a5da2d144 Make documentation theme configurable

- Merge pull request #46162 from rallytime/team-suse-zypper-owner
  - 13a295a3b7 Add pkg and snapper to team-suse
  - 35c7b7b0d3 Add btrfs, xfs, yumpkg, and kubernetes file to team-suse
  - 485d777ac0 Add team-suse to CODEOWNERS file for zypper files

- Merge pull request #46434 from gtmanfred/highstate_return
  - d18f1a55a7 fix pylint
  - 9e2c3f7991 split return key value correctly

- Merge pull request #46455 from whytewolf/Issue_44452_unicode_cloud
  - 5fe474b1a8 .format remove fix for #44452

- Merge pull request #46428 from twangboy/win_fix_reqs
  - e7ab97cc17 Remove six as a hard dep for Salt
  - cc67e5c2ef Set six to 1.11.0

- Merge pull request #46454 from gtmanfred/kitchen
  - b8ab8434a5 fix windows for kitchen

- Merge pull request #46452 from gtmanfred/spm_cache_dir
• 169cf7a4e2 make spm cache_dir instead of all cachedirs
  • a188984cd9 Merge pull request #46446 from bdrung/fix-typos
    • 7e6e80be87 heat: Fix spelling mistake of environment
    • a3c54b50f6 Fix various spelling mistakes
  • e35fc5263c Merge pull request #46309 from bdrung/dynamic-pillarenv
    • 584b451fd1 Support dynamic pillar_root environment
  • 35fe9827fe Merge pull request #46430 from terminalmage/issue44032
    • f9f187e915 Improve reliability/idempotence of file.blockreplace state
  • 2bad0a21c0 Merge pull request #46429 from twangboy/win_fix_snmp
    • 8995a9b8de Fix problem with __virtual__ in win_snmp
  • 93a572f229 Merge pull request #46100 from jfindlay/resolv_scope
    • d5561bedaf tests.unit.grains.core add scoped IPv6 nameserver
    • 4e2e62d508 salt.utils.dns parse scope param for ipv6 servers
  • 5acc1d5c54 Merge pull request #46420 from bdrung/2017.7
    • e48c13d9e0 Fix SSH client exception if SSH is not found
  • ca6a76e317 Merge pull request #46379 from angeloudy/2017.7
    • 3acb59c74c Merge branch '2017.7' into 2017.7
    • d971e0c08b Fix indent
    • 269514683f Update http.py
    • 908c040ac3 Update http.py
    • 51ba3c135b Update http.py
    • 14aba24111 fix bytes-object required error in python 3
  • 73f9233557 Merge pull request #46404 from gtmanfred/kitchen
    • c56ba95a8 clone .git for the version tests
    • 3620611b5b fix unhold package for debian
    • 5219f7d2ba fix minion log path
  • ca28cf4ae4 Merge pull request #46310 from twangboy/win_update_installer_build
    • bcf8b19566 Update the installer build
  • deccbcbe3 Merge pull request #46316 from twangboy/win_fix_dsc
    • 2042d33d59 Fix issues with the DSC module

• PR #46620: (rallytime) [2018.3] Merge 2018.3.0rc1 into 2018.3 @ 2018-03-20 22:45:00 UTC
  • 8ccd56b9dc Merge pull request #46620 from rallytime/merge-2018.3.0rc1-into-2018.3
  • b03cda3cea Merge branch '2018.3.0rc1' into '2018.3'

• PR #46606: (Ch3LL) add autodoc topics for infoblox state modules @ 2018-03-19 21:35:46 UTC
  • 2d2fe22ae2 Merge pull request #46606 from Ch3LL/infoblox_docs
  • 6eab6a7dc4 add autodoc topics for infoblox state modules
• PR #46540: (s0undt3ch) Some missing :isinstance: checks. @ 2018-03-15 16:17:19 UTC
  - 1191d5b379 Merge pull request #46540 from s0undt3ch/2018.3
  - fa1d68774 Some missing :isinstance: checks. Committed again through a PR.
• PR #46513: (rallytime) [2018.3] Merge forward from 2018.3.0rc1 to 2018.3 @ 2018-03-15 15:58:59 UTC
  - 5429438e4b Merge pull request #46513 from rallytime/merge-2018.3
  - aa76033a1 Merge branch '2018.3.0rc1' into '2018.3'
• ISSUE #43208: (mitar) Prevent user.present to change uid and gid of existing user (refs: #46502)
• PR #46502: (terminalmage) user.present: don't change uid/gid unless explicitly told to @ 2018-03-13 14:25:20 UTC
  - 3e073c7e8a Merge pull request #46502 from terminalmage/issue43208
  - 4106840deb user.present: don't change uid/gid unless explicitly told to
• PR #46398: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-03-12 20:25:19 UTC
  - 7cdb00ca9c Merge pull request #46398 from rallytime/merge-2018.3
  - d22e5ba442 Merge fix: return back wb+ mode in crypt.gen_keys.
  - c7dddaf8ce Lint: Use log variable, not logger.
  - ca1860cd91 Use new get_umask function in mask calls in virt.py
  - 19ec7b6de1 Update old utils paths with new utils paths
  - d83727fd9 Merge branch '2017.7' into '2018.3'
  - 95586678c3 Merge pull request #46394 from Ch3LL/mac_doc
    - 158a6d6661 change oxdownload to oxdownload-{python_version}
    - 21aa848c89 Add mac py2 and py3 packages to mac installation docs
  - 07b5d09ac1 Merge pull request #46338 from rallytime/fix-44831
    - 90771d999 Remove cmd.wait deprecation reference in docs
  - 3b13f37b44 Revert changes in the code and change docs instead
    - 3811465d8 Fixes color parameter mismatch and handles 204 responses correctly
  - a8f210b063 Merge pull request #46322 from terminalmage/issue44935
    - 85ac6a9893 yamlify_arg: don't treat leading dashes as lists
  - da5c282cb2 Merge pull request #46327 from samilaine/fix-vmware-cloud-fqdn
    - 4b8db326f Modify the way a FQDN is handled in the vmware cloud provider.
  - 78c45d3786 Merge pull request #46318 from terminalmage/squelch-warnings
    - 5889b36646 Skip type-checking for several gitfs/git_pillar/winrepo params
  - bb0d6fc263 Merge pull request #46312 from gtmanfred/2017.7
    - 749ae580ed add module_dirs to salt ssh thin tarball
  - 88b5f7383d Merge pull request #46242 from redbaron4/fix-46127
    - 06dba51617 Make changes from review
- 727ebe1056 Merge branch '2017.7' into fix-46127
- 08d1ee8baf Fix Python3 test errors
- aa9d709015 Pass env_vars to pip.freeze
- * a0716643e4 Merge pull request #46265 from Ch3LL/profit_cloud
  - d4893eab4c Add username/password to profitbricks conf for cloud tests
- * ed7bfa7e0 Merge pull request #46306 from rallytime/bp-46256
  - 6439bce4a8 Don't install msgpack 0.5.5
- * 8c2c4e3316 Merge pull request #46208 from terminalmage/audit-umask-usage
  - 9c92adce8 Disable blacklisted-function check for legitimate uses
  - 58a11aaa26 Disable pylint check in salt-ssh shim
  - ecad67659 Blacklist os.umask
  - 31b1d98fc8 Replace direct use of os.umask with use of existing context manager
  - 82ce546e18 Prevent failed os.makedirs from leaving modified umask in place
- * 978e869490 Merge pull request #46293 from eliasp/2017.7-44624-py3-compat
  - 2e08b0d9c8 Fix Python3 comparison TypeError in salt.modules.upstart
- * bee4a66d0c Merge pull request #46264 from terminalmage/issue46128
  - 68000b7211 Fix incorrect merge conflict resolution
- * 1e0b3aa348 Merge pull request #46296 from vutny/doc-pillar-get
  - 1faa8331e1 [DOC] Add missing params to pillar.get docstring
- * c490a50452 Merge pull request #45874 from GwiYeong/2017.7-local-client-hotfix
  - 949aefc82b Merge branch '2017.7' into 2017.7-local-client-hotfix
  - 45d663f435 fix for local client timeout bug
- * 8e8a3a2897 Merge pull request #46261 from rallytime/merge-2017.7
  - 8256ae5e5 Merge branch '2016.11' into '2017.7'
  - 140ef4d6b9 Merge pull request #46253 from rallytime/doc-banners
  - 07ed8c7db3 Update docbanner for SaltConf18
  - 9fe86ee520 Merge pull request #46179 from wedge-jarrad/cifs-remount-fix
  - 9ca25e4313 Add credentials and secretfile to mounted mounted mount_invisible_keys
- **PR #46421:** (bdrung) Skip SSHPasswordTests if ssh binary is not found @ 2018-03-09 16:21:02 UTC
  - 9c089aa4de Merge pull request #46421 from bdrung/skip-ssh-tests-if-ssh-is-missing
  - 3d6f658309 Skip SSHPasswordTests if ssh binary is not found
- **PR #46453:** (bdrung) Fix various spelling mistakes in 2018.3 @ 2018-03-09 14:48:33 UTC
  - **PR #46446:** (bdrung) Fix various typos (refs: #46453)
  - 4cbfde5839 Merge pull request #46453 from bdrung/fix-typos-2018.3
  - 3d37eca847 Fix various spelling mistakes
- **ISSUE #44032:** (PhilippeAB) blockreplace marker_end isn’t applied with newline (refs: #46430)
• PR #46437: (terminalmage) Improve reliability/idempotence of file.blockreplace state (2018.3 branch) @ 2018-03-08 15:38:53 UTC
  - PR #46430: (terminalmage) Improve reliability/idempotence of file.blockreplace state (refs: #46437)
  - a43d999fb8 Merge pull request #46437 from terminalmage/issue44032-2018.3
  - 4798187035 Improve reliability/idempotence of file.blockreplace state (2018.3 branch)
• PR #46328: (dincamihai) Fix openscap push @ 2018-03-07 17:51:41 UTC
  - 0c66507aff Merge pull request #46328 from dincamihai/2018.3.0rc1
  - b5e508f339 Fix openscap push
• PR #46174: (twangboy) Fix a unicode issue with the git module on Windows @ 2018-03-06 18:53:53 UTC
  - 82cb2ea5a0 Merge pull request #46174 from twangboy/win_fix_test_git_2
  - 80e3a47dd4 Add output_encoding argument to git state, and add docs
  - 661a0687ec Fix git utf-8 issues for Windows
• PR #46235: (twangboy) Fix unit.modules.test_ssh for Windows @ 2018-03-05 20:39:44 UTC
  - 7690cf8564 Merge pull request #46235 from twangboy/win_fix_test_ssh
  - 9ea02d7045 Use write instead of writelines for Windows
• PR #46332: (terminalmage) Update the merge-forward docs to reference the 2018.3 branch @ 2018-03-05 19:39:56 UTC
  - c4f366cdd9 Merge pull request #46332 from terminalmage/merge-forward-docs
  - 0411845cec Update the merge-forward docs to reference the 2018.3 branch
• PR #46307: (rallytime) [2018.3] Merge forward from 2018.3.0rc1 to 2018.3 @ 2018-03-03 12:56:07 UTC
  - 241611aca5 Merge pull request #46307 from rallytime/merge-2018.3
  - c9fa21f62c Merge branch '2018.3.0rc1' into '2018.3'
• PR #46314: (terminalmage) Merge 2017.7 branch into 2018.3 @ 2018-03-03 12:54:27 UTC
  - 30c34f0c62 Merge pull request #46314 from terminalmage/merge-2017.7-2018.3
  - 61ab47ee70 Merge branch '2017.7' into merge-2017.7-2018.3
    - 88a3166589 Merge pull request #46276 from terminalmage/issue44046
      - a14d4daf8c salt.utils.docker.translate_input: operate on deepcopy of kwargs
    - da60399b8f Merge pull request #46183 from oeufette/fx-docker-container-running-host-config-ulimits
      - 5b09644429 Sort lists from Ulimits before comparing
      - 0b80f02226 Update old dockering doc ref
    - 509429f08c Merge pull request #46260 from terminalmage/git_pillar
      - b1ce2501fd Normalize global git_pillar/winrepo config items
    - a97a3e6f0a Merge pull request #46101 from jfindlay/openrc_ret
      - 2eef3c65a6 tests.unit.modules.gentoo_service add retcode arg
      - 81ec66f8db modules.gentoo_service handle stopped retcode
    - 1a17593c05 Merge pull request #46254 from rallytime/enterprise-banner
Chapter 30. Release Notes

Salt Documentation, Release 3002.5

- f5fae3dedf Update enterprise banner
  - 8c50ff32bd Merge pull request #46250 from terminalmage/runner-docs
  - 91b4895087 Add documentation to the fileserver runner
  - 53067cca43 Merge pull request #46243 from racker-markh/fix-openstack-private-network-issue
  - 50c1e140f0 Don’t check deny private_ips already in the original list of private_ips
  - 15405c8760 Merge pull request #46239 from terminalmage/issue46109
    - 586d8b0def archive.extracted: don’t check source file when if_missing path exists

- ISSUE #33177: (robnagler) pillar.stack should not continue after errors (refs: #46287)

- PR #46287: (bbinet) Update PillarStack stack.py to latest upstream version @ 2018-03-02 21:39:52 UTC
  - 194b0317ac Merge pull request #46287 from bbinet/upstream-pillarstack
  - b14b6f2c95 Update PillarStack stack.py to latest upstream version

- PR #46227: (Ch3LL) Mock file_client call in smtp return test @ 2018-02-28 22:12:22 UTC
  - 7382654c70 Merge pull request #46227 from Ch3LL/smtp_file_client
  - 280dc9a2b6 Mock file_client call in smtp return test

- PR #46232: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-02-28 19:16:37 UTC
  - 123625213e Merge pull request #46232 from rallytime/merge-2018.3
  - 04f24c1794 Lint: fix from a bad merge
  - aad61c77bd Update old utils paths to new paths
  - 7243ba2c0 Merge branch '2017.7' into '2018.3'
    - 633e1208e4 Merge pull request #46221 from terminalmage/salt-jenkins-854
      - 0eb012659c Fix hanging tests in integration suite
    - 7917277345 Merge pull request #46214 from vutny/formulas-readme-formatting
      - d702846961 [DOC] Replace note rST block for GitHub
    - a2e099b744 Merge pull request #46203 from Ch3LL/7.5_release
      - 6ddf3246ce Add 2017.7.5 Release Notes File
    - 973b227818 Merge pull request #46201 from rallytime/merge-2017.7
      - 9ac2101baa Merge branch '2016.11' into '2017.7'
      - a4c5417d23 Merge pull request #46132 from rallytime/2016.11_update_version_doc
      - d2196b6df3 Update release versions for the 2016.11 branch
    - 89cf2e5061 Merge pull request #46139 from bdrung/os-grains
      - 0b445f2a37 tests: Add unit tests for _parse_os_release()
      - f6069b77ed Fix osfinger grain on Debian
      - 8dde55a761 tests: Add os_grains test cases for Debian
      - ff02ab9937 tests: Add Ubuntu 17.10 (artful) os_grains test case
      - 77d5356aba Fix incorrect oscodename grain on Ubuntu
      - 7e62dc9fd2 tests: Support reading os-release files from disk
· a92ec0db1b Make _parse_os_release() always callable
· eee1fe5b38 tests: Dissolve _run_ubuntu_os_grains_tests
· 1d6ef731fe tests: Deduplicate _run_os_grains_tests()
  * c8c71e75ca Merge pull request #46133 from rallytime/2017.7_update_version_doc
  * 0ed338e643 Update release versions for the 2017.7 branch
  * 390d592aa6 Merge pull request #46185 from terminalmage/issue46124
    · 3b58dd0da0 gitfs: Fix detection of base env when its ref is also mapped to a different env
  * 705caa8cca Merge pull request #46148 from rallytime/merge-2017.7
    · 25deebf7a6 Merge branch '2017.7.3' into '2017.7'
    · b5b083fd26 Merge pull request #46074 from Ch3LL/update-7.4
    · 8d00eeb059 Update 2017.7.4 Release Notes with new fixes
    · 32f3d00e44 Merge pull request #46066 from rallytime/pin-tornado
    · 6dc1a3b9dc Pin tornado version in requirements file
    · 85761e6650 Merge pull request #46036 from terminalmage/issue43769
    · e2140d9a84 Mock the ssh.key_is_encrypted utils func
    · 16992d3fe Move ssh.key_is_encrypted to a utils module temporarily
    · 54f4d78f7a Only keep ssh.py in the Windows installer
    · 5f04531e1b Keep ssh state and execution modules in the installer
    · f2b69f03d git.latest: Fix regression with identity file usage
  * 10a47dcb4c Merge pull request #46137 from damon-atkins/2017.7_fix_ec2_pillar2
    · 99e76a7d3 update ec2 pillar arguments with better names
  * d74cb14557 Merge pull request #46145 from terminalmage/issue46004
    · 467ff841cd pillarenv argument should default to None and not the value from opts
    · 2a185855ea Better solution for fixing the opts munging in pillar.show_pillar runner
    · e2c4702e0c Update tests to reflect changes to the SaltCacheLoader
    · f9301fcc34 Document behavior when orchestration runner invoked with non-orch states
    · 9644579cd0 Instantiate the SaltCacheLoader's fileclient in the __init__
    · f4a6886e21 salt.runners.pillar.show_pillar: don’t modify master opts
    · e094a9fc4 Properly detect use of the state.orch alias and add orch jid to kwargs
  * ISSUE #42932: (bobrik) cmd.run with bg: true doesn't fail properly (refs: #46172, #45932)
  * PR #46172: (The-Loeki) cmdmod: reimplementation of #45932 for Oxygen @ 2018-02-28 19:14:26 UTC
    · PR #45932: (The-Loeki) Fix cmd run_all bg error (refs: #46172)
    · PR #39980: (vutny) [2016.3] Allow to use bg kwarg for cmd.run state function (refs: #46172, #45932)
    · 20d869c228 Merge pull request #46172 from The-Loeki/fix_cmd_run_all_bg_oxygen
    · 3ecf5018d0 Merge branch '2018.3' into fix_cmd_run_all_bg_oxygen
    · b5315e817b Merge branch '2018.3' into fix_cmd_run_all_bg_oxygen

## 30.2. Previous Releases

2075
- beabf4f06b cmdmod: reimplementation of #45932 for Oxygen

- **PR #46238**: (terminalmage) Don't allow salt.utils.files.fopen() to open stdin/stdout/stderr @ 2018-02-28 19:08:23 UTC
  - 687575b582 Merge pull request #46238 from terminalmage/fds-in-fopen
  - fe1527a3c4 Don't allow salt.utils.files.fopen() to open stdin/stdout/stderr

- **PR #46219**: (twangboy) Fix unit.modules.test_network for Windows @ 2018-02-28 15:45:02 UTC
  - 3da5dcb313 Merge pull request #46219 from twangboy/win_fix_inet_pton
  - 46f1d2cc09 Use six.text_type instead of six.u

- **PR #46228**: (twangboy) Fix unit.modules.test_pip for Windows @ 2018-02-28 15:37:49 UTC
  - 44343f8063 Merge pull request #46228 from twangboy/win_fix_test_pip
  - 415821eee9 Fix encoding issue

- **PR #46198**: (rallytime) [2018.3] Merge forward from 2018.3.0rc1 to 2018.3 @ 2018-02-27 15:17:51 UTC
  - ade8950bbe Merge pull request #46198 from rallytime/merge-2018.3
  - 1b4dc71930 Lint fix
  - 776f2e5d67 Merge branch '2018.3.0rc1' into '2018.3'

- **ISSUE #45849**: (Epiclemonaid) XenServer Provisioning errors out on this line. removing it succeeds. (refs: #46168)

- **PR #46168**: (gtmanfred) driver and provider should be specified @ 2018-02-26 16:17:13 UTC
  - 06d2dff3ac Merge pull request #46168 from gtmanfred/2018.3
  - ac99bd26db driver and provider should be specified

- **PR #46161**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-02-26 15:29:39 UTC
  - 605e5eff73 Merge pull request #46161 from rallytime/merge-2018.3
  - 69ac4b4aca Update utils paths
  - cffbf52c10 Lint fix: remove extra line
  - 79bed6cf1f Merge branch '2017.7' into '2018.3'
    - 0398ce0482 Merge pull request #46135 from rallytime/bp-46088
      - 57a0f62a3 fix kernel subpackages install bug
    - 1fcbdb1e02 Merge pull request #46136 from rallytime/bp-46115
      - 0a481d707f update digitalocean salt-cloud driver
    - 11e5e8eb86 Merge pull request #45911 from twangboy/win_fix_lgpo_unicode
      - bcde5cc625 Update log statement
      - 0a481d707f update digitalocean salt-cloud driver
    - 524a6a72a0 Merge pull request #46123 from gtmanfred/2017.7
      - 8d36730eef7 If no pubkey is passed in openmode fail
    - e48fa58012 Merge pull request #46131 from vutny/doc-formula-formatting
      - d8f0b051e44 [DOC] Fix code-blocks for reStructuredText
* 6cea44ee95 Merge pull request #46118 from rallytime/bp-44603
  - 2a2c23c66b Fix acme state to correctly return on test
* 16c382b55b Merge pull request #46121 from rallytime/merge-2017.7
  - 4c2f504a85 Merge branch '2016.11' into '2017.7'
  - e197a0fbc5 Merge pull request #46076 from rallytime/bp-46066
  - b94d73c53e Pin tornado version in requirements file
  - c72c1bde5f Merge pull request #46093 from wedge-jarrad/contributing-doc-typo
  - 5a0fe104f7 Fix contributing doc typo
  - 3cb83ea87e Merge pull request #45992 from bgridley/fix-routes-present-state
  - 679787699c Add vpc_peering_connection_id to describe_route_tables route_keys
  - 8a60635da0 Merge pull request #46000 from terminalmage/issue45910
  - 8cf13325ee salt.states.reg.present: Prevent traceback when reg data is binary
  - 1f44e285dc Merge pull request #46011 from terminalmage/fixed-solaris-runs
  - 8ee0a3a28b Move Solaris USER workaround up a bit
  - 13c652690 cmdmod.py: runs workaround for platforms that don't set a USER env var
  - 30b8f7be0 Merge pull request #45467 from twangboy/win_exclude_hidden
  - ea41215646 Make the regex pattern less greedy
  - 6d223c9fa7 Add tip about passing bogus saltenv
  - 1282ae3a93 Skip hidden first
  - 437a457911 Skip hidden dirs in genrepo
  - 87dc554dc3 Add final updates to docs
  - 3646d5c897 Fix some docs formatting, add some warnings
  - 35c81fa5fa Log the source_dir when caching the files
  - 91c3da8dfd Improve docs for pkg.refresh_db
  - 4803d92707 Add some documentation
  - 08b82e0875 Fix lint error, use raw
  - 2f712691cf Exclude hidden directories in pkg.refresh_db
* b92346645b Merge pull request #46107 from amendlik/yumpkg-assumeeyes
  - 8d9a432fb2 Add --assumeeyes to yum/dnf commands in yumpkg.refresh_db
* 14fe423e0c Merge pull request #46094 from ktreee/fixed-memory-leak
  - 4808041b8e Fixes memory leak, saltclients should be cleaned after used.
  - aba00805f4 Adds set_close_callback function to removes stream instance after closed from a set streams.
* 320c2037e1 Merge pull request #46097 from vutny/fix-https-link
  - 2062fd0e5c [DOC] Put https link to the formulas doc page
* 0eb137f45e Merge pull request #46103 from bdrung/2017.7
• dd3f936557 Fix skipping Kubernetes tests if client is not installed
  • c3a938e994 Merge pull request #46070 from Ch3LL/fix-doc-dns
    • 2a5d855d97 add required arg to dns_check jinja doc example
  • 01042e9d77 Merge pull request #46067 from rallytime/bp-45994
    • a07bb48726 Correct formatting for lint
    • e8678f633d Fix Comment being None not ” and inject quotes into the TXT ChangeRecords
  • 5e0e2a30e2 Merge pull request #45932 from The-Loeki/fix_cmd_run_all_bg
    • f83da27ca5 Merge branch ’2017.7’ into fix_cmd_run_all_bg
    • 771758fbc2 Merge branch ’2017.7’ into fix_cmd_run_all_bg
    • c54fcf7a2d cmd: move separate DRY logging blocks into _run, prevent logging on bg=True, don’t use_vt on bg
    • ebb181a9b cmd run: when running in bg, force ignore_retcode=True
  • 45ace39961 Merge pull request #46062 from vutny/pg-user-state-fix-typo
    • a5f8e9e95e Fix typo in postgres_user.present state function
  • edcb64de76 Merge pull request #45763 from twangboy/win_fix_path_rehash
    • b9a2bc7b29 Fix hyperlinks
    • 29912adc15 Move the test_rehash test to test_win_functions
    • adc594c183 Remove duplicate link
    • e84628c1eb Add some comments to the code
    • d50d5f582f Add additional info to docs for broadcast_setting_change
    • 3a54e09cd9 Rename setting to message
    • a39e99bc0 Change to a generic function to broadcast change
    • 79299361c3 Create refresh_environment salt util
    • 967b83940c Fix rehash function
  • a46fbc546c Merge pull request #46042 from jfindlay/file_tree_doc
    • 0ba4954a4b salt.pillar.file_tree revise module documentation
    • 3c6a5bf967 salt.pillar.file_tree provide better debug info
    • bb1cde451e salt.pillar.file_tree no stack trace when nodegroups undefined
  • de86126dd8 Merge pull request #46013 from rallytime/bp-45598
    • 2ea3fe5f43 No lazy logging
    • f427b0fdebe Change formatting style of logging lines per review
    • ebb24396b Patch around ResourceRecords needing to be present for AliasTarget entries to work

• PR #46160: (rallytime) Mark 2 tests as flaky @ 2018-02-23 19:10:06 UTC
  • 05b771bfd7 Merge pull request #46160 from rallytime/flaky-tests
  • 49e49ae51b Mark 2 tests as flaky

• PR #46006: (dincamihai) Remove obsolete unicode handling in pkg.info_installed @ 2018-02-22 19:22:36 UTC
- 9b2bc1982c Merge pull request #46006 from dincamihai/oxygen.rc1
- 99079fc442 Remove obsolete unicode handling in pkg.info_installed

- **PR #46078**: (rallytime) [oxygen] Merge forward from oxygen.rc1 to oxygen @ 2018-02-20 21:49:04 UTC
  - 93dab45307 Merge pull request #46078 from rallytime/merge-oxygen
  - 2d0f81fd1b Merge branch 'oxygen.rc1' into 'oxygen'

- **ISSUE #45938**: (edgan) zookeeper.present state doesn't deal with an existing zode with no ACL specified (refs: #46043)

- **PR #46071**: (rallytime) Back-port #46043 to oxygen @ 2018-02-16 19:56:36 UTC
  - **PR #46043**: (edgan) Allow zookeeper znode creation to not require an ACL (refs: #46071)
  - 8d99e3b8fe Merge pull request #46071 from rallytime/bp-46043
  - b82c88d630 Allow zookeeper znode creation to not require an ACL

- **PR #46056**: (Ch3LL) Fix mac_assistive module not loading @ 2018-02-16 14:57:46 UTC
  - 5a31422432 Merge pull request #46056 from Ch3LL/ver_mac
  - e44f5133c5 Fix mac_assistive module not loading

- **PR #46041**: (rallytime) [oxygen] Merge forward from 2017.7 to oxygen @ 2018-02-16 14:55:51 UTC
  - cdca28f5da Merge pull request #46041 from rallytime/merge-oxygen
  - e060a74fd8 Merge branch '2017.7' into 'oxygen'

  - 07e5735471 Merge pull request #46016 from rallytime/bp-45826
    - 1916e5c4a4 Fix selinux.fcontext_policy_present for Centos 6

  - a1f4092811 Merge pull request #46015 from rallytime/bp-45785
    - ef6f1b492 Resolve linting errors
    - 8047066c46 Remove unused import
    - 8f7ce4593a Add tests for salt.modules.selinux.fcontext_get_policy
    - ba97b446a6 Ensure parsed fields are stripped
    - a830ae819 m/selinux.fcontext_get_policy allow long filespecs

  - 96097c037e Merge pull request #46012 from rallytime/bp-45462
    - 9f76836a6c emit port cli version, variants as separate args

  - 12799245f Merge pull request #45991 from terminalmage/fix-duplicate-extra-opts
    - 916766651 yumpkg: Fix a couple issues with _get_extra_opts

  - 8b9adc258e Merge pull request #46017 from rallytime/merge-2017.7
    - a06645ce71 Merge branch '2017.7.3' into '2017.7'
    - 6d5c4c6e7e Merge pull request #46009 from Ch3LL/rn_7.4
    - ac09af4bab Add 2017.7.4 Release Notes with PRs
    - ca76a0b328 Merge pull request #45981 from gtmanfred/2017.7.3
    - 0d48457dc apparently local is not set by default
    - 2a92f4bc16 use local config for vault when masterless
- 6530649dbc Merge pull request #45953 from rallytime/bp-45928-2017.7.3
- 85363189d1 Fixing vault when used with pillar over salt-ssh
- fb378ceb00 Merge pull request #45934 from rallytime/bp-45902
- bb83e8b345 Add regression test for issue 45893
- cdda66d759 Remove duplicated section in docstring and fix example
- 4b6351cda6 Check the effective saltenv for cached archive
- 0d74151c71 Merge pull request #45935 from rallytime/bp-45742
- 6a0b5f7af3 Removed the chained copy
- ad1150fad4 list.copy() is not compatible with python 2.7
  - d20ff89414 Merge pull request #45888 from rallytime/bp-45797
    - 953a400d79 follow symlinks
- b18087cee0 Merge pull request #45711 from bdrung/fix-unicode-tests
  - b6181b5ed6 Fix Unicode tests when run with LC_ALL=POSIX
- 5271fb1d40 Merge pull request #45878 from damon-atkins/2017.7_fix_ec2_pillar
  - 0e74025714 Merge branch '2017.7' into 2017.7_fix_ec2_pillar
  - b4d0b23891 py3 fix
    - 75d9e20d8a Add ignoring 'terminated', 'stopped' instances, to improve changes of a single match
    - 0093472a37 added tag_key_list and tag_key_sep to create ec2_tags_list
    - afb3968aa7 ec2_pillar could not find instance-id, resolved. add support to use any tag to compare minion id against.
- cf367dbd04 Merge pull request #45942 from terminalmage/issue45679-2017.7
  - 89ebd72a0d Don't try to sort ports when translating docker input
  - 9cd47b39dd Fix incorrect translation of docker port_bindings -> ports
- dae41de7a8 Merge pull request #45959 from rallytime/state-doc-update
  - 6f781cb95d A couple of grammar updates for the state compiler docs
- 007214f7bf Merge pull request #45908 from DimensionDataResearch/fix/issue/45884
  - 1a75786b5a Fix linter warnings.
    - 82ec0b589c Revert to using salt.utils.cloud.is_public_ip.
    - 9b6b01873b Fix violations reported by flake8.
    - a2bc155c73 Use __utils__['cloud. '] instead of salt.cloud.utils.
    - 98907a32cb Ensure 'auth' parameter is correctly passed to dimensiondata driver.
    - de26b03e2c Fix copy/paste bug in dimensiondata provider integration test.
    - 6b16b4e427 Add integration tests for dimensiondata cloud provider.
    - f6ea9fed7d Ensure that event data provided by the dimensiondata driver is serialisable.
- efcfba868c Merge pull request #45985 from garethgreenaway/2017.7_fixing_mac_tests_again
  - 7b8dc14433 Missing format in the call to write.
* bf03abd07c Merge pull request #45958 from garethgreenaway/backport-fixing_mactests_queue_full
  * 25ffaae91 Backporting #45935
* bab365d6c6 Merge pull request #45949 from rallytime/merge-2017.7
  * f51687e903 Merge branch '2016.11' into '2017.7'
  * 7779fa7ba Merge pull request #45940 from dmurphy18/fix_aix_cmdmod
  * dd2788419b Fix use of 'su' for AIX to use '-'
* 7fd00ec752 Merge pull request #45928 from garethgreenaway/45915_fixing_vault_pillar_for_salt_ssh
  * 259e60b3e move log_file option to changeable defaults
* 9d14ad9ccf Merge pull request #45925 from terminalmage/fix-spelling
  * 7a143fe454 Fix spelling error in docstring

- **PR #45972:** (mcalmer) move log_file option to changeable defaults @ 2018-02-15 18:57:24 UTC
  * 057e895af Merge pull request #45972 from mcalmer/allow-salt-ssh-define-log_file
  * f89a20b3c move log_file option to changeable defaults

- **PR #46007:** (rallytime) [oxygen] Merge forward from oxygen.rc1 to oxygen @ 2018-02-13 18:50:09 UTC
  * d4377d4678 Merge pull request #46007 from rallytime/merge-oxygen
  * d6c2d0693a Merge branch 'oxygen.rc1' into 'oxygen'

- **PR #45944:** (mirceaulinic) Add NetBox module autodoc @ 2018-02-13 00:01:48 UTC
  * 069f790b3c Merge pull request #45944 from cloudflare/netbox-autodoc
  * ed69b987cf Add NetBox module autodoc

- **PR #45984:** (garethgreenaway) [oxygen] Missing format in the call to write. @ 2018-02-12 19:06:04 UTC
  * 2a6285d313 Merge pull request #45984 from garethgreenaway/fixing_mac_tests_again
  * ae7791d30b Missing format in the call to write.

- **PR #45922:** (rallytime) [oxygen] Merge forward from 2017.7 to oxygen @ 2018-02-09 20:24:26 UTC
  * 88f481a3df Merge pull request #45922 from rallytime/merge-oxygen
  * 9c49c8d47c Remove extra patch
  * b9664c78a Remove duplicate import in cmdmod.py
  * 34ecdd2a71 Replace old utils paths with new paths
  * d80547e0b8 Merge branch '2017.7' into 'oxygen'
  * 0ce93c609 Merge pull request #45920 from rallytime/merge-2017.7
    * e4e4744218 Merge branch '2016.11' into '2017.7'
    * 27f82f996 Merge pull request #45864 from rallytime/release-note-fix
      * 10a42d424 Remove extraneous ] in release notes for 2016.11.9
    * 5fa010e2b Merge pull request #45787 from rallytime/2016.11.9_docs
      * a38d4d44fa [2016.11] Bump latest and previous versions
    * 643a8a5278 Merge pull request #45814 from gtmanfred/2017.7

30.2. Previous Releases 2081
• d8ee9aa97 fix cookies dict size changing in http.query
  – 3a3f87c16d Merge pull request #45877 from rallytime/new-release-notes
    • f937e8ba81 Add release notes file for 2017.7.4 release
  – 1c3ce0670 Merge pull request #45904 from rallytime/bp-41017
    • 80c56cdce8a Fixed typo in pkg state documentation
  – 317d35bd15 Merge pull request #45907 from terminalimage/fixed-grains-backport
    • 6cf7e5cc4 Fix backport of grains fix
  – dade5f0cab Merge pull request #45906 from rallytime/bp-45548
    • 1be7a386c Update x509.py
  – 82c473a1fe Merge pull request #45902 from terminalimage/issue45893
    • 9d200ec26 Add regression test for issue 45893
    • 1468f1d0ff Remove duplicated section in docstring and fix example
    • 6cc5cd98b Check the effective saltenv for cached archive
  – fdedde3c8a Merge pull request #45862 from rallytime/bp-45830
    • 10248569a Wrapping the put_nowait in a try...except and catching the exception when the multi-
      processing queue is full. This situation is happening when running the full testing suite on MacOS
      where the queue limit is 32767 vs on Linux where the queue limit is unlimited.
  – 43a456f42c3 Merge pull request #45779 from The-Loeki/patch-3
    • 85765ae3d52 Merge branch '2017.7' into patch-3
    • 47c00d88e SSH shell shim: Don't use $() for optimal support
  – cca997d0da Merge pull request #45788 from rallytime/2017.7.3_docs
    • d5fa6f126b [2017.7] Bump latest and previous versions
  – 746206cebe Merge pull request #45842 from rallytime/bp-45827
    • c631598a87 Fix traceback in disks grains when /sys/block not available
  – 900aaddc67 Merge pull request #45721 from garethgreenaway/44978_show_duration_when_no_state_run
    • 35926589f Adding a couple tests to ensure that duration is included in state run results even when
      states do not run.
    • 912347abc3 Include the duration when a state does not run, for example when the onchanges
      requisite is not met.
  – 80a2d009b4 Merge pull request #45517 from kstreee/fixedir
    • 24d41f2451 Fixes base dir making logic to ensure not raising the exception when base directory
      already exists.
  – 7a4b12e77 Merge pull request #45835 from kstreee/fixedir
    • 68c7f3dc6 Add a missing return statement.
  – 0a4f118c2 Merge pull request #45840 from rallytime/bp-45603
    • 9653363131 Fix for duplicate entries with pkrepo.managed
  – bd2178cd5f Merge pull request #45716 from ciqr/fixedir
    • 217791079b some code cleanup (lint errors and escape_argument as _cmd_quote)
• PR #45861: (rallytime) [oxygen] Merge forward from oxygen.rc1 to oxygen @ 2018-02-08 13:39:59 UTC
  - 048c18ea42 Merge pull request #45861 from rallytime/merge-oxygen
  - 6d81ac192 Merge branch 'oxygen.rc1' into 'oxygen'
• PR #45852: (Giandom) fix-missing-highstate-module-import @ 2018-02-05 15:02:39 UTC
  - 1bd38fb3b7 Merge pull request #45852 from Giandom/fix-missing-highstate-module-import
  - dc5af9233 fix-missing-highstate-module-import
• PR #45829: (rallytime) [oxygen] Merge forward from 2017.7 to oxygen @ 2018-02-02 20:20:32 UTC
  - 5f54ce7b5f Merge pull request #45829 from rallytime/merge-oxygen
  - 34a17819ca Add opts to salt.utils.jid.gen_jid call in minion.py
  - 79d071d9c Merge branch '2017.7' into 'oxygen'
  - f234bf52f4 Merge pull request #45756 from roaldnefs/fix-grafana4-documentation
    - 92979c0b57 Fix grafana4 states documentation
  - 685b683db5 Merge pull request #45801 from rallytime/merge-2017.7
    - 26e992e011 Merge branch '2016.11' into '2017.7'
    - 74638ed04c Merge pull request #45794 from vutny/doc-state-examples
      - ddfae6a29 [DOC] Fix code-block rST directive in file state module
      - abc9ece214 Merge pull request #45780 from vutny/doc-pkgrepo-zypper
      - f80c7d8d69 [DOC] Add missing gpgautoimport for pkgrepo.managed
  - c7d319f3bc Merge pull request #45802 from rallytime/merge-2017.7-from-2017.7.3
    - eb48513ba0 Merge branch '2017.7.3' into '2017.7'
    - 1439da8d76 Merge pull request #45755 from terminalmage/issue45743
    - 8af1251c59 salt.crypt: Ensure message is encoded before signing
  - 96e9232cc2 Merge pull request #45761 from gtmanfred/2017.7
  - 2807676d57 generate a jid for cache_jobs on the minion
• PR #45819: (Giandom) oxygen-added-highstate-output-to-slack-engine @ 2018-02-01 18:38:42 UTC
  - 3471796c51 Merge pull request #45819 from Giandom/oxygen-added-highstate-output-to-slack-engine
  - 1af8899a9d oxygen-added-highstate-output-to-slack-engine
30.2.34 Salt 2018.3.2 Release Notes

Version 2018.3.2 is a bugfix release for 2018.3.0.

The 2018.3.2 release contains only a small number of fixes, which are detailed below.

This release fixes two critical issues.

The first is Issue #48038, which is a critical bug that occurs in a multi-syndic setup where the same job is run multiple times on a minion.

The second issue is #48130. This bug appears in certain setups where the Master reports a Minion time-out, even though the job is still running on the Minion.

Both of these issues have been fixed with this release.

Statistics

- Total Merges: 7
- Total Issue References: 2
- Total PR References: 10
- Contributors: 4 (cro, garethgreenaway, gtmanfred, rallytime)

Warning: If you are using Jinja to dump lists or dictionaries in your SLS files, this will now cause errors in Python 2 since Jinja does not produce YAML-compatible output when strings in the data structures contain unicode types. The dictionary must be passed through a Jinja filter to produce YAML-compatible strings.

The below is an example of invalid SLS:

```
/etc/foo.conf:
  file.manged:
    - source: salt://foo.conf
    - template: jinja
    - defaults: {{ mydict }}
```

To make it valid, use either one of Salt's own json or yaml filters:

```
/etc/foo.conf:
  file.manged:
    - source: salt://foo.conf
    - template: jinja
    - defaults: {{ mydict | json }}
```

Changelog for v2018.3.1..v2018.3.2

Generated at: 2018-06-17 19:17:16 UTC

- ISSUE #48130: (rmarchei) Minion timeouts with 2018.3.1 (refs: #48158)
- PR #48158: (gtmanfred) always listen when gathering job info @ 2018-06-17 19:04:03 UTC
  - 521e92e458 Merge pull request #48158 from gtmanfred/2018.3.2
  - cecf564433 always listen when gathering job info
- PR #48138: (rallytime) Update man pages for 2018.3.2 @ 2018-06-14 21:22:34 UTC
- f154545aff Merge pull request #48138 from rallytime/man-pages-2018.3.2
- 8c340134f5 Update man pages for 2018.3.2

**PR #48137:** (gtmanfred) [2018.3.2] bootstrap kitchen branch tests with 2017.7.6 @ 2018-06-14 21:20:28 UTC
- b49271b76d Merge pull request #48137 from gtmanfred/2018.3.2
- 6128519e8b bootstrap kitchen branch tests with 2017.7.6

**PR #48129:** (rallytime) Add release notes for 2018.3.2 @ 2018-06-14 15:48:36 UTC
- 21aaf1c8b4 Merge pull request #48129 from rallytime/release-notes-2018.3.2
- 0b13be1111 Add release notes for 2018.3.2

**PR #48100:** (rallytime) Back-port #48014 to 2018.3.2 @ 2018-06-14 12:54:52 UTC
- PR #48014: (cro) Find job pause (refs: #48100)
- 36b99ae80a Merge pull request #48100 from rallytime/bp-48014
- 77fecc5c4 Lint: Add blank line
- 159b052962 One more case where returner doesn't respond
- 91b45b4cc4 Catch two cases when a returner is not able to be contacted--these would throw a stacktrace.

**PR #48099:** (rallytime) Back-port #47915 to 2018.3.2 @ 2018-06-14 12:54:23 UTC
- PR #47915: (garethgreenaway) [2018.3] state runner pause resume kill (refs: #48099)
- 40c1bfdec9 Merge pull request #48099 from rallytime/bp-47915
- 3556850058 fixing typo in alias_function call.
- 4b0ff496fa Some fixes to the set_pause and rm_pause function in the state runner, renaming to in line with the functions in the state module. Including aliases to previous names for back-ward compatibility. Including a soft_kill function to kill running orchestration states. A new test to test soft_kill functionality.

**ISSUE #48038:** (austinpapp) jobs are not dedup'ing minion side (refs: #48075)

**PR #48097:** (rallytime) Back-port #48075 to 2018.3.2 @ 2018-06-14 12:52:44 UTC
- PR #48075: (garethgreenaway) [2017.7] Ensure that the shared list of jids is passed (refs: #48097)
- 074a97dca1 Merge pull request #48097 from rallytime/bp-48075
- e4c719b55f Ensure that the shared list of jids is passed when creating the Minion. Fixes an issue when minions are pointed at multiple syndics.

### 30.2.35 Salt 2018.3.3 Release Notes

Version 2018.3.3 is a security and bugfix release for 2018.3.0.
Statistics

- Total Merges: 548
- Total Issue References: 69
- Total PR References: 341
- Contributors: 55 (Ch3LL, FedericoCeratto, KaiSforza, L4rS6, Lutseslav, The-Loeki, Vaelatern, adm, aesposito91, asenci, astorath, azelezni, babs, bbeceu, bbinet, brejoc, cro, daa, dmurphy18, dubb-b, dwoz, eliasp, ezh, garethgreenaway, gtmanfred, isbm, jeduardo, kt97679, kuetrzi, linoplit, lomeroe, lusche, mateiw, maxarnold, maxim-sermin, meaksh, mmulqueen, morganwillcock, mtorromeo, nullify005, paulcollinsii, pritambaral, rallytime, rares-pop, rmarchei, rosscdh, sizgiyaev, sjorge, tofik, terminalmage, travispaul, twangboy, vinian, weswhet, zertimon)

**Warning:** If you are using Jinja to dump lists or dictionaries in your SLS files, this will now cause errors in Python 2 since Jinja does not produce YAML-compatible output when strings in the data structures contain unicode types. The dictionary must be passed through a Jinja filter to produce YAML-compatible strings.

The below is an example of invalid SLS:

```
/etc/foo.conf:
file.mangaged:
  - source: salt://foo.conf
  - template: jinja
  - defaults: {{ mydict }}
```

To make it valid, use either one of Salt's own `json` or `yaml` filters. Another option would be to use Jinja’s `tojson` filter.

```
/etc/foo.conf:
file.mangaged:
  - source: salt://foo.conf
  - template: jinja
  - defaults: {{ mydict | tojson }}
```

Security Fix

CVE-2018-15751 Remote command execution and incorrect access control when using salt-api.

CVE-2018-15750 Directory traversal vulnerability when using salt-api. Allows an attacker to determine what files exist on a server when querying /run or /events.

Credit and thanks for discovery and responsible disclosure: nullbr4in, xcuter, koredge, loupos, blackcon, Naver Business Platform

Changes to win_timezone

Improves timezone detection by using the pytz module.

`timezone.get_offset` and `timezone.get_zonecode` now work properly.

Adds `timezone.list` to list supported timezones in either Windows or Unix format.
New Jinja Filter

The `tojson` filter (from Jinja 2.9 and later) has been ported to Salt, and will be used when this filter is not available. This allows older LTS releases such as CentOS 7 and Ubuntu 14.04 to use this filter.

You can use this filter any time you wish to dump a list or dictionary into an SLS file, to ensure that the result is able to be loaded by the YAML renderer. For example:

```yaml
foo:
  bar.baz:
    - some_arg: {{ mydict | tojson }}
```

MacOSX escape characters with runas

You are now required to escape quotes when using the runas argument with the cmd module on macosx.

Example:

```bash
cmd.run 'echo "h="baz""' runas=macuser
```

Changelog for v2018.3.2..v2018.3.3

Generated at: 2018-09-21 17:45:27 UTC

- **PR #49662**: (dwoz) Fix another bad filename reference in whitelist @ 2018-09-14 22:20:49 UTC
  - 9d8c0b3f4 Merge pull request #49662 from dwoz/2018.3.3
  - e10920313 Fix another bad filename reference in whitelist
- **PR #49655**: (dwoz) Fix windows test whitelist errors @ 2018-09-14 20:34:56 UTC
  - 6391560d57 Merge pull request #49655 from dwoz/2018.3.3
  - 8a4946478e Fix windows test whitelist errors
- **PR #49641**: (rallytime) Back-port #49632 to 2018.3.3 @ 2018-09-13 16:46:02 UTC
  - **PR #49632**: (garethgreenaway) [2018.3] Fixing integration.states.test_file.FileTest.test_directory_max_depth (refs: #49641)
  - 3fb3ffdb37 Merge pull request #49641 from rallytime/bp-49632
  - d11a400825 Fixing failing test under python 3.7 caused by changes to how os.makedirs sets initial permissions.
- **PR #49633**: (garethgreenaway) [2018.3.3] Moving test_build_whitespace_split_regex to TestBuildWhitespaceRegex @ 2018-09-13 06:57:01 UTC
  - 0096cf10b5 Merge pull request #49633 from garethgreenaway/moving_test_into_correct_class
  - 370de07617 Lint: Add extra blank line
  - 27b93c6c68 Moving the test_build_whitespace_split_regex test into the TestBuildWhitespaceRegex class.
- **PR #49594**: (rallytime) Back-port #49580 to 2018.3.3 @ 2018-09-10 19:59:41 UTC
  - **PR #49580**: (garethgreenaway) [2018.3] Fixing tests for Python 3.7 (refs: #49594)
  - e3a14e3535 Merge pull request #49594 from rallytime/bp-49580
  - 41a2586fc0 Add file coding line at top of file
- 7df3beb53 Fixing lint.
- 5fee38d1db Fixes various tests that were failing under python 3.7.

- **PR #49589:** (rallytime) Update old utils paths to use new utils paths @ 2018-09-10 16:51:31 UTC
  - 39f9ec952 Merge pull request #49589 from rallytime/utils-paths
  - 5de2245c11 Update old utils paths to use new utils paths

- **PR #49550:** (rallytime) Back-port #49548 to 2018.3.3 @ 2018-09-07 00:36:05 UTC
  - **PR #49548:** (garethgreenaway) [2018.3] Disabling State boto tests for Python 3.7+ (refs: #49550)
  - 202da7a94f Merge pull request #49550 from rallytime/bp-49548
  - 180692ccee Disable various boto tests when run under python 3.7 because of //github.com/spulec/moto/issues/1706. which was causing the test suite to hang on unit tests. This PR is disabling the tests in the test_boto_vpc state tests.

- **PR #49542:** (twangboy) Update openssl @ 2018-09-06 16:11:34 UTC
  - cae2d61568 Merge pull request #49542 from twangboy/fix_osx_build_3
  - fe02b2776f Add 1.0.2p shasum file
  - 5f06dc2762 Fix issues with osx build scripts on 2018.3.3

- **PR #49536:** (rallytime) Back-port #49524 to 2018.3.3 @ 2018-09-06 16:00:00 UTC
  - **PR #49524:** (garethgreenaway) [2018.3] Disable boto tests under 3.7 (refs: #49536)
  - d9f09da5d9 Merge pull request #49536 from rallytime/bp-49524
  - 9e7203e08a Disable various boto tests when run under python 3.7 because of //github.com/spulec/moto/issues/1706. which was causing the test suite to hang on unit tests.

- **PR #49535:** (Ch3LL) Skip test_virt and pip_state requirements tests on macosx @ 2018-09-06 15:59:38 UTC
  - cb934bf0b6 Merge pull request #49535 from Ch3LL/skip_pip_mac
  - 50237e9daf Skip test_virt and pip_state requirements tests on macosx

- **PR #49499:** (rallytime) Pin CherryPy version to < 18.0.0 in requirements files for PY2 @ 2018-09-04 18:52:44 UTC
  - 87d3df8e05 Merge pull request #49499 from rallytime/pin-cherrypy-2018.3.3
  - 9e724335a3 Pin CherryPy version to < 18.0.0 in requirements files for PY2

- **ISSUE saltstack/salt-jenkins#1075:** (Ch3LL) [2018.3.3] arch python3 tests do not finish (refs: #49303, #49451)

- **PR #49467:** (rallytime) Back-port #49451 to 2018.3.3 @ 2018-08-31 17:38:09 UTC
  - **PR #49451:** (gtmanfred) Handle thread shutdown on system exit (refs: #49467)
  - 39fdaacc434 Merge pull request #49467 from rallytime/bp-49451
  - b891a0a8d3 add lock for proxy minion process too
  - 72519878c0 start thread in try block
  - b878f01662 use finally instead of catching baseexception
  - de98be6093 use rlock so blocking can be passed in py2
  - d346b42332 import Callable from collections.abc for python3.7
  - d7a410070a Handle thread shutdown on system exit
Salt Documentation, Release 3002.5

- PR #49468: (rallytime) Back-port #49291 and #49331 to 2018.3.3 @ 2018-08-31 17:37:30 UTC
  - PR #49331: (dwoz) Use salt.utils to ensure string type (refs: #49468)
  - PR #49291: (dwoz) Add dedent that sets line endings (refs: #49468)
  - 37d145d69 Merge pull request #49468 from rallytime/bp-49291-and-49331
  - 94f8e96c8 Use salt.utils to ensure string type
  - 6c92ed2021 Fix review nits
  - 0e18b157e3 Re-factor dedent to fix warts
  - b503406f8 Use salt.utils.to_* functions
  - 6399d035a4 Add dedent that sets line endings

- PR #49449: (rallytime) Mark status test as flaky @ 2018-08-30 18:10:44 UTC
  - 0cda22e7a9 Merge pull request #49449 from rallytime/flaky-test
  - 0f322bb39f Mark status test as flaky

- PR #49444: (rallytime) Back-port #49299 to 2018.3.3 @ 2018-08-30 18:10:21 UTC
  - PR #49299: (dwoz) Work around cmd.run unicode issues in test for now (refs: #49444)
  - bc5f1a7c71 Merge pull request #49444 from rallytime/bp-49299
  - b8c5a5bb91 Fix string formatting wart in file state tests
  - 19756022be Fix wart in file state test
  - ba68388342 Work around cmd.run unicode issues in test for now

- PR #49448: (rallytime) Back-port #49400 to 2018.3.3 @ 2018-08-30 18:04:29 UTC
  - PR #49400: (rallytime) Mark pillar refresh test as flaky (refs: #49448)
  - 38713e2db9 Merge pull request #49448 from rallytime/bp-49400
  - b953fe0079 Mark pillar refresh test as flaky

- PR #49446: (rallytime) Back-port #49356 to 2018.3.3 @ 2018-08-30 18:04:01 UTC
  - PR #49356: (dwoz) Fix tests that use timed_subprocess for py3 (refs: #49446)
  - d6ddcab351 Merge pull request #49446 from rallytime/bp-49356
  - 8022b0c3d6 Fix tests that use timed_subprocess for py3

- PR #49445: (rallytime) Back-port #49192 to 2018.3.3 @ 2018-08-30 18:03:44 UTC
  - PR #49192: (dwoz) Test fixes flaky test and unicode environment key/value (refs: #49445)
  - 1a67956c0f Merge pull request #49445 from rallytime/bp-49192
  - 20148d4438 Test fixes

- PR #49443: (rallytime) Back-port #49197 to 2018.3.3 @ 2018-08-30 18:03:10 UTC
  - PR #49197: (dwoz) File state line ending fixes (refs: #49443)
  - 33f9d44de Merge pull request #49443 from rallytime/bp-49197
  - 5fe821978e File state line ending fixes

- PR #49442: (rallytime) Back-port #49180 and related fixes to 2018.3.3 @ 2018-08-30 18:02:54 UTC
  - PR #49186: (dwoz) Fix typo in #49180 (refs: #49442)
- **PR #49180**: (dwoz) Cherry-pick test fixes (refs: #49442, #49186)
- **PR #49167**: (dwoz) Fix remaining file state integration tests (py3) (refs: #49173, #49442)
  - 60758059c3 Merge pull request #49442 from rallytime/bp-49180
  - e155568957 Fix typo
  - 608a1ae7ba Account for file renames
  - e86a46a2b Fix directory unit test
  - 2f865c398e Fix is_windows checks
  - 6460f7f217 Account for normalized dirs in unit tests
  - f4b7101a35 Simplify dict keys lookup
  - 942b68bf8c Fix remaining file state integration tests (py3)

- **PR #49441**: (rallytime) Back-port #49240 to 2018.3.3 @ 2018-08-30 18:02:40 UTC
  - **PR #49240**: (dwoz) file state fixes (refs: #49362, #49441)
    - f4906346a Merge pull request #49441 from rallytime/bp-49240
    - 22ed452479 Work around listdir encoding issues on py2 windows
    - f5be275835 file state test fixes

- **PR #49440**: (rallytime) Back-port #49258 to 2018.3.3 @ 2018-08-30 18:02:25 UTC
  - **PR #49258**: (gtmanfred) flaky tests are flaky (refs: #49440)
    - cc27b67a37 Merge pull request #49440 from rallytime/bp-49258
    - 0191af1423 flaky tests are flaky yo
    - 720b671dda mark orchestration state tests as flaky

- **ISSUE #48880**: (damntoken) Can’t run cmd.run with UTF-8 chars as arguments / parameters. With custom module. (refs: #49322)

- **PR #49368**: (rallytime) Back-port #49322 to 2018.3.3 @ 2018-08-28 17:15:15 UTC
  - **PR #49322**: (dwoz) Encode shell commands explicitly. (refs: #49368)
    - af80e6456a Merge pull request #49368 from rallytime/bp-49322
    - 238853b9ec Encode shell commands explicitly.

- **PR #49363**: (rallytime) Back-port #49245 to 2018.3.3 @ 2018-08-28 17:14:18 UTC
  - **PR #49245**: (dwoz) Skip grep unit tests on windows (refs: #49363)
    - 0fee3e878e Merge pull request #49363 from rallytime/bp-49245
    - cc606509d0 Fix is_windows call - use the right path
    - 5488f3ea38 Skip grep unit tests on windows

- **PR #49361**: (rallytime) Back-port #49244 to 2018.3.3 @ 2018-08-28 17:12:58 UTC
  - **PR #49244**: (dwoz) Test fixes: unit.filesrvr.test_gifs (refs: #49361)
    - dbcd2fc726 Merge pull request #49361 from rallytime/bp-49244
    - e0909d3a25 Simplify by using to_unicode helper
    - 4723c69092 Older GitPython version do not have a close method
- d5feeba716 Fix up fileserver.test_gitfs tests on windows
- 4b688f6347 Remove unicode filenames on windows python 2

- **PR #49362**: (rallytime) Back-port #49240 to 2018.3.3 @ 2018-08-28 17:00:25 UTC
  - PR #49240: (dwoz) file state test fixes (refs: #49362, #49441)
  - b4a1e1d365 Merge pull request #49362 from rallytime/bp-49240
  - 16ca5b9694 Work around listdir encoding issues on py2 windows
  - 7650208dbc file state test fixes

- **PR #49365**: (rallytime) Back-port #49270 to 2018.3.3 @ 2018-08-28 16:56:23 UTC
  - PR #49270: (dwoz) Add async helper to test_sock_path_len (refs: #49365)
  - 9ca9a775ff Merge pull request #49365 from rallytime/bp-49270
  - 1b337a8b8 Add async helper to test_sock_path_len

- **PR #49364**: (rallytime) Back-port #49243 to 2018.3.3 @ 2018-08-28 16:55:55 UTC
  - PR #49243: (dwoz) Revert newline translation change (refs: #49364)
  - bbff57da16 Merge pull request #49364 from rallytime/bp-49243
  - 5db77c6229 Revert newline translation change

- **ISSUE #32737**: (Lothiraldan) No support for compound matcher in external auth configuration (refs: #49236)
- **PR #49313**: (rallytime) Back-port #49236 to 2018.3.3 @ 2018-08-24 20:59:16 UTC
  - PR #49236: (terminalmage) Allow compound matching in eauth config expressions (refs: #49313)
  - 64d7b0eac6 Merge pull request #49313 from rallytime/bp-49236
  - 1a5e996ec3 Add 'minion_data_cache: True' to mocked opts for minions unit tests
  - 549f5d5a86 Allow compound matching in eauth config expressions

- **ISSUE saltstack/salt-jenkins#1075**: (Ch3LL) [2018.3.3] arch python3 tests do not finish (refs: #49303, #49451)
- **PR #49311**: (rallytime) Back-port #49303 to 2018.3.3 @ 2018-08-24 17:48:23 UTC
  - PR #49303: (gtmanfred) use os._exit instead of sys.exit when daemonizing (refs: #49311)
  - 7a894a4ca8 Merge pull request #49311 from rallytime/bp-49303
  - 3fca1c87751 use os._exit instead of sys.exit when daemonizing

- **PR #49294**: (Ch3LL) Move run_function call from __init__ to setup @ 2018-08-24 12:41:35 UTC
  - 7bb356f11e Merge pull request #49294 from Ch3LL/fed_28_tests
  - 0a5d44a3db Move run_function call from __init__ to setup

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**30.2. Previous Releases**

2091
• **PR #49302**: (twangboy) Fix installer 2018.3.3 @ 2018-08-24 12:41:14 UTC
  - a607f9332f Merge pull request #49302 from twangboy/fix_installer_2018.3.3
  - 68fd37575e Fix erroneous NSSM reference
  - 103fc289e Remove delete vcredist line
  - 007a16638e Bring installer updates from 2017.7.8 to 2018.3.3

• **PR #49241**: (terminalmage) Don't silently catch SystemExit @ 2018-08-22 12:57:58 UTC
  - bc0b4ac513 Merge pull request #49241 from terminalmage/salt-jenkins-1078
  - 08d14f2c7 Don't silently catch SystemExit
  - c0fd818f7 Don't use a bare except!

• **PR #49239**: (Ch3LL) Use yaml's safe_dump in windows ec2 tests @ 2018-08-22 08:48:13 UTC
  - 0fb9ecf60a Merge pull request #49239 from Ch3LL/win_yaml_test
  - f5b42db24 import salt.utils.yaml
  - 67290eaf7 Use yaml's safe_dump in windows ec2 tests

• **PR #49182**: (terminalmage) Fix hanging syndic test @ 2018-08-18 12:10:32 UTC
  - 134f125b96 Merge pull request #49182 from terminalmage/salt-jenkins-1078
  - a2d2cd317b Fix hanging syndic test

• **PR #49172**: (Ch3LL) [2018.3.3] cherry pick #49118 @ 2018-08-17 20:54:05 UTC
  - PR #49118: (dwoz) Multiple fixes for integration.states.test_file (refs: #49172)
  - PR #49088: (dwoz) Multiple file state test fixes (refs: #49118)
  - PR #49087: (dwoz) Filter out scheme’s that are not valid (refs: #49118)
  - b3a247bbfbb Merge pull request #49172 from Ch3LL/bp-49118
  - ce517dbbd update is_windows salt.utils to correct path
  - 38ef11240f Multiple fixes for integration.states.test_file

• **PR #49173**: (Ch3LL) [2018.3.3] cherry pick #49167 @ 2018-08-17 20:30:27 UTC
  - PR #49167: (dwoz) Fix remaining file state integration tests (py3) (refs: #49173, #49442)
  - a1a298a13c Simplify dict keys lookup
  - 3d26affa10 Fix remaining file state integration tests (py3)

• **PR #49171**: (Ch3LL) [2018.3.3] cherry pick #49103 @ 2018-08-17 20:23:32 UTC
  - PR #49103: (dwoz) Install the launcher so we can execute py files (refs: #49171)
  - ee54eaf73 Merge pull request #49171 from Ch3LL/bp-49103
  - 05a2b91fb2 Install the launcher so we can execute py files

• **PR #49132**: (Ch3LL) [2018.3.3] backport PR #49062 @ 2018-08-17 14:51:50 UTC
  - PR #49062: (weswhet) fix memoize on available macOS services (refs: #49132)
  - 58034c9dc3 Merge pull request #49132 from Ch3LL/bp-49062
- 990fdb6a52 decorator link fix, updating context names, as well as updating macutils tests for latest changes
- 3ab5d282be fixing an issue with memoize on macOS services, switching to using `__context__` instead

- **PR #49142** (Ch3LL) Remove `-Z script_arg` for cloud tests @ 2018-08-16 16:12:59 UTC
  - 01f8f83ec0 Merge pull request #49142 from Ch3LL/rm_z_arg
  - a1ef6a88a6 Remove `-Z script_arg` for cloud tests

- **PR #49137** (Ch3LL) [2018.3.3] Update bootstrap script to latest release (2018.08.15) @ 2018-08-15 19:49:22 UTC
  - a03828884b Merge pull request #49137 from Ch3LL/bootstrap_2018.3.3
  - eb9a612096 [2018.3.3] Update bootstrap script to latest release (2018.08.15)

- **PR #49110** (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-08-14 17:11:25 UTC
  - b412bf534 Merge pull request #49110 from rallytime/merge-2018.3
  - 4649f60209 Update old utils paths with new paths
  - 49c2a784bb Merge branch `2017.7` into `2018.3`
    - d46e23f4c2 Merge pull request #49109 from rallytime/merge-2017.7
      - 3c5527f300 Merge branch `2017.7.8` into `2017.7`
      - 01cf2c71ff Merge pull request #49051 from rallytime/bp-49046
      - fc0817cb35 The osfullname grain differs when using Python2 vs Python3, swapping this out for the "OS" grain which is consistent.
    - 8954dd269f Merge pull request #49090 from dwoz/file_line_fix
      - 0dca634e3c Search for (but do not include) CRLF line ending
    - b99edc3dce Merge pull request #49088 from dwoz/file_hash_diffs
      - 054af8197 Multiple file state test fixes
    - 274977b6c4 Merge pull request #49087 from dwoz/url_file_test_fixes
      - 632b65f975 Filter out scheme's that are not valid
    - db5fb3232a Merge pull request #49086 from rallytime/new-doc-img
      - 90954203cb Update the DOCBANNER image for saltconf
    - af6ec1dce2 Merge pull request #49045 from twangboy/fix_43164
      - 589456d08f Fix lint errors
      - e79243566d Add rallytime's suggestions
      - d1ae6b3d6d Fix docs for the registry module and state
    - a840fe1a11 Merge pull request #49083 from rallytime/bootstrap-2017.7
      - 358e14cdac [2017.7] Update bootstrap script to latest release
    - 9db6cd5654 Merge pull request #49059 from twangboy/fix_37984
      - 7ed45b5b00 Remove import
      - 7fb1ed469 Fix docs to clarify uptime output on Windows
    - f9db72f00c Merge pull request #49061 from saltstack/revert-48982-new_logo_2017.7
      - 98a8da728b Revert "New logo 2017.7 (WIP)"
• bbcd1869ec Merge pull request #48982 from newwebash/new_logo_2017.7
  - 5c1c311f77 Update Salt Conf ad
  - 72dc63c426 Merge branch '2017.7' of https://github.com/saltstack/salt into new_logo_2017.7
  - 9f4e78a7b9 Revert "Update saltconf ad"
  - 3ab8c6b882 Update saltconf ad

• ISSUE #48665: (dgengtek) salt-api auth ldap generates a valid token when using bindpw and an invalid request (refs: #48901)

• PR #48901: (garethgreenaway) [2018.3] fix to auth/ldap.py @ 2018-08-14 16:10:19 UTC
  - e78fc0e0eb Merge pull request #48901 from garethgreenaway/48665_auth_ldap_valid_token_failed_auth
  - d4e4f2e803 Fixing a typo in a comment.
  - 2eb167ea42 Fixing issue when a valid token is generated even when invalid user credentials are passed. This change verifies that the binddn credentials are valid, then verifies that the username & password (if not None) are also valid.

• ISSUE #49081: (frogunder) Fluorine - I see error/traceback when running minion in debug mode (refs: #49085)

• PR #49099: (rallytime) Back-port #49085 to 2018.3 @ 2018-08-14 12:42:51 UTC
  - PR #49085: (gtmanfred) fix async call to process manager (refs: #49099)
  - 484c1e0123 Merge pull request #49099 from rallytime/bp-49085
  - 024d9cb843 fix async call to process manager

• ISSUE #49018: (Ch3LL) add MasterPillarUtil tests (refs: #49034)

• PR #49071: (rallytime) Back-port #49034 to 2018.3 @ 2018-08-13 20:15:31 UTC
  - PR #49034: (garethgreenaway) [fluorine] Adding tests for MasterPillarUtil (refs: #49071)
  - bc033da677 Merge pull request #49071 from rallytime/bp-49034
  - 8108a4d31a Adding some tests for the grains, pillar and mine functions in the cache runner. These will also ensure that the relevant functions in salt.utils.master.MasterPillarUtil are functioning properly.

• PR #49077: (rallytime) Back-port #49075 to 2018.3 @ 2018-08-13 20:00:00 UTC
  - PR #49075: (gtmanfred) fix last async issue (refs: #49077)
  - 90c2f026b3 Merge pull request #49077 from rallytime/bp-49075
  - 5e07b8306b fix last async issue

• PR #49096: (rallytime) Update the DOCBANNER image for saltconf @ 2018-08-13 19:59:39 UTC
  - 6942ef1102 Merge pull request #49096 from rallytime/new-doc-img-2018.3
  - 75080705ce Update the DOCBANNER image for saltconf

• PR #49055: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-08-13 19:20:11 UTC
  - 0e1ed7b923 Merge pull request #49055 from rallytime/merge-2018.3
  - 83a15cb623 Add optimization_order config to mocked opts
  - ea6883ee55 Update old utils paths to new utils paths
  - 201031fa8a Merge branch '2017.7' into '2018.3'
    * 0d2a495378 Merge pull request #49050 from rallytime/merge-2017.7
30.2. Previous Releases

- ed6fb8b739 Merge branch '2017.7.8' into '2017.7'
- 189e28691f Merge pull request #49044 from Ch3LL/vultr_test
- 0dedfae4d1 increase timeout on vultr cloud integration test
- c606a32cf2 Merge pull request #49042 from rallytime/flaky-jinja-test
- a43d9b4ba6 Mark a jinja template test as flaky
- 6415b6f73b Merge pull request #49041 from Ch3LL/ec2_fix
- cf7f2459b8 [2017.7.8] backport PR #48212
- 1db036406b Merge pull request #49030 from rallytime/update-client-tests
- f08e66c6ae Update netapi client tests

- 70be9ac9b1 Merge pull request #49046 from garethgreen-away/1022_fixing_test_failing_py3_Debian_test
  - fa2339bb91 The osfullname grain differs when using Python2 vs Python3, swapping this out for the "OS" grain which is consistent.
- 69c9b0af81 Merge pull request #49036 from cspeidel/doc-fix-netyang
  - f7ac085eb5 minor doc fix in netyang.py
- c5f3fd82b2 Merge pull request #48997 from AVeenstra/patch-1
  - 0e535f2c8c Unpacking dict with the six iterator
  - 5e82685b89 Python 3 related fix in highstate_return.py
- c06a3c531 Merge pull request #49021 from rallytime/merge-2017.7
  - ca82b3d57a Merge branch '2017.7.8' into merge-2017.7
  - f73ba21bc7 Merge pull request #49024 from rallytime/fixed-code-generation-test
  - a9c16d9137 Fix test error in test_compiler jinja check
  - c6f8429e41 Merge branch '2017.7.8' into '2017.7'
  - 6b6d86c615 Merge pull request #49020 from rallytime/fixed-grains-test
  - f72a3ac6be Make grains integration test more robust
  - 92d6c25c7f Merge pull request #49002 from rallytime/skip-jinja-deep-error-test
  - 23b66eff8bb Skip test_jinja_deep_error on Debian 8
  - 41df11eb3 Merge pull request #48999 from rallytime/fixed-boto-test
  - d0136b1be5 Update expected return value in boto test
- 2ddba6391a Merge pull request #49010 from Ch3LL/univention
  - c09bce9afe Add univention OS to debian_os_family mapping
- 41bd36842e Merge pull request #48636 from terminalmage/loader-fixes
  - 0441cd56ef Add optimization_order to mocking
  - 2256fad320 Process pycache files after .py files
  - a78663a301 Lint
  - 0728b88b6 Add note about Python 3.5+ only support for optimization_order
  - 76496e0c08 Add a test to confirm that .py files are still loaded correctly
• 0f60beb6b6 Fix bad copypasta
• fbc1d42ea2 Add configuration docs for optimization_order config option
• 8af2d580f3 Only compile the suffix_order/map once per LazyLoader instance
• 4b95e5f313 Don't put __pycache__ dir in the file list
• e7c10196da Quiet the byte compiling for PY2
• 9338370477 Add unit tests for loader optimization levels
• c3622933c1 PY3: Support different optimization levels
• 6fc8da5bab Add optimization_order config option with default value
• dfe423a1e0 Remove commented-out log message

• PR #49084: (rallytime) [2018.3] Update bootstrap script to latest release @ 2018-08-13 18:14:42 UTC
  – db7ec46875 Merge pull request #49084 from rallytime/bootstrap-2018.3
  – 28dc8ce954 [2017.7] Update bootstrap script to latest release
  – 990936992c Keep runner API unchanged
  – 46bafcafe6 Fix nag-message
  – 5c887ac2ae Support original API
  – 2c22e794d4 Use kwargs instead of directly named parameters
  – 7d095491d9 Update docstring
  – 980738dbb7 Add 'async' backward compatibility
  – e8608aa9be Revert api call: it is about "functionname.Async" suffix.
  – 0543578336 Deprecate 'async' parameter in Mandrill API
  – 1107de0dec Lintfix: PEP8 requires two empty lines
  – 2a18e335af Fix function signatures in Cassandra module
  – 603f94e2a3 Cleanup docstrings at module level
  – b9718d3a09 Fix log error/info/warning and exception messages
  – 6e77a6f69a Fix local opts from CLI
  – 493e48dbd5 Remove internal variables/properties with the reserved words
  – be07f64bc4 Change internal function signatures to avoid reserved word
  – 7d095e0bb6 Rename async function to asynchronous
  – 35eabbb8a4 Fix docstrings
  – 7a597f19b5 Fix comments
- 69920366ae Fix CLI config
- 173f3d7aa8 Fix docstring typo
- b7da571624 Fix imports
- 7ec3954bef Rename module to full wording

- **ISSUE #48557**: (whytwolf) file.line in python3 on windows 2012 r2 is adding extra CR line endings. (refs: #49026)
- **PR #49026**: (dwoz) Fix file.line line endings @ 2018-08-13 13:05:43 UTC
  - 338ecb70ef Merge pull request #49026 from dwoz/issue_48557
  - a4d22fda2f Merge remote-tracking branch 'origin/issue_48557' into issue_48557
    - 702e76cfc9 Merge branch '2018.3' into issue_48557
  - 6cf93e8fc4 Skip newline in binary mode
  - 2cf80c1595 Fix linter errors
  - baf291b4c8 Fix file.line line endings

- **PR #49038**: (gtmanfred) disable enable_ssh_minions to see if it is slowing down 2018.3 tests @ 2018-08-10 18:07:59 UTC
  - 602fed7806 Merge pull request #49038 from gtmanfred/slowtest
  - 6bc44c91c4 remove localhost from tests
  - 7b168a5aac disable enable_ssh_minions to see if it is slowing down 2018.3 tests

- **ISSUE #48996**: (jils2013) file.get_diff not work on version:2018.3.2 (refs: #49033)
- **PR #49033**: (terminalmage) Fix file.get_diff for remote files @ 2018-08-09 21:06:53 UTC
  - 4eeb75f028 Merge pull request #49033 from terminalmage/issue48996
  - 163aea71c8 Lint
  - d6e5038022 Fix file.get_diff for remote files

- **ISSUE #48856**: (travispaul) Salt fails to start on NetBSD 8 (refs: #48926)
- **PR #48926**: (travispaul) Handle ifconfig output differently for NetBSD >= 8.0 @ 2018-08-09 20:07:44 UTC
  - b24e96a292 Merge pull request #48926 from travispaul/fix-netbsd-8-new-ifconfig
  - d59b6d8269 Add unit test for NetBSD 8 ifconfig changes
  - 80f8a667d1 Handle ifconfig output differently for NetBSD >= 8.0

- **PR #48803**: (dmurphy18) Support for execution modules and states mount on AIX @ 2018-08-09 17:51:55 UTC
  - 7d6b9ed0a5 Merge pull request #48803 from dmurphy18/aix_filesystems
  - 92818f816b Fixes for testing
  - 77dd7a1743 Adjust unit tests
  - eae033cde Updated for review comments and adjusted locking when writing files
  - 5bf9e6085b Update due to review comments
  - 9fb5641dc7 Mount unit tests for modules and states for AIX
  - b28f427432 Save off work after laptop issue
  - e5c2741fe7 module and states mount support for AIX

30.2. Previous Releases

2097
Further updates to support for mount on AIX
210076276f Initial support for handling /etc/filesystems on AIX

**ISSUE #48496:** (icy) Salt-key unable to delete the certificate Test=True (refs: #48929)

**PR #48929:** (terminalmage) 2 salt-key fixes @ 2018-08-09 17:50:07 UTC
- 2a38905a8a Merge pull request #48929 from terminalmage/issue48496
- 7ac10f9ea2 salt-key fixes

**ISSUE #47481:** (whytewolf) Oxygen: task.add_trigger with start_date stating strptime needs a string not int. (refs: #49022)

**PR #49022:** (dwoz) Document time format idiosyncrasies @ 2018-08-09 17:47:12 UTC
- bb9d23bfa1 Merge pull request #49022 from dwoz/47481_docs
- 313a3d93d6 Document time format idiosyncrasies

**PR #48932:** (twangboy) Fix pkg.install when pkg already installed @ 2018-08-09 17:45:51 UTC
- 9b6a9ff4f1 Merge pull request #48932 from twangboy/fix_win_repo
- 075ea29d29 remove .lower(), fix debug messages
- d7c2f476ac Remove current: version for latest as well
- 522ac26459 Fix typo in code comment
- 47b2898a85 return empty dict on no changes
- 6532706d2f Make the tests run on Linux
- cfe55a391a Add tests for pkg.install output
- 8ec05f498 Clarify code comment
- 8af2cfd54a Fix issues where current is not returned

**PR #49011:** (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-08-09 17:34:18 UTC
- d7b7a92ef6 Merge pull request #49011 from rallytime/merge-2018.3
- 0267096d00 Apply fix to ssh init file that was there before merge
- 7f1f7915e4 Revert "Allow for not being prompted to supply a password to deploy keys to a minion with salt-ssh"
- 00416d54d1 Revert "add key-deploy test"
- c26fa0d6c4 Mark orchestration test as expensive
- fce6b8d6f Update old utils paths to use new paths
- 3e6445a9d6 Merge branch '2017.7' into '2018.3'
  * b49eeaca6e9 Merge pull request #49003 from rallytime/boto-test-2017.7
    - 1a23bb233f Update expected return value in boto test
  * 51eed1f3f3 Merge pull request #48988 from rallytime/merge-2017.7
    - df8699e2e7 Merge branch '2017.7.8' into '2017.7'
    - a1e54634dc Merge pull request #48976 from rallytime/tornado
    - 0bd838a6c Skip unreliable tornado tests
    - 22713be9c1 Merge pull request #48979 from rallytime/bp-48959
03aa0e49b0 Merge pull request #48970 from Ch3LL/back_48962
3ce1b8a3c9 Update the elif block to only be true for versions below Debian 9.
e6ce5e3c7 Merge pull request #48968 from rallytime/man-pages
64e3be41a Update man pages for 2017.7.8 release
10fd4661ff Merge pull request #48978 from gtmanfred/2017.7
6108363f82 clean up gemfile
5b2423e527 Merge pull request #48959 from rallytime/flaky-tests
aa9f8d728 Mark one grains test as flaky & convert to pytest notation
e7e5abcf48 Mark 2 matcher tests as flaky
79994ecab4 Merge pull request #48962 from garethgreen-away/1022_test_service_disable_debian_part_deux
9e71551b36 Update the elif block to only be true for versions below Debian 9.
a1bda00cb Merge pull request #48960 from dwoz/block_replace_tests
94ac2b4fc7 Multiple block replace test fixes
93b862f350 Merge pull request #48957 from whytewolf/beacons_log_doc_change
a77fd16869 Update salt.beacons.log to reflect that re module is used for matching.
0245c0fbb0 Merge pull request #48955 from terminalmage/service-systemd
23f87bd536 Don't load service.py if minion is running a non-sysvinit init system
848d583438 Merge pull request #48950 from KaiSforza/kitchenfix-2017.7
5242cb143a Added a quote to kitchen Jenkinsfiles
928d688d65 Merge pull request #48943 from rallytime/flaky-tests
668a57ab9 Mark some shell and runner integration tests as flaky
cd42510d3a Merge pull request #48940 from rallytime/bp-48852
fa4ef92e79 Record all the artifacts from the build
43649a68be Merge pull request #48935 from garethgreen-away/1045_test_pkg_015_installed_held_centos
0bb10107b6 Merge branch '2017.7' into 1045_test_pkg_015_installed_held_centos
24d5e6a22f Fixing the test_pkg_015_installed_held test to be able to successfully run on CentOS
2421e2a570 Merge pull request #47100 from gtmanfred/ssh
5b443af7ae add key-deploy test
a131c9beeb Allow for not being prompted to supply a password to deploy keys to a minion with salt-ssh
d541bd6446 Merge pull request #48891 from damon-atkins/2017.7_win_pkg.list_pkgs_not_found
a4af1dbb1 Fix win_pkg issues introduced Jan 2018. If DisplayVersion does not exist it should return version as "Not Found"
5f6a56f5dc Merge pull request #48896 from rallytime/bp-48730
57aa204c9d Merge branch '2017.7' into bp-48730
- 4995922584 Forgot variable in signature
- 0503bc18b6 Fix batch install using pkgng

- 0c64bba865 Merge pull request #48933 from garethgreenaway/1022_debian_8_failing_service-test
  - 280d1d2ad2 Fixing failing test, integration.modules.test_service.ServiceModuleTest.test_service_disable_does_not_exist on Debian 8 and higher.
- 0c3d2c6a09 Merge pull request #48922 from rallytime/cache-doc-error
  - 8ca89df7e8 Update backticks on job_cache docs
- 8d1fc4f8e5 Merge pull request #48866 from Ch3LL/cmd_win_tests
  - 905da13653 Merge branch '2017.7' into cmd_win_tests
- 57d58e7541 Merge pull request #48920 from rallytime/bp-48904-2017.7
  - a55f92954a No rehashing in parallel
  - 3be11e6fe Add docs for new escape kwarg
  - 391bb8a411 use a specific path for just the cmd._run call
  - 62c66ba489 make sure we lower the check on shell
  - 9312a993a5 Add cmd module integration tests for windows and fix space in path issue

- ISSUE #48123: (c-wicklein) file.directory with recurse fails when it encounters a broken symbolic link (refs: #48985)

- PR #48985: (garethgreenaway) [2018.3] Fix to salt/modules/file.py @ 2018-08-09 15:03:09 UTC
  - 3325b7d4c0 Merge pull request #48985 from garethgreenaway/48123_file_directory_recurse_fails_broken_symlink
  - 10c4eca206 Merge branch '2018.3' into 48123_file_directory_recurse_fails_broken_symlink
  - a404cc030f Fixing the issue when using the file.directory state with recurse if the directory contains a broken symbolic link. This fix adds an additional conditional, is_link, before running lsattr since lsattr does not work on symlinks and causes issues when that symlink is broken.

- ISSUE #47695: (AmbicaY) Continuous error in the proxy minion logs (refs: #49019)

- PR #49019: (garethgreenaway) [2018.3] Fix to scheduler when global enabled key is present @ 2018-08-09 13:06:26 UTC
  - d353c02a8c Merge pull request #49019 from garethgreenaway/47695_fixing_scheduler_bug_when_enabled_is_present
  - aff1b8f6d4 Lint.
  - 8935e08141 Fixing a bug that occurs if the "enabled" key is present in the scheduler items dictionary. Adding a test to ensure scheduler runs as expected when that key is present.

- PR #49023: (The-Loeki) Salt SSH appends IdentityFile=agent-forwarding @ 2018-08-09 12:55:59 UTC
  - a56bc7ff9 Merge pull request #49023 from The-Loeki/patch-1
  - 8b53571c70 Salt SSH appends IdentityFile=agent-forwarding

- PR #48981: (Ch3LL) Add warning to mac runas docs about escaping characters @ 2018-08-08 19:43:43 UTC
  - 4590494b50 Merge pull request #48981 from Ch3LL/mac_runas_quote
  - 826b55b84 remove unnecessary spaces in cmdmod.py docs
  - 757daf7d7e add runas macosx warning in 2018.3.3 release notes
  - 4e9e985b14 Add warning to mac runas docs about escaping characters
• PR #49004: (rallytime) Port #48999 to 2018.3 @ 2018-08-08 15:32:46 UTC
  - PR #48999: (rallytime) Update expected return value in boto test (refs: #49004, #49003)
  - b87bf905c2 Merge pull request #49004 from rallytime/boto-test-2018.3
  - 90b9a1073 Update expected return value in boto test
• PR #48987: (twangboy) Fix issue with win_iis.create_cert_binding @ 2018-08-08 13:29:06 UTC
  - 630f61e625 Merge pull request #48987 from twangboy/fix_48786
  - 86d0836f90 Fix issue with iterating over None
• ISSUE #48777: (jonasgit) file.recurse fails on file contents encoding not utf-8 (refs: #48934)
• PR #48934: (terminalmage) Properly handle latin-1 encoding in file diffs @ 2018-08-07 21:02:24 UTC
  - ab1a719bc3 Merge pull request #48934 from terminalmage/issue48777
  - 52c64e4d51 Fix to_unicode test
  - e2d19f40b6 Only try latin-1 from get_diff instead of by default
  - d39fa889f3 Add stringutils.get_diff to mocks
  - 5b191c9120 Fix incorrect use of __salt__ when __utils__ is needed
  - 53ba10ad5f Skip pylint false-positives
  - f14f4ae22 Add unit test for latin-1 fallback, multi-encoding
  - 906644a80f PY3 scoping fix
  - 726dd43c1f Add integration test for latin-1 file diffs
  - 2d1f312d3 Use BASE_FILES instead of redundant STATE_DIR
  - 612ff5fe8 Use new get_diff helper in file module
  - c632265802 Make to_unicode/to_str/to_bytes helpers attempt latin-1
  - 2acb49b01 Add get_diff to salt.utils.stringutils
• ISSUE #47766: (zerthimon) salt-cloud: openstack driver: crash on instance creation (refs: #48956)
• PR #48956: (gtmanfred) if booted from volume, use string from image @ 2018-08-07 16:39:45 UTC
  - bad995462c Merge pull request #48956 from gtmanfred/openstack
  - 4cb1636c4b if booted from volume, use string from image
• ISSUE #48306: (davidscholberg) Documentation update for custom returners used for master job cache (refs: #48319)
• PR #48319: (gtmanfred) don’t break older returners right now @ 2018-08-06 13:19:43 UTC
  - 71f58edd7 Merge pull request #48319 from gtmanfred/jid
  - 084e7f0e4f Merge branch `2018.3` into jid
  - 60661b4cd0 document minions required on save_load
  - a8c243071d document passing in minions
  - d493810c0b6 don't break save_load backwards compat
  - cfcacf953a don’t break older returners right now
• PR #48941: (rallytime) Back-port #48912 to 2018.3 @ 2018-08-06 13:09:38 UTC

30.2. Previous Releases
– PR #48912: (maxim-sermin) make jboss7.py compatible with 2018.3.0 and later (refs: #48941)
  – 1623e53ef4 Merge pull request #48941 from rallytime/bp-48912
  – 3f5b2f89e make jboss7.py compatible with 2018.3.0 and later

• PR #48897: (rallytime) Back-port #48863 to 2018.3 @ 2018-08-05 19:15:51 UTC
  – PR #48863: (admd) Decode file contents for python2 as well (refs: #48897)
  – 070af9d925 Merge pull request #48897 from rallytime/bp-48863
  – 0ee1940232 Merge branch '2018.3' into bp-48863
  – f40b966d99 decode file contents for python2 as well

• PR #48928: (Ch3LL) fix test_runas integration test for macosx @ 2018-08-05 14:24:13 UTC
  – abd7f1312d Merge pull request #48928 from Ch3LL/mac_runas
  – 3d6455dbcd remove unnecessary comment in setup
  – 8e30db0217 move destructivetest to testname
  – 708dec8740 add destructivetest to setup and teardown for runas test
  – c0730ff968 fix test_runas integration test for macosx

• PR #48899: (Ch3LL) remove base_top_file file in teardown and add sleep @ 2018-08-05 14:23:42 UTC
  – dbd300ff70 Merge pull request #48899 from Ch3LL/unit_state
  – 0272cadff8 Merge branch '2018.3' into unit_state
  – 5896c7fe36 remove base_top_file file in teardown and add sleep

• PR #48898: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-08-05 14:23:19 UTC
  – ffa1fcd682 Merge pull request #48898 from rallytime/merge-2018.3
  – 1f093ce4a4 Merge branch '2018.3' into merge-2018.3
  – b3a5aa49d7 Merge branch '2017.7' into '2018.3'
    * e79cc35b1 Merge pull request #48876 from Vaelatern/make-network-learning-optional
      * a4905b0e5d Make IP_LEARNING optional
    * fb0faabf9f Merge pull request #48890 from Ch3LL/cmd_test
      * acda4ed9ab add sleep in test_cmd integration test
    * 52722f6ded Merge pull request #48885 from rallytime/flaky-tests-shadow
      * da871a2d57 Mark shadow module integration test as flaky
    * bf089565de Merge pull request #48884 from rallytime/flaky-tests-matchers
      * 38d9eae537 Merge branch '2017.7' into flaky-tests-matchers
    * a567666938 Merge pull request #48868 from terminalmage/fix-loader-race
      * 5f1169b9a2 Fix race when SIGTERM/SIGINT received while lazyloading a module
    * 0ca0b6f2f2 Merge pull request #48883 from terminalmage/salt-jenkins-1023
      * 61f75cb50 Fix failing git worktree tests
      * 3660ff13e2 Separate compound matcher tests into individual tests
    * a84f5155a1 Merge pull request #48869 from Ch3LL/mac_shell_tests

2102 Chapter 30. Release Notes
- 373b41ec89 Catch socket.error exception in testprogram
- 7f56b8bf44 Merge pull request #48867 from rallytime/skip-tornado-test
- 7320aa9104 Skip unreliable tornado test.

- PR #48893: (Ch3LL) handle when ca_certs is None in utils.http @ 2018-08-03 20:30:48 UTC
  - 848e26ed0b Merge pull request #48893 from Ch3LL/http_tests
  - 16d251f7ff Merge branch '2018.3' into http_tests
  - 5674dddb2a handle when ca_certs is None in utils.http

- PR #48903: (Vaelatern) Wrap ElementTree.tostring to make strs, not bytes @ 2018-08-03 19:12:34 UTC
  - PR #48877: (Vaelatern) Wrap ElementTree.tostring to make strs, not bytes (refs: #48903)
  - f1aad56017 Merge pull request #48903 from Vaelatern/improve-salt-cloud-python3-virt
  - c45447fe0b Wrap ElementTree.tostring to make strs, not bytes

- PR #48900: (Ch3LL) skip getpwnam check on mac in unit test_cmdmod @ 2018-08-03 16:38:51 UTC
  - d23471262d Merge pull request #48900 from Ch3LL/cmd_unit
  - b82dd708be skip getpwnam check on mac in unit test_cmdmod

- PR #48921: (rallytime) Back-port #48904 to 2018.3 @ 2018-08-03 15:17:15 UTC
  - PR #48904: (KaiSforza) No rehashing in parallel (refs: #48921, #48920)
  - d622a49b58 Merge pull request #48921 from rallytime/bp-48904
  - b50425f61 No rehashing in parallel

- PR #48877: (Vaelatern) Wrap ElementTree.tostring to make strs, not bytes (refs: #48903) @ 2018-08-02 19:28:56 UTC
  - 1e150923aa Merge pull request #48877 from Vaelatern/improve-salt-cloud-libvirt-python3-libvirt
  - fb785315c Wrap ElementTree.tostring to make strs, not bytes

- PR #48824: (rallytime) Bump deprecation in win_servermanager state to Neon @ 2018-08-02 18:01:34 UTC
  - 1bf7d9431b Merge pull request #48824 from rallytime/win_servermanager_deprecations
  - 6ef5412528 Bump deprecation in win_servermanager state to Neon

- ISSUE #37512: (ChristianBeer) What's the precedence if multiple master configurations are specified? (refs: #48888)

- PR #48888: (terminalmage) Explicitly document the configuration override priority @ 2018-08-02 16:57:18 UTC
  - ec8e07e8ce Merge pull request #48888 from terminalmage/issue37512
  - 7dece7de14 Explicitly document the configuration override priority

- PR #48871: (dwoz) Remove unicode key pairs from environ after test @ 2018-08-01 22:33:41 UTC
  - d4bb3a0963 Merge pull request #48871 from dwoz/test_cleanup
  - f2e15c7f1d Do not re-define tearDown
  - 4fb8191a69 Remove unicode key pairs from environ after test

- PR #48843: (isbm) Prevent u'something' to appear in help info. @ 2018-08-01 20:38:58 UTC
  - bce79e83a3 Merge pull request #48843 from isbm/isbm-log-level-names-fix-2
  - a63686180d Merge branch '2018.3' into isbm-log-level-names-fix-2
- Prevent u'something' to appear in help info.

- **PR #48855**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-08-01 17:44:59 UTC
  - a8376b537a Merge pull request #48855 from rallytime/merge-2018.3
  - 44998c208e Lint: Fix undefined logger variable
  - 92c9317a25 Update old utils paths to use new paths
  - 15bfa7143 Merge branch '2017.7' into '2018.3'
    - 05f26d65ed3 Merge pull request #48853 from rallytime/bp-48850
      - 3c33ee554a Skip tests in integration.shell.test_master
    - 8a1285239a Merge pull request #48426 from garethgreen-away/46689_fixing_pkg_held_when_package_is_installed
      - 9b0f5dd212 Fixing indentation, removing some unnecessary conditionals.
      - 727964ab55 One last cleanup.
      - 11cb5e6eb General cleanup in pkg state, reducing duplicate code. Fixing the requires_salt_modules decorator, sys.doc was returning too much information for the event to handle. This change specifically calls sys.doc with the module name.
      - 16b6ae635 Make sure pkg.hold and pkg.unhold are available before running the test.
      - 99b5a1102d Fixing a situation when a package is already installed via salt or manually and a state attempts to set that package to be held. Previously the holding/unholding logic was only being run against packages that were being installed. This change moves the holding logic outside and runs it against all desired packages. Adding a new test to test holding logic.
    - c8e69431f Merge pull request #47734 from OrlandoArcapix/Issue47689-pip-state-performance
      - 662bd1f780 Merge branch '2017.7' into Issue47689-pip-state-performance
      - 66936b4f41 Changed string comparison in pip test to match new confirmation string - ref PR #47734.
      - bb5939d6ef Merge branch '2017.7' into Issue47689-pip-state-performance
      - d6a49ae41c Merge branch '2017.7' into Issue47689-pip-state-performance
      - d4083f9cd1 Merge branch 'Issue47689-pip-state-performance' of github.com:OrlandoArcapix/salt into Issue47689-pip-state-performance
      - 779b5fa785 Merge branch '2017.7' into Issue47689-pip-state-performance
      - f365349bab Removed whitespaces at end of added comments lines
      - db11f2ff4b Merge branch '2017.7' into Issue47689-pip-state-performance
      - eac0178de2 Ref: #47689 - document additional kwarg passed to pip._check_if_installed function
      - 0d19803106 Merge branch '2017.7' into Issue47689-pip-state-performance
      - d3678fa2f3 #47689 fix lint errors
      - 4fe8f86bce #47698 improve run-speed of pip package state checks by only loading the current package list once when checking multiple packages
    - 83a5b3cc47 Merge pull request #48844 from AVeenstra/fix-python3-incompatibility
      - f238779a62 Merge branch '2017.7' into fix-python3-incompatibility

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2104 Chapter 30. Release Notes
6b1805afc6 Fixed Python 3 incompatibility in methods in nilrt_ip and debian_ip.
136ff6735a Merge pull request #48662 from slaws/fix-retention-schedule-48637
   3c8f5f5b3d pylint fix
   5539eff39e Excluding relative dirs in state.file.retention_schedule
1fc04f281b Merge pull request #48840 from gtmanfred/docs
   8d2d268e4a fix links in pkg doc.
0a19f845ea Merge pull request #48834 from gtmanfred/slsutil
   f9441d2bef read output of stringio if it is readable
2e00939a6e Merge pull request #48788 from Ch3LL/timezone_windows
   de95a6a215 add unused import to timezone test file
   22e424859e add unused import to import
   0840fc3117 disable pylint import error
   f09d1a2c7e Add timezone windows integration tests and fix get_zone

• ISSUE #48659: (dstoliker) file.grep with glob (*) in path produces file not found error (refs: #48830)
• PR #48830: (garethgreenaway) [2018.3] Fixes to file.grep @ 2018-07-31 21:30:04 UTC
   e23ba01cd2 Merge pull request #48830 from garethgreenaway/48659_file_grep_glob_fix
   0791b0a03c FileGrepTestCase tests back to 2018.3
   2e01c55e7e Fixing a bug that prevents specifying wildcards for filenames.
• PR #48814: (isbm) dmidecode race conditions check @ 2018-07-31 20:48:29 UTC
   9fda70b3d0 Merge pull request #48814 from isbm/isbm-2018.3-smbios-bugfix
   5f1141dc05 Merge branch '2018.3' into isbm-2018.3-smbios-bugfix
   b00ee5feef Update clean clause
   b1b2e9c222 Remove multiple returns and combine logic to just one clause
   fd77f760ee Rephrase explanatory comment
   1031e06443 Remove unnecessary code
   c379b7e4ed Get rid of global variable
• PR #48804: (Ch3LL) Use brew path from which cmd in mac_brew module @ 2018-07-31 20:24:33 UTC
   3d16a63ff2 Merge pull request #48804 from Ch3LL/mac_brew
   e818c752b3 Merge branch '2018.3' into mac_brew
   41e3d17f29 Use brew path from which cmd in mac_brew module
• PR #48836: (dwoz) Fix unicode directory listing on py2 @ 2018-07-31 20:22:53 UTC
   950c1014aa Merge pull request #48836 from dwoz/unicode_names_py2
   47e158b9f0 Optimize if statement
   9b462394b2 Fix unicode directory listing on py2
• PR #48847: (terminalmage) Update file.blockreplace docs to reflect changed functionality @ 2018-07-31 18:11:30 UTC
– baf8c5784a Merge pull request #48847 from terminalmage/issue48695
– e2bdf7fb92 Update file.blockreplace docs to reflect changed functionality

• PR #48587: (twangboy) Fix lgpo issue on Py3 @ 2018-07-31 18:05:58 UTC
  – 644af4ff8 Merge pull request #48587 from twangboy/fix_lgpo
  – a42621c817 Write file in normal mode
  – bfcbdeca3b Fix lgpo issue on Py3

• PR #48796: (Ch3LL) Remove fake su used in integration tests @ 2018-07-31 17:08:54 UTC
  – 2bacc23481 Merge pull request #48796 from Ch3LL/remove_su
  – d3b7f2cb18 Remove fake su used in integration tests

• ISSUE #38310: (ghost) Unable to checkout external pillar git repo using its git tag (refs: #48689)

• PR #48689: (linoplit) Fix ext_pillar remote checkout using tag (pygit2) @ 2018-07-31 16:15:58 UTC
  – 00d06bda76 Merge pull request #48689 from linoplit/fix_38310_pygit2_checkout_ext_pillar_remote_using_tag
  – eb4361dcc2 Merge branch '2018.3' into fix_38310_pygit2_checkout_ext_pillar_remote_using_tag
  – c20977e3bc Merge branch '2018.3' into fix_38310_pygit2_checkout_ext_pillar_remote_using_tag
  – b0157e215b Fix ext_pillar remote checkout using tag (pygit2)

• PR #48838: (sizgiyaev) Fixed: added additional return code 200 for succeeded vault api request @ 2018-07-31 16:14:22 UTC
  – 5e14e36195 Merge pull request #48838 from sizgiyaev/fix-vault-policy-state
  – 02d09c6281 Fixed: added additional return code 200 for succeeded api request

• PR #48714: (dwoz) Always transfer bytes from fileserver roots @ 2018-07-30 22:37:13 UTC
  – 69f81214d1 Merge pull request #48714 from dwoz/state_echo_fix
  – ce3ed43dab Always use unix line endings
  – d5e60090bc Merge pull request #2 from terminalmage/state_echo_fix
    • 52fc1c955d Simplify file contents in roots fileserver test
    • b6f73e8e57 Remove trailing whitespace on what should be a blank line
  – 95329ab1e Fileserver transfers bytes
  – aa34a80997 Always trasfer bytes from fileserver roots

• PR #48822: (Ch3LL) Fix salt-ssh state.sls_id TypeErro  key must be a string @ 2018-07-30 20:29:29 UTC
  – 16cad4ec2eb Merge pull request #48822 from Ch3LL/ssh_2018_id
  – 01f6a15da0 Fix salt-ssh state.sls_id TypeError key must be a string

• ISSUE #47999: (arthurlogilab) Carbon returner failing when run through scheduler on log.trace (refs: #48757)

• PR #48791: (rallytime) Back-port #48757 to 2018.3 @ 2018-07-27 21:30:44 UTC
  – PR #48757: (kuetrzi) Update carbon_return.py (refs: #48791)
  – 488ff7e16d4 Merge pull request #48791 from rallytime/bp-48757
  – f440ebe9f1 Update carbon_return.py

• PR #48799: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-07-27 21:30:13 UTC
- fae29f4257 Merge pull request #48799 from rallytime/merge-2018.3
- 487458ad4b Update old utils paths to use new utils paths
- 436510796f Merge branch '2017.7' into '2018.3'
  * 8e61f3dce0 Merge pull request #48742 from frogunder/45014
    - f08058b043 Merge branch '45014' of https://github.com/frogunder/salt into 45014
    - 757fde70c6 Merge branch '2017.7' into 45014
    - 33c20c1ec0 fix tests
    - a7a914060d add windows integration tests for states.file
  * d74f47b340 Merge pull request #48795 from rallytime/fx-48417
    - 5123b17ff1 Update linting docs to contain .testing.pylintrc use
  * bbea9ae936 Merge pull request #48789 from rallytime/bp-48783
    - 682a05bebe Threshold was wrong
    - d4ca0e3a97 test: except for OSError only
    - 4547231909 Only run lint checks against changed files
  * 41464db39f Merge pull request #48731 from zero/def/virt-runner-init-args
    - a1f081ad0 Documentation to missing parameters in virt.init runner.
    - 365ebf539 Fixed enable_vnc runner arg being passed into seed_cmd module arg in virt.init.
  * 169afea16a Merge pull request #48749 from Ch3LL/logo_docs
    - 73b1fc29f0 Update Saltstack Logo banner on docs.saltstack.com

- ISSUE #48020: (calvinhp) mine.get not returning data in a state.orchestrate sls (refs: #48765)
- PR #48765: (FedericoCeratto) [2018.3] Fix mine.get not returning data @ 2018-07-27 18:01:06 UTC
  - bd67d2a805 Merge pull request #48765 from FedericoCeratto/fx_mine.get_not_returning_data
  - 7183a660e8 Workaround for #48020
- PR #48747: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-07-26 18:14:34 UTC
  - 6978ce5d1d Merge pull request #48747 from rallytime/merge-2018.3
  - 4122da40b5 Merge branch '2017.7' into '2018.3'
    * 781c6a6c9e6 Merge pull request #48743 from rallytime/saltconf-ad-2017.7
      - 6df8d8652 Update DOCBANNER with new SaltConf18 image
    * ce4e22224e Merge pull request #48720 from Ch3LL/mac_file_path
      - 01d25fae19 Fix testManagedSourceHashIndifferentCase on macosx to correct tmp path
    * 4bf037d4d3 Merge pull request #48719 from Ch3LL/service_mac_state
      - f44a2fc349 Enable service if disabled before running state service tests
    * b2431ebab0 Merge pull request #48715 from rallytime/flaky-tests
      - 7332ccce567 [2017.7] Mark some tornado tests as flaky
    * 801ea3b8ed Merge pull request #48672 from frogunder/45012
      - 0747f2e58a add service enabled test
• ISSUE #48676: (djneades) salt-ssh should not target wrong minion from roster file as a result of reverse-DNS lookups (refs: #48771)

• PR #48771: (gtmanfred) only do reverse dns lookup on ips for salt-ssh @ 2018-07-26 15:41:40 UTC
  - 5ea43817ab Merge pull request #48771 from gtmanfred/2018.3
  - 535f88e78 only do reverse dns lookup on ips for salt-ssh

• PR #48752: (garethgreenaway) [2018.3] Fix when state file is integers @ 2018-07-25 15:03:02 UTC
  - f2ef2d3ef6 Merge pull request #48752 from garethgreenaway/fix_state_file_all_integers
  - 790801c67e Fixing a case where the state module would fail if the state file being passed was all integers. Added a new tests for this edge case.

• ISSUE #46896: (Poil) Proxy + file.managed => Comment: Failed to cache xxx invalid arguments to setopt (refs: #48754)

• PR #48754: (lomeroe) send proxy/ca_cert parameters as strings (not unicode) to tornado httpclient @ 2018-07-25 14:55:42 UTC
  - 030c921914 Merge pull request #48754 from lomeroe/fix-tornado-proxy
  - d33056704b pass proxy_user, proxy_password, proxy_host, and ca_certs through salt.utils.stringutils.to_str()

• PR #48769: (Ch3LL) Update Saltstack Logo banner on docs.saltstack.com @ 2018-07-25 14:47:19 UTC
  - 1eee4b136b Merge pull request #48769 from Ch3LL/update_doc_2018.3
  - 0cb4ac798 Update Saltstack Logo banner on docs.saltstack.com

• PR #48760: (dwoz) Multiple windows test fixes @ 2018-07-24 23:38:32 UTC
  - 8ae9f6d9960 Merge pull request #48760 from dwoz/test_file_fixes
  - b7a37efc11 merge branch '2018.3' into fix_prepend

• ISSUE #48536: (whytewolf) diskusage beacon does not recognize tmpfs disks in linux. (refs: #48718)

• PR #48718: (garethgreenaway) [2018.3] beacon diskusage fixes @ 2018-07-24 17:45:26 UTC
  - 62fe7ccf Merge pull request #48718 from garethgreenaway/48536_beacon_diskusage_fixes
  - 38a68e8b3 Fixing test_diskusage_nomatch and test_diskusage_match_regex
  - 6ecca166f Updating psutil.disk_partitions to pull in all mounts not just the physical ones. Check to see if the mount point from the configuration ends with a $ (regular expression end of line) if not we add one in to ensure that a simple / does not end up matching all mount points. Updating tests accordingly.

• PR #48711: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-07-24 17:38:58 UTC
  - e873621009 Merge pull request #48711 from rallytime/merge-2018.3
  - ea5c063237 Update old utils paths to use new paths
- e740d3b208 Merge branch ’2017.7’ into ’2018.3’
  - 689c231d2b Merge pull request #48691 from Ch3LL/win_repo_pkg_test
    - 4b7d6d80c5 Remove unnecessary jinja in curl.sls file
    - 2bedafdb Add windows pkg module integration tests
  - 83e4ba916 Merge pull request #48635 from nbraud/acme
    - 3673bae9de modules/acme: explicitly ignore the perms return value
    - 1800a231e8 Fixup some schema expectations
    - 8c718c417 acme: Make the private key mode configurable
    - 917dea6761 modules/acme: Use file.check_perms ret-morphing powers
    - d2241ceb2d module/acme: Do not exit early when the certificate already exists
    - 98af0db826 modules/acme: Set the private key filemode to 0640
  - 85991680c8 Merge pull request #48345 from twangboy/fix_48169
    - ead19725b6 Merge branch ’2017.7’ into fix_48169
    - 653fcb383 Fix some docs errata
    - 8898e5ff11 Add warn_until Fluorine
    - 707906ac15 Fix unit.state.test_powercfg
    - 32c5014eb6 Fix unit tests
    - 0d9c56e540 Add some more logging
    - b20453de9f Use minutes to set
    - 7dc7eb11c2 Fix documentation to denote seconds when setting
  - 96447ce541 Merge pull request #48656 from Ch3LL/windows_ip_mod
    - 90c3f568b1 Add windows ip module integration tests
  - 0c5ff3dc8 Merge pull request #48638 from twangboy/fix_vcredist
    - e30d17099d Use goto instead of if statement
    - e1042fa084 Remove vcredist for Py3
  - 1ebd96d909 Merge pull request #48664 from Ch3LL/srv_disable_mac
    - f1fbfad387 move the disable call up in try block
    - f60d21bda4 reverse assertion order for service disable test
    - 3727d1b3b9 switch try/except to match 2018.3
    - fb953c2369 [2017.7] Fix service.disabled test for macosx
  - 3da3cf23f Merge pull request #48625 from Ch3LL/ssh_state
    - f590eb2b02 Update state.py
    - 9790ee3d0d Follow up to PR #48555
  - 33812f78f1 Merge pull request #48673 from Ch3LL/mac_port
    - 87dd85a220 Use different pub and ret ports for testprogram integration tests
  - 5f6a7c4d89 Merge pull request #48675 from Ch3LL/mac_disable
· c78efab828 Fix mac service.disable tests
* 93d2f51d2b Merge pull request #48658 from wyardley/wyardley-npm-json-output-2017
  · 7ff3c9c5ff Improve handling of npm json output (#43138)
* 3e29b0513 Merge pull request #48678 from OrlandoArcapix/fix-npm-dryrun-test
  · 851a4046b Fix for issue #48677 - return True when no changes are to be made with npm.bootstrap with test=true
* 07a1f6520f Merge pull request #48580 from rallytime/fix-46884
  · 736b382e91 Don't error on retcode 0 in libcrypto.OPENSSL_init_crypto call
* 9874429741 Merge pull request #48628 from terminalmage/testinfra
  · 5ace9f01ec Fix NameError in testinfra module
* 0d4c80205f Merge pull request #48651 from gtmanfred/pylint-2017.7
  · b6ee52f859 handle pyzmq for python3.4
* 160ae29cf2 Merge pull request #48647 from gtmanfred/pylint-2017.7
  · ff818c4ca2 disable checks on pylint
* 47b1032efa Merge pull request #48593 from pritambaral/fix/2017.7-importlib-pyc-loading-order
  · add7894dee loader: Fix suffix order when importlib is used
* 9da7b2ec8d Merge pull request #48630 from dubb-b/pipeline-updates
  · 8594a8dd05 Adding PY_COLORS=1 as PY_COLORS = 1 instead
  · 314b0e3599 Adding PY_COLORS=1 for python programs to use ANSI Colors
  · b705e8f7a5 Adding correct spacing to options section
  · 9d8a7e07db Adding options to Jenkins pipeline builds
* a8ae2ad6f4 Merge pull request #48633 from saltstack/revert-48610-2017.7
  · bab4a769d4 Revert "only run pylint on files that change"
* 6e32bb7f74 Merge pull request #48614 from rallytime/bp-48562
  · cb654bbf2c Add timeouts to all s3 queries
* 1b6e6388f8 Merge pull request #48588 from garethgreenaway/48415_event_send_multi_master
  · fab25af1a9 Adding some quick documentation about why we are setting ret=True following the channel.send.
  · bf78f4b188 If the channel send is successful and does not raise an exception, we set ret to True, in case a previous exception from a previous channel send to another master has sent it to False.
  · 8d1551c5fb When using Salt multi-master, if we encounter a salt master that has not accepted the minion key yet we should not exit right away, rather continue on and try the next salt master available in the list.
* 24ffda49ba Merge pull request #48610 from gtmanfred/2017.7
  · 779d1a3dcb only run pylint on files that change
* 5391dd0a8d Merge pull request #48584 from Ch3LL/mac_user_grp
  · 585ee9db90 Fix grp import for mac in test_user integration test
- 61572b6780 Merge pull request #48555 from Ch3LL/ssh_id
  - f69932f506 fix pylint
  - 70e36764ee Add more tests for salt-ssh state.sls_id
  - dab80e805c Fix state.sls_id to run on ssh minion and not master
- aa6dcf39e8 Merge pull request #48583 from Ch3LL/mac_flaky_tests
  - 4ba2299a87 import flaky decorator on mac tests
  - 811220b41e Add flaky decorator to mac_system and mac_timezone tests
- 6973152057 Merge pull request #48534 from xetix fix-zypper-latest_version
  - 9985f0b4c1 Lint: remove extra blank line
  - 5fbead8a36 Merge branch '2017.7' into fix-zypper-latest_version
  - 56ac449271 Merge branch 'fix-zypper-latest_version' of https://github.com/xetix/salt into fix-zypper-latest_version
  - 44e87f5a0f Adding testcase for this fix.
  - b354ce686c Fix behaviour of function latest_version in zypper module when multiple packages are passed to function. Function now properly return dict with empty string as version if latest packages is already installed, and multiple packages are passed to function
  - db35d0c1e1 Adding testcase for this fix.
  - d2513757ed Fix behaviour of function latest_version in zypper module when multiple packages are passed to function. Function now properly return dict with empty string as version if latest packages is already installed, and multiple packages are passed to function
- 10124034cb Merge pull request #48582 from dwoz/test_prepend_fix
  - f37571e0bd Merge branch '2017.7' into test_prepend_fix
- 13f67335f3 Merge pull request #48564 from dwoz/test_prepend_fix
  - 136dd5f54 Finally fix prepend for real
  - 66b25e65bf Fix failing prepend test
- b8ce27729f Merge pull request #48558 from dwoz/test_file_fix
  - c858bf477f Remove which mock to get the test passing
- a15c65202d Merge pull request #48552 from KaiSforza/jenkins-junit-2017
  - 72b1830974 Set up junit in jenkins
- f73108026e Merge pull request #48550 from gtmanfred/2017.7
  - d5c603d9b6 add posargs to tox pylint
- 113b0426f8 Merge pull request #48535 from asnell/asnell-patch-2
  - 328f8e434d Update manage_file helptext

- PR #48744: (rallytime) [2018.3] Update DOCBANNER with new SaltConf18 image @ 2018-07-24 17:15:40 UTC
  - 6c7f1e549d Merge pull request #48744 from rallytime/saltconf-ad-2018.3
  - dbc1f8b777 Update DOCBANNER with new SaltConf18 image

- PR #48726: (dwoz) Skip test when syslog not available @ 2018-07-24 16:12:44 UTC
  - 04ab17a4d6 Merge pull request #48726 from dwoz/syslogtest
- 00f04cfd59 Skip test when syslog not available

- **PR #48727**: (dwoz) Windows compatible cp test @ 2018-07-24 14:41:34 UTC
  - af837424aa Merge pull request #48727 from dwoz/file_cp_test_fix
  - 6e7824266b Windows compatible cp test

- **ISSUE #40004**: (te-af-github) svn changes report (refs: #47510)

- **ISSUE #21025**: (RobertFach) svn.export reports invalid change data (2014.7.x) (refs: #47510)

- **PR #48710**: (rallytime) Back-port #47510 to 2018.3 @ 2018-07-23 21:11:18 UTC
  - **PR #47510**: (daa) Fix svn export invalid changes data (refs: #48710)
  - 04125b077d Merge pull request #48710 from rallytime/bp-47510
  - ebcd3b1c6b fixed test for svn.export
  - e79f4aa5cc put name under "new" key in changes dictionary to be in line with svn.latest
  - 163f99089c made svn.export changes data dictionary, fixes #21025, #40004
    - 3a941055c1 Use salt.utils.platform.is_windows
    - 33e48f7ad7 Finally fix prepend for real

- **PR #48699**: (terminalmage) Add missing release notes mention of file.blockreplace changes @ 2018-07-23 13:34:32 UTC
  - e1dd10be70 Merge pull request #48699 from terminalmage/issue48695
  - 7ad832e901 Add missing release notes mention of file.blockreplace changes

- **PR #48700**: (dwoz) Call sync_modules to fix Windows test case @ 2018-07-22 22:23:48 UTC
  - ab44a05fe4 Merge pull request #48700 from dwoz/ext_mod_test
  - d731edf8e Call sync_all to fix Windows test case

- **PR #48653**: (terminalmage) docker_container.running: Fix regression in test mode @ 2018-07-20 19:15:47 UTC
  - 6a494205f2 Merge pull request #48653 from terminalmage/docker-unboundlocal
  - b0440871a0 Merge branch '2018.3' into docker-unboundlocal
  - 9515dd17ff docker_container.running: Fix regression in test mode

- **ISSUE #47059**: (OrlandoArcapix) Some states incorrectly return None instead of an empty dict when there are no changes (refs: #48685)

- **ISSUE #46985**: (OrlandoArcapix) grafana4_user.present and grafana4_org.present states not working in 2018.3.0 (refs: #48685)

- **PR #48685**: (bbinet) Use empty dict for 'changes' instead of None @ 2018-07-20 17:12:43 UTC
  - **PR #48671**: (bbinet) Few fixes to the grafana module and states (refs: #48685)
  - 26662506 Merge pull request #48685 from bbinetnone-changes
  - 842eb3da24 Use empty dict for 'changes' instead of None

- **PR #48670**: (bbinet) Add the "traverse" jinja filter @ 2018-07-20 16:36:21 UTC
  - 5a67a085e Merge pull request #48670 from bbinet/traverse
  - 32b6d22cf2 Fix RST syntax issue in doc
  - 37a41226d5 Add the "traverse" jinja filter
• **PR #48594**: (pritambaral) Backport 48418 @ 2018-07-20 14:57:19 UTC
  - **PR #48418**: (pritambaral) Fix multi-sls `salt.state` orchestration in masterless systems (refs: #48594)
  - ff11763fd3 Merge pull request #48594 from pritambaral/bp-48418
  - adcee2884 Fix multi-sls `salt.state` orchestration in masterless systems

• **ISSUE #48184**: (mmulqueen) Invalid DMI prevents salt-minion from running (refs: #48440)

• **PR #48440**: (mmulqueen) Make core.py tolerant of invalid chars in DMI data @ 2018-07-20 14:48:07 UTC
  - **PR #48216**: (Ch3LL) Fix UnicodeDecodeError when reading file to determine virtual grain (refs: #48440)
  - 111908f519 Merge pull request #48440 from mmulqueen/patch-1
  - 5bbdce74cd Make core.py tolerant of invalid chars in DMI data

• **PR #48663**: (Ch3LL) [2018.3] Fix service.disabled test for macosx @ 2018-07-20 14:32:22 UTC
  - 4e77b242f2 Merge pull request #48663 from Ch3LL/srv_disable_mac_2018
  - bddfd75d2 reverse assertion order for service disable test
  - 2bfa7fe89 Fix service.disabled test for macosx

• **PR #48304**: (Ch3LL) Fix macosx grains when swapusage returns comma @ 2018-07-20 14:30:59 UTC
  - dfe1582475 Merge pull request #48304 from Ch3LL/swap_mac
  - 5d6135e1e2 Fix macosx grains when swapusage returns comma

• **PR #48671**: (bbinet) Few fixes to the grafana module and states (refs: #48685) @ 2018-07-20 13:58:02 UTC
  - 9d7eabdb24e Merge pull request #48671 from bbinet/grafana-fixes
  - 3c5083f550 Add support for dry run (test=True) of grafana states
  - 7e7ae8ace7 influxdb: fix conflicts in function arg names with client_args
  - 73a24b774a Ignore readOnly option when diffing
  - 81f0cf8af3 Add missing profile argument to grafana4.get_user_data

• **PR #48585**: (astorath) [2018.3] handle pyzmq for python3.4 @ 2018-07-16 14:11:02 UTC
  - fb7b242f2 Merge pull request #48585 from astorath/pyzmq-2018.3
  - e828167114 Merge pull request #48585 from gtmanfred/pylint-2018.3
  - c3c5083f550 Add support for dry run (test=True) of grafana states

• **PR #484648**: (gtmanfred) [2018.3] disable checks on pylint @ 2018-07-18 16:21:37 UTC
  - a688acf4d4c Merge pull request #484648 from gtmanfred/pylint-2018.3
  - 7c34e2965e disable checks on pylint

• **PR #48634**: (dwoz) Sync modules for state tests @ 2018-07-17 20:33:06 UTC
  - 01c9c59a97 Merge pull request #48634 from dwoz/state-module-test-fix
  - 9df3d2ae392 Sync modules for state tests

• **PR #48585**: (astorath) replaced meta tag @ 2018-07-16 14:11:02 UTC
  - fb7b242f2 Merge pull request #48585 from astorath/fixed-vault-meta
  - 42fd3d5f67 replaced meta tag

• **PR #48579**: (Ch3LL) Fix python2 syslog returner expecting string bytes not unicode @ 2018-07-13 19:50:16 UTC
  - 4b16537a29 Merge pull request #48579 from Ch3LL/fixed_syslog
- d8288a0ff0c add unicode type for syslog test for tag
- 17e9382d5 Fix python2 syslog returner expecting string bytes not unicode

- **ISSUE #48542**: (calvinhp) Missing state git.cloned is listed in the docs as new for 2018.3.2 (refs: #48547)
- **PR #48547**: (gtmanfred) fix git.cloned doc versionadded @ 2018-07-13 18:46:25 UTC
  - 3549e408d Merge pull request #48547 from gtmanfred/git.cloned
  - b596a945ea Merge branch '2018.3' into git.cloned
  - e14f922a0 fix git.cloned doc versionadded

- **ISSUE #48110**: (whytwewolf) file.line on windows not treating unix line endings correctly. (refs: #48503)
- **PR #48503**: (rallytime) Back-port #46291 to 2018.3 @ 2018-07-13 17:14:47 UTC
  - PR #48380: (twangboy) Detect and preserve line endings (refs: #48503)
  - PR #46291: (t0fik) Line mixed line ends (refs: #48503)
  - PR #45498: (t0fik) Added support for mixed line ending in file (refs: #46291)
  - ee257a1f91 Merge pull request #48503 from rallytime/bp-46291
  - 8bc71688ea Remove /sr.* pattern from test
  - 5e2e2a63fa Update file unit tests to handle "writelines" change
  - 5d38aa8b33 Update file.line to use writelines instead of joining
  - d0b6e82eb8 Add 'name' as the passed in filepath for test_line_insert_ensure_before_first_line test
  - d8920db61f Update test_line_insert_ensure_before_first_line to use new mock_open methodologies
  - 475f075d8e Handle list of lines instead of strings in file.line func
  - b9b0653b04 Added comments
  - f3517a1852 List comprehension replaced
  - adfa3aed0d Empty match on delete or replace not causing IndexError exception
  - 5169b1fbfd Comprehensions converting to unicode replaced by salt.utils.data.decode_list
  - d3e8ef0e05 Removed regex compilation
  - f29815b49e Fixed file permissions
  - d2af8e19e87 Make integration green. Added test for mode ensure insert before first line
  - 9b7df671a5 file.line function refactored
  - 3af551eb1d /sr.* pattern should raise exception
  - 935a9b9d56 test_line_insert_end fixed
  - 7d6e3ad2e2 Make tests green
  - 75a7e368a6 Setting end of line
  - 489e381100 Added _set_line_eol and _get_eol functions
  - aacb8c0e2 line function refactored to work on list
  - de668166f9 _regex_to_static refactored to work on lists
  - 464ef6dfe1 _get_line_indent renamed to _set_line_indent

- **ISSUE #48507**: (emersonveenstra) mysql_grants.present escape option incorrectly reports failure (refs: #48561)
• PR #48561: (garethgreenaway) [2018.3] fixes to grants in mysql module @ 2018-07-13 14:24:58 UTC
  - 2d923f2943 Merge pull request #48561 from garethgreenaway/48507_mysql_grants_incorrect_failure
  - 14c59da72c Following a successful grant application in the MySQL module, the new grant and the desired grant are mismatched because the new grant from Mysql included hashmarks. This change adds the replace which is included for other items such as database name and username.

• PR #48529: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-07-12 17:59:35 UTC
  - 5b5a930449 Merge pull request #48529 from rallytime/merge-2018.3
  - f9b8c4b257 Use () when using with_tempfile decorator in tests
  - d3190ca0c0 Update old utils paths to new utils paths
  - 29b05ffdd1 Merge branch '2017.7' into '2018.3'
    * 0c0c05c2bc Merge pull request #48527 from saltstack/revert-48525-2017.7
      - 18d06c193 Revert "add kazoo for testing zookeeper."
    * 05bad3e71c Merge pull request #48526 from twangboy/rollback_certifi-win32
      - 361b3dc2f Rollback python-certifi-win32
    * db066e4e4 Merge pull request #48521 from Martin819/2017.7
      - d5d01f6698 Fix for GlusterFS 4.0 and above
    * ed0bd2bbec Merge pull request #48525 from gtmanfred/2017.7
      - d7a6b2b2b2 add kazoo for testing zookeeper.
    * ad5a959ab9 Merge pull request #48388 from garethgreenaway/48277_2017_7_file_roots_wrong
      - 6f11da35a7 Fixing a few things in the new test.
      - cf747b14ec Fixing lint issue
      - 16d36ec79c8 When pillar items are compiled a new render is instantiated but the file_roots is the pillar_roots. This change forces the __opts__['file_roots'] to be set to what is set in actual_file_roots for all renderers once compile_pillar has finished. Adding a test when this situation is run via a orchestration runner.
    * 38df812257 Merge pull request #48512 from gtmanfred/npm
      - 9ba06b3a0 pin pm and grunt packages for npm tests
    * 04ba31147f Merge pull request #48513 from rallytime/merge-2017.7
      - a466a4880f Merge branch '2017.7.7' into '2017.7'
      - cfd21ed22c Merge pull request #48172 from rallytime/2017.7.7-release-notes
      - a0ad794132 Update release notes for 2017.7.7
      - 8af4452134 Merge pull request #48157 from gtmanfred/2017.7.7
      - d8209e8a40 always listen when gathering job info
      - b98c52ee51 Merge pull request #48140 from rallytime/man-pages-2017.7.7
      - 8893b0f0d4c Update man pages for 2017.7.7
      - baa036336 Merge pull request #48136 from gtmanfred/2017.7.7
      - fce1c31146 bootstrap kitchen branch tests with 2017.7.6
      - b0ba08f4d9 Merge pull request #48134 from rallytime/release-notes-2017.7.7
217005b8f1 Add missing v for tag reference
2d53569d1e3 Add release notes file for 2017.7.7
084de927fe Merge pull request #48098 from rallytime/bp-48075-2017.7.7
e462e8b3a Ensure that the shared list of jids is passed when creating the Minion. Fixes an issue when minions are pointed at multiple syndics.

f0352ea95a Merge pull request #48514 from gtmanfred/2017.7
739bf92599 upgrade dependencies for pytest tests
5372b60137 Merge pull request #48491 from grokrecursion/group-fix-v2
1556b37221 fixed pylint errors
f6d9177dab fixed indentation for pep8
b9556bf923 v2 try of gid converted to integer

16d3daab3c Merge pull request #48375 from Ch3LL/file_copy
d16a790775 Add mode to _makedirs call in file.copy
2cbcb4fd26 Add user and group to makedirs cmd in file.copy
d38951b1b3 Merge pull request #48490 from KaiSforza/cifixes
9fe7199af5 Mark failed if anything is found
6749a6bf19 Stop archiving the docs

PR #48553: (KaiSforza) Set up junit in jenkins @ 2018-07-12 16:24:01 UTC
  a95b8ef8d8a Merge pull request #48553 from KaiSforza/jenkins-junit-2018
  412ffcc956 Set up junit in jenkins

PR #48551: (gtmanfred) add posargs to tox pylint @ 2018-07-12 14:35:25 UTC
  c4aed02740 Merge pull request #48551 from gtmanfred/2018.3
  a6a286af28 add posargs to tox pylint

PR #48533: (terminalmage) Fix UnicodeDecodeError in sh beacon @ 2018-07-12 13:38:43 UTC
  260da0d545 Merge pull request #48533 from terminalmage/sh-beacon
  7ac5ac06c9 Fix UnicodeDecodeError in sh beacon

ISSUE #48519: (Lutseslav) Mysql module alter_db quotation missing (refs: #48520)

PR #48520: (Lutseslav) Add quotes to schema name in ALTER DATABASE. @ 2018-07-11 19:15:08 UTC
  8761ac2589 Merge pull request #48520 from Lutseslav/fix-alter-databases-with-special-symbols
  d088b0ff2 Merge branch '2018.3' into fix-alter-databases-with-special-symbols
  59629e9757 Merge branch '2018.3' into fix-alter-databases-with-special-symbols
  da8336712e Add quotes to schema name in ALTER DATABASE.

PR #48528: (gtmanfred) add 2018.3 requirements for tox/pytest tests @ 2018-07-11 18:13:40 UTC
  ad4f7efaf8 Merge pull request #48528 from gtmanfred/2018.3
  221559358a add 2018.3 requirements for tox/pytest tests

ISSUE #48336: (JuanManuelVizcainoAbad) file.directory (refs: #48399, #48398)
• PR #48508: (rallytime) [2018.3] Fix 2 bugs found in the file.check_perms function @ 2018-07-11 15:03:32 UTC
  - PR #48399: (garethgreenaway) [2017.7] fixes to module/file.py (refs: #48508)
  - PR #48398: (garethgreenaway) [2018.3] fixes to module/file.py (refs: #48508)
  - 70e5cb8a5 Merge pull request #48508 from rallytime/fix-file-bug
  - 0747eb5476 Move comment string join and test/changes check to bottom of file.check_perms
  - 6efa1db21 Fix up bad merge - remove extra section of "mode" changes

• ISSUE #48277: (dvenckus) init.sls with included states fails with more than one, 'Template was specified incorrectly: False' (refs: #48388, #48389)

• ISSUE #46986: (github-abcde) opts file_roots gets overwritten with pillar_roots in orchestration run (refs: #48388, #48389)

• PR #48389: (garethgreenaway) [2018.3] reset file_roots for renderers after compile_pillar @ 2018-07-11 13:13:33 UTC
  - 5a0b274bf1 Merge pull request #48389 from garethgreenaway/48277_2018_3_file_roots_wrong
  - 4b492fa633 Removing unused start_time variable from test_orchestration_with_pillar_dot_items test.
  - 30c5855d20 Fixing a few things in the new test.
  - 36b7253418 Fixing lint issue
  - ab6abf3d31 When pillar items are compiled a new render is instantiated but the file_roots is the pillar_roots. This change forces the __opts__['file_roots'] to be set to what is set in actual_file_roots for all renderers once compile_pillar has finished. Adding a test when this situation is run via a orchestration runner.

• ISSUE #48342: (jeffclay) UnicodeDecodeError when using cache mysql (refs: #48495)

• PR #48495: (garethgreenaway) [2018.3] Fix to mysql cache module @ 2018-07-10 12:54:10 UTC
  - f9fd1a889a Merge pull request #48495 from garethgreenaway/48342_mysql_cache_unicode
  - 0029f19033 Ensure the query_string is a bytestring, otherwise an attempt will be made to convert the msgpack data to unicode which will result in a UnicodeDecodeError error.

• PR #48487: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-07-09 18:38:00 UTC
  - fc3eef6b3 Merge pull request #48487 from rallytime/merge-2018.3
  - 54341d1a8d Update old utils paths to use new utils paths
  - 68a9b0f0f6 Merge branch '2017.7' into '2018.3'
  - 22cd4206c4 Merge pull request #48472 from gtmanfred/2017.7
    - c7a3a7d8bd update jenkins tests to use tox for lint
    - 44aaac1d33 use tox to run pylint
  - 27ea8f35ea Merge pull request #48476 from twangboy/fix_dependencies
    - b0087d425c Add license info
    - 9359b560c Fix dependencies
  - acf42864aa Merge pull request #48399 from garethgreenaway/48336_2017_7_ensure_chmod_setuid_with_chown
    - 8e6fd3320f Normalize the mode before we compare it.
- f894f0ecb8 Setting the mode with setuid or setgid bits in addition to setting the owner and group will force the setuid & setgid bits to reset. This change ensures that we set the mode after setting the owner & group.
- 616ff6b78 Merge pull request #48471 from gtmanfred/2017.7
  - 392ab4e51f Add some configurations to tox
- 6234d9b15d Merge pull request #48433 from discogestalt/fix-redis.hmset
  - 65817ac74d Use clean_kwargs method instead
  - f7fa7f57c6 Found another issue with redismod.hmset
  - 5624865f86 Fix issue with redismod.hmset method
- aace0fe2c Merge pull request #48428 from terminalmage/fix-jobs.lookup_jid
  - 6509aa9089 Fix outputter detection in jobs.lookup_jid runner
- a7e52f0de2 Merge pull request #48429 from rallytime/bp-46824
  - 8b4486248d Added ignore_retcode to mock unit tests
  - f8beab71dd Regression to ignore retcodes on crontab calls
- 4576ef20bc Merge pull request #48432 from dwoz/file-prepend-again
  - 349a2b279e Prepend test needs file.touch method

- PR #48481: (terminalmage) Improve the slack engine docs @ 2018-07-09 13:41:15 UTC
  - 4d4d2eacce Merge pull request #48481 from terminalmage/slack-engine
  - 56e8a1eb93 Improve the slack engine docs
  - dde9c0640d Add information on creating bot users
  - 513c6af975 Fix inaccurate docs

- PR #48348: (dwoz) Fix multiple git module tests @ 2018-07-06 20:35:58 UTC
  - 491b5b077c Merge pull request #48348 from dwoz/test_git
  - 5ca5e606b3 Merge branch '2018.3' into test_git

- PR #48454: (terminalmage) Improve error message when ext_pillar is incorrectly formatted @ 2018-07-06 18:03:44 UTC
  - dd6a6a97c5 Merge pull request #48454 from terminalmage/issue48107
  - 269dbab7f6 Improve error message when ext_pillar is incorrectly formatted

- ISSUE #48336: (JuanManuelVizcainoAbad) file.directory (refs: #48399, #48398)

- PR #48398: (garethgreenaway) [2018.3] fixes to module/file.py (refs: #48508) @ 2018-07-06 18:02:43 UTC
  - a9dc758e73 Merge pull request #48398 from garethgreenaway/48336_ensure_chmodd_setuid_with_chown
  - 2454652914 Normalize the mode before we compare it.
  - 08ad5665de Fixing test to ensure it works under py3
  - 2b25d8c95b Setting the mode with setuid or setgid bits in addition to setting the owner and group will force the setuid & setgid bits to reset. This change ensures that we set the mode after setting the owner & group.

- PR #48431: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-07-05 17:23:00 UTC
  - 2baa7f189f Merge pull request #48431 from rallytime/merge-2018.3
- 3e59dda0b1 Merge branch '2017.7' into '2018.3'
  * 422441505d Merge pull request #48422 from rallytime/fix-48230
    - a6abf85621 Allow file.managed to work with uppercase source_hash in test=true mode
    - 4c691ac57a Add regression test for Issue #48230
  * 83e387c951 Merge pull request #48410 from dwoz/service_dead_test_fix
    - 5c0923448d Fix service dead test on windows
  * d3ba345da5 Merge pull request #48413 from twangboy/fix_47811
    - c5aad04140 handle unc paths
  * 827ef2aac4 Merge pull request #48416 from dwoz/service_integration_fix
    - c43f150dcd Fix service integration test (py3)
  * 10fe7d2b9b Merge pull request #48385 from Ch3LL/1update_version_doc_2017.7
    - 3cf335b0b9 Update release versions for the 2017.7 branch
  * f8a9a037e6 Merge pull request #48405 from Ch3LL/rm_inprog_2017.7
    - 03ed5167fa [2017.7] Remove In Progress Warning on 2017.7.7
  * 8ac867c168 Merge pull request #48409 from dwoz/test_prepend_fix
    - 9c7085b70f Fix file state prepend test
  * 10e93bff7f Merge pull request #48396 from dwoz/symlink_test_fix
    - d3456d31e6 Fix file.symlink state test for windows
  - PR #48310: (mtorromeo) Backport ini_manage fixes to 2018.3 @ 2018-07-05 16:27:19 UTC
    - 432cbb5ee Merge pull request #48310 from mtorromeo/ini-manage-backports
    - 88f80fd77 Fixed pylint useless-super-delegation warning.
    - e20f4cad4 Uniformed reports between ini.options_absent and ini.options_present
    - 2c3ae0b6c9 pylint cosmetics.
    - 0c0d10d18f Fixes dry run false positive when option value is a number.
    - 7014dccb8 Fixes dry run in ini_manage + Fixes related bug - when working with options which are not in section. + Fixes related tests + Fixes pylint warnings
  - ISSUE #48402: (elsmorian) Running SaltStack master with no init system repeatedly logs "could not determine init system " (refs: #48441)
  - PR #48441: (terminalmage) Switch init system log message to debug @ 2018-07-05 14:43:25 UTC
    - 84fd5d2784 Merge pull request #48441 from terminalmage/issue48402
    - d758995763 Switch init system log message to debug
  - PR #48386: (Ch3LL) Update release versions for the 2018.3 branch @ 2018-07-03 13:37:32 UTC
    - 871c9e3b98 Merge pull request #48386 from Ch3LL/1update_version_doc_2018.3
    - 84a1994110 Update release versions for the 2018.3 branch
  - PR #48404: (Ch3LL) [2018.3] Remove In Progress Warning on 2017.7.7 @ 2018-07-03 13:33:18 UTC
    - ddb83ad4ce Merge pull request #48404 from Ch3LL/rm_inprog_2018.3
    - ef288f2a74 [2018.3] Remove In Progress Warning on 2017.7.7
• **PR #48339**: (terminalmage) Backport tojson filter from #48309 to 2018.3 @ 2018-07-02 17:52:53 UTC
  - PR #48309: (terminalmage) Drop support for Python 2 unicode string literals in YAML renderer (refs: #48339)
  - 5b38019ca0 Merge pull request #48339 from terminalmage/backport-tojson-filter
  - 4433bec891 Add release notes for tojson jinja filter
  - ac36998801 Tweak docs to reflect backported filter
  - c636b18cf0 Add unit test for tojson filter
  - e34e39f0e2 Document filter deprecation
  - b9a4f288b2 Deprecate json_encode_dict and json_encode_list jinja filters
  - 3896e3468c Use upstream tojson filter, if present
  - 1499c6abcf Implement tojson jinja filter for those using Jinja < 2.9

• **ISSUE #48274**: (ipmb) s3.get signature failure with + in the object name (refs: #48328)

• **PR #48328**: (garethgreenaway) [2018.3] Fixes to utils/s3.py @ 2018-07-02 13:22:31 UTC
  - 2221d6e5db Merge pull request #48328 from garethgreenaway/48274_s3_get_signature_fail
  - 22cafc8334 fixing lint issue
  - 131486203e Need to pass the URL path through quote to ensure any special characters are being quoted properly. if we include local_file for a PUT, read the file into data before passing it along to requests.requests.

• **PR #48358**: (Ch3LL) Fix corrupt public key with m2crypto python3 @ 2018-07-02 13:10:32 UTC
  - d3c658bdef Merge pull request #48358 from Ch3LL/m2crypto_fix
  - 8fdd34d430 m2crypto open file in rb mode for pub key
  - a964db4663 Fix corrupt public key with m2crypto python3

• **ISSUE #48367**: (asenci) salt.proxy.fx2: dictionary changed size during iteration (refs: #48368)

• **ISSUE #46765**: (roskens) pkg.mod_repo fails with a python error when removing a dictionary key (refs: #46776)

• **PR #48384**: (rallytime) Back-port #48368 to 2018.3 @ 2018-07-01 04:19:10 UTC
  - PR #48368: (asenci) Fix issue #48367 using the same approach as PR #46776 (refs: #48384)
  - PR #46776: (gtmanfred) fix shrinking list in for loop bug (refs: #48368)
  - 2fd65d66dc Merge pull request #48384 from rallytime/bp-48368
  - 430c462f34 Fix issue #48367 using the same approach as PR #46776

• **PR #48394**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-07-01 04:13:03 UTC
  - 3b53e2d206 Merge pull request #48394 from rallytime/merge-2018.3
  - 0475b5f39 Update old utils paths to new utils paths
  - c4fd2a0930 Merge branch '2017.7' into '2018.3'
  - 7e25f26837 Merge pull request #48362 from twangboy/fix_48276
    * 77629f640a Fix module unit tests
    * b5ca560b73 Fix lint error
    * 210e280ecf Use explicit parameter names
- 776db98a5c Handle missing registry entries
  - 80222b6b7c Merge pull request #48383 from rallytime(bp-48379
    - 9fc7815594 Clean up the workspaces at the end for every job
  - a68aa774a Merge pull request #48382 from rallytime(bp-48346
    - 6a70ba222e Use the right ssh key to destroy kitchen
  - 9519f640e7 Merge pull request #48381 from rallytime(bp-48330
    - 6857bedcc2 Add warnings plugin to replace violations
  - 14db0aa35d Merge pull request #48363 from dubb-b/2017.7
    - c0b962c28d Changing debug to info for logging
  - 5b29cd326f Merge pull request #48352 from Ch3LL/wheel_doc
    - 89ada68165 Add missing key to accept_dict function in wheel docs
  - 02cf19ee3b Merge pull request #48329 from rallytime/codeowners-roster-files
    - 5e5661e00 Trigger review requests for team-ssh for roster files
  - 53cf1794be Merge pull request #48349 from ralex/fix-manjaro-service-behaviour
    - 6cafce547e Disable the service module on Manjaro since it is using systemd
  - 89dfcf3a4e Merge pull request #48324 from Ch3LL/update_version_doc_2017.7
    - 47845ba810 Update release versions for the 2017.7 branch
  - ece4e30aac Merge pull request #48331 from rallytime(bp-48215
    - 9d6ba3e247 Set jobs to pending when they come in
    - 727d2b4ffe Use proper creds with githubNotify
    - d355861c5c Test using different credentials
  - ab05e00d8c Merge pull request #48332 from rallytime(bp-48321
    - d72af6ab4e Jenkins needs the / to get the directory
  - 21ed5b97ce Merge pull request #48295 from rallytime(bp-48193
    - 352fe33fd6 Separate set_result() to a new line apart from Future() call
    - c0180ff33d Properly configure syndic in test case
    - 0da98534a9 Properly wait on returns in saltnado
  - 9aa4687ab9 Merge pull request #48117 from twangboy/fix_48026
    - dd37f8fc2 Disable services that are set to manual
  - caf630487c Merge pull request #48207 from rallytime(bp-48189
    - e9d09e0375 Use old is_windows utils path on 2017.7
    - b9656c9b3 If pip binary is passed to bin_env, use that pip binary
  - 06a927b2aa Merge pull request #48293 from rallytime(bp-47453
    - e96ab6778e dont reset system locale when running rabbitmqctl commands

• ISSUE #45939: (andygabby) user.present with hash_password: True detects change on every state.apply/highstate (refs: #47147)
• PR #47147: (eliasp) states.user.present: Make usage of `hash_password` idempotent @ 2018-06-30 13:29:27 UTC
  - 9b364e25cf Merge pull request #47147 from eliasp/2018.3-issue-45939-shadow-hash-salt
  - dd3be1d76e Add warning log message when using MD5 for hashing shadow passwords
  - 5451ab6b7a states.user.present: Make usage of `hash_password` idempotent
• PR #48297: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-06-30 12:57:35 UTC
  - 89857ea8b9 Merge pull request #48297 from rallytime/merge-2018.3
  - 9498618418 Use `saltenv` opts instead of `environment`
  - 1c8bd35f28 Update old utils paths to use new utils paths
  - c7bb8a50b0 Merge branch '2017.7' into '2018.3'
    - 95ef006e00 Merge pull request #48219 from zer0def/lxc-bootstrap-fixes
      - c77058560b Merge branch '2017.7' into lxc-bootstrap-fixes
      - d63cf3f072 Fixes another case of legacy configuration key usage warning getting in the way of changing container's state.
    - 3327181507 Merge pull request #48234 from dwoz/thin_dir
      - 70c603451b Fix py2 thin dir issues
    - 83d7d286c4 Merge pull request #48080 from lusche/2017.7
      - 917de985fc #47984 remove the line completly
      - ba12ee947b Merge branch '2017.7' of https://github.com/saltstack/salt into 2017.7
      - dfb13d5051 Bugfix #47984 messed up cert serial
    - bccb4dc46 Merge pull request #48232 from gtmanfred/cloud
      - d108112e1a do not expand kwargs for cloud.action
  - 056f43f663 Merge pull request #48238 from mirceaulinic/fix-sdb-cache
    - 51e55fa1d SDB cache module: AttributeError: 'Cache' object has no attribute 'set'
  - 731ec0a11a Merge pull request #48037 from terminalmage/fix-custom-types-sync-docs
    - 052ae83c4b Update versionchanged
    - 8b1bd0eda2 Update test to reflect changed argument name
    - 5e75936198 Change 2018.3.2 to 2018.3.3
    - c53ad603fc Rename sync -> sync_mods per review suggestion
    - e4d67c5fd8 Update docs to include references to new "sync" argument
    - cb8e69fb8 Remove redundant mocking
    - bc3ad795e9 Add test for sync argument to state.sls
    - f81ccd1fdd Add sync option to state.apply/state.sls
    - 8289b07e24 Fix documentation on when custom types are synced
• 0bae927048 Merge pull request #48249 from rallytime/2017.7.7-release-notes-update
  - 36032c8ee7 Update release notes for 2017.7.7
• 8e06471817 Merge pull request #48242 from asnell/asnell-patch-1
- f66bf60073 Add sample list data via command line pillar

- **PR #48364**: (dubb-b) Changing debug to info for logging @ 2018-06-28 20:48:24 UTC
  - c5746deb5f Merge pull request #48364 from dubb-b/2018.3
  - d8260b6628 Changing debug to info for logging

- **PR #48354**: (rallytime) [2018.3] Merge forward from 2018.3.2 to 2018.3 @ 2018-06-28 20:26:31 UTC
  - 0202493b60 Merge pull request #48354 from rallytime/merge-2018.3.2-to-2018.3
  - fface7cc74 Merge branch '2018.3.2' into '2018.3'

- **PR #48347**: (dwoz) Fixes fileserver maintenance process on Windows @ 2018-06-28 13:17:42 UTC
  - bbabbf76b Merge pull request #48347 from dwoz/sigfix
  - ccdff5029f Remove unneeded attribute
    - e8362adf71 fopen does not support encoding
    - 487161ba8f Fix file encoding on windows
    - f760685ee Fix multiple git module tests

- **PR #47975**: (terminalmage) Add a new git.cloned state @ 2018-06-27 20:53:42 UTC
  - 67303d7901 Merge pull request #47975 from terminalmage/issue47937
  - 34b24bb7fa Merge branch '2018.3' into issue47937

- **PR #48323**: (Ch3LL) Update release versions for the 2018.3 branch @ 2018-06-27 13:44:58 UTC
  - 5b8d5542e8 Merge pull request #48323 from Ch3LL/update_version_doc_2018.3
  - b4548aca56 Update release versions for the 2018.3 branch

- **PR #48326**: (Ch3LL) Remove In Progress Warning for 2018.3.2 Release @ 2018-06-27 13:43:16 UTC
  - 7cf403e313 Merge pull request #48326 from Ch3LL/rn_remove_in_prog
  - dfe1ad5ed Remove In Progress Warning for 2018.3.2 Release

- **PR #48301**: (terminalmage) Fix typos in new mock_open docs @ 2018-06-25 19:08:14 UTC
  - 60f4ad5126 Merge pull request #48301 from terminalmage/docs
  - 6c33345f05 Fix typos in new mock_open docs

- **PR #48292**: (rallytime) Back-port #48288 to 2018.3 @ 2018-06-25 19:07:11 UTC
  - **PR #48288**: (rmatchei) fix lsattr.get in file.check_perms (refs: #48292)
  - 4760f87153 Merge pull request #48292 from rallytime/bp-48288
  - d6620573bb fix lsattr.get in file.check_perms

- **PR #48296**: (rallytime) Back-port #48258 to 2018.3 @ 2018-06-25 19:04:41 UTC
  - **PR #48258**: (nullify005) preserve tuples for ldap modification operations (refs: #48296)
  - 27207fc510 Merge pull request #48296 from rallytime/bp-48258
  - 8bf756f264 preserve tuples for ldap modification operations

- **ISSUE #48204**: (zerthimon) State mysql_user.present Exception with mysql 8.0.11 (refs: #48275, #48228)

- **PR #48275**: (garethgreenaway) [2018.3] Follow up fix to MySQL user for password management @ 2018-06-25 13:23:35 UTC
• PR #48279: (terminalmage) Add documentation/further enhancements to rewritten mock_open @ 2018-06-25 13:12:30 UTC
  - 27a0e95174 Merge pull request #48279 from terminalmage/mock_open-docs
  - 65c575ae9c Fix spelling error
  - 830a624ce8 Ignore IOError when tearing down filehandles not opened for reading
  - 3b6356f4fb0 Raise TypeError when trying to read from filehandles not opened for reading
  - 09aae0c82b Add more examples and information on strict string types
  - 8c069d105d Add some mock_open docs
  - a13d1fe1a0 Update mock_open usage to reflect read_data type enforcement
  - 374a8ce31f Add more mock_open tests
  - 0f06ad0b08 Improve code-reuse in mock_open tests
  - 0e8c83bac6 2 MockFH enhancements:

• ISSUE #48141: (zerthimon) salt-api request causes exception (refs: #48236)

• PR #48236: (garethgreenaway) [2018.3] Fix to cmd_batch @ 2018-06-25 12:58:49 UTC
  - 6ee856631b Merge pull request #48236 from garethgreenaway/48236_salt_api_local_batch
  - aea4f7ae14 Fixing test_local_batch
  - ce3e1eaf2c Removing sort.
  - 83acff3b20 Fixing test_local_batch
  - ff14b99752 Fixing a typo in the comment.
  - 85c0f126e0 Adding note about why salt.utils.versions is being re-imported. Adding a test for local_batch.
  - 808805fd3d Fixing cmd_batch to work correctly when called via salt-api.

• ISSUE #48204: (zerthimon) State mysql_user.present Exception with mysql 8.0.11 (refs: #48275, #48228)

• PR #48228: (garethgreenaway) [2018.3] Fixes to mysql module @ 2018-06-22 15:44:00 UTC
  - 09b036c26e Merge pull request #48228 from garethgreenaway/48228_mysql_user_password_exception
  - 1b2f1c61d1 Updating the mysql module to not use the PASSWORD when MySQL is version 8.0.11 or higher, where the PASSWORD function has been removed.

• PR #48252: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-06-22 15:13:42 UTC
  - 67cb556d3f Merge pull request #48252 from rallytime/merge-2018.3
  - 84ec655c24 Merge branch '2017.7' into '2018.3'
• a172f9de84 Merge pull request #48226 from terminalmage/fix-alias-docstring
  • fb237272f5 Don't display "None" in SaltInvocationError when Salt installed using -OO
  • 90c90f5d5c Fix docstring construction in alias_function when Salt installed using -OO
• c6a027cae Merge pull request #48227 from Ch3LL/fix_win_tests
  • 236773e3e9 Skip new sha256 files on repo.saltstack.com/windows
• 6929423528 Merge pull request #48131 from bowmanjd-lms/fix-apk-python3
  • f5d2835299 Merge branch '2017.7' into fix-apk-python3
  • 02f9e29ca5f Don't call .exception() on future unless it's done.
• 868c1737f Merge pull request #48185 from DSRCorporation/bugs/47901_future_done_exception
  • 5f63316311 Merge branch '2017.7' into bugs/47901_future_done_exception
  • 9f2dbf94cb Don't call .exception() on future unless it's done.
• 80a3e37c2e Merge pull request #48192 from twangboy/fix_pip_version_2017.7
  • 59ae2c56c Use --disable-pip-version-check for build_env_.ps1
• 12e2b8882a Merge pull request #48201 from zerodef/lxc-bootstrap-fixes
  • 6f6d3d40d4 Take lxcpath into account when bootstrapping new containers. Version comparison fixes.
• e079fcee3d Merge pull request #48190 from terminalmage/fix-vfstab-test
  • 8d70d14362 Fix mount.vfstab unit test
• c8b9cee986 Merge pull request #48115 from KaiSforza/pr-lint-2017
  • 494727ab39 Add docs, kitchen tests
  • 317023bb20 Move .jenkins to .ci for future
  • dedc313cee Make it parallel so we don't fail right away
  • cd1d31e446 Add a .jenkins file to run pylint
• fc1752b721 Merge pull request #48174 from terminalmage/docker-update-mine
  • 9af09e0127 Mock config.get due to changes in _refresh_mine_cache
  • c5802ad465 Fix the version number in versionadded
  • d403ae58d7 Add unit test for docker.update_mine
  • 44c275698a Actually it's more than just add/remove that updates the mine
  • 0cb6996b07 Add release notes mention of docker.update_mine config option
  • de05097b20 Add docs for new config option
  • 04c5a9178 Add note in mine.get_docker docstring about new config item
  • 4e456255c0 Allow mine update to be disabled using new config option

• ISSUE #48029: (vinian) syndic failed to auth when restart salt-master on syndic master (refs: #48034)
• PR #48034: (vinian) restart salt-syndic when salt-master restart @ 2018-06-21 20:12:37 UTC
  • 9f6bd90c5b Merge pull request #48034 from vinian/restart-salt-syndic-when-salt-master-retart
  • f7652d8c8b restart salt-syndic when salt-master restart
• PR #48250: (rallytime) Update release notes for 2018.3.2 @ 2018-06-21 18:30:21 UTC
  - ab2ba942ad Merge pull request #48250 from rallytime/2018.3.2-release-notes-update
  - 19c104b6cd Update release notes for 2018.3.2

• PR #48166: (terminalmage) Add trace logging and optimize file handling in grains.core.os_data @ 2018-06-21 18:02:33 UTC
  - 51928f050 Merge pull request #48166 from terminalmage/salt-jenkins-1000
  - b73df0ab00 Change call_args to call.args to reflect changes to MockFH
  - 0c2cc07704 remove unused import
  - b8c0a55cf3 Add test for tell()
  - 1cebe89fee Add implementation of tell() for filehandle iteration
  - efb8f49d42 Add tests for read_data being a list, and containing unicode or bytestrings
  - 38df912fa6 Operate on a copy of the read_data
  - 71eeae1240 Update mount module unit tests to reflect changes in mock_open
  - 16c414e120 Update nfs3 module tests to reflect changes in mock_open
  - b7eab25d6c Update grub_legacy module tests to reflect changes in mock_open
  - cc002b8fd7 Update new network unit test to reflect changes in mock_open
  - a8f11594f1 Update new core grains tests to reflect changes in mock_open
  - 84e18d956 Update crypt unit tests to reflect changes in mock_open
  - 67c036dc2d Add MockCall to tests.support.mock to track calls
  - 2556a1e13d Remove unused import
  - fd9d700157 Add additional docs to MockOpen class
  - 6acbf4c83ec Update newly added test to reflect renaming of handles attribute
  - 77e5288d42 Update fibre_channel grains tests to reflect changes in mock_open
  - ed40371a06 Update timezone module tests to reflect changes in mock_open
  - f0aa9934f Track call_count in MockOpen
  - 2598d2453a Update snapper module tests to reflect changes in mock_open
  - 51b3faa7bd Add support for passing multiple strings for a given match in read_data
  - 55487c175c Fix mock_open call to use new multifile syntax
  - 7fb16fe73a Update puppet module tests to reflect changes in mock_open
  - 3ca97c4ecc Update btmp beacon tests to reflect changes in mock_open
  - b027cfa94 Update wtmp beacon tests to reflect changes in mock_open
  - f5823252bb Track call args/kwars in MockFH
  - 33591ca90 Mock the seek function in MockFH
  - 7eb4b1a1e1c Update cp.push test to reflect changes to mock_open
  - 2be19cfa89 Report correct location when reading using explicit size and EOF reached
  - 5ec95ba5ca On second thought, actually implement tell()
- 19022eb9e5 Add tell mock to MockFH
- 4b5a393445 Update junos tests to reflect changes to mock_open
- 278a222b09 Update dnsutil tests to reflect changes to mock_open
- 4e67955572 Replace the rest of mock_open with a class
- 75307a47c5 Update linux_sysctl tests to reflect changes to mock_open
- 05c68fd5d9 Use explicit config file and fix remaining mac_sysctl tests
- 836fde9a30 Allow Python 2 to accept an exception as read_data
- 543385fd02 Add writelines_calls property
- 42fa842456 Make read funcs mocks so their calls can be tracked
- 675f03c58f Update mac_sysctl tests to reflect new mock_open behavior
- 3d2c41d395 Update file module tests to reflect new mock_open behavior
- b9200dbc3e add a dict containing the handles to the mock_open return object
- 852ba4b982 Add mocked close() function to MockFH
- f6b46bc608 Remove unused import
- 20f60a769b Add blank lines to appease linter
- 48d7cfa6d3 Add multfile tests for mock_open
- 1861e9b944 mock_open: rewrite multi-file support
- 5e6b539770 Use function for empty string
- cb2620ad2b Update core grains tests to reflect EAFP changes
- 5d09b178d7 Separate mocked file contents per filename, not glob
- 875102f538 Modify mock_open to support multiple file paths
- 096ace74df Move lsb_release parsing into its own function
- 6a0828beed Add unit tests for mock_open
- 8ba6cadac7 More mock_open bugfixes
- 329dea218e Add a bunch of logging for linux os_data core grains
- 2c64b270df Add timestamp to the minion’s log_fmt_console

- **PR #48216**: (Ch3LL) Fix UnicodeDecodeError when reading file to determine virtual grain (refs: #48440) @ 2018-06-20 16:53:41 UTC
  - 6072d1ef9c Merge pull request #48216 from Ch3LL/grains_unicode
  - c4334f3f14 Fix UnicodeDecodeError when reading file to determine virtual grain

- **PR #48212**: (Ch3LL) Fix python3 ec2 salt-cloud TypeError when installing salt (refs: #49041) @ 2018-06-20 16:00:21 UTC
  - 77a75ebdfc Merge pull request #48212 from Ch3LL/py3_ec2
  - bd7f5459a Fix python3 ec2 salt-cloud TypeError when installing salt

- **ISSUE #47984**: (jeduardo) x509 module/state writing wrong certificate serial number to CRL (refs: #47986, #48080)

- **PR #48209**: (rallytime) Back-port #47986 to 2018.3 @ 2018-06-20 13:44:17 UTC
- **PR #48080**: (lusche) Bugfix #47984 messed up cert serial (refs: #48209)
- **PR #47986**: (jeduardo) Fix serial number writing into CRL files with the x509 module (refs: #48209)
- de614d31f5 Merge pull request #48209 from rallytime/bp-47986
- f4b3bd5d2c Changed salt.utils.fopen to salt.utils.files.fopen
- 8686872909 Fixed typos, removed repeated unit tests, and applied code fixes suggested by linter.
- 382df4a72 Removed useless new line
- 5aa99d14c4 Added unit tests for CRL creation and certificate revocation with CRL
- cc12844922 Fixed a problem where the OpenSSL bindings refuse to consume unicode strings.
- 399cf08860 Stopped converting the certificate hexadecimal serial number to an integer in order to avoid breaking CRLs.

- **PR #48210**: (rallytime) [2018.3] Merge forward from 2018.3.1 to 2018.3 @ 2018-06-20 13:43:19 UTC
  - 1f88df6e89 Merge pull request #48210 from rallytime/merge-2018.3
  - dae65da256 Merge branch '2018.3.1' into '2018.3'

- **PR #48186**: (rallytime) Add autodoc module for saltcheck.py @ 2018-06-19 19:03:55 UTC
  - 5b4897f050 Merge pull request #48186 from rallytime/saltcheck-docs
  - 314fc2d889 Clean up some doc references
  - da7603d879 Add autodoc module for saltcheck.py

- **PR #48191**: (twangboy) Use the --disable-pip-version-check option @ 2018-06-19 18:13:44 UTC
  - 7274a33c80 Merge pull request #48191 from twangboy/fix_pip_check
  - 5c00f0e6bf Use the --disable-pip-version-check option

- **ISSUE #48122**: (pasmon) Salt minion 2017.7.6 disregards "bin_env" in pip state (refs: #48189)

- **PR #48189**: (gtmanfred) If pip binary is passed to bin_env, use that pip binary (refs: #48207) @ 2018-06-19 18:08:13 UTC
  - 96f79b0674 Merge pull request #48189 from gtmanfred/pip
  - 96c69f3d93 If pip binary is passed to bin_env, use that pip binary

- **PR #48165**: (terminalmage) Fix regression with top_file_merging_strategy=same @ 2018-06-19 18:03:07 UTC
  - 71e385501b Merge pull request #48165 from terminalmage/issue48144
  - 92ac2a2d6a Remove unused imports
  - 15a44d5d4 Remove redundant top file merging tests
  - 12100d9bd3 Add more top file merging tests
  - 0ed686cb3f Add unit test for show_top with "same" merging strategy
  - 35e5492fb7 Revert 7058f10 / 3df0f7

- **ISSUE #46806**: (ezh) Lack of debug messages on authentication fail. (refs: #46807, #48179)

- **PR #48179**: (ezh) 2018.3 auth @ 2018-06-19 14:16:40 UTC
  - **PR #4807**: (ezh) Reduce initial authentication setup complexity (refs: #48179)
  - 2a8e1c6539 Merge pull request #48179 from ezh/2018.3-auth
  - 9ed2d2ec55 Fix integration.shell.test_key and integration.shell.test_runner
- 26a6f79730 Fix integration tests test_list_acc_wrong_eauth, test_salt_run_with_wrong_eauth
- b84c321c4 Add more verbose debug messages for auth subsystem

- **PR #48188**: (gtmanfred) allow virtual aliases to be used for the driver name @ 2018-06-18 21:49:16 UTC
  - 0231008cf8 Merge pull request #48188 from gtmanfred/2018.3
  - 45249d5e10 allow virtual aliases to be used for the driver name

- **PR #48116**: (KaiSforza) Add jenkinsfiles to define tests in 2018 @ 2018-06-18 21:27:10 UTC
  - 0f95238da Merge pull request #48116 from KaiSforza/pr-lint-2018
  - f158bed5bd Add docs, kitchen tests
  - 904a70c187 Move .jenkins to .ci for future
  - 365fa0e51f Make it parallel so we don’t fail right away
  - e59479745 Add a .jenkins file to run pylint

- **ISSUE #48146**: (rmarchei) mysql_query.run: exception on 2018.3 (refs: #48164)

- **PR #48164**: (garethgreenaway) [2018.3] Fixes to mysql state @ 2018-06-18 13:10:20 UTC
  - 60c9490bdc Merge pull request #48164 from garethgreenaway/48146_mysql_output_to_file
  - a040643a82 Accounting for certain situations when the query result is not a string, but actually a dictionary.

- **ISSUE #48113**: (gaetanquentin) state file.line has error and erase file content complely, while with mode test=true it is ok (refs: #48156)

- **PR #48156**: (garethgreenaway) [2018.3] Unicode fixes for file.line @ 2018-06-17 19:34:08 UTC
  - 85ebcb3f2 Merge pull request #48156 from garethgreenaway/48113Ensure_writing_strings_with_file_dot_line
  - 5a9ef0d1ae Unless we're using py2 and Windows, ensure we're writing out a string when using file.line

- **PR #48161**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-06-17 19:33:29 UTC
  - 33400e72db Merge pull request #48161 from rallytime/merge-2018.3
  - 0733fa1b02 Update utils path for which function to new path
  - 398cc78224 Merge branch '2017.7' into '2018.3'
  - df2a156338 Merge pull request #48061 from garethgreenaway/port_47049_2017_7
    - 7c472fed51 Fixing failing test_set_hwclock_aix test.
    - ccb0ace958 Porting #47049 to 2017.7.
  - 5ec3ef2dd4 Merge pull request #48143 from Ch3LL/fix_long_job
    - 48bd2e9d3 Add timeout argument to run_salt for ShellCase
  - e1e566d1f8 Merge pull request #48135 from rallytime/release-notes-2017.7
    - 7a97f157b3 Add missing v for tag reference
    - 2f2b69ed37 Add "in progress" notation to 2017.7.7 release notes
    - 06a1151a63 Add release notes file for 2017.7.7
    - 885b2862ce Move 2017.7.7 release notes to 2017.7.8
  - ac9dabbfaa Merge pull request #48105 from rallytime/merge-2017.7
    - cdb45874de Merge branch '2017.7.6' into '2017.7'
- 16916d6bd2 Merge pull request #47880 from gtmanfred/2017.7.6
- 987ae6358b quote python_version in requirements.txt
- 27670168ea Merge pull request #47875 from rallytime/release-notes-dot-six
- 58dee4c829 Remove sentence about the release being in progress
- b3dcb7330e Remove "in progress" too
- 99e1df7823 Update 2017.7.6 release notes: remove "unreleased" text
- 1f0bada07c Merge pull request #47873 from gtmanfred/2017.7.6
- a1c1b5b5cf allow tornado 5.0 to be installed only for python2
  - 2da56a69d9 Merge pull request #48101 from rallytime/update-doc-refs-2017.7
    - 7ba6f5fb36 Update 2017.7.7 reference to 2017.7.8
- 5a0e3d46e7 Merge pull request #48091 from terminalmage/fix-file_roots-monkeypatching
  - 6fe711ad76 Reverse monkeypatching after test_symlink_list finishes
- 053b019a8f Merge pull request #48088 from rallytime/update_version_doc_2017.7
  - 1b8d1c936b Remove "in progress" info for 2017.7.6 release notes
  - 9a0f4d190a Update release versions for the 2017.7 branch
- d6d2c5ee18 Merge pull request #48075 from garethgreenaway/48038_jobs_are_not_deduping_minion_side
  - c537b3275b Ensure that the shared list of jids is passed when creating the Minion. Fixes an issue when minions are pointed at multiple syndics.
- aa33c0b0c Merge pull request #48071 from terminalmage/gitfs-docs
  - 24545204b3 Fix inaccurate gitfs_saltenv example in GitFS Walkthrough
- fb4ceacb88 Merge pull request #48053 from rallytime/bp-48040
  - 265b22b194 states/github.py fix for incorrect positional argument
- f37daac6d Merge pull request #48024 from gtmanfred/2017.7
  - 56b7a427a7 allow specifying a different state to run on converge
  - cc9c4b4d5a add pytest coverage and xml junits
- ISSUE #48145: (max-arnold) Failed to load ext_pillar saltclass: can only assign an iterable (refs: #48155)
- PR #48155: (max-arnold) Do not fail on empty saltclass classes (fix for #48145) @ 2018-06-15 20:21:28 UTC
  - 9aa9a83b10 Merge pull request #48155 from max-arnold/2018.3
  - 63ab0c2648 Do not fail on empty saltclass classes declaration #48145
  - 3d4fcb3aa Add test for issue #48145
- PR #48104: (twangboy) Fix unit.modules.test_win_status @ 2018-06-15 17:05:34 UTC
  - 152c09ec0e Merge pull request #48104 from twangboy/test_win_status
  - 1ec3f436ee Fix test_error_logged_if_process_get_owner_fails
- PR #48147: (brejoc) Fix for sorting of multi-version packages @ 2018-06-15 17:03:18 UTC
  - 8cf0310d4 Merge pull request #48147 from brejoc/2018.3-multi-version-fix
  - 90ed25447d Swtiching to salt.utils.versions like linter suggested

Chapter 30. Release Notes
- ed09574073 Fix for sorting of multi-version packages (bsc#1097174 and bsc#1097413)

- **PR #47956**: (dmurphy18) Improved support for mount on AIX @ 2018-06-15 13:40:01 UTC
  - 2ede5f5442 Merge pull request #47956 from dmurphy18/aix_mount_support
  - f2a3e321db Improved support for mount on AIX

- **ISSUE #48012**: (Timandes) Found UnicodeDecodeError when trying to start Salt Master (refs: #48081)

- **PR #48081**: (terminalmage) Fix UnicodeDecodeError when parsing hosts file with non-ascii @ 2018-06-15 12:41:13 UTC
  - c05e176782 Merge pull request #48081 from terminalmage/issue48012
  - 8d2fb0bf25 Fix cp.push test
  - e230a7223f Fix definition of test data for wtmp/btmp beacon tests
  - 82874a8c10 Import six like we do everywhere else
  - 54f9a2ab54 Remove unused import
  - 767cc7e87f fix tabs
  - db19636f56 Get rid of additional newline append
  - 7427e192ba Fix more crappy mocking
  - 4ee05789ce Fix crappy mocking
  - 248467edc Add regression test for _generate_minion_id()
  - 5e62d6d45f Fix UnicodeDecodeError when parsing hosts file with non-ascii
  - e6a4f4f85 Use errno instead of hard-coding error 2
  - ff63f6932 Fixes / enhancements for mock_open

- **PR #48133**: (rallytime) Updates the 2018.3.2 and 2018.3.3 release notes files @ 2018-06-14 21:21:15 UTC
  - **PR #48129**: (rallytime) Add release notes for 2018.3.2 (refs: #48133)
  - 5d92e2763a Merge pull request #48133 from rallytime/release-notes-2018.3
  - afe191972 Add "in progress" notation to 2018.3.2 release notes
  - 3e4272ac09 Add release notes for 2018.3.2
  - 88c584cb0d Move 2018.3.2 release notes to 2018.3.3

- **PR #48103**: (terminalmage) Fix for gitfs base env being pinned to commit ID @ 2018-06-14 16:29:24 UTC
  - 0e3f846836 Merge pull request #48103 from terminalmage/gitfs-base-pinned-to-commit
  - 31ab2fe8de Fix for gitfs base env being pinned to commit ID

- **PR #48077**: (twangboy) Fix issue with salt.utils.parsers on Windows @ 2018-06-14 16:22:57 UTC
  - 4b6f1c7f75 Merge pull request #48077 from twangboy/fix_parsers
  - 0fd7691a2 Call logger in each case
  - 0e99dd741c Fix logic for non-root
  - 2d2534a688 Fix parsers for Windows, fix tests

- **PR #48096**: (twangboy) Fix unit.utils.test_which on Windows @ 2018-06-14 13:15:14 UTC
  - 80332b32a7 Merge pull request #48096 from twangboy/fix_test_which

30.2. Previous Releases
- d26fc56f13 Use os.sep for paths
- **PR #48102**: (rallytime) [2018.3] Update 2018.3.2 references to 2018.3.3 @ 2018-06-14 13:14:26 UTC
  - 66b2200913 Merge pull request #48102 from rallytime/update-doc-refs-2018.3
  - 1c9bece3d8 Update 2018.3.2 references to 2018.3.3
- **PR #48109**: (rallytime) Back-port #47851 to 2018.3 @ 2018-06-14 13:09:04 UTC
  - **PR #47851**: (rares-pop) Fixup! add master.py:FileserverUpdate **kwargs (refs: #48109)
  - 2902ee0b14 Merge pull request #48109 from rallytime/bp-47851
  - e9dc30bf8e Fixup! add master.py:FileserverUpdate **kwargs
- **ISSUE #47925**: (JonGriggs) GitFS looking for files in the master branch only (refs: #47943)
- **PR #47943**: (terminalmage) Make sure we set the effective environment when lock_saltenv is True @ 2018-06-13 20:02:00 UTC
  - 2529292568 Merge pull request #47943 from terminalmage/issue47925
  - 534a17100 Merge branch '2018.3' into issue47925
- **PR #48089**: (rallytime) Update release versions for the 2018.3 branch @ 2018-06-13 14:03:44 UTC
  - 9e1d0040e4 Merge pull request #48089 from rallytime/update_version_doc_2018.3
  - fa60a0991e Remove "in progress" info for 2018.3.1 release notes
  - a3b3b0a0e1 Remove "in progress" info for 2017.7.6 release notes
  - f9be1b9125 Update release versions for the 2018.3 branch
- **PR #48054**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-06-13 12:58:46 UTC
  - b10b7355a0 Merge pull request #48054 from rallytime/merge-2018.3
  - 508d70f4bf Update old util paths to use new paths
  - 3d2ea1563a Merge branch '2017.7' into '2018.3'
    - f3ee3576ec Merge pull request #48044 from twangboy/wua_add_fail_code
      - d41d0c25eb Add fail code for WinHTTP send/receive error
    - 871a910fcb Merge pull request #48009 from dwoz/winswarmfix
      - 5027c7bb84 minionswarm runs on windows
    - 0dcaead36d Merge pull request #47968 from gtmanfred/2017.7
      - ae1b0d28bb pass LANG and HOME into tox commands
      - 8d15b93d00 remove tox virtualenvs from doc tests
      - e1872e2036 simplify tox.ini
      - 81bd0f5af add tests.txt for running tests with tox requirements
      - 556a2067fc fix masterapi test to use testing directory for configs
      - 5a41f8b4ef add EXPENSIVE_TESTS
      - 055cd5a6ba set DESTRUCTIVE_TESTS environment variable for pytest
    - 42d6b83eb Merge pull request #47978 from twangboy/fixed_test_pkg
      - 8bb36b3a4b Add try/finally, fix typo in 7zip def file
• a67b21ef3d Merge pull request #47959 from twangboy/fix_test_service
  - 0cd47aa81e Remove unused import
  - d4b42540e3 Fix failing test when service doesn’t exist
• b81d482067 Merge pull request #47983 from garethgreenaway/backport_47843_2017_7
  - 7b7fbbf5d5 Adding missing test sls file.
  - 54e51bc627 Backporting #47843 to 2017.7, updating test for 2017.7.
• d56dad22c Merge pull request #47533 from twangboy/fix_47178
  - 24717cbe21 Change version added to 2017.7.7
  - 0592f1bac2 Fix issues with functions that user makedirs on Windows
• 5c56b8c755 Merge pull request #47827 from twangboy/fix_47791
  - fbbd91f09e Add more descriptive debug message
  - 365f81651b Fix deprecated exception handling
  - 8dd7610b93 Use local instead of network
  - 980d99d74b Fix issue when archive is on mapped drive

- **PR #48060:** (gtmanfred) mark test as expensive @ 2018-06-13 12:58:21 UTC
  - c83818e4f9 Merge pull request #48060 from gtmanfred/2018.3
  - 914935e4d4 Merge branch '2018.3' into 2018.3
- **PR #48057:** (terminalmage) Fix link without target in 2018.3.0 release notes @ 2018-06-11 18:50:17 UTC
  - a4eb41623d Merge pull request #48057 from terminalmage/docs-2018.3
  - 20f71ff6f6 Fix link without target in 2018.3.0 release notes
  - d8c035e5e5 mark test as expensive
- **PR #48042:** (terminalmage) Switch to trace level logging for further test failure troubleshooting @ 2018-06-11 14:03:48 UTC
  - 09a3122df Merge pull request #48042 from terminalmage/salt-jenkins-1000
  - b33a0b5eaa Switch to trace level logging for further test failure troubleshooting
- **PR #48041:** (terminalmage) salt.utils.hashutils: Only decode to utf-8 on Windows @ 2018-06-11 13:31:41 UTC
  - 6c5389189a Merge pull request #48041 from terminalmage/hashutils-fix-windows
  - 58c7ed33d7 salt.utils.hashutils: Only decode to utf-8 on Windows
- **PR #48014:** (cro) Find job pause @ 2018-06-08 13:48:45 UTC
  - dcae209950 Merge pull request #48014 from cro/find_job_pause
  - 440a67c4f4 Lint: Add blank line
  - 7b0e99a511 One more case where returner doesn’t respond
  - 5abed8f822 Catch two cases when a returner is not able to be contacted--these would throw a stacktrace.
- **PR #47915:** (garethgreenaway) [2018.3] state runner pause resume kill @ 2018-06-07 16:08:30 UTC
  - ea85f882bc Merge pull request #47915 from garethgreenaway/state_runner_pause_resume_kill
  - 2ecbe9c034 fixing typo in alias_function call.
Some fixes to the set_pause and rm_pause function in the state runner, renaming to in line with the functions in the state module. Including aliases to previous names for back-ward compatibility. Including a soft_kill function to kill running orchestration states. A new test to test soft_kill functionality.

- PR #48002: (rallytime) Back-port #47923 to 2018.3 @ 2018-06-07 15:25:39 UTC
  - PR #47923: (isbm) Prevent crash if files in file.recurse (refs: #48002)
  - 5c11fcede60 Merge pull request #48002 from rallytime/bp-47923
  - 9465e5f1e9 Use to_unicode from stringutils avoid deprecation warning
  - 73d33cbfc3 Prevent crash if files in file.recurse

- PR #48003: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-06-07 15:25:19 UTC
  - 3d0a087c71 Merge pull request #48003 from rallytime/merge-2018.3
  - a6533a9332 Merge branch '2017.7' into '2018.3'
    * 998a1c13d5 Merge pull request #47966 from mbunkus/fix-postfix-prefix-free-key-names-assumption
      - 0ae402d1b5 Fix postfix.set_main’s assumption of prefix-free key names
    * df50ce7b1b Merge pull request #47824 from twangboy/fix_setup.py
      - 4538b3abb3 Remove 'len-as-condition' disablement
      - d4efcc3c8b Skip lint errors
      - 1b3977f8d4 Remove m2crypto download for Windows
    * 3e91a31134 Merge pull request #47922 from damon-atkins/2017.7_win_pkg_keys_fix
      - 7129203b1b Merge branch '2017.7' into 2017.7_win_pkg_keys_fix
    * 8008fca2f6 Merge pull request #47933 from terminalmage/add-pillar.get-docs
      - 4eb022675 Clarify pillar.get docs
    * ab565bfaa3 Merge pull request #47944 from terminalmage/fix-git.detached-docs
      - 1d082b4389 Replace use of deprecated argument name in git.detached docstring
      - 6253793cb6 Merge branch '2017.7' into 2017.7_win_pkg_keys_fix
      - 4ce0fe6546 win_pkg under py3 keys returns a view instead of a list, wrap keys in list()

- PR #48022: (morganwillcock) win_wua state: fix function name in examples @ 2018-06-07 15:03:52 UTC
  - 0a05212f60 Merge pull request #48022 from morganwillcock/patch-1
  - 443fd6df21 win_wua state: fix function name in examples

- ISSUE #47546: (ender8282) archive.extracted fails when archive includes files with non-ascii names with 2018.3.0 (refs: #48015, #47572)

- PR #48015: (garethgreenaway) [2018.3] more unicode nonsense in archive module @ 2018-06-07 14:44:55 UTC
  - 406e60e1b61e Merge pull request #48015 from garethgreenaway/47546_more_unicode_nonsense
  - f457f9cb84 Adding a test to ensure archive.list returns the right results when a tar file contains a file with unicode in its name.
  - 9af49bc595 Ensure member names are decoded before adding to various lists.

- ISSUE #47955: (frogunder) 2018.3.1 Creating Windows machine in Amazon using salt-cloud fails. (refs: #47989)
• PR #47989: (dwoz) Properly decode password from aws using m2crypto @ 2018-06-06 20:44:28 UTC
  - 1ce7d6c38a Merge pull request #47989 from dwoz/awscloud
  - 23ab272be Fix lint errors
  - 6c8daa2b85 Properly decode password from aws using m2crypto

• PR #47976: (terminalmage) Capture and log output of processes that timed out and were killed @ 2018-06-06 19:17:08 UTC
  - 76068c83f5 Merge pull request #47976 from terminalmage/salt-jenkins-1000
  - 41e5a75027 Add catch_timeout to run_script
  - 551ada8e4d Capture and log output of processes that timed out and were killed

• PR #47990: (terminalmage) Docs fixes in 2018.3 release branch @ 2018-06-06 17:15:17 UTC
  - f12a52736e Merge pull request #47990 from terminalmage/2018.3-docs
  - f89d2cdd30 Clean up Sphinx warnings
  - f5fe936865 Add clarifying comment so that we don’t break this
  - 94849780ac fix docs build error due to IndexError

• PR #47982: (twangboy) Fix unit.modules.test_win_dns_client tests @ 2018-06-06 15:02:10 UTC
  - 9d56af3cad Merge pull request #47982 from twangboy/fix_test_win_dns_client
  - 2dcd6788c Force string to ModuleType

• PR #47985: (twangboy) Fix unit.states.test_reg test failure @ 2018-06-06 14:56:03 UTC
  - 1b4c72345b Merge pull request #47985 from twangboy/fix_test_reg
  - 4ce551811f Remove the unnecessary to_unicode stuff
  - 863ded39fa Mock reg.cast_vdata

• ISSUE #47236: (MorphBonehunter) x509.private_key_managed broken after upgrade to 2018.3.0 (refs: #47957)

• PR #47957: (garethgreenaway) [2018.8] Ensure x509 passphrase is a string @ 2018-06-05 13:27:33 UTC
  - 84100570f7 Merge pull request #47957 from garethgreenaway/47236 Ensure passphrase is a string
  - 99bad3ca6 removing unnecessary change
  - e22df8473d Ensuring that when a passphrase is passed in, it is returned as a string from the passphrase callback.
    - d0cf06a24d Make sure we set the effective environment when lock_saltenv is True
      - 8da6ce45dc Finish the docstring for git.cloned state
      - 4a8260a5e5 Add tests for git.cloned state
      - 311179da05 Add git.cloned state

• PR #47926: (dmurphy18) Backport of PR 47808 to 2018.3, improved grains support for AIX @ 2018-06-04 19:31:24 UTC
  - PR #47808: (dmurphy18) Updated AIX support for grains reported (refs: #47926)
  - c355daa93d Merge pull request #47926 from dmurphy18/backport_pr47808
  - ac15d209a Backport of PR 47808 to 2018.3, improved grains support for AIX

• PR #47927: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-06-04 18:55:12 UTC
- a46e42ab11 Merge pull request #47927 from rallytime/merge-2018.3
- 5baab66f4b Lint: Whitespace fix
- 7e1d278d19 Update old utils paths to use new utils paths
- 3273bbda7 Merge branch '2017.7' into '2018.3'
  * a2b588299b Merge pull request #47860 from terminalmage/state-writing-docs
    - 8cb33d3dec Quiet the linter
    - af51e1ef23 Use more elegant RST syntax
    - 91cd57d1e0 Update mocking to reflect changes in service module
    - b9ace5a859 Fix crappy mocking
    - bc9e3acef3 Lint fixes
    - d37f7e4f04 Add 2017.7.6 release notes
    - 9dddeefab Improve documentation on syncing states
    - f465fa3ca7 Add best practices docs for writing states
    - 93ee5ee2b0 Fix all Sphinx warnings
    - 64b9b4d0b8 Clarify that name would override the id declaration
  * d2f3377b5b Merge pull request #47877 from dwoz/sleep_audit
    - ebc7cde9cb Revert job chunk wait time change
  * 735e92093e Merge pull request #47917 from dwoz/winsuite
    - 118601ebd6 Fix windows tests suite breakage
  * 63efb76d51 Merge pull request #47822 from Ch3LL/win_user_test
    - 3a691b405f add user_home path for both windows and linux
    - 788ab771e Add user state integration tests to windows
  * b9da4f1221 Merge pull request #47876 from doesitblend/add-file-read-windows
    - 3f7e7ec327 Add file.read function to Windows module
  * cbe2ecfae8 Merge pull request #47882 from frogunder/45013
    - 38d114a2d2 add whoami test
- PR #47931: (rallytime) Back-port #47913 to 2018.3 @ 2018-06-04 14:39:16 UTC
  - PR #47913: (rarepop) Fixup! beacons/avahi_announce.py finding grains (refs: #47931)
  - 4db1f8c603 Merge pull request #47931 from rallytime/bp-47913
  - c51e732f4d Fixup! beacons/avahi_announce.py finding grains
- PR #47930: (rallytime) Back-port #47725 to 2018.3 @ 2018-06-04 14:38:58 UTC
  - PR #47725: (bbczeuz) network_settings beacon: Update example to follow new cfg convention (refs: #47930)
  - d05a6c70d3 Merge pull request #47930 from rallytime/bp-47725
  - 5c666409f3 Spelling fix
  - cfe0a5bb42 network_settings: Fix doc using new list/dict syntax
• **PR #47557**: (L4rS6) fix broken rabbitmq list policies in rabbitmq version 3.7 @ 2018-06-04 13:25:07 UTC
  - 484d83014b Merge pull request #47557 from L4rS6/fix-broken-rabbitmq-list-policies
  - 6d7ef27557 Merge branch '2018.3' into fix-broken-rabbitmq-list-policies
  - e043ea2833 refactored list_policies code and added more tests
  - eea81feb7b fix broken rabbitmq list policies in rabbitmq version 3.7

• **PR #47949**: (terminalmage) Continued troubleshooting on salt-jenkins 1000 @ 2018-06-04 13:17:14 UTC
  - 866a2bf5e Merge pull request #47949 from terminalmage/salt-jenkins-1000
  - 9c369c6aa8 Remove temp logging from test
  - af02d5ba7b Add result logging to run_script, make returns DRY

• **PR #47941**: (terminalmage) Update test logging for salt-jenkins @ 2018-06-03 02:40:56 UTC
  - 0b85d1273f Merge pull request #47941 from terminalmage/salt-jenkins-1000
  - fb66368a9 Create test logging for salt-jenkins 1000

• **PR #47924**: (Ch3LL) Catch all exceptions in git import for salt.utils.gitfs @ 2018-06-01 21:06:58 UTC
  - 58b5f2b4dd Merge pull request #47924 from Ch3LL/mac_gitpy
  - 75c51ad69b Catch all exceptions in git import for salt.utils.gitfs

• **ISSUE #47269**: (isdig) Reopen Windows Minion That Has IAM Role Cannot Access to S3 (refs: #47879)

• **PR #47879**: (dwoz) Fix ami role usage warts #47269 @ 2018-06-01 14:11:55 UTC
  - b88ec5258d Merge pull request #47879 from dwoz/ami_role_fix
  - 3884c2cf5 Fix ami role usage warts #47269

• **PR #47788**: (twangboy) Use pytz to calculate timezones @ 2018-05-31 18:33:20 UTC
  - b09596982b Merge pull request #47788 from twangboy/fix_47559
  - 0d229c6182 Merge branch '2018.3' into fix_47559
  - 9e612ec9e7 Fix markup in release notes
  - 60499d18f0 Skip test if pytz not present
  - 72cc361c7b Move pytz to 3rd party import, add to __virtual__
  - b8a6488688 Update __virtual__ function
  - 9923176b68 Use __utils__, fix unit tests
  - 73e033f555 Return offset in the same format as Unix
  - 5656183c5e Add timezone.list, add 2018.3.2 release notes
  - 986f6c9b2a Use pytz to calculate timezones

• **PR #47899**: (terminalmage) salt-jenkins issue 1000 @ 2018-05-31 18:24:49 UTC
  - ae73cb947 Merge pull request #47899 from terminalmage/salt-jenkins-1000
  - 25af9c932f7 WIP salt-jenkins issue 1000

• **PR #47753**: (Ch3LL) Add stderr launchctl helper class and fix service mac tests @ 2018-05-31 18:16:57 UTC
  - 8f78e3ae6 Merge pull request #47753 from Ch3LL/service_mac
  - 185c9e9ae2 only stop service if its running

30.2. Previous Releases
Salt Documentation, Release 3002.5

- e15e674955 Add stderr launchctl helper class and fix service mac tests

- **PR #47908:** (meaksh) Align SUSE salt-master.service 'LimitNOFILES' limit with upstream Salt @ 2018-05-31 18:13:27 UTC
  - 828bf39695 Merge pull request #47908 from meaksh/2018.3-align-suse-salt-master-service
  - efe308013a Align SUSE salt-master.service 'LimitNOFILES' limit with upstream Salt

- **PR #47868:** (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-05-30 21:20:38 UTC
  - b4bac9b41b Merge pull request #47868 from rallytime/merge-2018.3
  - e5d386e91c Update solaris core grains test
  - 267f09c1a0 Lint: Remove unused import
  - 120ee16b70 Replace old utils paths with new utils paths
  - dc32b67c03 Merge branch '2017.7' into '2018.3'

  * 4b28e510f1 Merge pull request #47853 from dwoz/py3-cloud-test
  * c2f8ae7f7c5 Fix for py3 ec2 cloud tests

  * 215efa6b73 Merge pull request #47847 from garethgreen-away/47833_reactor_runner_documentation
    * 03676712de Adding some addition documentation to the reactor runner indicating that the reactor system must be active prior to using it.

  * 0bf651b470 Merge pull request #47846 from Ch3LL/p_refresh_test
    * 019edad8e4 Fix flaky refresh pillar integration test

  * 799f5e979d Merge pull request #47552 from twangboy/fix_46981
    * cff9b7806 Merge branch '2017.7' into fix_46981
    * 81308a4a44 Add release notes for 2017.7.7
    * 008af0ac6b Fix unit tests
    * 87097ee586 Add comments about how get is returning data
    * 019edad8e4 Fix flaky refresh pillar integration test

  * ffc26bc373 Merge pull request #47691 from lomeroe/solaris_product_grains
    * 6889bec6b Merge branch '2017.7' into solaris_product_grains
    * 49053bc106 lint fix
    * 6f185c9179 another lint fix
    * dbfba6876 fix tons of errors in my tests
    * 8c9355d34c Lint fix
    * b29ec75d7a Update regexes in core grains for detecting the 'product' grain on Solaris Sparc systems. Additionally, copy the 'product' grain to 'productname' to be consistent with other OSes.

  * 96b7c0cc7e Merge pull request #47778 from Ch3LL/win_state_pkg
    * e1786de6b0 Merge branch '2017.7' into win_state_pkg
    * f8c467d3e6 Fix text editor error
    * 872e162137 Add test_pkg integration state tests to windows
* 6f934c2259 Merge pull request #47823 from Ch3LL/win_dns_test
  • 7848114d6a Add win_dns module integration tests for windows
* e63e04602d Merge pull request #47838 from rallytime/bp-47810
  • bd2b62fa66 better debug message
  • 83565c55df Address PR feedback
  • 50bce3a2f3 make decode_linode_plan_label a private function
  • 2ba4fc4ceafix raising when a ‘GB’ format invalid plan is supplied
  • 3afbe50d5a2 slight cleanup
  • 319fb3d3406 match quotation mark types properly
  • 9502d5a2d5 more consistent use of paren in logged warning
  • f52926ca87 log a warning when the user supplied a label we could decode but was not in the proper format
  • 121303d827 reduce complexity of get_plan_id by moving decoding of the user-supplied label to its own function
  • cf534c7314 Fix Linode plan selection
* 9ef6e60617 Merge pull request #47805 from twangboy/add_sign.bat
  • 66d8b0331a Add sign.bat script for signing packages
* 934209503d Merge pull request #47500 from dwoz/winuser
  • 0ca5224cbf Merge branch ’2017.7’ into winuser
  • e5948902af Use salt utils method for this_user
  • a056a293f1 Centralize test username lookup
  • 6a6ab69722 Get the current username on windows
* 552526f309 Merge pull request #47802 from rallytime/bp-40892
  • bb357da084 add minion function to reload beacon #35960
* c9ccc5b399 Merge pull request #47816 from Ch3LL/disable_windows
  • 2509d36888 Add windows to service disable ERROR check in tests
* 2cb6634c6b Merge pull request #47773 from frogunder/45011
  • 7c9b0bda33 add win_servermanager.list_available test
* e65dece202 Merge pull request #47807 from dwoz/winrmtests
  • 1f1cc1357a Increase instance size for cloud tests
  • be83cd21f1 Try an even bigger timeout

• PR #47900: (rallytime) [2018.3] Merge forward from 2018.3.1 to 2018.3 @ 2018-05-30 18:09:41 UTC
  • 21550dbd2d Merge pull request #47900 from rallytime/merge-2018.3.1-to-2018.3
  • 2801e9eb26 Merge branch ’2018.3.1’ into ’2018.3’

• ISSUE #30367: (paulfanelli) salt-run orchestration via state.sls always successful; it is ignoring state return value (refs: #47843)

30.2. Previous Releases
• **PR #47843**: (garethgreenaway) [2018.3] orchestration results False when function is False (refs: #47983) @ 2018-05-30 17:21:54 UTC
  - a0bf565741 Merge pull request #47843 from garethgreenaway/30367_orch_return_false_when_function_fails
  - 09242697b8 Merge branch '2018.3' into 30367_orch_return_false_when_function_fails

• **PR #47866**: (rallytime) Back-port #47814 to 2018.3 @ 2018-05-29 19:55:24 UTC
  - **PR #47814**: (travispaul) Bugfixes and unit tests for pkgin module (refs: #47866)
    - da6f7a5538 Merge pull request #47866 from rallytime/bp-47814
    - d500ab96b Lint test_pkgin.py
    - 4dac0b4a31 pkgin latest_version bugfix
    - 4ae031797 Bugfixes and unit tests for pkgin module

• **PR #47865**: (rallytime) Back-port #47600 to 2018.3 @ 2018-05-29 19:54:44 UTC
  - **PR #47600**: (travispaul) Prevent crash on NetBSD and OpenBSD when no swap is configured. (refs: #47865)
    - d9e7f2b5b1 Merge pull request #47865 from rallytime/bp-47600
    - f9f464af51 Prevent crash on NetBSD and OpenBSD when no swap is configured.

• **PR #47221**: (azelezni) Fix boto_ec2 unused parameter "network_interfaces" @ 2018-05-26 14:41:35 UTC
  - 61561a8279 Merge pull request #47221 from azelezni/fix-boto_ec2-network_interfaces
  - 03ee0023eb Fix unused network_interfaces parameter
  - 1ece61dafa Fix unused network_interfaces parameter
  - 3e07489c3c Fixing lint
  - 02609b6e61 Adding state files for new test.
  - 377e34c697 Updating function in saltmod to ensure that the result is a failure if the function being run returns as False.

• **PR #47850**: (rallytime) Fix autodoc for new swarm module @ 2018-05-26 01:53:16 UTC
  - c4d828c986 Merge pull request #47850 from rallytime/swarm-autodoc
  - 467c8fa4e5 Fix autodoc for new swarm module

• **PR #47800**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-05-26 01:17:40 UTC
  - 30b31c5db5 Merge pull request #47800 from rallytime/merge-2018.3
  - 9e3ee39e8 Typo: test_type --> text_type
  - 8877489386 Fix bad merge caught by test in zpool state
  - c328450be2 Update old utils paths to new paths
  - 4abfd26e68 Merge branch '2017.7' into '2018.3'
    * 46618d2ce7 Merge pull request #47765 from meaksh/2017.7-fix-zypper-error-reading-repo
      - 4475ba19b8 Prevent zypper from parsing repo configuration from not .repo files
    * 0e87559ee3 Merge pull request #47781 from rallytime/update-linode-sizes
      - a90c1b760e Update cloud test profile and docs to use new Linode size labels
    * 3ddc56cb9b Merge pull request #47748 from rallytime/merge-2017.7
- b75f5ae38e Merge branch '2017.7.6' into '2017.7'
- edf94c915e Merge pull request #47775 from gtmanfred/2017.7.6
- 548f65d056 catch UnsupportedOperation with AssertionError
- 17596f3025 Merge branch '2017.7.6' into '2017.7'
- 8c38ec75f Merge pull request #47769 from gtmanfred/2017.7.6
- 3fd8c0a82 skip test that breaks test suite
  - e458fa031 Merge branch '2017.7.6' into '2017.7'
- 0d5b473e2 Merge pull request #47747 from Ch3LL/rn_2017.7.6
- 8a5b34f7d9 Merge pull request #47702 from damon-atkins/2017.7.6_fix_pkg.latest_state
- adcc094e08 Merge branch '2017.7.6' into 2017.7.6_fix_pkg.latest_state
- d610c192d9 Merge pull request #47700 from yannj-fr/2017.7.6
- 961c1ef61e fix roots modification time check
  - 2a73e90df Merge branch '2017.7.6' into 2017.7.6
- 266749420f Merge pull request #47632 from gtmanfred/2017.7.6
- 2c50c0d2f5 fix pylin
  - 4a29057b16 Fix last test for tornado
- 550ef2e272 allow using tornado 5.0
- 6e468448b handle new _create_stream in tornado 5.0
- 2643c356af Merge pull request #47720 from rallytime/bp-47692-2017.7.6
- 6e5cb36839 Default windows to m1.small for ec2-classic
- 20d9785244 fix roots modification time check
- aef37dd1ce fix roots modification time check
- d51662e053 Ensure targeted_pkgs always contains value for non-windows.
- 83b4224cf8 Adjusted based on feedback.
- 12f983ce9f Whitespace lint issues
- 075d3d3c49 pkg.install execution module on windows ensures the software package is installed when no version is specified, it does not upgrade the software to the latest. This is per the design. pkg.latest must provide the versions to install to pkg.install
  - 0ddc864f90 Merge pull request #47779 from dwoz/winrmtest
    - d5e0af9d53 Use common timeout variable
    - 7e948eb540 Increase ec2 cloud timeouts to 1000
  - 17c4c8443c Merge pull request #47430 from baniobloom/vpc_association_not_found
    - 0f1d007f91 added catch for VPCAssociationNotFoundException
  - 9c5dde1449 Merge pull request #47525 from baniobloom/duplicate_sec_group_rule
    - d5c5df489 if we are trying to add the same rule then we are already in the desired state, return true
• 536ce2fa42 Merge pull request #47772 from gtmanfred/2017.7
  - 67756a50fd lock down dependencies for kitchen-salt
• 12b330f049 Merge pull request #47749 from terminalmage/issue47717
  - cd484be6f9 Fix "dnf list upgrades" parsing
• 5cd18b9e70 Merge pull request #47755 from dwoz/winrmtests
  - 57dd89e6c3 Default to ec2 classic compatible images
  - f89668920a Be explicit about winrm setting
• f45a96ba1d Merge pull request #47668 from Ch3LL/win_pkg_test
  - a8981024de Add pkg.latest_version windows test
• 7b12444df0 Merge pull request #47750 from dwoz/cloudtest
  - 63b722ba21 Allow ssh_interface to default to public_ips
• 27ff42210 Merge pull request #47737 from dwoz/win_timeout
  - e88833a07d Cloud test fixup
• 1a93f060f0 Merge pull request #47729 from UtahDave/fix_get_info_doc
  - 443a2d72a2 fix cli example to match function name
• 00a13761c7 Merge pull request #47682 from terminalmage/issue47182
  - d0243e8f23 Suppress spurious lint failure
  - 3b449f11fc Add regression test for excludes issue
  - 28a7d2b81c Skip __exclude__ in find_sls_ids
• 518f7bce62 Merge pull request #47708 from darkpixel/47696-do-not-enumerate-none
  - 54e9bf9ec9 Merge branch '2017.7' into 47696-do-not-enumerate-none
• cad062ea7 Merge pull request #47681 from rallytime/merge-2017.7
  - 6c06cb3ae3 Merge branch '2017.7.6' into '2017.7'
• fd2d45d9c2 Merge pull request #47683 from Ch3LL/mac_user_test
  - 5a1b2b9c7 Remove unnecessary setUp in states.test_user test for mac
• f323799c42 Merge pull request #47692 from dwoz/win_instance_type
  - 20b607d54 Default windows to m1.small for ec2-classic
• 990ee5c5d5 Merge pull request #47665 from gtmanfred/cloud
  - fd8a02decb use dictupdate to update the providers dictionary and merge lists
• a2ed8cb77f Merge pull request #47151 from zer0def/configparser-defaultsect
  - a8f2ad977e Merge branch '2017.7' into configparser-defaultsect
  - cca2a806c9 Made interaction with [DEFAULT] section in ConfigParser as sane as upstream permits.
• e6fb8342ef Merge pull request #47673 from terminalmage/bp-45808
  - 454291ad62 Fix errors when attempting to cache files with long names or URLs
• b0446aab07 Merge pull request #47670 from gtmanfred/2017.7
- dfd5a8715f add a pytest.ini and update a dependency for kitchen
- 0d06da6944 Merge pull request #47626 from gtmanfred/2017.7
  - 418364a533 make dev_python27.txt have the same message as dev_python34.txt
  - d53b44d10f remove lock file
  - 493edf93d use the toml dict format
  - e0f7cc1447 add proxy tests decorator to pytest conftest
  - 0a621dd0ec add Pipfile for managing dependencies in salt
  - f78b81db94 simplify dev and base.txt to single files
- a07a8906a0 Merge pull request #47578 from Ch3LL/mac_service_disabled
  - 6032a01f55 change disable check for upstart service on ubuntu14
  - 33b4cfbc5b Change service assertion check for systemd platforms
  - 14896f9743 change codeauthor and class name
  - 502c5bfdf5 Ensure mac_service.disabled is correctly querying services

  95d4488f01 Merge branch '2017.7.6' into 47696-do-not-enumerate-none
  16c2153385 Merge pull request #47667 from Ch3LL/mac_service_disabled
  ba40d3d1a1 Update test_mac_service_enabled_auto_login to test both py2 and py3
  a4921e86c9 Merge pull request #47645 from Ch3LL/py3_rm_pip
  225d90ad4c query the pip path for test test_issue_2087_missing_pip
  e441733ac1 Merge pull request #47646 from rallytime/bp-47601-and-47643
  9e1d1a5ef8 Fix typo
  4e94609136 Remove unwanted file
  0109249c78 use ignore-undefined-variable
  37caeb7f4 Ignore pylint WindowsError
  c1135d90c7 Better doc string
  e53b9ed9 Skip tests when we can not use runas
  041e4c6dddb Wrap properties loop with a check for None. Closes GH-47696

- PR #47581: (twangboy) Add get_encoding salt util @ 2018-05-25 20:40:07 UTC
  - da9eaa1825 Merge pull request #47581 from twangboy/fix_47274
  - ff6600f25e Merge branch '2018.3' into fix_47274
  - 6eff2f847b Add suggested changes
  - e27e9fd1e7 Fix tests on Py3
  - f398cbbdda Use os.linesep.join instead of textwrap.dedent
  - 771392e299 Fix unit tests, add newline=\n to io.open
  - c0f735dde3 Remove comment
  - 6d877bb48b Add comment
- 9f369d3f22 Remove to_encoding, create get_encoding
- 68be0f9ed2 Add is_encoding salt util

- **ISSUE #47694**: (thuhak) utils/boto and utils/boto3 load error (refs: #47726)
- **PR #47726**: (gtmanfred) rename boto to botomod @ 2018-05-25 20:37:37 UTC
  - b860d95b2c Merge pull request #47726 from gtmanfred/2018.3
  - 43997a466e fix tests
  - 59180e09a8 switch all salt.utils.boto* calls to __utils__ calls
  - 7e30f459e9 rename boto to botomod

- **ISSUE #47701**: (babs) elasticsearch.index_template_present state with check_definition: True fails. (refs: #47703)
- **PR #47804**: (rallytime) Back-port #47761 to 2018.3 @ 2018-05-23 20:11:55 UTC
  - **PR #47803**: (rallytime) Back-port #47703 to 2018.3 @ 2018-05-23 20:12:30 UTC
    - PR #47703: (babs) Fix elasticsearch.index_template_present with check_definition (refs: #47803)
    - 2a270162d0 Merge pull request #47803 from rallytime/bp-47703
    - 8fce0c562d Fix elasticsearch with check_definition
  - **PR #47761**: (zerthimon) Fix userdata in openstack instances (refs: #47804)
    - 780043e6fd Merge pull request #47804 from rallytime/bp-47761
    - b7bc30633 Fix userdata in openstack instances

- **PR #47776**: (garethgreenaway) [2018.3] Fixes to failing _before_connect tests @ 2018-05-23 15:10:35 UTC
  - 1e8f891c42 Merge pull request #47776 from garethgreenaway/970_two_minion_unit_tests_failing
  - a5011b49ab Merge branch '2018.3' into 970_two_minion_unit_tests_failing

- **PR #47783**: (rallytime) [2018.3] Merge forward from 2018.3.1 to 2018.3 @ 2018-05-23 14:51:56 UTC
  - 4a6ca67883 Merge pull request #47783 from rallytime/merge-2018.3
  - 1adb8e2a7f Merge branch '2018.3.1' into '2018.3'

- **PR #47149**: (meaksh) [2018.3] Strip trailing commas on Linux user's GECOS fields @ 2018-05-22 21:18:49 UTC
  - f86a85d28 Merge pull request #47149 from meaksh/2018.3-remove-trailing-commas-on-linux-user-gecos-fields
  - 60ec3230db Merge branch '2018.3' into 2018.3-remove-trailing-commas-on-linux-user-gecos-fields

- **ISSUE #46938**: (racooper) Beacons documentation update for 2018.3 (refs: #47740)
- **PR #47740**: (garethgreenaway) [2018.3] Updating Beacon topic to include list based configuration for Beacons @ 2018-05-21 13:58:01 UTC
  - 19f4137b63 Merge pull request #47740 from garethgreenaway/46938_beacons_documentation
  - 5d23ef4dd8 Updating Beacon topic to include list based configuration for Beacons

- **PR #47710**: (terminalmage) salt.loader: add error logging when whitelist lookup fails @ 2018-05-18 16:56:18 UTC
  - 22807ac756 Merge pull request #47710 from terminalmage/fix-loader-whitelist
- 6192391b7b Add additional missing modules to whitelist
- 7192c38f66 Change key -> function to make log message more clear
- 91f9fd38fd Fix loader whitelists in unit tests
- d4f2662e5b Add error logging when whitelist lookup fails

**PR #47680:** (rallytime) [2018.3] Merge forward from 2018.3.1 to 2018.3 @ 2018-05-17 21:30:27 UTC
- b91c0f5647 Merge pull request #47680 from rallytime/merge-2018.3
- 9b1773a763 Merge branch '2018.3.1' into '2018.3'

**PR #47545:** (dmurphy18) Fix non-root build and signing for rpm packages @ 2018-05-17 21:20:10 UTC
- dbf12f9be2 Merge pull request #47545 from dmurphy18/fix_nonroot_build
- 220f887fa6 Fixed review comment, changed file.chown to file.makedirs_perms
- b15a1652b5 Changed versionadded from 2018.3.1 to 2018.3.2, to reflect when change should be accepted
- 90eb03e375 Additional error checking and minor cleanup
- 40d77e03d2 Correct building rpms with non-root user

**ISSUE #47546:** (ender8282) archive.extracted fails when archive includes files with non-ascii names with 2018.3.0 (refs: #48015, #47572)

**PR #47572:** (garethgreenaway) [2018.3] archive module, filenames with Unicode characters @ 2018-05-17 20:41:11 UTC
- 69056e5b67 Merge pull request #47572 from garethgreenaway/47546_archive_non_ascii_filenames
- 5e97b8b44a Updating with requested changes.
- cc1aa75a2f only convert to bytes when using Python2
- 0fe32f4066 Updating integration/modules/test_archive to include filenames with unicode characters.
- 5a9cadd125 Accounting for when files in an archive contain non-ascii characters

**PR #47661:** (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-05-16 15:53:36 UTC
- cb04d9c37e Merge pull request #47661 from rallytime/merge-2018.3
- dd3e63f0a Merge branch '2017.7' into '2018.3'
  * f63d801858 Merge pull request #47639 from rallytime/merge-2017.7
    - 1503f1020f Merge branch '2017.7.6' into '2017.7'
    - 6f178ca908 Merge pull request #47570 from gtmanfred/2017.7.6
    - 84aa034e03 Update dependency to msgpack
    - 98bd598701 Merge pull request #47523 from rallytime/man-pages
    - 48ec8a78dec [2017.7.6] Update man pages
    - e608ea9617 Merge pull request #47517 from rallytime/bp-47505-2017.7.6
    - 0734578533 Raise proper invocation errors
  * db0ee5e8eb Merge pull request #47643 from dwoz/runas_detect
    - 8c5e54b8b3 Fix typo
    - 69bc88f1c6 Remove unwanted file
  * 6dd3ab9f06 Merge pull request #47601 from dwoz/runas_detect
Salt Documentation, Release 3002.5

- 3235ac08cb use ignore-undefined-variable
- 58911d510a Ignore pylint WindowsError
- 17987d3c5a Better doc string
- a48ac26573 Skip tests when we can not use runas

  * f61ccae627 Merge pull request #47611 from Ch3LL/deb_doc
  - 6d2ddd050f One more grammar fixup
  - 2d5ff01261 Grammar fix
  - 138847c9c4 Update debian install docs to reflect new latest debian releases

  * 9e2fe284e4 Merge pull request #47598 from rallytime/bp-47568-2017.7
    - 09458c65cf Add exception logging on serialize/deserialize exceptions
    - c62c855f9c salt.serializers.yaml/yamlex: remove invalid multi_constructor

  * 8a7913ccc3 Merge pull request #47548 from Ch3LL/syslog
    - 31f13a4197 sysloghander: check for 3.5.4 python version
    - a020352a03 Catch Sysloghandler errors when log file does not exist

  * 82fb6ba366 Merge pull request #47508 from gtmanfred/2017.7
    - 1a87e7455f allow pulling the mysql_query.run_file to pull from the fileserver

  * be29b58a09 Merge pull request #47562 from rallytime/bp-47513
    - 357bc084b3 fix #46546

  * d3121fcfa4 Merge pull request #47471 from terminalmage/2017.7-fix-inconsistent-scheduled-jid-with-returners
    - f079939500 Do not override jid on returners, only sending back to master

  * 662f6086db Merge pull request #4713 from Circuitsoft/2017.7
    - 237560b745 Merge branch '2017.7' into 2017.7
    - cb674f1bc6 Enable opkg as pkgrepo handler on Poky
    - 7a58fd157e Enable opkg on non-NILinuxRT systems
    - 139360c55f Add Poky to OS Information Grains
    - d74057224d Un-normalize os_family in pkgrepo state

- **PR #47672**: (terminalmage) Backport #47487 to 2018.3 @ 2018-05-16 13:55:40 UTC
  - **PR #47487**: (rosscdh) bad ref to error fix (refs: #47672)
  - d17a16b648 Merge pull request #47672 from terminalmage/bp-47487
  - 12abbf0cf7 bad ref to error fix

- **ISSUE #47501**: (mateiw) salt-ssh doesn't propagate pillar when overriding pillar in module.run + state.apply (refs: #47504)

- **PR #47504**: (mateiw) Fix pillar propagation in salt-ssh when overriding pillar in module.run + state.apply @ 2018-05-16 13:55:05 UTC
  - 9d4f5203a7 Merge pull request #47504 from mateiw/2018.3-salt-ssh-pillar-propagation-issue-47501
  - 3ffa412ee5 Merge branch '2018.3' into 2018.3-salt-ssh-pillar-propagation-issue-47501
- 2f1485e067 Option to merge current pillar with opts['pillar'] during pillar compile

**PR #47212**: (weswhet) fix macOS running as user. @ 2018-05-16 13:54:23 UTC
- 4fe78bb9f Merge pull request #47212 from weswhet/fix-macos-runs
- 8ee11d74af Merge branch '2018.3' into fix-macos-runs
- e78fa45927 adding in requested changes
- 33c1492099 Merge branch '2018.3' into fix-macos-runs
- 0ecabcae78 adding in a fix for running commands as a user on macos

**ISSUE #47587**: (FedericoOlivieri) --out=table broken in 2018.3.0 'str' object but received a 'unicode' (refs: #47674)

**PR #47674**: (terminalmage) Fix regression in table outpuffer due to unicode types @ 2018-05-16 13:41:04 UTC
- 0c7439a955 Merge pull request #47674 from terminalmage/issue47587
- 43e3dcd398 Fix Python 3 incompatibility in table outpuffer
- d729656703 Add unit tests for table outpuffer
- 907d182dea Fix regression in table outpuffer due to unicode strings

**PR #47617**: (aesposito91) Update napalm.py @ 2018-05-15 15:44:35 UTC
- d1a1a594e9 Merge pull request #47617 from aesposito91/2018.3
- 9fd5b01d77 Update napalm.py

**ISSUE #46871**: (guettli) Sentry Logging Handler (refs: #47649)

**PR #47649**: (paulcollinsiii) Some additional details about Sentry for the docs @ 2018-05-15 15:41:36 UTC
- 049abe2850 Merge pull request #47649 from paulcollinsiii/sentry_docs
- 2a8df6d65d7 Some additional details about Sentry for the docs

**PR #47642**: (garethgreenaway) [2018.3] Updating templates used by salt-extend for unicode goodness @ 2018-05-15 15:38:26 UTC
- 8a21b864df Merge pull request #47642 from garethgreenaway/unicode_update_salt_extend_templates
- 68d73f7afc Updating the templates that the salt-extend utility uses to include unicode_literals & print_function
  * 0232a6e1ad Add 'other' as valid kwargs for 'user.add' method
  * ff861d9089 Merge branch '2018.3' into 2018.3-remove-trailing-commas-on-linux-user-gecos-fields

**PR #47603**: (terminalmage) Move/merge more test modules @ 2018-05-14 20:48:43 UTC
- 99f53c0a9f Merge pull request #47603 from terminalmage/more-test-renaming
- d612bd27e4 Move/merge more test modules

**PR #47640**: (rallytime) [2018.3] Merge forward from 2018.3.1 to 2018.3 @ 2018-05-14 17:59:06 UTC
- cc3aa88f3 Merge pull request #47640 from rallytime/merge-2018.3
- 2827c56399 Merge branch '2018.3.1' into '2018.3'
  * f1680f1d9b Do make comparisons in a single line
  * 7de455c12 Add unit test for new method 'user.chother'
  * 694882632c Add 'other' attribute to GECOS fields to avoid inconsistencies with chfn

30.2. Previous Releases

2147
- 6c089c9de1 Fix unsupported chars checking on GECOS fields
- d5c9ca0fbc Add unit tests for GECOS fields
- ed940c4f58 Strip trailing commas on Linux user GECOS fields

- PR #47589: (Ch3LL) Remove duplicate file id in watch_any doc example @ 2018-05-10 22:06:00 UTC
  - 4ec63dd041 Merge pull request #47589 from Ch3LL/watch_any_doc
  - 8cb97a48f5 Add additional state to watch_any doc example
  - f7223a3bbf Remove duplicate file id in watch_any doc example

- PR #47564: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-05-10 19:13:36 UTC
  - 9836a7e62b Merge pull request #47564 from rallytime/merge-2018.3
  - 295e302fcf Lint: Fix syntax error from bad merge-conflict resolution
  - 25f03ae425 Merge branch '2017.7' into '2018.3'
  - 291d3d3bd8 Merge pull request #47540 from terminalmage/cmdmod-home-fix
  - e4b277f82e Fix corner case where runas user's HOME env value is incorrect
  - 49af577b3e Merge pull request #47547 from terminalmage/gitfs-tutorial
  - 806fb298a Add masterless mode docs to gitfs tutorial
  - 476ba053d1 Merge pull request #47538 from terminalmage/pip-docs
  - 98e8ffe8a4 Fix/clarify some of the pip module documentation
  - 7cc8d9d30a Merge pull request #47524 from dwoz/whitelistlines
  - 2605ff8712 Gracefully handle blank lines in whitelist.txt
  - f1a5b13072 Merge pull request #47527 from dwoz/test_file_name
  - 4ae7ca57a Update doc string
  - b3289e5a1c Fix test file name
  - e9c1723175 Merge pull request #47408 from Ch3LL/skip_diskusage
  - 068da8ad7d Merge branch '2017.7' into skip_diskusage
  - 1a7ff8e0d return error if diskusage not available
  - 10bd63a976 Skip status.diskusage integration tests on macosx
  - 2f50ff7bc8 Merge pull request #47480 from baniobloom/ConflictingDomainExists
  - d22ed7dffa added handling for the aws error ConflictingDomainExists
  - 7f53be6e92 Merge pull request #47444 from terminalmage/render_state-spurious-error
  - a1e9fe00fd Skip trying to render a template for a nonexistent SLS file
  - 50b9e4d79d Merge pull request #47478 from terminalmage/rename-pip-state-test
  - 9f7a9ebebd Rename pip state test modules to match naming convention
  - e78ac0f9b7 Merge pull request #47505 from dwoz/win_dsc_fixes
  - d1fcb40d1c Raise proper invocation errors
  - 0d4d5047d8 Merge pull request #47499 from dwoz/win_run_timeout_again
  - c6697b9f16 Move kill process tree and re-use it
PR #47565: (rallytime) Back-port #47440 to 2018.3 @ 2018-05-10 18:15:50 UTC
  - PR #47440: (kt97679) fix for the race condition, details are here: https://github.com/salt...
  - b22657ff9e Merge pull request #47565 from rallytime/bp-47440
  - 7c43417d46 addressed feedback
  - 1abe05207c fix for the race condition, details are here: https://github.com/saltstack/salt/issues/33223#

PR #47590: (Ch3LL) Fix firewalld prune_services deprecation warning @ 2018-05-10 17:01:48 UTC
  - 17e0fdca6c Merge pull request #47590 from Ch3LL/firewall_warn
  - d29b8e0ae2 Fix firewalld prune_services deprecation warning

PR #47568: (terminalmage) salt.serializers.yaml/yamlex: remove invalid multi_constructor (refs: #47598) @ 2018-05-10 16:18:07 UTC
  - 8e26624db3 Merge pull request #47568 from terminalmage/salt-jenkins-971

ISSUE #38671: (MikeSpaceG) zpool.get error (refs: #47224)

PR #47563: (rallytime) Back-port #47224 to 2018.3 @ 2018-05-10 16:18:07 UTC
  - PR #47224: (sjorge) Zpool zol fixes (refs: #47563)
  - c3ee7053fb Merge pull request #47563 from rallytime.bp-47224
  - 1d191445a7 FIX #38671 - zpool.get should support older zfs version
  - 23705b12cb zpool.scub docs should mention pause is not always available
  - d73885aa5c Make sure the docs mention that createboot is only available on illumos

PR #47569: (Ch3LL) Update salt.utils.path mock in virtual core test @ 2018-05-10 15:18:31 UTC
  - 8e26624db3 Merge pull request #47569 from Ch3LL/core_virt

PR #47576: (rallytime) [2018.3] Small Documentation Fixes @ 2018-05-10 14:08:11 UTC
  - f93715eea Merge pull request #47576 from rallytime/doc-updates
  - ca927fc14b Add extra lines that are needed for proper code-block formatting
  - b330d763a4 Remove infoblox state autodoc file

30.2.36 Salt 2018.3.4 Release Notes

Version 2018.3.4 is a bugfix release for 2018.3.0.
Salt Documentation, Release 3002.5

State Changes

- The `host.present` state can now remove the specified hostname from IPs not specified in the state. This can be done by setting the newly-added `clean` argument to `True`.

Statistics

- Total Merges: 531
- Total Issue References: 111
- Total PR References: 412
- Contributors: 76 (SuperShoot, Ch3LL, ClaudiuPID, Giandom, KaiSforza, MTecknology, ManicoW, OrangeDog, ShantonRU, The-Loeki, Yxnt, aarnaud, amendlik, angeloudy, bartlaarhoven, bbh-kmd, bbinet, bdung, bergmannf, bluesilverx, bornwitbugs, brejoc, cachedout, casselt, cro, cstarke, dgmorrisjr, dmurphy18, dubb-b, dwoz, frogunder, garethgreenaway, gtmanfred, isbm, jacobweinstock, jgleissner, jokod, jpsv, juurdal, kiemlicz, kual-Bajpai, lexvella, lomeroe, m03, madrisan, mat813, mattp-, max-arnold, mchugh19, meaksh, michaelgibson, nhavens, pirogoeth, rallytime, rkienger, rmarcinik, rongzeng54, rwaueber, s0undt3ch, sathieu, sheagcraig, sileniuis, sunyq, t0fik, terminalmage, terrible-broom, thebluesnevrdie, thetaurean, tlemarchand, tonybaloney, twangboy, waynew, weswhet, whytewolf, yosnoop, zwo-bot)

Changelog for v2018.3.3..v2018.3.4

Generated at: 2019-02-06 20:56:17 UTC

- **PR #51525**: (twangboy) Backport 51095 to 2018.3.4 @ 2019-02-06 20:20:37 UTC
  - a37fb7d Merge pull request #51525 from twangboy/backport_51095_2018.3.4
  - b6acc92 Backport 51095
- **PR #51520**: (frogunder) Update man pages for 2018.3.4 @ 2019-02-06 18:42:13 UTC
  - 602ddc8 Merge pull request #51520 from frogunder/man_pages
  - 0cbe3f8 Update man pages for 2018.3.4
- **ISSUE #51428**: (yosnoop) salt.utils.dns.lookup fails with dig method on EL7 (refs: #51429)
- **PR #51429**: (yosnoop) The `+nocl` is supported much wider than `+noclass` @ 2019-02-06 17:48:48 UTC
  - 1f981c6 Merge pull request #51429 from yosnoop/replacement-noclass-with-nocl-for-dig
  - 5231e73 Merge branch '2018.3.4' into replacement-noclass-with-nocl-for-dig
  - 14e6f7b In case the test machine can't resolve
  - 95e8a2f The `+nocl` is supported much wider than `+noclass`
  - a00d708 Test dig options for salt.utils.dns.lookup
- **ISSUE #49226**: (defanator) salt-cloud grains inheritance from provider to profile (2018 vs 2016) (refs: #51366)
- **PR #51441**: (Ch3LL) Backport #51366 into 2018.3.4 @ 2019-02-06 17:42:19 UTC
  - PR #51366: (dwoz) Cloud provider and profile configs are merged [2018.3] (refs: #51441)
  - 209e632 Merge pull request #51441 from Ch3LL/bp-51366
  - 5bc466e Fix python 3 path for shell test cases
  - 5351e5c Add testing path to run_script commands
- 2d8a364 Fix linter issues
- 9b8718a Cloud provider and profile configs are merged

- **PR #51458**: (twangboy) Add Py2 Warning for Py2 Installer @ 2019-02-06 17:33:02 UTC
  - 90a8682 Merge pull request #51458 from twangboy/add_py2_warning
  - 05522c0 Merge branch '2018.3.4' into add_py2_warning

- **PR #51460**: (twangboy) Update installer mac 2018.3.4 @ 2019-02-06 17:31:18 UTC
  - b492021 Merge pull request #51460 from twangboy/update_installer_mac_2018.3.4
  - 3c92688 Merge branch '2018.3.4' into update_installer_mac_2018.3.4

- **PR #51471**: (twangboy) Fix the failing dns test on Windows @ 2019-02-03 22:03:34 UTC
  - 892d98c Merge pull request #51471 from twangboy/fixed_test_win_dns_client
  - c9f6b01 Merge branch '2018.3.4' into fixed_test_win_dns_client

- **PR #51462**: (ShantonRU) Fix insecure SQL queries in MySQL module @ 2019-02-01 21:19:20 UTC
  - a0530d5 Merge pull request #51462 from ShantonRU/fix-insecure-sql-queries-in-mysql-module
  - d3ef2cb Merge branch '2018.3.4' into fix-insecure-sql-queries-in-mysql-module
  - f47dda6 Fix improper use of socket authentication in mysql.user_chpass
  - ed6a2f Fix insecure SQL queries in mysql.user_chpass

- **PR #51445**: (terminalmage) Remove custom grains module from 2018.3 branch @ 2019-02-01 16:48:13 UTC
  - 48936c2 Merge pull request #51445 from terminalmage/fix-custom-grains-traceback
  - 191235d Remove custom grains module from 2018.3 branch
  - 72fd1a2 Roll back icon change
  - 7dd1704 Add welcome_py2.rtf
  - c93e9e3 Add Py2 Warning to installer package
  - b658900 Add Py2 Warning for Py2 Installer

- **PR #51438**: (twangboy) Add missing raise statement @ 2019-01-30 20:04:05 UTC
  - a880e42 Merge pull request #51438 from twangboy/fix_raise_2018.3.4
  - 5830fad Add missing raise statement

- **PR #51432**: (Ch3LL) Backport #51324 into 2018.3.4 @ 2019-01-30 17:51:50 UTC
  - PR #51324: (garethgreenaway) [2018.3] Fixes to x509 module and test (refs: #51432)
  - 28b898e Merge pull request #51432 from Ch3LL/bp-51324
  - bd41ff0 Fixing various bits in x509 module and unit test to ensure tests are passing on python2 & python3

- **PR #51377**: (twangboy) Fix issue when directory doesn’t exist in LGPO module (2018.3.4) @ 2019-01-29 17:33:25 UTC
  - 01717d2 Merge pull request #51377 from twangboy/fixed_auditpol_2018.3.4
  - 19e5181 Fix issue when directory doesn’t exist

- **PR #51338**: (Ch3LL) Backport #51207 into 2018.3.4 @ 2019-01-27 23:44:59 UTC
- **PR #51207**: (twangboy) Backport 50771 to 2018.3 (refs: #51338)
- **PR #50771**: (terminalmage) Fix failing opensuse tests (refs: #51207)
- 43a9d2f Merge pull request #51338 from Ch3LL/bp-50771
- 345ae67 Backport PR #50771 to 2018.3 branch
- **ISSUE #51158**: (AndreiPashkin) saltmod.state doesn’t respect “roster” argument (refs: #51170)
- **PR #51337**: (Ch3LL) Backport #51170 into 2018.3.4 @ 2019-01-27 23:44:24 UTC
  - **PR #51170**: (dwoz) Honor roster system for ssh orchestrations (refs: #51337)
  - 3dcd11d Merge pull request #51337 from Ch3LL/bp-51170
  - 4e85505 Merge branch '2018.3.4' into bp-51170
- **ISSUE #50221**: (tkaehn) file.managed: contents_pillar and pillar.file_tree with keep_newline is broken in 2018.3.3 (refs: #51252)
- **PR #51340**: (Ch3LL) Backport #51252 into 2018.3.4 @ 2019-01-27 23:42:49 UTC
  - **PR #51252**: (dwoz) Preserve newlines from pillar data for file.managed [2018.3] (refs: #51340)
  - 7656aa5 Merge pull request #51340 from Ch3LL/bp-51252
  - e74ac6c Fix py3 managed.file test failure
  - 6f2c7cf Remoe un-needed log statement
  - 824950c Fix 50221 regression test on Windows
  - 1840af9 preserve newlines from pillar data for file.managed
- **PR #51290**: (s0undt3ch) [2018.3.4] Fix minion start @ 2019-01-25 15:14:47 UTC
  - 90ca1d Merge pull request #51290 from s0undt3ch/hotfix/fix-network
  - da3ace Merge branch '2018.3.4' into hotfix/fix-network
  - 04f16b8 Fix tests. We no longer get ipaddress instances back.
  - c3fa82a Fix minion start issue
    - * c893dc4 Fix saltmod roster test
    - * b61854f Roster defines the roster system not a file
    - * 484ab48 Fix linter
    - * 5e2db2f Honor roster file for ssh orchestrations
- **PR #51317**: (terminalmage) Fix regression in dynamic pillarenv @ 2019-01-25 09:29:44 UTC
  - c8db7e3 Merge pull request #51317 from terminalmage/fix-pr-50417
  - 4be2891 Merge branch '2018.3.4' into fix-pr-50417
- **PR #51311**: (twangboy) Fix failing test unit.states.test_file.TestFileState.test_managed on Windows @ 2019-01-24 21:09:35 UTC
  - e246f04 Merge pull request #51311 from twangboy/fix_test_file.test_managed
  - f4177e0 Remove mode parameter on Windows
  - 4c4ded3 Fix regression in dynamic pillarenv
- **ISSUE #51195**: (littleski) fstab improperly escaped when spaces are used in options (refs: #51226)
- **ISSUE #27160**: (martinadolfi) salt.states.mount persistence error using spaces in route (refs: #39593)
• PR #51292: (Ch3LL) Backport #51226 into 2018.3.4 @ 2019-01-24 11:11:34 UTC
  - PR #51226: (garethgreenaway) [2018.3] Handle spaces in fstab opts, similar fix to #39593 (refs: #51292)
  - PR #39593: (zwo-bot) Fix issue #27160 - escape whitespaces in fstab entry in module mount when persist=True (refs: #51226)
  - 40b20126 Merge pull request #51292 from Ch3LL/bp-51226
  - aba114e Merge branch '2018.3.4' into bp-51226
• PR #51295: (Ch3LL) Backport #51279 into 2018.3.4 @ 2019-01-24 11:10:19 UTC
  - PR #51279: (twangboy) Backport __context__ support from develop (refs: #51295)
  - fc0bec5 Merge pull request #51295 from Ch3LL/bp-51279
  - 5c4a7a4 Merge branch '2018.3.4' into bp-51279
• PR #51293: (Ch3LL) Backport #51233 into 2018.3.4 @ 2019-01-24 09:17:49 UTC
  - PR #51233: (Ch3LL) Backport #51105 to 2018.3 (refs: #51293)
  - PR #51105: (garethgreenaway) [develop] Report permission changes in test mode (refs: #51233)
  - dacd1ea Merge pull request #51293 from Ch3LL/bp-51233-2
  - a155fd7 Accounting for when permissions are not returned from file.check_perms, eg. windows systems.
  - 53ba068 When test=True and there are permissions changes, report it.
  - d2eba77 Remove network.py patch
  - d431c71 Add __context__ support
    * de6c13d Handle spaces in fstab opts, similar fix to #39593
• ISSUE #51248: (johnnybubonic) "[WARNING ] The file_roots parameter is not properly formatted, using defaults" (refs: #51278)
• PR #51278: (dwoz) Warn about proper validation option @ 2019-01-22 22:13:13 UTC
  - 1abff2b Merge pull request #51278 from dwoz/issue51248
  - c614198 Use pillar roots validation method
  - 0d2b0c6 Fix linter warnings
  - 5b98895 Fix wart in pillar_roots validation
• PR #51230: (Ch3LL) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2019-01-18 19:50:10 UTC
  - e53e9b1 Merge pull request #51230 from Ch3LL/merge-2018.3
  - 0ef7675 Merge branch '2017.7' into '2018.3'
  - 4a12c5f Merge pull request #50852 from mirceaulinic/fx-capirca
    * fa91267 Merge branch '2017.7' into fix-capirca
    * 71913ff Merge branch '2017.7' into fix-capirca
    * 6fc3484 Lint?
    * 3d56750 Extra newline for lint
    * 5176cd8 Improve the Capirca and related modules for ACL config generation
  - 3f4759b Merge pull request #50923 from astronouth7303/patch-2
    * 4f631a6 Document [% include %]
- 210e817 Merge pull request #51111 from s0undt3ch/2017.7
  - 08e0ae7 Update to salt-bootstrap v2019.01.08

- **ISSUE #51211**: (sathieu) file_roots envs with slash leads to "No such file or directory: '/var/cache/salt/master/file_lists/roots/.foo/bar.w'" (refs: #51212)

- **ISSUE #48132**: (BenjaminSchiborr) Dynamic File Roots (refs: #51212)

- **PR #51212**: (sathieu) Allow slashes in file_roots envs. @ 2019-01-17 17:29:18 UTC
  - 26008ef Merge pull request #51212 from sathieu/file_roots_slash
  - b769f18 Allow slash in file_roots envs
  - f9437e2 Test for file_roots envs with slash leads to "No such file or directory"

- **PR #51209**: (garethgreenaway) [2018.3] Back-port PR #51124 to 2018.3 @ 2019-01-17 13:28:32 UTC
  - PR #51124: (Ch3LL) Handle encoding when opening file for both py2/py3 (refs: #51209)
  - 5916282 Merge pull request #51209 from garethgreenaway/bp-51124
  - 82acce4 Handle encoding when opening file for both py2/py3

- **PR #51184**: (twangboy) Fix win_lgpo_auditpol salt util on Windows @ 2019-01-16 18:08:01 UTC
  - 094bd33 Merge pull request #51184 from twangboy/fix_auditpol
  - 2e68d35 directly call cmd.run_all

- **PR #51191**: (Ch3LL) Backport #50918 into 2018.3 @ 2019-01-16 18:02:19 UTC
  - PR #50918: (twangboy) Fix test_debian_ip on Windows (refs: #51191)
  - ac71922 Merge pull request #51191 from Ch3LL/bp-50918
  - 7300d84 Skip debian tests on Windows
  - 4622433 Fix test_debian_ip on Windows

- **ISSUE #49883**: (kiemlicz) salt-cloud azurearm is not working (refs: #51144)

- **PR #51144**: (jgleissner) 2018.3 azurearm py3 @ 2019-01-15 16:46:35 UTC
  - e7f3a3 Merge pull request #51144 from jgleissner/2018.3-azurearm-py3
  - 3178f1a msazure.py: remove unused imports
  - 99a4b9d azurearm: fix list_locations
  - aeebe34b azurearm: fix show_instance function
  - d80669f msazure: fix object_to_dict for python 3

- **PR #51171**: (twangboy) Add random sleep time to avoid overloading Windows @ 2019-01-15 16:45:33 UTC
  - 1206f92 Merge pull request #51171 from twangboy/fix_crypt
  - 6ca93b Add random sleep time to avoid overloading Windows

- **PR #51174**: (jpsv) Update OpsGenie to use their V2 API (2018.3) @ 2019-01-15 16:44:54 UTC
  - a96deed Merge pull request #51174 from jpsv/2018.3
  - 055823e Update opsgenie.py
  - 501c8df Merge branch '2018.3' into 2018.3
  - 220aa8a Update opsgenie.py
- 5dc21cc Update to from V1 API to V2
- f93ce7c Update to V2 API

• ISSUE #42280: (michaelgibson) make ldap eauth 2 factor compatible (refs: #42426, #45347)

• PR #51010: (amendlik) Allow unauthenticated bind for listing LDAP groups @ 2019-01-15 16:43:42 UTC
  - PR #45811: (gtmanfred) Fix ldap eauth (refs: #51010)
  - PR #45347: (amendlik) LDAP group membership (refs: #51010)
  - PR #42426: (michaelgibson) adding 2-factor auth capability to ldap eauth module - #42280 (refs: #45347)
  - 563d487 Merge pull request #51010 from amendlik/ldap-groups
  - cd33ed Merge branch '2018.3' into ldap-groups
  - 94f8ee4 Update unit tests for auth.ldap
  - 08e36d0 Allow unauthenticated bind for listing LDAP groups

• PR #51112: (s0undt3ch) [2018.3] Update to salt-bootstrap v2019.01.08 @ 2019-01-15 16:42:09 UTC
  - 6dc3752 Merge pull request #51112 from s0undt3ch/2018.3
  - 4f1d846 Update to salt-bootstrap v2019.01.08

• PR #51097: (terminalmage) Fix improper exception raises (2018.3) @ 2019-01-15 16:38:25 UTC
  - b19c990 Merge pull request #51097 from terminalmage/fix-keyerror-raise
  - a3c0b49 Fix poorly-written test
  - c0ff7b1 Fix more incorrect exception raises
  - f1d1bc Fix improper KeyError raise

• PR #51169: (twangboy) More descriptive error when missing GitPython or PyGit2 @ 2019-01-15 16:37:44 UTC
  - 8920a86 Merge pull request #51169 from twangboy/fix_git_state
  - 2f2d11b8 More descriptive error when missing GitPython or PyGit2

• ISSUE #51160: (amendlik) Minion crashes with long hostname under Python 3 (refs: #51173, #51161)

• PR #51173: (dwoz) Avoid exceptions by passing bytes to idna @ 2019-01-15 16:32:31 UTC
  - PR #51161: (amendlik) Ignore exceptions when generating the minion ID (refs: #51173)
  - 58eed6 Merge pull request #51173 from dwoz/issue51160
  - 11cc7b3 Remove un-needed test
  - 0f87812 Merge develop, Revert exception handling
  - 7365a1a Pass bytes to idna

• PR #51147: (Ch3LL) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2019-01-15 02:05:51 UTC
  - 06854cf Merge pull request #51147 from Ch3LL/merge-2018.3
  - d39d8b7 Merge branch '2018.3' into merge-2018.3

• ISSUE #51160: (amendlik) Minion crashes with long hostname under Python 3 (refs: #51173, #51161)

• PR #51161: (amendlik) Ignore exceptions when generating the minion ID (refs: #51173) @ 2019-01-14 22:47:54 UTC
  - b79c09e Merge pull request #51161 from amendlik/long-hostname
• **ISSUE #51067**: (rkrieger) KeyError u'manufacturer' causes salt-minion crash on start with OpenBSD arm64 system (refs: #51159)

• **ISSUE #3**: (thatchb45) libvirt module (refs: #51159)

• **PR #51159**: (rkrieger) Prevent crash by testing for 'manufacturer' in osdata on OpenBSD @ 2019-01-14 18:08:22 UTC
  - 1424734 Merge pull request #51159 from rkrieger/fix-issue-51067
  - 1440ccf Prevent crash by testing for 'manufacturer' in osdata on OpenBSD
  - 1aae307 Ignore exceptions when generating the minion ID

• **PR #51146**: (terminalmage) Fix invalid assignment in vsphere module @ 2019-01-12 21:44:33 UTC
  - 5e37326 Merge pull request #51146 from terminalmage/fix-vsphere-tuple-issue
  - 5d60022 Fix invalid assignment in vsphere module

• **PR #51154**: (twangboy) Add support for Advanced Audit policies @ 2019-01-12 21:43:27 UTC
  - fad8621 Merge pull request #51154 from twangboy/auditpol
  - 9064376 Add support for Advanced Audit policies

• **PR #51151**: (Ch3LL) Backport #51061 to 2018.3 @ 2019-01-12 03:18:44 UTC
  - **PR #51061**: (garethgreenaway) [fluorine] fix to salt.utils.vt.Terminal (refs: #51151)
  - f7a100c Merge pull request #51151 from Ch3LL/bp_51061
  - ffdae27 When writing output to stdout we want to ensure that the data is a string not bytes. Under py2 the salt.utils.data.encode function results in a string but under py3 the result is a bytestring. Swapping out salt.utils.data.encode for salt.utils.stringutils.to_str.

• **PR #51150**: (Ch3LL) Back-port #49508 to 2018.3 @ 2019-01-12 03:18:19 UTC
  - **PR #49508**: (bergmannf) Fix X509 remote signing on python3 (refs: #51150)
  - 3a50a57 Merge pull request #51150 from Ch3LL/bp-49508
  - 7aee53 Do not silently ignore errors.
  - deb0134 Convert to string before sending via 'publish'.
  - 651c551 Use to_str salt.utils when writing to a file.

• **ISSUE #50433**: (zerthimon) Wildcard grant fails in mysql_grants.present in mysql 8.x (refs: #51152)

• **PR #51152**: (garethgreenaway) [2018.3] Fixes to mysql module to handle ALL PRIVILEGES grant @ 2019-01-12 03:17:15 UTC
  - 8bb589d Merge pull request #51152 from garethgreenaway/50433_handle_grants_better
  - ftca4d Fixing lint
  - e8c8c0f Adding some tests to ensure "ALL PRIVILEGES" is handled correctly in 8.0 and 5.6
  - b4bf69f Add additional grants. Adding logic to handle when ALL or ALL PRIVILEGES is passed for the grant, including some logic to handle the fact that the grants are split when show grants is run for a particular user.
    - 74edfd9 Fix pylint
    - 81a3d47 Merge branch '2017.7' into '2018.3'
* 8a76a19 Merge pull request #50858 from jasonarewhy/bugfix-2017.7/ubuntu-networking-searchdomain
  - 3395a3d Merge branch '2017.7' into bugfix-2017.7/ubuntu-networking-searchdomain
  - 69d25aa update debian_ip test
  - a6b896c get searchdomain in Ubuntu 12+

* ISSUE #50849: (SuperShoot) MySQL version needs to be decoded (refs: #51133)

* PR #51133: (SuperShoot) Fixes mysql server version comparison. @ 2019-01-10 16:45:38 UTC
  - dda1ebb Merge pull request #51133 from SuperShoot/issue-50849
  - ec14e13 Fixes mysql server version comparison.

* PR #50878: (max-arnold) Fix profile outputter docs @ 2019-01-08 18:32:40 UTC
  - 9d4321d Merge pull request #50878 from max-arnold/output-docs
  - d7403da Fix profile outputter docs

* PR #51076: (OrangeDog) Typos in index_template_present documentation @ 2019-01-08 18:25:20 UTC
  - ce87504 Merge pull request #51076 from OrangeDog/patch-1
  - 5684fb Revert add -> check
  - 4d7ebe7 Typos in index_template_present documentation

* PR #51081: (garethgreenaway) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2019-01-07 20:34:16 UTC
  - d08abf4 Merge pull request #51081 from garethgreenaway/merge-2018.3
  - 027804a Merge branch '2018.3' into merge-2018.3

* ISSUE #50966: (klafkoff) 2018.3.3 missing a patch to salt/modules/nxos.py (refs: #51080)

* PR #51080: (garethgreenaway) [2018.3] Fix to nxos module @ 2019-01-07 18:07:25 UTC
  - 335088b Merge pull request #51080 from garethgreenaway/50966_nxos_ensure_kwargs_list
  - 230a66b Merge branch '2018.3' into 50966_nxos_ensure_kwargs_list
  - 629dc25 Ensure kwargs is a list before we attempt to loop through. Similar fix to https://github.com/rallytime/salt/commit/430c462f34eb4eedf2384e06fbee8dc19b8026f6 in the proxy module.
    - a20791b Merge branch '2018.3' into merge-2018.3

* PR #51079: (terminalmage) Fix shadow.set_date/shadow.set_expire on F28 @ 2019-01-07 16:28:36 UTC
  - c47b646 Merge pull request #51079 from terminalmage/salt-jenkins-1238
  - ccd5c15 Fix shadow.set_date/shadow.set_expire on F28

* ISSUE #47043: (xBytez) lsattr slowing down archive.extracted (refs: #51044)

* PR #51044: (terminalmage) archive.extracted: Don't run lsattr when enforcing user/group ownership @ 2019-01-03 19:26:03 UTC
  - aeeb047 Merge pull request #51044 from terminalmage/issue47043
  - 787b79a archive.extracted: Don't run lsattr when enforcing user/group ownership

* ISSUE #50964: (gtmanfred) Add a long description to setup.py for the new pypi.org (refs: #51031)

* PR #51034: (garethgreenaway) Back-port PR #51031 to 2018.3 @ 2019-01-03 15:42:22 UTC
  - PR #51031: (waynew) Set long_description (refs: #51034)
• ISSUE #50634: (marek-obuchowicz) Debian pkg.managed gpg/tty issue (refs: #50972)
  
• PR #50972: (pirogoeth) Use gpg's --batch in apt-key adv during repo key add @ 2019-01-03 02:34:13 UTC
  
    4685e0e Merge pull request #50972 from pirogoeth/sjohn/2018.3-apt-key-batch
  
    cd3d755 Merge branch '2018.3' into sjohn/2018.3-apt-key-batch
  
• PR #51028: (whytewol) AIX lsattr fix for file module. @ 2019-01-03 01:52:33 UTC
  
    44bc862 Merge pull request #51028 from whytewol/aix_lsattr_fix
  
    1b733c6 Set lsattr functions to return None if salt.utils.platform.is_aix returns true.
  
    7410008 Merge branch '2018.3' into sjohn/2018.3-apt-key-batch
  
• PR #51018: (garethgreenaway) [fluorine] Merge forward from 2017.7 to 2018.3 @ 2019-01-01 23:11:02 UTC
  
    b4774a8 Merge pull request #51018 from garethgreenaway/merge-2018.3
  
      773b3f1 Use gpg's --batch in apt-key adv during repo key add
  
      938a9a8 Merge branch '2017.7' into merge-2018.3
  
      998fe6a Merge pull request #51030 from terminalmage/issue38502
  
      6d6b8df Add unit test to ensure we don't diff bare repos
  
    12f7538 Merge branch '2017.7' into merge-2018.3
  
    4529150 Merge pull request #50977 from rallytime/config-docs
  
      43c39e4 Add documentation to master config docs for job_cache_store_endtime
  
      887c3d7 Add some salt-api options to the master config docs
  
      0d49f3d Fix some formatting in master config docs
  
    409594b Merge pull request #50991 from twangboy/requests_2017.7
  
      32b9d2a Update requests for osx
  
      413dc72 Merge branch '2017.7' of https://github.com/saltstack/salt into requests_2017.7
  
    e053074 Merge pull request #50983 from garethgreenaway/bp-50885
  
      09a86e6 fix a del in cloud vmware that crash when the key isn't there
  
      4196690 Update requests to 2.21.0
  
      23f788b Upgrade requests to 2.20.1
  
• PR #50990: (twangboy) Requests 2018.3 @ 2018-12-31 20:19:01 UTC
  
    c35723a Merge pull request #50990 from twangboy/requests_2018.3
  
    e8b9233 Update requests on osx
  
    b22856f Update requests to 2.21.0
  
    242389b Merge branch '2018.3' of https://github.com/saltstack/salt into requests_2018.3
  
    0d4bb99 Upgrade requests to 2.20.1
  
• PR #51004: (twangboy) Add tests for the win_wusa state and module @ 2018-12-31 20:03:30 UTC
  
    cecd108 Merge pull request #51004 from twangboy/win_wusa
- 0e92528 Merge branch '2018.3' into win_wusa
- c0d2495 Fix lint, add test docs
- 1750270 Add state tests for win_wusa
- 6285b64 Update win_wusa and add tests
- PR #51014: (madrisan) ssh module: missing space in error message @ 2018-12-31 19:59:19 UTC
  - 3e0515b Merge pull request #51014 from madrisan/patch-1
  - ab980b ssh module: missing space in error message
- PR #50883: (terminalmage) Backport #49622 to 2018.3 branch @ 2018-12-31 19:58:11 UTC
  - PR #49622: (angeloudy) fix command line options (refs: #50883)
  - 582d6b4 Merge pull request #50883 from terminalmage/bp-49622
  - c93dbfa Update archive.py
  - 925a9c9 Update archive.py
  - ed2bed3 fix command line options
- PR #50945: (garethgreenaway) [2018.3] Merge forward from 2017.7 to 2018.8 @ 2018-12-30 00:05:47 UTC
  - fd9711b Merge pull request #50945 from garethgreenaway/merge-2017.7
  - 43b3fa4 Merge branch '2018.3' into merge-2017.7
- ISSUE #50854: (Ch3LL) [fluorine] windows stops when cannot connect to master (refs: #50855)
- PR #51006: (dwoz) Let minions try to connect to master indefinitely @ 2018-12-28 21:10:39 UTC
  - PR #50855: (dwoz) Let minions try to connect to master indefinitely (refs: #51006)
  - b8615e1 Merge pull request #51006 from dwoz/backport_50855
  - 5563631 Let minions try to connect to master indefinitely
- ISSUE #50989: (mpx8701) SLS error (An exception occurred in this state: Traceback) (refs: #51005)
- PR #51005: (garethgreenaway) [2018.3] Fixes to junos state module @ 2018-12-28 20:51:31 UTC
  - cfed697 Merge pull request #51005 from garethgreenaway/50989_fixing_junos_state_arguments
  - d4ac180 Fixing the arguments accepted by cli function in the junos state module which are passed along to
    the cli function in junos module, so they align.
  - 3cfae86 Merge branch '2018.3' into merge-2017.7
- PR #50982: (twangboy) Fix issue with LGPO when returning empty dict (2018.3) @ 2018-12-26 19:58:12 UTC
  - daa591b Merge pull request #50982 from twangboy/fix_lgpo_2018.3
  - d942934 Get rid of requests import (CaseInsensitiveDict)
  - 6170fa5 Merge branch '2018.3' into merge-2017.7
- ISSUE #46886: (bbh-kmd) Unable to get salt-minion to call salt-call with alternate configuration (refs: #50959)
- PR #50984: (garethgreenaway) Back-port PR #50959 to 2018.3 @ 2018-12-26 19:29:54 UTC
  - PR #50959: (bbh-kmd) #46886: Use correct path to config_dir when running salt from alternate place-
    ment. (refs: #50984)
  - 110bc66 Merge pull request #50984 from garethgreenaway/bp-50959
  - 20fa5c9 Update sudo.py

30.2. Previous Releases
• **PR #50958**: (bdrung) Fix twilio version checking @ 2018-12-25 10:46:15 UTC
  - 8fc89a0 Merge pull request #50958 from bdrung/fix-twilio
  - df8d7b9 Fix twilio version checking
    * d89c9b5 Merge branch '2018.3' into merge-2017.7

• **ISSUE #50947**: (cachedout) Log full of IPv6 warnings (refs: #50962)

• **PR #50962**: (terminalmage) Remove redundant overrides for ip_address/ip_interface @ 2018-12-21 22:04:34 UTC
  - bb87822 Merge pull request #50962 from terminalmage/ipv6-warnings
  - 773b983 Merge branch '2018.3' into ipv6-warnings
  - f3b1254 Remove redundant overrides for ip_address/ip_interface
    * cca01e7 Updating valigdate_tgt to ensure tests pass.
    * f04a87e One last lint fix.
    * df363b Fixing various lint errors.
    * 6a65bf9 Merge branch '2017.7' into merge-2017.7
  - 747dd69 Merge pull request #50876 from terminalmage/issue50153
    * 676a12a Fix compound matching in eauth
    * 07fca64 Merge pull request #50909 from damon-atkins/jenkins_pylint
      * da1fc32 change params.CHANGE_BRANCH to env.CHANGE_BRANCH
    * e7f0ab6 Merge pull request #50873 from Ch3LL/bp-50740
      * 5fd9ed9 Merge branch '2017.7' into bp-50740
    * 2f77b2d Merge pull request #50869 from garethgreenaway/50848_mysql_exception_test
      * 3767df4 Merge branch '2017.7' into 50848_mysql_exception_test
      * af3e145 Cleanup.
      * b85c5bf Adding a test to ensure exception handling is correct.
      * 4242e64 Merge branch '2017.7' into bp-50740
    * a5caab7 Merge pull request #50872 from Ch3LL/bp-50864
      * fc9e64b fix typo in file.managed documentation
      * f73f86 Catch UnicodeDecodeErrors in id verification

• **PR #50937**: (Ch3LL) Fix external_pillars documentation @ 2018-12-20 19:15:20 UTC
  - 49f2a35 Merge pull request #50937 from Ch3LL/pillar_doc
  - 1f01489 Fix external_pillars documentation

• **ISSUE #50919**: (dpkirchner) state.apply test documentation unclear (refs: #50940)

• **PR #50940**: (terminalmage) Fix confusing state module documentation @ 2018-12-20 18:29:26 UTC
  - 4213527 Merge pull request #50940 from terminalmage/issue50919
  - 3318927 Fix confusing state module documentation
• PR #50929: (twangboy) Fix `unit.utils.test_lgpo_netsh` on Windows for Py3 (2018.3) @ 2018-12-20 17:50:37 UTC
  - 421e4f4 Merge pull request #50929 from twangboy/fix_test_lgpo_netsh_2018.3
  - 01f9beb Fix failing lgpo netsh tests

• PR #50917: (dwoz) Cherry pick test fixes from fluorine @ 2018-12-19 17:56:19 UTC
  - b08b7e1 Merge pull request #50917 from dwoz/test_fixes
  - 16d10fb Fix linter warnings
  - b22f827 Increase and standardize ShellCase timeouts
  - a5c8e18 Do not pass unicode in environment

• PR #50913: (bdrung) Fix documentation build @ 2018-12-19 16:03:55 UTC
  - 59df0b4 Merge pull request #50913 from bdrung/fix-doc-build
  - ecdb452 doc: Indroduce MOCK_MODULES_MAPPNG
  - cfe4824 doc: Move mock_decorator_with_params up
  - 08e66b9 doc: Address pylint issues in conf.py
  - 67a3e37 doc: Mark preamble variable as raw string
  - b1e608b doc: Fix reference to salt executors
  - e48b32c doc: Replace xa0 (non-breaking space) by spaces
  - b97c7a doc: Fix iterating over the Mock object in Python 3
  - bb29948 doc: Do not mock non-existing __mro_entries__ attribute
  - e6cf3e4 Do not mock json when building the documentation
  - 4acaf45 Fix sphynx error about tornado.version_info

• ISSUE #50892: (cruscio) archive.extracted source_hash is case sensitive (refs: #50906)

• PR #50906: (garethgreenaway) [2018.3] Ensure source_hash returned from get_source_sum is lowercase. @ 2018-12-19 04:22:23 UTC
  - f4e6b88 Merge pull request #50906 from garethgreenaway/50892_archive_extracted_source_hash_case_sensitive
  - bcf8f06 fixing lint
  - 543ec7b Ensure source_hash returned from get_source_sum is lowercase.

• PR #50867: (Ch3LL) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-12-14 21:32:23 UTC
  - b95b44f Merge pull request #50867 from Ch3LL/merge-2018.3
  - 512293f Remove dunder_dictionaries.rst. Was added to modules/developing.rst
  - 89b4e09 Merge branch '2017.7' into '2018.3'
  - 858cfa5 Merge pull request #50863 from 5uper5hoot/fix-issue-50848
    * c90d201 Unpack exception args in python3 compatible way.
  - 6b2b2b2 Merge pull request #50752 from kstreee/fix-memory-leak
    * 98cc63a Fixes a memory leak un-cleared stream connections.
  - 1f57602 Merge pull request #50837 from Ch3LL/pyren_doc
    * a873019 Clarify py render docs when data context is available
- fdf675 Merge pull request #50844 from twangboy/fix_grains
  - 473f4d7 Fix some unrelated lint
  - fd1a072 Fix grains for future windows releases
- 32dfaba Merge pull request #50816 from dubb-b/2017.7
  - dc7ff48 Pinning bootstrap to the tagged version of salt.
- b1e5f3f Merge pull request #50709 from mattLLVW/service_unmask
  - b199255 Merge branch '2017.7' into service_unmask
  - 38add1 salt style guideline
  - 823c4ad Implement unmask in states.services
  - 91a6bf5 Functional unmask, must add tests
- e4e9563 Merge pull request #50633 from astronouth7303/loader-docs
  - 03e3168 whitelist_modules is linked via enable_whitelist_modules for some reason? idk
  - 5ca1f8e Typos
  - 7cb1a87 Add a quick index of loader-related settings
  - 318ca48 Make a note to not import modules
  - 6294658 Merge remote-tracking branch 'origin/2017.7' into loader-docs
  - 678958e Editing
  - 9d59629 Merge branch '2017.7' into loader-docs
  - 374d0e9 Finish the last sections
  - 1bdd49d Add more links and write some system summaries
  - bd3796a Update TOC
  - 3a9ab1b Merge dunders into developing, expand to cover all dunders.
  - d06739a Add short writeups for a bunch of systems.
  - 705e7e4 Add a bunch of cross linking
  - 40f9b16 Add missing module type sections
  - 172d8c2 Refactor headings
  - 53154a0 Oops, missed that
  - 0dcd341 Possible horrific use of toctrees? maybe
  - bed3509 Refactor, add a TOC
  - f647c1d Fill in some missing modules
  - 9d4b596 Merge branch '2017.7' into loader-docs
  - 26468df Add missing blank line
  - 205fea9 Some more revising
  - d4a8f7e Remove some code from some links
  - 65e4199 I feel like it should be up there
* d44f5ce Rephrase footnote
* 125e46e Add section on how modules get loaded, including giant table of names
* 5bfc6c6 Update reference to modules/index
* 4b096c1 Move all the module-development documentation into a single folder
  - dcdb9b2 Merge pull request #50750 from bewing/pepa12
    - 9931a41 Fix last key detection in pepa key_value_to_tree
  - cb85d5d Merge pull request #50733 from marmarek/patch-3
    - 1011421 Report salt-call exit code from ssh_py_shim.py
  - b086ff3 Merge pull request #50756 from GwiYeong/local-client-fix
    - c488092 fix local client missing minion return

• ISSUE #50850: (akrus) key_cache: sched prints error messages in logs (refs: #50859)

• PR #50859: (garethgreenaway) [2018.3] Fixes for key_cache and python3 @ 2018-12-13 23:57:07 UTC
  - 216fa14 Merge pull request #50859 from garethgreenaway/50850_python_key_cache_file_binary
  - ebc9a01 When reading and writing the key cache file, when using Python3, ensuring the file is read &
    written in binary mode.

• PR #50828: (twangboy) Fix issues with lgpo state and util @ 2018-12-13 16:37:33 UTC
  - 6b45aad Merge pull request #50828 from twangboy/fix_lgpo
  - 05baa95 Merge branch '2018.3' into fix_lgpo

• PR #50843: (bdrung) Fix RemoveCapacityFromDiskgroupTestCase require pyvmomi @ 2018-12-12 20:36:32 UTC
  - 6ea059d Merge pull request #50843 from bdrung/fix-tests
  - 0d00ae4 Fix RemoveCapacityFromDiskgroupTestCase require pyvmomi

• ISSUE #50829: (ghost) process.absent UnicodeDecodeError (refs: #50839)

• PR #50839: (terminalmage) Fix UnicodeDecodeError in ps module @ 2018-12-12 19:59:12 UTC
  - 14d7d1d Merge pull request #50839 from terminalmage/issue50829
  - 3a3db7 Ensure that unicode types returned from compatibility funcns
  - 1a00abc Add unit test for _get_proc_cmdline
  - 9ea2ed Remove extraneous comments

• ISSUE saltstack/salt#49393: (Poil) file.directory recurse not always changing perms (refs: #50653)

• PR #50653: (lexvella) Check file_mode in file.directory and _check_directory @ 2018-12-12 16:30:52 UTC
  - 264a042 Merge pull request #50653 from lexvella/2018.3
  - 4ea9386 Merge branch '2018.3' into 2018.3
  - 42e4ab3 Merge branch '2018.3' into 2018.3
  - 79f6b42 Check file_mode in file.directory and _check_directory
    - 1233e2b Fix some lint
    - 56c0e55 Fix issues with lgpo state and util

• ISSUE #45026: (angeloudy) bytes error in mysql module (refs: #50823)
- **PR #50823**: (terminalmage) salt.modules.mysql: Decode fetch results before making string comparisons @ 2018-12-11 21:04:41 UTC
  - a8ad17a Merge pull request #50823 from terminalmage/issue45026
  - ec8e116 Decode fetch results before making string comparisons
- **PR #50817**: (dubb-b) Adding git ‘v’ to the bootstrap options @ 2018-12-11 17:28:10 UTC
  - e31e731 Merge pull request #50817 from dubb-b/2018.3
  - 48fc01f Adding git ‘v’ to the bootstrap options
- **PR #50780**: (twangboy) Add netsh mechanism in the LGPO module @ 2018-12-10 22:09:20 UTC
  - 9b6b39c Merge pull request #50780 from twangboy/lgpo_netsh
  - 5eea728 Fix some lint
  - f077783 Add some tests
  - 2dde12a Fix one more lint item
  - c55b7b4 Fix some lint
  - 1247598 Add more policies
  - b2b9795 Fix overly long lines
  - f18d1aa Add additional policies that use netsh
  - cb50648 Add versionadded tags
  - 00cbf26 Add the netsh mechanism to the lgpo module
- **PR #50783**: (sathieu) gitfs/git_pillar: Fix UnicodeDecodeError while cleaning stale refs @ 2018-12-10 20:34:53 UTC
  - 0351296 Merge pull request #50783 from sathieu/gitfs_stalerefs_unicode
  - ef160a6 gitfs/git_pillar: Fix UnicodeDecodeError while cleaning stale refs
- **ISSUE #45867**: (Nick2253) Icinga2 Module uses incorrect paths (refs: #50615)
- **PR #50765**: (ClaudiuPID) Fix icinga2 cert path @ 2018-12-10 18:10:24 UTC
  - **PR #50615**: (ClaudiuPID) Fixes icinga2 certs path for newer versions 2.8+ (refs: #50765)
  - deadf9c Merge pull request #50615 from ClaudiuPID/fix-icinga2-cert-path
  - ce1842e Merge branch ’2018.3’ into fix-icinga2-cert-path
  - 31878d5 Pylint fixes
  - 47bba1 Migrated to cmd.run_all and tested on working srv
  - a1dddec Fixes icinga2 certs path for newer versions 2.8+
- **PR #50692**: (terminalmage) Update a couple test modules to use with_tempdir/with_tempfile decorators @ 2018-12-10 17:24:02 UTC
  - 9f8829b Merge pull request #50692 from terminalmage/update-tests
  - 36a4a1a Merge branch ’2018.3’ into update-tests
  - be14517 Make x509 tests use tempfiles instead of hard-coding them
  - a394cd7 Update file integration tests to use decorator for tempdirs
• ISSUE #32245: (tkwilliams) git_pillar should permit automatic mapping of environment to branch a-la gitfs (refs: #50768)

• PR #50768: (sathieu) git_pillar: Add support for all_saltenvs parameter @ 2018-12-10 16:39:37 UTC
  – 3a71567 Merge pull request #50768 from sathieu/git_pillar_all_saltenvs
  – e971412 git_pillar: Add support for all_saltenvs parameter

• ISSUE #48801: (dstoliker) salt.states.user.present - mindays, warndays, and inactdays won't return to salt’s default values (refs: #50796)

• PR #50796: (dwoz) Fix #48801 min, max, inact, and warn changes @ 2018-12-10 16:30:14 UTC
  – 12a8447 Merge pull request #50796 from dwoz/issue48801
  – 6b95223 fix linter errors
  – 87a04df Fix #48801 min, max, inact, and warn changes

• ISSUE #46388: (dynek) IPv4 & v6 network configuration on Debian (refs: #49355)

• ISSUE #40262: (pjediny) Salt enforces configuration from /etc/network/interfaces.d/* to /etc/network/interface (refs: #49355)

• ISSUE #38672: (valentin2105) IPv6 Network states is incomplete (refs: #49355)

• PR #50804: (Ch3LL) Back-port #49355 to 2018.3 @ 2018-12-10 16:21:31 UTC
  – PR #49355: (MTecknology) Improve management of interfaces in debian-based distributions (refs: #50804)
  – PR #46980: (MTecknology) Fix broken rendering debian_eth.jinja. (refs: #49355)
  – b266ec8b Merge pull request #50804 from Ch3LL/bp-49355
  – d34ede Use a temp file instead of /etc/network/interfaces for unit tests.
  – 622c354 Support reading multiple addresses from interface files.
  – 15c34fe Support unicode in space-delimited list; fixes unit tests in py2.
  – 0b5961 Added documentation about debian.interfaces.d/*. (Fixes: #40262)
  – 1b096fb Removed python lint.
  – 6e41225 Finished adding support for multiple IP addresses.
  – 4c7df5f Cleaned up documentation/examples in states.network:
    – 601f43 Added support for -ipaddrs and -ipv6ipaddrs to modules.debian_ip().
    – 638f899 Added support for loopback devices to modules.debian_ip(). (Fixes: #38672)
    – cf61c8d Added a bunch of unit tests for modules.debian_ip.build_interface().
    – b905fc6 Added support for dns_[nameservers,search] being a list or string.

• PR #50767: (dwoz) Make sure ldap passwords are honored @ 2018-12-05 22:59:17 UTC
  – dc9414c Merge pull request #50767 from dwoz/ldap_no_pass
  – 67aa591 Fix linter errors
  – be3945a Remove crufty import
  – 91f50a4 Add more ldap auth tests for ZD-2993
  – 0558d5 Make sure ldap passwords are honored
• ISSUE #50364: (sathieu) git_pillar mountpoint ignores the root parameter (refs: #50626)

• PR #50626: (sathieu) git_pillar: Allow root and mountpoint parameters together @ 2018-12-05 17:46:59 UTC
  - 60aa0d5 Merge pull request #50626 from sathieu/git_pillar_mountpoint_and_root
  - 5423c27 git_pillar: Allow root and mountpoint parameters together

• PR #50745: (bbinet) Fix grafana dashboard updating when nothing has changed @ 2018-12-04 19:26:32 UTC
  - c02387e Merge pull request #50745 from bbinet/fix-grafana-dashboard-update
  - 7019d47 Fix grafana dashboard updating when nothing has changed

• PR #50737: (garethgreenaway) [develop] Merge forward from 2017.7 to 2018.8 @ 2018-12-04 16:02:13 UTC
  - ae81498 Merge pull request #50737 from garethgreenaway/merge-2017.7
  - fde8db5 Merge branch '2017.7' into merge-2017.7
  - 246c055 Merge pull request #50718 from dwoz/run_run_timeout
    * edc8486 Honor run_run timeout for shell tests
  - 979b3aa Merge pull request #50702 from damon-atkins/jenkins_pylint
    * 5936066 ensure archiveArtifacts are always collected. Use CHANGE_BRANCH to detect merge-forward
  - 22acaaa Merge pull request #50632 from astronouth7303/loader-exception-handler
    * 0f72815 Merge branch '2017.7' into loader-exception-handler
  - d9e7be1 Merge pull request #50670 from damon-atkins/jenkins_pylint
    * b6d1605 ci/lint corrected filenames and test condition on full lint Also fix CODEOWNER team name
      * 194801a Merge branch 'loader-exception-handler' of github.com:astronouth7303/salt into loader-exception-handler
      * da6ebd0 Merge branch '2017.7' into loader-exception-handler
      * 8697744 Use single quotes per style guide
      * 07868f1 Improve logging output
      * fb05bd5 Eat an exception from an entry point instead of letting it kill the system.

• PR #50685: (Ch3LL) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-11-30 18:46:07 UTC
  - edaa9fe Merge pull request #50685 from Ch3LL/merge_2018.3
  - d46aff0 Merge branch 2017.7 into 2018.3
    * 6dc3af1 Merge pull request #50672 from garethgreenaway/49691_file_replace_search_only_return_false
      * 7e7df06 lint
      * 6b73c76 When using file.replace, with the search_only option, if the pattern does not exist in the file then we should return False.
    * 1236b51 Merge pull request #50659 from garethgreenaway/49954_gem_installed_less_than_greater_than_support
      * 0ec8bce When using the gem installed state, when passing a version that includes greater than or less than symbols, ensure that the installed versions meets that requirement.
    * 6317f3a Merge pull request #50583 from damon-atkins/jenkins_pylint
- 2d1f51c Fix lint only changes, full lint on merge forwards - lint only changes previous diff picked up out of data files, when the branch was out of date. - full limit on merge forward to pick up changes in the lint checks between versions. - update CODEOWNERS for .ci/*

- 15bf09a Merge pull request #50605 from Oloremo/fix-supervisord-dead-state-idempotency
  - ba3f281 Merge branch '2017.7' into fix-supervisord-dead-state-idempotency
  - cf9ab84 Merge branch '2017.7' into fix-supervisord-dead-state-idempotency
  - af3862 Fixed the supervisord.dead state idempotency

- ISSUE #50016: (abednarik) State augeas.change do not update config file (refs: #50690)

- PR #50690: (garethgreenaway) [2018.3] fixes to augeas_cfg module @ 2018-11-30 18:44:42 UTC
  - 7cb2405 Merge pull request #50690 from garethgreenaway/50016_ensure_path_is_str
  - cec7cb4 Older versions of python-augeas need the path passed to aug.match to be a string.

- ISSUE #49392: (Poil) hosts not replacing existing entry (refs: #50657)

- PR #50657: (terminalmage) Rewrite host.present state to allow for removal of entries not matching IP @ 2018-11-29 17:58:40 UTC
  - a5c7639 Merge pull request #50657 from terminalmage/issue49392
  - 2ddb587 Add release notes for new "clean" option
  - e4946f9 Rename "remove" argument to "clean"
  - 7fd3bce Add remove parameter to host.present state
  - 2671a30 Add unit tests for host.present state
  - 30f1b85 Remove non-matching IPs from hosts file
  - ec297a0 Performance improvements in hosts module
  - d1c2038 Add generic ip address validation function
  - 9f547f0 Add ignore ability to process_read_exception

- ISSUE #48759: (MyIgel) acme.cert: Fail to update certificate after adding aliases / missing --expand (refs: #50683)

- PR #50683: (garethgreenaway) [2018.3] Fixes to acme module when adding aliases to existing certificate @ 2018-11-29 17:46:54 UTC
  - b604785 Merge pull request #50683 from garethgreenaway/48759_adding_aliases_include_expand
  - 3940af0 When adding alises to an existing Certbot certificate, if we see a message about expanding in the stderr returned from cmd.run_all we should rerun the cmd with --expand included.

- ISSUE #50406: (glkappe) salt-ssh can’t use Mongo returner (refs: #50664)

- PR #50664: (garethgreenaway) [2018.3] Fix to logic for configuring returners @ 2018-11-28 05:24:30 UTC
  - 15f9ae4 Merge pull request #50664 from garethgreenaway/50406_salt_ssh_returner_configuration
  - 3525411 When pulling values out of the available configuration for returners we should always default to using keys for those returners, eg. mongo.user for the username. Otherwise in certain situations, eg. when using salt-ssh we will end up with the wrong value for the user.

- PR #50652: (twangboy) Fix unit.utils.test_mac_utils on Windows @ 2018-11-27 20:45:41 UTC
  - afbcf03 Merge pull request #50652 from twangboy/fix_test_mac_utils
  - c4cb729 Fix path issues with the tests
• **PR #50640:** (garethgreenaway) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-11-26 22:33:22 UTC
  - 61a82af Merge pull request #50640 from garethgreenaway/merge-2017
  - 409c98f Merge branch '2018.3' into merge-2017

• **ISSUE #50403:** (prometheanfire) tornado 5.1.1 is not co-installable with salt on python2.7 (refs: #50639)

• **PR #50639:** (dwoz) Handle pipenv like version restrictions @ 2018-11-26 19:42:11 UTC
  - 20a2de3 Merge pull request #50639 from dwoz/pipfix
  - 9c6f653 Handle pipenv like version restrictions
  - fed78b lint
  - 45a1aa3 Merge branch '2017.7' into merge-2017
  - b2cf134 Merge pull request #50463 from dwoz/zmqpubserv
    - a289e3c Merge branch '2017.7' into zmqpubserv
  - 6679242 Merge pull request #50590 from garethgreenaway/bp-50333
    - 1f5a4b pkg.installed currently fails when sources is used along with hold: True. This was due to a change in #48426 that swapped out sending the pkgs variable for the desired variable instead. This caused problems with pkg.hold because desired and sources are always populated, and pkg.hold can only include one or the other. This change just includes desired in the call to pkg.hold since desired has the same value for sources.
    - 39e811b Add issue url to tests
    - c4d7a43 Add debug log when connecting
    - 4f81432 Set subscribe via sockopt for better compatibility
    - 6882209 More reliable pub server publishing

• **ISSUE #49957:** (whytwolf) salt-master scheduled items ignore maxrunning. (refs: #50130)

• **PR #50130:** (garethgreenaway) [2018.3] Fixes to schedule maxrunning on master @ 2018-11-26 18:35:35 UTC
  - 5b7ab35 Merge pull request #50130 from garethgreenaway/49957_master_schedule_ignoring_maxrunning
  - 2f6dac9 Updating test_maxrunning.master to Mock get_running_jobs.
  - abda0a4 Reverting changes to doc/conf.py.
  - 6d072fc Some additional cleanup.
  - 4bd0406 Adding integration.scheduler.test_maxrunning to ignore list.
  - 45e160d Adding integration.scheduler.test_maxrunning to filename_map.yml
  - 2201a46 Fixing lint
  - 6c0ee32 removing unused cache_jobs function from utils/master.py
  - c2ed1d4 Adding some logging when the cache files are unable to be removed.
  - 44940d6 Ensure minion tests using minion options.
  - 722be43 Fixing lint
  - 65b4421 Adding some master specific functions to uitls/masters.py to determine if a Salt process is running. Updating utils/schedule.py to use the appropriate running function either from utils/master.py or utils/minion.py depending on where the scheduled job is running. Adding tests to test maxrunning in scheduled jobs for both the minion and master.
- 0d65304 Swapping manual mocking to autodoc_mock_imports

- **ISSUE #50542**: (doug-stratoscale) mysql.user_exists doesn’t work with Mysql 8.0.13 (refs: #50551)

- **PR #50551**: (garethgreenaway) [2018.3] Fixes to verify_login in mysql module @ 2018-11-26 17:44:25 UTC
  - 26759c2 Merge pull request #50551 from garethgreenaway/50542_mysql_ensure_verify_login_uses_connection_host
  - 96742aed4 Merge branch '2018.3' into 50542_mysql_ensure_verify_login_uses_connection_host
  - eb510a6 Merge branch '2018.3' into 50542_mysql_ensure_verify_login_uses_connection_host
  - 6d2309d Merge branch '2018.3' into 50542_mysql_ensure_verify_login_uses_connection_host
  - db89b27 Merge branch '2018.3' into 50542_mysql_ensure_verify_login_uses_connection_host
  - 0284323 Ensure that verify_login is using the host from the connection_args and not the host associated with the user. Adding a test to ensure user_exists when the passed host is the MySQL wildcard %.

- **PR #50619**: (s0undt3ch) Don’t squash tracebacks and Unicode fixes @ 2018-11-26 17:04:31 UTC
  - 14c4fd5 Merge pull request #50619 from s0undt3ch/2018.3
  - a477ld2 UNICODE!
  - 72205a5 DO! NOT! SQUASH! TRACEBACKS!

- **ISSUE #50562**: (soostdijck) scheduled highstate ignores blackout (refs: #50586)

- **PR #50586**: (garethgreenaway) [2018.3] minion_blackout for scheduled jobs @ 2018-11-23 11:15:38 UTC
  - 59809a1 Merge pull request #50586 from garethgreenaway/50562_minion_blackout_scheduler
  - 48673b7 Adding some defaults for minion_blackout code when pillar & grains are not available in opts. Removing some debugging code.
  - 9f422b2 Moving the minion_blackout code to the start of the try...except. Adding a test to ensure we get a log.exception when minion_blackout is True.
  - 2bf8fa5 Adding support for minion_blackout for jobs that are run from the Salt scheduler.

- **PR #50576**: (garethgreenaway) Back-port PR #50549 to 2018.3 @ 2018-11-21 14:39:55 UTC
  - PR #50549: (cachedout) Add security credits to release notes (refs: #50576)
  - 5c28179 Merge pull request #50576 from garethgreenaway/bp-50549
  - 807068d Typo fix
  - 2ef8307 Typo fix
  - 7c8957a Typo fix
  - c1ca603 Merge branch '2018.3' into bp-50549
  - b163380 Add security credits to release notes

- **PR #50599**: (terminalmage) Merge Sphinx fixes from 2017.7 to 2018.3 @ 2018-11-21 13:31:18 UTC
  - c9531d8 Merge pull request #50599 from terminalmage/merge-2018.3
  - ba82b07 Merge remote-tracking branch 'upstream/2017.7' into merge-2018.3
  - 1b8a8ac Merge pull request #50592 from terminalmage/docs-2017.7
    - db15776 Remove overline from section title
    - 8127dd5 Disable unused shorturls plugin

- **ISSUE #50254**: (jmcook1) file.line adding line every time (refs: #50366)
• PR #50366: (t0fik) 2018.3 fix issue50254 @ 2018-11-20 20:31:30 UTC
  - 60b4622 Merge pull request #50366 from jdsieci/2018.3-fix-issue50254
  - a9b9fa2 Fixed pylint warnigs
  - 342786b Issue #50254 fixed
  - 1ab59e7 Added integration tests
  - 110f74f Added unit tests reproducing issue

• ISSUE #50558: (angeloudy) 'test=True' does not work with artifactory.download (refs: #50580)

• ISSUE #50155: (mikemartino) artifactory.downloaded state is not respecting test=True (refs: #50580)

• PR #50580: (garethgreenaway) [2018.3] Adding test=True to artifactory.download. @ 2018-11-20 16:37:14 UTC
  - 735c9f4 Merge pull request #50580 from garethgreenaway/50155_artificatory_download_state_test_true
  - 7dd57d0 Lint.
  - 3661ee0 Adding test=True to artifactory.download.

• ISSUE #46292: (asymetrixs) win_wua should have possibility to specify source file (refs: #50397)

• PR #50577: (garethgreenaway) Back-port PR #50397 to 2018.3 @ 2018-11-19 21:28:42 UTC
  - PR #50397: (tlemarchand) Add Win WUSA management, to install Windows Update files (.msu). (refs: #50577)
  - 015834d Merge pull request #50577 from garethgreenaway/bp-50397
  - dd2d872 Documentation
  - af6d21f Import unicode_literals from future and add versionadded tag
  - 09dc09d Disable powershell modules list Add list_kbs function
  - 05852d0 pchanges to changes named parameters
  - 16525e4 Add Win WUSA management, to install Windows Update files (.msu).

• PR #50570: (garethgreenaway) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-11-19 20:04:05 UTC
  - 12e0d80 Merge pull request #50570 from garethgreenaway/merge-2018.3
  - 4c85119 merge-forward 2017.7 to 2018.3
  - 02238a7 Merge pull request #50520 from dwoz/issue_50459
    * 1aa2e34 Simplifie and portable homedir lookup
    * f14f747 Fix windows home dir lookup
    * d3620c3 Always set .gitconfig dir to user's home
  - edd9738 Merge pull request #50532 from dubb-b/2017.7
    * 009e52d Adding tag to ec2 cloud tests
  - b0446f5 Merge pull request #50500 from terminalmage/2017.7-docs
    * 870a364 Set docs jenkins job to treat warnings as errors
    * e03bdcf Update docs references for states with func_alias
    * 8a2c08f Disable custom sphinx automodule

• ISSUE #50266: (4815162342lost) grains.virtual show incorrect info (refs: #50519)
• PR #50519: (garethgreenaway) [2018.3] Fix to virtual core grain @ 2018-11-16 23:42:18 UTC
  – 6ba83c Merge pull request #50519 from garethgreenaway/50266_core_virtual_grain_fixes
  – dcae2f0 Merge branch '2018.3' into 50266_core_virtual_grain_fixes
• PR #50427: (sathieu) Backports git_pillar tests improvements to 2018.3 @ 2018-11-16 16:37:29 UTC
  – PR #50425: (sathieu) git_pillar: Add tests for mountpoint parameter (refs: #50427)
  – PR #50407: (sathieu) git_pillar: Add tests for root parameter (refs: #50427)
  – PR #50378: (sathieu) Don't fail on git_pillar tests when destructive tests are not enable (refs: #50427)
    – 84edd62 Merge pull request #50427 from sathieu/bp-git_pillar_tests
    – 12ea1cc git_pillar: Add tests for mountpoint parameter
    – fce47e git_pillar: Add tests for root parameter
    – ba150a5 Don't fail on git_pillar tests when destructive tests are not enable
• PR #50530: (terminalmage) Enable proxy/ssh daemons when filename mapping causes those tests to be run @ 2018-11-15 23:03:06 UTC
  – 4651481 Merge pull request #50530 from terminalmage/salt-jenkins-1209
  – fbe11d Enable proxy/ssh daemons when filename mapping causes those tests to be run
  – 4f30611 lint
  – 4f9eb95 Fixing a typo in the _virtual function, should be checking for existing grains in odata not grains. Updating the detection to look for /sys/bus/xen/drivers/xenconsole instead of specifically looking for any files under /sys/bus/xen/drivers. Some systems that are not running as Xen PV hosts include files under that location, particular Oracle Linux.
• ISSUE #50224: (mruepp) Augeas changes state with setm not working (refs: #50526)
• PR #50526: (terminalmage) Work around augeas’ lack of unicode support @ 2018-11-15 17:33:26 UTC
  – 6c07ba4 Merge pull request #50526 from terminalmage/issue50224
  – ee246ed Work around augeas’ lack of unicode support
• PR #50503: (terminalmage) Set jenkins docs job to treat any warnings as errors (2018.3 branch) @ 2018-11-14 19:30:24 UTC
  – d83da51d Merge pull request #50503 from terminalmage/2018.3-docs
  – a4fc108 Fix docs configuration for renamed logstash engine
  – 5b06464 Set docs jenkins job to treat warnings as errors
  – 9b6c669 Update docs references for states with func_alias
  – 62b5d40 Disable custom sphinx automodule
• ISSUE #48343: (bornwitbugs) CPU Beacon TypeError (refs: #50514)
• PR #50514: (bornwitbugs) Load beacon fix @ 2018-11-14 19:20:33 UTC
  – fa2f4a5 Merge pull request #50514 from bornwitbugs/load_beacon_fix
  – e59c6d6 Merge branch '2018.3' of github.com:saltstack/salt into load_beacon_fix
• PR #50509: (Ch3LL) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-11-14 17:52:06 UTC
  – a50377b Merge pull request #50509 from Ch3LL/merge-2018.3
  – 178dab3 Merge branch 2017.7 into 2018.3
- c00fd43 Merge pull request #50493 from rallytime/bp-50362
  * 60559cf Remove flaky test
  * a696a8f Fix test_matcher on Windows
- 3cac1d0 Merge pull request #50494 from terminalmage/2017.7-docs
  * d561b26 Late import to fix docs build errors
- 0829944 Merge pull request #50479 from Ch3LL/digital_ocean_location
  * 917781d Lint: Add blank line
  * 3583519 Update digital ocean location for cloud tests
- accf681 Merge pull request #50480 from terminalmage/docs
  * c34690e Don’t import obsolete Directive class from Sphinx
- 2e9b3d2 Merge pull request #50478 from rallytime/update-bootstrap-docs
  * 66b078c Update the bootstrap script documentation to point to bootstrap repo

- **PR #50502:** (twangboy) Add definition for RestrictRemoteSAM @ 2018-11-14 14:30:38 UTC
  - 55b4914 Merge pull request #50502 from twangboy/lgpo_2018.3
  - fe92a3a Add definition for RestrictRemoteSAM

- **ISSUE #48734:** (oddfellow) salt-run jobs.list_jobs has Target: unknown-target (refs: #50328)

- **ISSUE #43453:** (kunal-bajpai) Runner job load is never saved to job cache (refs: #43454)

- **PR #50328:** (rallytime) Fix issue with salt-run jobs.list_jobs where Target: unknown-target @ 2018-11-13 19:49:58 UTC

  - **PR #43454:** (kunal-bajpai) Fix save_load which is never called for returner jobs (refs: #50328)
  - c1dde7e Merge pull request #50328 from rallytime/fix-48734
  - 2c51ec9 Make target test job more specific to reduce test flakiness
  - caace3f Rewrite job cache target test to be more robust
  - b29fcfa New test must be py3 compatible...oops. :)
  - c684ce9 Fix issue #48734
  - 6859e0e Add regression test for issue #48734

- **PR #50499:** (dwoz) Fix 2018.3 build @ 2018-11-13 18:46:54 UTC

  - 351faeb Merge pull request #50499 from dwoz/build_fix
  - 5754b4a Fix 2018.3 build

- **PR #50496:** (terminalmage) Fix 2018.3 docs build warnings @ 2018-11-13 17:21:09 UTC

  - 6f4b23f Merge pull request #50496 from terminalmage/2018.3-docs
  - cb25641 Fix header underline length to avoid another sphinx warning
  - 9272f7b Fix more sphinx build errors
  - 18a8104 Late import to fix docs build errors
  - d457132 Fix sphinx build warnings in 2018.3 branch

- **ISSUE #50227:** (sheagcraig) mac_utils _available_services will fail with malformed launchd plists present (refs: #50228)
• **PR #50492**: (rallytime) Back-port #50228 and #50443 to 2018.3 @ 2018-11-13 16:59:15 UTC
  - **PR #50443**: (weswhet) fix when checking for service Label on macOS (refs: #50492)
  - **PR #50228**: (sheagcraig) Fix 50227 malformed plists (refs: #50492, #50443)
  - 6b272c1 Merge pull request #50492 from rallytime/bp-50228-and-50443
  - 7879a2d Fix logging format
  - f578392 Lint Fix: add mock_open import
  - e5b999b add try/except when checking for service Label
  - 3c36bdc Fix linting errors.
  - fab57de Write tests to handle invalid launchd plist XML.
  - bb429b0 Condense service result assertions, add a binary plist test.
  - a809f9e Factor out another helper function, implement broken symlink test.
  - 216f7ef Update testing for mac_utils services.
  - 89d8267 Fix trailing-slash bug in User LaunchAgent appending.
  - 0e23b6e Handle bad plists by ignoring them, with py2 and py3 specific approaches
  - fa44149 Avoid AttributeError when checking for exception types.
  - fd62b33 Add secondary exception handler for malformed plists.
  - ae6f49b Make test correctly generate a double exception.
• **PR #50486**: (twangboy) Back port lgpo from Fluorine @ 2018-11-13 09:40:17 UTC
  - da980d9 Merge pull request #50486 from twangboy/lgpo_2018.3
  - bbbc07b Back port lgpo from Fluorine
• **ISSUE #50218**: (ata-sql) git.latest with unless command fails after upgrade to 2018.3.3 (refs: #50456)
• **PR #50456**: (terminalmage) Two bugfixes @ 2018-11-13 06:06:52 UTC
  - 7dd3438 Merge pull request #50456 from terminalmage/issue50218
  - 6143408 Add unit test for TimedProc regression
  - e2346ab Add support for list of commands in git states’ onlyif/unless
  - cb05c8 TimedProc: Don’t assume args is a string
  - 87de250 Exit gracefully when mod_run_check raises exception
• **PR #50455**: (dubb-b) Adding the released version as the bootstrap minion. @ 2018-11-12 22:52:53 UTC
  - d8514e6 Merge pull request #50455 from dubb-b/2018.3
  - fb61482 adding git
  - 181b8a4 removing stable
  - fc93ad6 Adding the released version as the bootstrap minion.
• **PR #50483**: (rallytime) Back-port #50272 to 2018.3 @ 2018-11-12 22:45:05 UTC
  - **PR #50272**: (jyurdal) Fix out of order docker Env comparison (refs: #50483)
  - cbf3351 Merge pull request #50483 from rallytime/bp-50272
  - 0f02da7 Remove unnecessary u prefix from string literals

30.2. Previous Releases 2173
- fc26ae8 Add unit test for comparing containers with the same env vars
- cf7cb4b extra blank line after function definition (pylint)
- 1de9ce3 Compare sorted docker environment

**PR #50481:** (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-11-12 22:44:15 UTC
- 360ae6a Merge pull request #50481 from rallytime/merge-2018.3
- 1517bb3 Update old utils paths to use new paths
- d8e7c47 Merge branch '2017.7' into '2018.3'
- e5f97cd Merge pull request #50467 from dwoz/test_kitchen_up
  * 8c5e93e Use patched version of test-kitchen until next release
- b16ff9c Merge pull request #50469 from dwoz/minion_timeout_test
  * 57f702d Fix linter warning
  * 686153a Fix up integration.minion.test_timeout
- 45b438e Merge pull request #50470 from dwoz/set_time_flaky
  * 794ba17 Reset date and time after changing
- c85561e Merge pull request #50442 from rallytime/replace-docbanner
  * 193325d Update docbanner hyperlink
- 7200568 Merge pull request #50439 from rallytime/bootstrap-contributing-docs
  * d2158aa Add bootstrap section to contributing docs
- cca7a36 Merge pull request #50441 from rallytime/replace-docbanner
  * 2af92bd Update SaltConf doc banner
- 1e72d20 Merge pull request #50414 from flassman/backmerge-for-typeerror-windows-python3
  * 20fff15 use exc.winerror not exc[0] to avoid python3 TypeError
- 93095cb Merge pull request #50415 from flassman/pass-cwd-to-runas_system
  * 0113137 cwd needs to be passed from runas() to runas_system()

**ISSUE #50461:** (absolutejam) elementaryOS 'pkg' __virtual__ returned false (refs: #50468)

**PR #50468:** (garethgreenaway) [2018.3] Adding elementary override to grains/core.py @ 2018-11-12 16:41:57 UTC
- 3aaad17 Merge pull request #50468 from garethgreenaway/50461_fix_elementary_os_family_grain
- 77e8dcc On later versions of elementary, the os_family is being populated as elementary. In order for the aptpkg module to function, we need to override is to be Debian.

**ISSUE #50311:** (marek-obuchowicz) pkg.installed state fails even though it succeeded (refs: #50590, #50333)

**ISSUE #46689:** (mxork) pkg.installed: hold: True not applied to a package which is already installed. (refs: #48426)

**PR #50333:** (garethgreenaway) [2018.3] Fix to pkg.installed for sources and hold: True (refs: #50590) @ 2018-11-08 18:02:33 UTC
- PR #48426: (garethgreenaway) [2017.7] fixes to states/pkg.py (refs: #50333)
- d9179fb Merge pull request #50333 from garethgreenaway/50311_pkg_installed_fails_sources_hold
- 7bc9b3d Merge branch '2018.3' into 50311_pkg_installed_fails_sources_hold
- 6e96728 pkg.installed currently fails when sources is used along with hold: True. This was due to a change in #48426 that swapped out sending the pkgs variable for the desired variable instead. This caused problems with pkg.hold because desired and sources are always populated, and pkg.hold can only include one or the other. This change just includes desired in the call to pkg.hold since desired has the same value for sources.

**PR #50434**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-11-08 17:40:39 UTC
- 193c80a Merge pull request #50434 from rallytime/merge-2018.3
- 83dfbb2 Merge branch '2017.7' into '2018.3'
  * 6e96728 pkg.installed currently fails when sources is used along with hold: True. This was due to a change in #48426 that swapped out sending the pkgs variable for the desired variable instead. This caused problems with pkg.hold because desired and sources are always populated, and pkg.hold can only include one or the other. This change just includes desired in the call to pkg.hold since desired has the same value for sources.
- 58ced12 log jid to payload size
- 3c537b5 Log message flow to publish daemon

**PR #50417**: (meaksh) Get the right target when using "_env__" on git_ext_pillar to avoid merging problems @ 2018-11-08 17:07:03 UTC
- 73ce80f Merge pull request #50417 from meaksh/2018.3-fix-git_pillar__env__-solving-for-merging
- 71af32d Remove unicode references
- b7af5e5 Test git_ext_pillar across multiple repos using __env__
- 59894e2 Resolve target branch when using __env__

**ISSUE #50292**: (dstoliker) sysctl in test=True mode results in [ERROR] Could not open sysctl file (refs: #50423)

**PR #50423**: (garethgreenaway) [2018.3] Fixes to sysctl modules and state @ 2018-11-08 14:13:00 UTC
- e9464c9 Merge pull request #50423 from garethgreenaway/50292_no_error_log_test_true
- 95a7f12 Adding file check and empty list return to freebsd_sysctl.py
- 469c090 Adding a check to see if the config file exists, if not then return an empty list so we get the would be changes. Adding a test for this functionality.

**ISSUE #50420**: (weswhet) mac_system virtual function fails to load on 2018.3.3 (refs: #50421)

**PR #50421**: (weswhet) fixing an issue on mac_system where the virtual function wouldnt load @ 2018-11-07 21:57:44 UTC
- fccf875 Merge pull request #50421 from weswhet/fix-mac_system-loader
- 042445d fixing an issue on mac_system where the virtual function wouldnt load

**PR #50409**: (casselt) Fix test mode for mount state if device_name_regex is used. @ 2018-11-07 16:04:45 UTC
- d2fc910 Merge pull request #50409 from casselt/mount-device_name_regex-test-mode-fix
- 56d5a32 Fix test mode for mount state if device_name_regex is used.

**PR #50383**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-11-06 15:51:53 UTC
- c2fda9d Merge pull request #50383 from rallytime/merge-2018.3
- e993692 Merge branch '2017.7' into '2018.3'
  * cd7c95f Merge pull request #50128 from mgomersbach/fix-py3-reload-compat
    * e453e82 Satisfy pylint, use naming instead of W or E classification
    * d20581c Merge branch 'fix-py3-reload-compat' of github.com:mgomersbach/salt into fix-py3-reload-compat
• 48c6a4f Merge branch '2017.7' into fix-py3-reload-compat
• 5cd9741 Satisfy pylint
• a2838db Satisfy pylint checks
• 05c598c Fix import error by utilizing six and strict version spec
• 95174e6 Merge branch '2017.7' into fix-py3-reload-compat
• ab8b5b4 Update workaround to root of file
• 37ab1f8 Update workaround to root of file
• 253ab11 Workaround for py2 builtin, =<3.3 imp and >=3.4 libimport quirks, solves #50127
  • aa6b149 Merge pull request #50354 from rallytime/version_num_docs
  • 0621f7d Add a few more feature release codenames to the version_numbers doc
• 6472100 Merge pull request #50359 from dwoz/clitest
  • 18b5d43 Increase cli batch test timeout for increased reliability
• 99c8f35 Merge pull request #50345 from dwoz/pub_d_logging
  • fd58523 Fix linter warnings
  • 5e1db3c Fix ZMQ PubServer daemon logging works on winndows
  • 8899832 Configure logging for ZMQ PubServer daemon
• 44f7af4 Merge pull request #50350 from dubb-b/2017.7
  • 346a831 Updating the AMI's and sizes for the test run.
• b947a18 Merge pull request #50274 from rallytime/bp-41472
  • 0a1e607 When the minion key is denied by the master then exit status 77 (permission denied)
• 4725acd Merge pull request #50195 from damon-atkins/jenkins_pylint
  • eb13407 capture some extra info
• ab8e845 Merge pull request #50329 from twangboy/fix_cloud_winrm
  • cf5f604 Check WinRM port before initiating connection
• e535b38 Merge pull request #50252 from dwoz/backport_ws_fix
  • 59ac284 Do not allow age to be a negative number

• ISSUE #49523: (MTecknology) [salt-cloud] Non-ascii chars cause an exception in salt-cloud (refs: #50146, #50236)
  • PR saltstack/salt#50174: (rallytime) Back-port #50146 to 2018.3 (refs: #50231)
• PR #50236: (rallytime) Fix salt-cloud UnicodeEncodeError when writing to stdout @ 2018-11-05 22:04:18 UTC
  • PR #50235: (rallytime) Don't encode the return values in utils/vt.py (refs: #50236)
  • PR #50231: (rallytime) Revert "Back-port #50146 to 2018.3" (refs: #50236)
  • PR #50230: (rallytime) Add various ssh tests to the filemap for salt/utils/vt.py changes (refs: #50291, #50235)
  • PR #50174: (rallytime) Back-port #50146 to 2018.3 (refs: #50236)
  • PR #50146: (MTecknology) Improve handling of non-ascii characters in terminal output. (Fixes: #49523)
    (refs: #50235, #saltstack/salt#50174, #50174, #50231, #50236)
- 46c7dc2d Merge pull request #50236 from rallytime/fix-cloud-vt
- c1984ec9 Fix salt-cloud UnicodeEncodeError when writing to stdout

- **ISSUE #50062**: (whytewolf) max_event_size does not always trim large events. (refs: #50382)

- **PR #50382**: (garethgreenaway) [2018.3] Fix to utils/dicttrim.py to honor max_event_size with nested dictionaries @ 2018-11-05 20:04:06 UTC
  - ed4fa87 Merge pull request #50382 from garethgreenaway/50062_max_event_size_does_not_always_trim_large_events
  - 039f3d1 Increase limit for trimming.
  - 7f77bfe Adding test for utils/dicttrim.py
  - 9b55ac7 Adding _trim_dict_in_dict to utils/dicttrim.py to be called from trim_dict when data contains a nested dictionary. This will ensure that values will still be trimmed correctly.

- **PR #50387**: (rallytime) Back-port #50339 to 2018.3 @ 2018-11-05 20:03:15 UTC
  - PR #50339: (bartlaarhoven) The driver requires dependency, not the other way around. (refs: #50387)
  - 493d653 Merge pull request #50387 from rallytime/bp-50339
  - a3f264d Lint: Add extra blank line
  - bd18412 The driver requires dependency, not the other way around.

- **ISSUE #41342**: (githubcdr) beacons.state does not save as list (refs: #50347)

- **PR #50347**: (garethgreenaway) [2018.3] Fixes to beacon state module @ 2018-11-05 14:19:41 UTC
  - 3022b7d Merge pull request #50347 from garethgreenaway/41342_beacon_state_module_fixes
  - 8885d1f Merge branch '2018.3' into 41342_beacon_state_module_fixes
  - c2354a9 Fixing beacon state test. Adding a reset function to beacon module to clear out beacon configuration. Useful for tests runs to ensure bits are left over between runs.
  - 2390f47 Adding SaltReturnAssertsMixin back in
  - 677d090 Remove zookeeper reference.
  - f3de43 Updating the beacon state module to ensure that the format of the beacon data that is being sent along to the beacon execution module is in the right format.

- **ISSUE #41583**: (seanjnkns) mount.swap for swap file test=True results wrong (refs: #50358)

- **PR #50358**: (garethgreenaway) [2018.3] fixes to function mount.swap in mount state @ 2018-11-05 14:16:50 UTC
  - 929525a Merge pull request #50358 from garethgreenaway/41583_mount_swap_test_true_wrong_results
  - b8ded8b Updating the swap function in the mount.swap function also check the device name when checking the fstab data. Updating tests to reflect new behavior.
    - d07c84d reordering ret dictionary in load test to ascending order
    - f704128 fixing type in load beacon module and adding option validators to config check function along with mock default values in test, fixes #48343
    - 4114a4f fixing type in load beacon module and adding option validators to config check function along with mock default values in test

- **ISSUE #49225**: (onnodb) [win_lgpo] lgpo_set always reports failure; Registry.pol corruption (refs: #50006)

- **ISSUE #48782**: (mike2523) [win_lgpo] Causes corrupt Registry.pol file (refs: #50006)

- **PR #50006**: (lomeroe) Correct more issues in lgpo @ 2018-11-02 16:32:29 UTC
- 3ffa392 Merge pull request #50006 from lomeroe/issue48782_2018.3
- dc58252 update to use a single line if statement when dealing with prepended text
- 0e011ad add runTest method to class for PY2
- 377ec09 add a test for #47784
- 0a14505 change backslashes in comment string to fix lint error
- 02181d3 add fix/test for #50079
- 05f2951 more lint fixes
- 94b3335 lint fixes in test
- 2a79626 update test to actually work
- 42840ec add missing comma in function call
- c283f50 Log a warning message instead of an exception when a SID cannot be converted to a username (for user rights assignments)
- 271bd70 capture and print exception information
- bc94b8e update method for creating size field of **delvals items for py3 compatibility
- d9fe28a fix clobbering of admx_search_results which was keeping some policies from being properly detected

• **PR #50340: (garethgreenaway) [2018.3] Backporting #48087 to 2018.3 @ 2018-11-01 18:15:37 UTC**
  - **PR #48087: (mat813) Fix patching sysctl.conf on FreeBSD. (refs: #50340)**
  - 12de4b9 Merge pull request #50340 from garethgreenaway/backport_48087_to_2018_3
  - 56c87ff Backporting #48087 to 2018.3

• **PR #50275: (rallytime) Back-port #49752 to 2018.3 @ 2018-11-01 16:50:17 UTC**
  - **PR #49752: (jodok) add support for clonenum parameter (refs: #50275)**
  - 5e46343 Merge pull request #50275 from rallytime/bp-49752
  - e463d99 Merge branch '2018.3' into bp-49752
  - 1e10c6e add support for clonenum parameter

• **ISSUE #47425: (raddessi) states/netyang.managed ignores models when passed as a kwarg (refs: #50301)**

• **PR #50316: (rallytime) Back-port #50301 to 2018.3 @ 2018-11-01 16:32:04 UTC**
  - **PR #50301: (tonybaloney) Fixes issues raised in #47425 for states.netyang (refs: #50316)**
  - 51e333a Merge pull request #50316 from rallytime/bp-50301
  - 367b689 Merge pull request #32 from tonybaloney/bp50301
    * 529687a update test assertions
    - 02a52ad remove unused import
    - 220e57f create 2 simple unit tests for the netyang state module and fix issue in #47425
    - 0bf306 reproduce bug in 47425

• **PR #50290: (twangboy) Fix test_state for Windows @ 2018-10-31 19:28:34 UTC**
  - af1075b Merge pull request #50290 from twangboy/fix_test_state
  - 69c02fc Fix some lint and some typos
- d184013 Fix typo
- 92b5ea0 Create salt util that copies file security info

- **ISSUE #50050**: (terminalmage) Backport runtests.py's --from-filenames functionality to 2018.3 branch (refs: #50308, #50291)

- **PR #50291**: (rallytime) Back-port #50230 to 2018.3 @ 2018-10-31 19:22:25 UTC
  - PR #50230: (rallytime) Add various ssh tests to the filemap for salt/utils/vt.py changes (refs: #50291, #50235)
  - 045d81c Merge pull request #50291 from rallytime/bp-50230
  - 1aae681 Merge branch '2018.3' into bp-50230
  - 1ef712a Add various ssh tests to the filemap for salt/utils/vt.py changes

- **PR #50315**: (rallytime) [2018.3] Merge forward from 2018.3.3 to 2018.3 @ 2018-10-31 14:16:34 UTC
  - 00437aa Merge pull request #50315 from rallytime/merge-2018.3
  - 422465e Merge branch '2018.3.3' into '2018.3'
  - 4d9e2a0 Merge pull request #50088 from vulnbe/fixincorrect-id-handling-2018-3-3
  - 619f2f2 Fix incorrect id handling in file state

- **PR #50309**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-10-30 16:07:25 UTC
  - 84ee7a3 Merge pull request #50309 from rallytime/merge-2018.3
  - 381a59d Merge branch '2017.7' into '2018.3'
  - 11fa33e Merge pull request #50295 from dubb-b/remove-cloud-change
    - 80982ad Removing an un needed change and maybe fixing the lint error
    - e00c507 Merge pull request #50287 from whytwolf/boto_vpc
      - 5a39644 minor correction to boto_vpc.route_table_present example, subnet_names was on wrong indent level
    - 37ae06c Merge pull request #50280 from gtmanfred/2017.7
      - 5808074 fix InstallRequirement.from_line for pip 18.1

- **ISSUE #50050**: (terminalmage) Backport runtests.py's --from-filenames functionality to 2018.3 branch (refs: #50308, #50291)

- **PR #50308**: (rallytime) Fix matcher grain file @ 2018-10-30 15:27:47 UTC
  - PR #50182: (terminalmage) Backport runtests.py modifications from develop to 2018.3 (refs: #50308)
  - b805bab Merge pull request #50308 from rallytime/test-fixes
  - f238522 Fix matcher grain file

- **PR #50270**: (terrible-broom) apt: speedup installing packages with ‘>=’ or ‘<=’ and reduced memory... @ 2018-10-30 13:24:36 UTC
  - 57fe6cd Merge pull request #50270 from terrible-broom/feature/apt-cache-show-instead-of-dump
  - 6c1b05a Lint: add extra blank line
  - a4df706 fix review notes
  - d059edd apt: speedup installing packages with ‘>=’ or ‘<=’ and reduced memory consumption

- **PR #50293**: (gtmanfred) update jenkins version for 2018.3 @ 2018-10-29 23:39:34 UTC
- 6a65402 Merge pull request #50293 from saltstack/jenkins
- fe6bc4 update jenkins version for 2018.3
- PR saltstack/salt-jenkins#1182: (gtmanfred) clean up salt.utils for using 2018.3.3 (refs: #50289)

  - PR #50289: (gtmanfred) ignore empty line in localectl status output @ 2018-10-29 21:39:07 UTC
    - 935f181 Merge pull request #50289 from gtmanfred/2018.3
    - fb43061 fix test
    - 5eb0e37 add extra space to localemod
t    - e8dc8ba if line in output of localectl is empty, ignore it

  - PR #50276: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-10-29 19:05:15 UTC
    - 10ba8b4 Merge pull request #50276 from rallytime/merge-2018.3
    - f05abb0 Merge branch `2017.7` into `2018.3`
      * 6ae8a33 Merge pull request #50281 from dubb-b/add_subnet
        - 4fdef7c Lint: Add extra blank line
        - cebfd8a Fixing lint error
        - 0da6301 Merge branch `2017.7` of https://github.com/saltstack/salt into add_subnet
        - 2df6115 Adding subnetID so it knows the right VPC to build the node in.
    - a0cfbdc Merge branch `2017.7` into `2018.3`
      * b94a43b Merge pull request #50184 from ethanculler/fix-minion-return-exception-with-return
        - 283d41c Merge branch `2017.7` into fix-minion-return-exception-with-return
        - a4e54d7 Added handling for minion return exceptions containing the word "return"
      * 6b009b4 Merge pull request #50258 from dubb-b/fix_cloud_ec2
        - 6a1e9f0 Adding securitygroupname as the config instead of securitygroup
    - 3e1aac9 Merge pull request #50251 from gtmanfred/2017.7
      - 061e599 bump salt version to 2017.7.8
    - fe9bc81 Merge pull request #50233 from Ch3LL/bp-50232
      - f83460d change order of search engine ids
      - b3f2f17 Update search engine IDs for releases

  - PR #50282: (twangboy) Fix `unit/beacons.test_diskusage` on Windows @ 2018-10-29 18:37:13 UTC
    - 0f1dc08 Merge pull request #50282 from twangboy/fixed_test_diskusage
    - fd369dd Mock is_windows = False

  - PR #50182: (terminalmage) Backport runtests.py modifications from develop to 2018.3 (refs: #50308) @ 2018-10-29 16:25:07 UTC
    - f7c2f04 Merge pull request #50182 from terminalmage/issue50050
    - 113d76e Revert "Move jinja templating tests alongside salt/utils/jinja.py's tests"
    - 3057ca4 Lint fix: add extra blank line in core.py
    - 8968f9d Revert "Rename test_map_conf test file to respect naming convention"
- 85a9395 Remove saltclass pillar unit test for list expansion
- 3d95673 Use get_config_dir() instead of self.config_dir
- e8b3a62 Add init file back in for unit/client pkg
- d527dd2 Rename states/test_libvirt.py into states/test_virt.py
- ab4a670 Remove pgjsonb returner unit tests
- 68ab3ee Remove "test_custom" from grains section of filename_map
- 6814698 Remove test_error from scheduler tests
- c55def0 Add init file back in for integration/cloud/clouds pkg
- f485b4a enable testing only filemaps
- dfa05b9 Remove test files for beacons that don't exist in 2018.3
- 85612cf runtests.py: Fix IndexError in --from-filenames
- 25097f9 Make sure from-filenames intersect with names-file
- ed864ce runtests.py: Accept modified file list from a text file
- 059754c Add some doc tests to the filename that should run on every PR
- b1ee2e5 Set a default value for the filename map path
- 5ea1024 Add documentation explaining naming convention for test files
- 8f790c0 Fix conflicting dict key in filename map
- f2e5512 Evan Moar Lint
- 65fe9a Moar Lint
- 39c2455 Lint
- dd20f12 Make sure we always run the module names test
- 2ac939e Add test to check test module names and make sure they match the naming convention
- 785d298 Add integration.netapi.rest_tornado.test_app to filename map
- 662ca0d Rename files to match naming convention
- 186d333 Add back changes lost in cherry-pick
- a236531 Add back test accidentally deleted when cherry-picking
- eaa4da3 Rename providers to clouds to respect naming convention
- 85b96ce Rename some files to avoid them being identified as test modules
- bf6015 Rename/consolidate salt.utils unit tests to conform to naming convention
- 84749dd Consolidate and move salt-ssh unit tests to proper location
- 71825a5 Consolidate and move loader tests to test/unit/test_loader.py
- 8326a09 Rename test_map_conf test file to respect naming convention
- 6d9c2eb Move jinja templating tests alongside salt/utils/jinja.py's tests
- 1ef43a3 Add additional paths to the filename map
- 75e6731 Use the new helper to get the test mods
- c3dc8ec Add function to get all of the test modules
- `c5593bc` Rename `custom_grains.py` so it's not identified as a test module
- `330c211` Consolidate saltclass pillar unit tests into single module
- `a642619` Rename test pgjsonb returner test file to match naming convention
- `6433c48` Don't import old module name
- `a97e032` Move helper outside of for loop
- `3f1b6fd` Add more unit test mapping
- `ac3406d` Fill out the filename map a bit
- `07d6f2a` Enhancements to `--from-filenames`, `--filename-map` options
- `b851a41` Don't run unit or integration tests unnecessarily
- `569276b` Add an initial filename_map
- `4419b1` Add `--from-filenames` and `--filename-map` options to parser

- **PR #50267**: `(m03)` Fix missing aptly config paths @ 2018-10-29 13:27:23 UTC
  - `1e8b092` Merge pull request #50267 from m03/fix-aptly-config-paths-20183
  - `319bb31` Fix missing aptly config paths

- **PR #50232**: `(Ch3LL)` Update search engine IDs for releases (refs: #50233) @ 2018-10-25 20:15:08 UTC
  - `ab0022` Merge pull request #50232 from Ch3LL/search_latest
  - `3452d9b` change order of search engine ids
  - `c9546df` Update search engine IDs for releases

- **ISSUE #49523**: `(MTecknology)` [salt-cloud] Non-ascii chars cause an exception in salt-cloud (refs: #50146, #50236)
  - **PR saltstack/salt#50174**: `(rallytime)` Back-port #50146 to 2018.3 (refs: #50231)

- **PR #50231**: `(rallytime)` Revert "Back-port #50146 to 2018.3" (refs: #50236) @ 2018-10-25 20:12:15 UTC
  - **PR #50146**: `(MTecknology)` Improve handling of non-ascii characters in terminal output. (Fixes: #49523)
    (refs: #50235, `saltstack/salt`#50146, #50231, #50236)
  - `c76ac1b` Revert "Back-port #50146 to 2018.3"

- **ISSUE #50132**: `(ManicoW)` XCP-ng packages and services management (refs: #50140)
  - **PR #50172**: `(rallytime)` Back-port #50140 to 2018.3 @ 2018-10-25 14:00:32 UTC

- **PR #50172**: `(rallytime)` Back-port #50140 to 2018.3 @ 2018-10-25 14:00:32 UTC
  - **PR #50140**: `(ManicoW)` Adding XCP-ng support (refs: #50172)
  - `82d4f43` Merge pull request #50172 from rallytime/bp-50140
  - `02e0ea0` lint fix
  - `819c46c` fix lint errors and code factorization
  - `8aa3598` Fix lint error
  - `9092e4e` Adding support for XCP-ng
  - `c516bc5` Adding XCP-ng to os family map

- **PR #50063**: `(twangboy)` Use long when setting REG_QWORD @ 2018-10-25 13:45:03 UTC
  - `9ad43f2` Merge pull request #50063 from twangboy/fix_50039
- 5fdba7d Disable lint error
- 84b8dd6 Add tests
- 4644bb6 Use long when setting REG_QWORD

• ISSUE #49965: (nkrishnakishor) Beacon: Usage in windows (refs: #50188)
• PR #50188: (garethgreenaway) [2018.3] fixes to diskusage beacon @ 2018-10-25 13:41:19 UTC
  - 01b083e Merge pull request #50188 from garethgreenaway/49965_beacon_diskusage_windows
  - 1f0ab27 Merge branch '2018.3' into 49965_beacon_diskusage_windows
  - 42b3203 Fixing lint
  - f65fa57 Fixing a bug in the diskusage beacon that prevented it from working on Windows. Adding a couple tests to test functionality on Windows.
• PR #50214: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-10-25 13:38:40 UTC
  - 9ea51c0 Merge pull request #50214 from rallytime/merge-2018.3
  - 897145c Merge branch '2017.7' into '2018.3'
    - 017d394 Merge pull request #50202 from Ch3LL/_2017.7.8
      - d520f9a Add tests with filename in token data
      - d45f6c7 Add empty token salt-api integration tests
      - 652dbf6 Ensure that tokens are hex to avoid hanging/errors in cherrypy
    - f28a4fa Merge pull request #50211 from channias/fix-spm-modules-install
      - 9b203d5 Fix broken install of additionnal modules in SPM packages
    - 6b4e07b Merge pull request #50212 from dwoz/test_no_fail
      - 7f613ac Do not fail if process already ended
    - 85e22d2 Merge pull request #50207 from Ch3LL/2update_version_doc_2017.7
      - 198d25c Add 2017.7.8 previous release
      - d4e26ac Update release versions for the 2017.7 branch
    - d035695 Merge pull request #50205 from Ch3LL/rm_2017.7.8
      - 71ee68b [2017.7.8] remove in progress and add security details
    - ce341f2 Merge pull request #50180 from max-arnold/2017.7
      - 881a521 Revert curly braces example for nested dictionaries
    - 622bb51 Merge pull request #50026 from damon-atkins/jenkins_pylint
      - aebce88 Merge branch '2017.7' into jenkins_pylint
      - 5f708fa use awk to create the other files, so git does not need to search again
      - 6b96a24 Adjust jenkins linting process, only run stage if required, use git diff to find files, instead of find, report on status, changed and deleted files, lint only changed files.
    - aa66d1b Merge pull request #50158 from vutny/doc/2017.7/fix-http-tutorial
      - fe2d70d [DOC] Fix JSON payload example in HTTP tutorial
• ISSUE #50162: (rbthomp) Scheduled job runs in endless loop when using when: and splay: together. (refs: #50216)
• PR #50216: (garethgreenaway) [2018.3] Fixes to scheduler, list of whens plus splay @ 2018-10-25 13:31:26 UTC
  - 51b3fa4 Merge pull request #50216 from garethgreenaway/garetgreenaway/50162_when_plus_splay@endless_loop
  - 685509f Fixing an issue when a combination of the when parameter as a list plus using the splay parameter would cause the schedule to continuously run jobs in an endless loop, regardless of if their scheduled time had been reached. Also fixing a related issue where scheduled jobs that rely on _next_fire_time were not being run as the corrected splayed time but rather running at the original scheduled time. Adding new tests.

• PR #50190: (dwoz) Fix test_managed_file_with_grains_data on Windows @ 2018-10-24 22:43:35 UTC
  - 43303fb Merge pull request #50190 from dwoz/grains_template_test
  - b77db48 Fix test_managed_file_with_grains_data on Windows

• PR #50187: (garethgreenaway) [2018.3] Adding fixes to scheduler tests to 2018.3 @ 2018-10-24 19:45:32 UTC
  - PR #49871: (garethgreenaway) [fluorine] Updating scheduler tests for OS X (refs: #50187)
  - 462314b Merge pull request #50187 from garethgreenaway/port_49871_to_2018_3
  - 25e7c6e Merge branch '2018.3' into port_49871_to_2018_3
  - d232df Update test_eval.py
  - d8d559 Fixing lint
  - 766e232 Removing unnecessary debugging lines
  - d2d06e22 Back porting #49871 to 2018.3. Adding some additional changes to ensure they are passing on OS X.

• PR #50201: (Ch3LL) [2018.3] Ensure that tokens are hex to avoid hanging/errors in cherrypy @ 2018-10-24 19:44:23 UTC
  - 8ad9a1b Merge pull request #50201 from Ch3LL/_2018.3.3

• PR #50208: (Ch3LL) Update release versions for the 2018.3 branch @ 2018-10-24 15:52:19 UTC
  - 88673ad Merge pull request #50208 from Ch3LL/2update_version_doc_2018.3
  - cdb49d Add 2017.7.8 previous release
  - 6f775e7 Update release versions for the 2018.3 branch

• PR #50206: (Ch3LL) [2018.3.3] remove in progress and add security details @ 2018-10-24 15:50:50 UTC
  - db0ef1e Merge pull request #50206 from Ch3LL/rn_2018.3.3
  - 896ca1a Add 2016.11.10 release notes to 2018.3 branch
  - 1e34158 [2018.3.3] remove in progress and add security details

• PR #50200: (rallytime) Back-port #50181 to 2018.3 @ 2018-10-24 15:49:59 UTC
  - PR #50181: (cro) Testinfra has a python packaging issue that is making version 1.17.0 fail to install some places (refs: #50200)
  - 3d3db79 Merge pull request #50200 from rallytime/bp-50181
  - f8e599f Ignore testinfra 1.17.0

• ISSUE #49523: (MTeknology) [salt-cloud] Non-ascii chars cause an exception in salt-cloud (refs: #50146, #50236)

• PR #50174: (rallytime) Back-port #50146 to 2018.3 (refs: #50236) @ 2018-10-23 18:16:45 UTC
- **PR #50146**: (MTecknology) Improve handling of non-ascii characters in terminal output. (Fixes: #49523)
  (refs: #50235, #saltstack/salt#50174,"_, #50174, #50231, #50236)
- 5f904dd Merge pull request #50174 from rallytime/bp-50146
- 601a5b8 Improve handling of non-ascii characters in terminal output. (Fixes: #49523)

- **ISSUE #50142**: (m03) stringutils.to_none AttributeError: 'module' object has no attribute 'tex_type' (refs: #50143)

- **PR #50173**: (rallytime) Back-port #50143 to 2018.3 @ 2018-10-23 17:13:55 UTC
  - **PR #50143**: (m03) Fix #50142, stringutils.to_none (refs: #50173)
  - **PR #45429**: (terminalmage) [PY3] Add unicode_literals to salt.utils modules (R-S) (refs: #50143)
  - 1cd0339 Merge pull request #50173 from rallytime/bp-50143
  - f5d6080 Add test_to_none
    - c0ce36b Fix #50142, stringutils.to_none

- **PR #50171**: (terminalmage) Fix invalid RST link in docker_network docs @ 2018-10-23 13:40:36 UTC
  - 9331f1e Merge pull request #50171 from terminalmage/docs
  - 7ea1d6c Fix invalid RST link in docker_network docs

- **PR #50161**: (rmarcinik) Add a missing result for task.info @ 2018-10-23 13:31:43 UTC
  - 16eece3 Merge pull request #50161 from rmarcinik/patch-1
  - 9848f06 Add a missing result for task.info

- **PR #50136**: (terminalmage) Add some debug logging before and after states gather pillar data @ 2018-10-22 14:40:38 UTC
  - 28bc5e3 Merge pull request #50136 from terminalmage/debug-logging
  - 8592a0b Add some debug logging before and after states gather pillar data

- **ISSUE #50129**: (kmatsoukas) Call to network.get_route fails when interface name contains a dash (refs: #50147)

- **PR #50147**: (garethgreenaway) [2018.3] Fix to modules/network.py @ 2018-10-22 14:31:03 UTC
  - 593c7ff Merge pull request #50147 from garethgreenaway/50129_network_get_route_fails_dash_in_name
  - 8fa87e3 Update test_network.py
  - 3117969 Fixing scenario where the interface for the default route has a dash in it, regular expression used in get_route currently doesn't not account for this. Adding some additional tests for network.get_route.

- **PR #50156**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-10-22 14:24:39 UTC
  - 5c7a7d9 Merge pull request #50156 from rallytime/merge-2018.3
  - 87e20fd Merge branch '2017.7' into '2018.3'
  - 1a90c4f Merge pull request #50144 from dwoz/winrm_fs_release
    - 0951d85 Use newest winrm-fs release
  - e096560 Merge pull request #50113 from rallytime/bp-49989
    - 27c7ac9 Increase centos7-py2 kitchen pr timeout to 8 hours

- **PR #50148**: (MTecknology) Proxmox fixups @ 2018-10-22 11:55:10 UTC
  - ce375f4 Merge pull request #50148 from MTecknology/proxmox-fixups
PR #50085: (dwoz) Fix test_win_pkg yet again @ 2018-10-19 18:16:16 UTC
- 0ece06e Merge pull request #50085 from dwoz/win_pkg_redux
- f22630e Merge branch '2018.3' into win_pkg_redux
- 0b033a6 Do not allow age to be a negative number
- a24d8b8 Debug file list cache
- 9f5722a The test is not a flush problem
- 071f8a0 Add cache file name to list cache log
- 128c2e5 Flush and sync file contents
- 7d361d8 Add debug log when file list is returned from cache

PR #49980: (twangboy) Add support for AddPrinterDrivers @ 2018-10-19 13:19:41 UTC
- 0069247 Merge pull request #49980 from twangboy/lgpo_add_printer_drivers
- 76c9301 Add support for AddPrinterDrivers

PR #50114: (rallytime) Back-port #50061 to 2018.3 @ 2018-10-19 11:46:03 UTC
- PR #50061: (rongzeng54) pkg.install bugfix (refs: #50114)
- de23c83 Merge pull request #50114 from rallytime/bp-50061
- 1f09104 Add unit test for pkg.install with epoch
- a253c6 pkg.install bugfix

ISSUE #50074: (bigpick) Arista EOS Salt Minion - Debug Log Flooded with Repeated Message (refs: #50115)

PR #50115: (garethgreenaway) [2018.3] Apply scheduler fixes and tests from #49104 to 2018.3 @ 2018-10-19 11:45:31 UTC
- PR #49104: (garethgreenaway) [fluorine] Fixes to scheduler for jobs with seconds, minutes, etc. (refs: #50115)
- 9188bec Merge pull request #50115 from garethgreenaway/apply_49104_to_2018_3
- adb1e79 Apply scheduler fixes and tests from #49104 to 2018.3

PR #50119: (terminalmage) Squelch spurious errors logged in unit tests @ 2018-10-19 11:42:31 UTC
- e892042 Merge pull request #50119 from terminalmage/boto-tests
- 91812ff Squelch spurious errors logged in unit tests

PR #50120: (terminalmage) Fix bad merge conflict resolution @ 2018-10-19 11:38:35 UTC
- 35449b4 Merge pull request #50120 from terminalmage/salt-jenkins-1137
- 1ddfd26 Fix bad merge conflict resolution

PR #50013: (Giandom) Passed kwargs to db_exists in db_remove method @ 2018-10-18 11:28:30 UTC
- 5123488 Merge pull request #50013 from Giandom/2018.3
- 9c91df3 Merge branch '2018.3' into 2018.3
- 06bb245 Merge branch '2018.3' into 2018.3
- 04a99e0 Passed kwargs to db_remove
• PR #50092: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-10-17 19:57:07 UTC
  – aa94f60 Merge pull request #50092 from rallytime/merge-2018.3
  – 8609064 Update old utils paths to use new paths
  – a984ad8 Merge branch ’2017.7’ into ’2018.3’
    * 7ec3840 Merge pull request #49794 from twangboy/fix_groupadd_test
      * 3d3b67d Gate for Windows
      * deca52 Check value of result instead of entire dict
    * e562838 Merge pull request #50028 from basseed/fix-windows-virtual-grain
      * 8129ac6 removed whitespaces
      * 82fa866 Fix #50015, Windows grain defaults to physical as unix grain
• ISSUE #50073: (jorotenev) boto_cloudfront update distribution fails (refs: #50082)
• PR #50082: (garethgreenaway) [2018.3] Fixing a typo in the boto_cloudfront @ 2018-10-17 19:35:00 UTC
  – d1f2e5d Merge pull request #50082 from garethgreenaway/50073_fixing_typo_boto_cloudfront
  – b5b90a1 Fixing a typo in the boto_cloudfront.
• PR #50090: (garethgreenaway) [2018.3] Fix to utils/vault.py @ 2018-10-17 13:57:30 UTC
  – 05bd2a0 Merge pull request #50090 from garethgreenaway/fix_vault_sdb_runner_test
  – 4444e5 Merge branch ’2018.3’ into fix_vault_sdb_runner_test
• ISSUE #49275: (dgengtek) execution module cp.cache_file fails with error ‘invalid arguments to setopt’ (refs: #50080)
• PR #50080: (terminalmage) Ensure all string kwargs passed to Tornado’s httpclient are str types @ 2018-10-16 21:01:41 UTC
  – 7092879 Merge pull request #50080 from terminalmage/issue49275
  – 4a6c327 Ensure all string kwargs passed to Tornado’s httpclient are str types
• ISSUE #44979: (hunkeelin) Firewalld state cause horrid performance during saltrun. (refs: #49811)
• PR #49811: (nhavens) Optimize firewalld state @ 2018-10-16 11:26:46 UTC
  – 45b6da3 Merge pull request #49811 from nhavens/optimize-firewalld-state
  – 7d6e628 Merge branch ’2018.3’ into optimize-firewalld-state
  – a718b0c Merge branch ’2018.3’ into optimize-firewalld-state
  – f7299b9 Merge branch ’2018.3’ into optimize-firewalld-state
  – f289618 Merge branch ’2018.3’ into optimize-firewalld-state
  – 41a5f13 Merge branch ’2018.3’ into optimize-firewalld-state
  – 7ceba4 Merge branch ’2018.3’ into optimize-firewalld-state
  – c38bb7d Merge branch ’2018.3’ into optimize-firewalld-state
  – abed058 Merge branch ’2018.3’ into optimize-firewalld-state
  – 0ec1f82 Merge branch ’2018.3’ into optimize-firewalld-state
  – db6b23b Merge branch ’2018.3’ into optimize-firewalld-state
  – 4ca7e12 Merge branch ’2018.3’ into optimize-firewalld-state
- 4f7c914 fix invalid icmp type handling in firewalld state
- 2d2e2eb resolve lint error in firewalld state
- 081424d resolve indentation issues in updates to firewalld state
- c92c4fe optimize firewalld.present rich rule handling
- 25d1daf optimize firewalld.present source handling
- 5f62c14 optimize firewalld.present interface handling
- 69f2c6c optimize firewalld.present service handling
- 71ec8e7 optimize firewalld.present port forward handling
- f18e09e optimize firewalld.present open port handling
- 35193dc clean up firewalld.present masquerade code (DRY)
- 8c88784 optimize firewalld.present icmp block handling

- PR #50055: (rallytime) Back-port #50024 to 2018.3 @ 2018-10-16 09:14:06 UTC
  - PR #50024: (rwaweber) docs: Correct napalm topic spelling mistake and smooth out sentence (refs: #50055)
  - b94e0a0 Merge pull request #50055 from rallytime/bp-50024
  - 1ea72a0 docs: Correct spelling mistake and smooth out sentence

- PR #50056: (rallytime) Back-port #50029 to 2018.3 @ 2018-10-16 09:12:59 UTC
  - PR #50029: (thebluesnevrdie) Expose docs for Ansible modules (refs: #50056)
  - 14f3fac Merge pull request #50056 from rallytime/bp-50029
  - 2e46a78 Expose docs for Ansible modules

- PR #50064: (rallytime) Back-port #50064 to 2018.3 @ 2018-10-16 09:07:10 UTC
  - PR #50064: (bluesliverx) Make test check_pillar more lenient (refs: #50064)
  - 40da3ce Merge pull request #50064 from rallytime/bp-50022
  - 6ef5ce4 Due to a previous PR the test_sdb_runner in sdb.test_vault was failing because of a exception that was being swallowed in the test_run_run function. The cause was that when vault related functions were being run, if they were being run on the master then they were being forced to run through the _get_token_and_url_from_master() function, which pull the id element out of the grains dictionary. When the call was taking place from a runner, the exception was popping up since there is no id when called from a runner. This fix checks to see if the id exists in the dictionary.
first, if it is there then \_get\_token\_and\_url\_from\_master() is called, otherwise \_use\_local\_config is called.

- PR \#49987: (terminalmage) Make Pillar no longer munge file_roots @ 2018-10-15 21:58:08 UTC
  - 4c4bb5a Merge pull request \#49987 from terminalmage/pillar_roots
  - f59506d Update tests to reflect behavior changes
  - 58f5fde Make Pillar no longer munge file_roots

- PR \#50065: (rallytime) Back-port \#50044 to 2018.3 @ 2018-10-15 21:32:37 UTC
  - PR \#50044: (mchugh19) add saltclass info from release notes to docs (refs: \#50065)
  - 1e377ac Merge pull request \#50065 from rallytime/bp-50044
  - 1eaaab7 Doc title formatting must match doc name length
  - 6ac26b6 add saltclass docs from release notes

- PR \#50038: (s0undt3ch) Don't squash the traceback @ 2018-10-15 20:36:55 UTC
  - 8a6b435 Merge pull request \#50038 from s0undt3ch/2018.3
  - 852257a Don't squash the traceback

- PR \#50054: (rallytime) Back-port \#50004 to 2018.3 @ 2018-10-15 20:36:03 UTC
  - PR \#50004: (kiemlicz) https://github.com/saltstack/salt/issues/49883 (refs: \#50054)
  - dbfd7ee Merge pull request \#50054 from rallytime/bp-50004
  - 88e3202 https://github.com/saltstack/salt/issues/49883

- PR \#50057: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-10-15 20:35:46 UTC
  - a9e9974 Merge pull request \#50057 from rallytime/merge-2018.3
  - 1b5b018 Merge branch '2017.7' into '2018.3'
    - 9eb17ea Merge pull request \#50047 from rallytime/bp-49605
      - e3a0f7b Add gce fix to 2017.7.9 release notes
      - e6d86fc document GCE instance credentials configuration
      - c3a0d1b allow empty service_account_private_key in GCE driver
    - 6cdd390 Merge pull request \#50017 from gtmanfred/iptables
      - e552e4f Use parse_known_args when checking iptables rules
    - a6a66b9 Merge pull request \#50012 from dwoz/norm_log
      - f96b29d Use normal log formatting and add jid
    - 15f86b2 Merge pull request \#50001 from kyentei/doc-fix-gpg
      - 3d6ee3e Fix gpg state Documentation
    - 7a235d7 Merge pull request \#50000 from kyentei/doc-fix-lvm
      - c2f3d87 Fix LVM state documentation
    - 4edd094 Merge pull request \#49999 from kyentei/doc-fix-proxy
      - a180ed7 Fix proxy documentation
    - 58d2302 Merge pull request \#49998 from kyentei/doc-fix-process
• edd4f40 Fix documentation on process.py
  • 411635b Merge pull request #49997 from kyentei/doc-fix-mysql
  • 01059cc Fix documentation for mysql processlist
  • PR #50060: (rallytime) [2018.3] Fix some pylint issues that have popped up recently @ 2018-10-15 20:35:22 UTC
    • f1bcb1f Merge pull request #50060 from rallytime/fix-lint
    • a8f4f39 Merge branch '2018.3' into fix-lint
  • ISSUE #49927: (thetaurean) File Tree external pillar fails to render templates in python 3 (refs: #49943)
  • PR #50052: (rallytime) Back-port #49943 to 2018.3 @ 2018-10-15 20:06:20 UTC
    • PR #49943: (thetaurean) Coerce string when calling compile_template_str (refs: #50052)
    • b26b21c Merge pull request #50052 from rallytime/bp-49943
    • d336dec Handle non-ASCII chars during template data decode
    • 435afb7 Adjusted import to expose stringutils namespace
    • 958ec30 Coerce string when calling compile_template_str
    • e73f13d [2018.3] Fix some pylint issues that have popped up recently
  • PR #49809: (Ch3LL) Add additional asserts to help investigate test_win_pkg failure @ 2018-10-13 18:00:09 UTC
    • fe7669 Merge pull request #49809 from Ch3LL/win_pkg_flaky
    • f795b60 Merge pull request #7 from dwoz/win_pkg_flaky
      • beaab2a Fix win_pkg test
    • 75809b4 Merge pull request #6 from dwoz/win_pkg_flaky
      • e5ea3f1 Try running fsync to avoid fs caching race condition
    • fd5e842 Merge pull request #5 from dwoz/win_pkg_flaky
      • c386826 Log results of cache_dir for now
    • 2cd4058 Merge pull request #4 from dwoz/win_pkg_flaky
      • 1005b91 Debug win_pkg
    • 9dce5cc Fix the assertion message order
    • 18e9a28 Add additional asserts to help investigate test_win_pkg failure
  • PR #49983: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-10-11 13:27:34 UTC
    • 8949873 Merge pull request #49983 from rallytime/merge-2018.3
    • f8e73e8 Merge branch '2017.7' into '2018.3'
      • a8a3811 Merge pull request #49972 from rallytime/release-notes-2017.7.9
        • 6c00003 Add 2017.7.9 release notes file
      • 8de58d6 Merge pull request #49974 from rallytime/bp-49940
        • a70358a Update mod_watch() description for all states.
        • bf3d064 Another attempt to clean up service.mod_watch description.
        • 165b799 Clean up documentation/language in service state. (Fixes #40819)
      • d68e5d3 Merge pull request #49978 from whytewolf/inotify_doc_change
· 89cbbb6 Merge pull request #49934 from rallytime/fix-49925
  · 216fd64 Remove event_publisher_pub_hwm and salt_event_pub_hwm from documentation
  · PR #49979: (cachedout) Update license date and include NOTICE @ 2018-10-11 12:57:21 UTC
    · c7d2482 Merge pull request #49979 from cachedout/license_update
    · b4f148e Break out support and contributing docs into separate files
    · 1dd0e34 Update license date and include NOTICE
  · PR #49973: (rallytime) Add 2018.3.4 release notes file @ 2018-10-10 17:46:04 UTC
    · ef61fc6 Merge pull request #49973 from rallytime/release-notes-2018.3.4
    · 32e7d90 Add 2018.3.4 release notes file
  · PR #49975: (rallytime) Back-port #49958 to 2018.3 @ 2018-10-10 17:44:56 UTC
    · PR #49958: (garethgreenaway) [fluorine] Fixes to mac_system.py (refs: #49975)
      · 7df8f10c Merge pull request #49975 from rallytime/bp-49958
      · a229a50 Swap the call for mac_utils.available_services to use __utils__ so mac_utils.available_services
        has access to __context__
  · PR #49946: (isbm) osversion/osversion_info/osmajorrelease grains fixes @ 2018-10-10 14:01:05 UTC
    · c91d3a Merge pull request #49946 from isbm/isbm-osversion_info-fixes
    · a17ba35 Fix proper part name in the string-bound CPE
    · 9d49607 Expand unit test to verify part name
    · a6b7d01 Remove linebreak
    · 5376886 Keep CPE_NAME only for opensuse series
    · 8af3904 Add part parsing
    · c202b41 Prevent possible crash if CPE_NAME is wrongly written in the distro
    · 712083d Add unit test for broken CPE_NAME
    · 1306ddb Add unit test for v2.3 of CPE format
    · 04b61d3 Add unit test for WFN format of CPE_NAME
    · 035690f Override VERSION_ID from os-release, if CPE_NAME is given
    · 08e235b Remove unnecessary linebreak
    · 853e163 Add CPE_NAME parsing
  · ISSUE #48204: (zerthimon) State mysql_user.present Exception with mysql 8.0.11 (refs: #49918)
  · PR #49918: (garethgreenaway) [2018.3] Fixes to MySQL module @ 2018-10-10 14:00:11 UTC
    · 18fb5df Merge pull request #49918 from garethgreenaway/48204_mysql_user_password_exception_part_deux
    · 92c0680 Merge branch ‘2018.3’ into 48204_mysql_user_password_exception_part_deux
    · 71e53a3 Cleanup of debugging.
    · dd96c13 Fixing lint.
    · ac7da89 Tweaking a couple tests to account for new scenarios with later versions.
Removing __mysql_hash_password, no longer needed.
 Removing unnecessary empty line.
 Updating the mysql update to handle changes in version 8.0.11 where PASSWORD was removed. Updating unit tests.

• PR #49961: (dmurphy18) Fix aix grains test for prtconf present @ 2018-10-10 13:38:02 UTC
  1c2e5be Merge pull request #49961 from dmurphy18/fix_aix_grains
  f38d543 Correct test for AIX grains prtconf

• ISSUE #49205: (ereslibre) Compound targeting includes unexpected targets in the result (refs: #49897, #49907)

• PR #49907: (brejoc) 2018.3 fix for list compound targeting @ 2018-10-10 13:33:40 UTC
  PR #49897: (brejoc) 2017.7 fix for list compound targeting (refs: #49907)
  e427306 Merge pull request #49907 from brejoc/2018.3-fix-for-list-compound-targeting
  1bcadb9 Merge branch '2018.3' into 2018.3-fix-for-list-compound-targeting
  649c46c Adds check for engine before adding the additional engine argument
  7d0b20c Minor fix for def test_batch_run_grains_targeting
  0d64716 Ignore missing minions only when excluding them with 'not'
  6af53cd No longer passes missing in list compound engine

• ISSUE #48599: (angeloudy) module ldap3 'TypeError: ('expected a byte string in the list'' (refs: #48666)

• PR #49947: (rallytime) Back-port #48666 to 2018.3 @ 2018-10-09 17:48:20 UTC
  PR #48666: (angeloudy) values need to be bytes when writing back to ldap (refs: #49947)
  143c723 Merge pull request #49947 from rallytime/bp-48666
  5166917 Update ldap3.py
  05e55bd values need to be bytes when writing to ldap
  0d749e6 values need to be bytes when writing back to ldap

• PR #49948: (rallytime) Skip pillar refresh test @ 2018-10-09 15:20:52 UTC
  dbf994e Merge pull request #49948 from rallytime/skip-flaky-test
  df11c39 Skip pillar refresh test

• PR #49938: (s0undt3ch) Handle missing pkg_resources package @ 2018-10-09 13:41:09 UTC
  614d172 Merge pull request #49938 from s0undt3ch/2018.3
  b1c2928 Handle missing pkg_resources package

• PR #49942: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-10-09 13:38:04 UTC
  bce12c3 Merge pull request #49942 from rallytime/merge-2018.3
  91534ee Merge branch '2017.7' into '2018.3'
  * 327796e Merge pull request #49911 from dubb-b/slack-pr
    57e630c Adding failure messages for PR.
  * cf1df79 Merge pull request #49900 from dwoz/presence_wart
• 7bd34f6 Connect before processing presence
  * 8e4707d Merge pull request #49899 from twangboy/fix_49892
  * a66765f Remove arrInstalled artifact

• PR #49930: (isbm) Get os_family for RPM distros from the RPM macros @ 2018-10-09 13:31:52 UTC
  - a30c053 Merge pull request #49930 from isbm/isbm-osarch-bugfix
  - f8a75f1 Fix imports
  - 70d3de0 Strip and stringify the return for the osarch
  - a248371 Get os_family for RPM distros from the RPM macros.

• PR #49868: (dwoz) windows shell tests @ 2018-10-08 17:32:20 UTC
  - 99c5dba Merge pull request #49868 from dwoz/shelltests
  - 9997f45 Merge branch '2018.3' into shelltests

• PR #49875: (dwoz) Add spm tests to Windows suite @ 2018-10-05 18:13:07 UTC
  - eee82d3 Merge pull request #49875 from dwoz/win_spm_tests
  - e76a751 Use os.path.split for more consistancy
  - bc54d15 Fix wart in spm on windows
  - df5e271 Add spm tests for windows

• PR #49872: (twangboy) Fix issues with windows file permissions when using reset=True @ 2018-10-05 13:52:07 UTC
  - c0e2404 Merge pull request #49872 from twangboy/fix_49861
  - 01bd847 Gate the win_function a little better
  - bcd366 Skip on non-windows systems
  - 02f6335 Fix some lint
  - 8ecebe0e Add tests for check_perms
  - d6e7512 Fix issues with file permissions

• ISSUE #49582: (UtahDave) lgpo doesn’t seem to allow for unsetting a gpo setting (refs: #49902)

• ISSUE #48661: (mike2523) win_lgpo: User Rights Assignment policies (refs: #49902)

• PR #49902: (lomeroe) lgpo better comments on user right assignments @ 2018-10-05 13:41:16 UTC
  - d3a909f Merge pull request #49902 from lomeroe/issue48661_2018.3
  - 760d8f4 Merge branch '2018.3' into issue48661_2018.3
  - f72ca81 add comments on user right assignment policies when they are already set and note if cumulative_rights_assignment is True that the particular user is already granted the right
  * 75dd5a5 Merge branch '2018.3' into shelltests

• PR #49896: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-10-04 21:00:24 UTC
  - 4eb43af Merge pull request #49896 from rallytime/merge-2018.3
  - 41c8b31 Merge branch '2017.7' into '2018.3'
  - b959033 Merge pull request #49739 from twangboy/fix_49660
  * f3400ad Merge branch '2017.7' into fix_49660
• 0a4f5fc Merge branch '2017.7' into fix_49660
• 1f9bbc8 Populate changes dictionary
  - 71669bd Merge pull request #49885 from dwoz/gemfile
    • 791e3ff Use dwoz/winrm-fs for chunked downloads
    • f3999e1 Move vagrant to its own group
  - 0662e37 Merge pull request #49870 from KaiSforza/ci_actually_fail
    • 9ef9206 Actually catch the exception when we fail
      - 19072f0 Use os.path.split for more consistancy
      - 6c22459 Merge remote-tracking branch 'origin/shelltests' into shelltests
      - 43b292f Merge branch '2018.3' into shelltests
      - 876c040 Fix wart in test_cp module
      - 9e6ff11 Add syndic tests to whitelist.txt for Windows
      - 9cab293 Fix wart in spm on windows
      - 58e9d1b Add spm tests to whitelist.txt for Windows
      - 7393610 Add more shell integration tests to whitelist
      - ce85d60 Add shell.test_key to whitelist and fix wart
      - 6fbadd7 Skip tests not valid on windows
      - 9deb2f9 Add shell cp tests and fix them
      - 8bfa634 Fix warts in integration.shell.test_matcher
      - 45d2142 Fix wart in test_cp module
      - 0e4fc5 Add syndic tests to whitelist.txt for Windows
      - f72ad01 Fix wart in spm on windows
      - 4141cc8 Add spm tests to whitelist.txt for Windows
      - 02ad722 Add more shell integration tests to whitelist
      - 48275c0 Add shell.test_key to whitelist and fix wart
      - e5edff4 Skip tests not valid on windows
      - a389729 Add shell cp tests and fix them

• ISSUE #49744: (MTecknology) Group state cannot force empty group membership (refs: #49745)

• PR #49745: (MTecknology) Remove all users from group when members list is empty. @ 2018-10-03 13:48:40 UTC
  - 85478cd Merge pull request #49745 from MTecknology/fix-49744
  - 61af5d5 Merge branch '2018.3' into fix-49744
  - 269bde2 Merge branch '2018.3' into fix-49744
  - 0b5d9f6 Modify if structure, as requested.
  - f57ce67 Remove all users from group when members list is empty. (Fixes #49744)

• PR #49867: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-10-03 13:23:35 UTC
- 05cd56b Merge pull request #49867 from rallytime/merge-2018.3
- b53c3e6 Update old utils paths to use new utils paths
- a65c60d Merge branch '2017.7' into '2018.3'
  - 7fa2043 Merge pull request #49858 from Paulo-Nunes/fix-requisite-doc
  - fb6f818 Edit requisite documentation
- 0587fbc Merge pull request #49828 from dwoz/testslogencoding
  - 2b323df Merge branch '2017.7' into testslogencoding
  - 7ce1b64 Use utf-8 encoding for salt-runtests.log
- 15ccfffd Merge pull request #49848 from terminalmage/fix-version-rst-2017.7
  - af2dddb Fix badly formatted versionadded directive
- 297031b Merge pull request #49777 from terminalmage/issue49738
  - 8a9945e Update test docstring to reflect switch to using SHA1
  - 7ddf72 Switch from base64 encoding to sha1 digest for unique cache filename
  - 0e26dc6 Explicitly import salt.utils.hashutils
  - dca90d7 Skip parallel states test on Windows until we can get it to work
  - 5a11067 Add additional info to the assert to aid in troubleshooting
  - cb19086 Remove/replace unnecessary setUp/tearDown
  - b3e9678 Fix parallel states with long ID dec or name
- 98c9372 Merge pull request #49763 from twangboy/fix_49730
  - 99bc8f1 Merge branch '2017.7' into fix_49730
  - 7a9278b Fix broken tests, add new tests
  - 2cd1509 Merge branch '2017.7' into fix_49730
  - defb1ac Merge branch '2017.7' into fix_49730
  - af1ed1c Add/fixed tests
  - 5005ad4 Only clear dns entries if you pass []
  - 048561e Add ability to clear DNS entries on static DNS

- **PR #49876: (KaiSforza)** Actually catch the exception when we fail @ 2018-10-03 12:26:58 UTC
  - 42b540b Merge pull request #49876 from KaiSforza/ci_actually_fail_2018
  - c88a81d Actually catch the exception when we fail

- **PR #49852: (terminalmage)** Rename logstash engine filename to make it work with the loader @ 2018-10-02 17:42:10 UTC
  - 1c8de9f9 Merge pull request #49852 from terminalmage/issue49627
  - 559cf1b Rename logstash engine filename to make it work with the loader

- **PR #49850: (rallytime)** Back-port #49798 to 2018.3 @ 2018-10-02 17:40:29 UTC
  - **PR #49798: (mattp-)** saltnado: teach runner about full_return (refs: #49850)
  - 675df25 Merge pull request #49850 from rallytime/hp-49798
- 4b6dcd7 saltnado: teach runner about full_return

- **ISSUE #49204**: (mchugh19) file.directory state fails if directory contains an invalid symlink (refs: #49209, #49827)

- **PR #49846**: (rallytime) Back-port #49650 and #49827 to 2018.3 @ 2018-10-01 20:05:24 UTC
  - **PR #49827**: (dgmorrisjr) fixing mis-spelling of lattrs in file.py, referncing #49204 (refs: #49846)
  - **PR #49650**: (Yxnt) fix aliyun cloud typeerror (refs: #49846)
  - 93d064a Merge pull request #49846 from rallytime/bp-49650
  - fb7fed7 referncing #49204, fixing mis-spelling of lattrs on line 4514 per request from @gtmanfred
  - ec9fa92 use stringutils instead of hard code
  - a307ae0 fix aliyun cloud typeerror

- **ISSUE #49520**: (doesitblend) Multi-master DNS Issue - minion connect fail (refs: #49764)

- **PR #49764**: (garethgreenaway) [2018.3] Adding retry_dns_count to minion @ 2018-10-01 14:20:03 UTC
  - ec97806 Merge pull request #49764 from garethgreenaway/49520_multimaster_dns_issue_fix
  - 30cc5e5 Merge branch '2018.3' into 49520_multimaster_dns_issue_fix
  - 741928b Fixes per request from @rallytime.
  - 04c9583 Moving the check for an empty self.minions into a io_loop.call_later call.
  - 44ee2ec Updating default for retry_dns_count
  - 75f64a6 Removing unneccessary code.
  - e66dc18 Updating the resolve_dns function in minion.py to include a new minion configuration option which will control how many attempts will be made when the master hostname is unable to be resolved before giving up.

- **PR #49847**: (terminalmage) Fix badly formatted versionadded directive (2018.3 branch) @ 2018-10-01 14:04:27 UTC
  - ab5ab86 Merge pull request #49847 from terminalmage/fix-version-rst-2018.3
  - a127548 Fix badly formatted versionadded directive

- **ISSUE #49043**: (awerner) Unicode broken with file.blockreplace on Python2 (refs: #49782)

- **PR #49782**: (dwoz) Fix issue 49043 @ 2018-10-01 13:43:02 UTC
  - aca87ab Merge pull request #49782 from dwoz/issue-49043
  - b7d904f Merge branch '2018.3' into issue-49043
  - ed35633 Revert diff newline change
  - 2a901e9 Fix issue 49043

- **ISSUE #49671**: (mchugh19) Vault execution module broken in pillar lookups (refs: #49820)

- **PR #49820**: (garethgreenaway) [2018.3] Fixing vault when being used from Pillar @ 2018-10-01 13:40:25 UTC
  - 1a41d1b Merge pull request #49820 from garethgreenaway/49671_fixing_vault_pillar
  - a57872f Merge branch '2018.3' into 49671_fixing_vault_pillar
  - 5f13219 Merge branch '2018.3' into 49671_fixing_vault_pillar
  - b0ba2ec Fixing the scenario when vault values are used in Pillar, but due to a previous change the minion was not being granted token based access.
• PR #49842: (rallytime) [2018.3] Merge forward from 2018.3.3 to 2018.3 @ 2018-10-01 13:21:42 UTC
  – b9c175 Merge pull request #49842 from rallytime/merge-2018.3
  – 81b0aa7 Add "in progress" notation back to the 2018.3.3 release notes
  – 0e76103 Merge branch '2018.3.3' into '2018.3'
• PR #49839: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-09-30 16:32:53 UTC
  – e6382cb Merge pull request #49839 from rallytime/merge-2018.3
  – 179e4b1 Merge branch '2017.7' into '2018.3'
  – fd46d35 Merge pull request #49823 from dubb-b/timeout_addition
    * b25ac9f Adding some changes for the status
    * f6d9679 Updating syntax to be better and with new lines
    * 855fe6 Adding timeout to all pipelines so that the build aborts
• PR #49815: (ism) Bugfix/rework: IPv6 scope errors (bp) @ 2018-09-28 19:44:59 UTC
  – fcc08c Merge pull request #49815 from ism/ism-ipv6-scope-errors-2018.3
  – c14f26f Reverse skipping tests: if no ipaddress
  – bb37ba0 Add IPv6 scoped test
  – facb34a Add additional check
  – 615b09a Lintfix: W0611
  – 3ce265e Remove unnecessary manipulation with IPv6 scope outside of the IPv6Address object instance
  – c314e1c Revert method remapping with pylint updates
  – 0a86112 Lintfix refactor: remove duplicate returns as not needed
  – 593240d Lintfix
  – f52ea0b Add Py3.4 old implementation's fix
  – 1c02a31 Fix wrong type swap
  – 54233ca Do not use introspection for method swap
  – 12038ea Simplify checking clause
  – 7f2208b Fix py2 case where the same class cannot initialise itself on Python2 via super.
  – cefb16b Add extra detection for hexadecimal packed bytes on Python2. This cannot be detected with
type comparison, because bytes == str and at the same time bytes != str if compatibility is not around
  – 379ead4 Lintfix: mute not called constructors
  – 66ec29c Add scope on str
  – f5644bf Add logging to the ip_interface
  – 8bb5438 Add real exception message
  – 693e4d4 Move docstrings to their native places
  – 77f1e44 Remove duplicated code
  – 40d0e6b Use ternary operator instead
  – d05999e Remove multiple returns
- 3fde850 Remove unnecessary operator
- deb0b4e Remove duplicated code
- 8e62633 Remove unnecessary variable for import detection
- 7a6ea3b Remove multiple returns and add check for address syntax
- b40e1e1 Add debugging to the ip_address method (py2 and py3)
- cab5f62 Add logging
- eeb9f2 Isolate Py2 and Py3 mode
- 49b32b7 Check version via object
- 1ae94f1 Override standard IPv6Address class
- 5e970ea Fix unicode imports in compat
- bbeec4d Fix ipaddress import
- 561c99e Remove unused import
- 0498e94 Fix ipaddress imports
- b4f1a72 Add missing docstrings

• **PR #49784**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-09-28 17:29:30 UTC
  - 804d52c Merge pull request #49784 from rallytime/merge-2018.3
  - c6b9d18 Merge branch '2018.3' into merge-2018.3
  - 26461f9 Add helper import comments
  - 22f055c Merge branch '2017.7' into '2018.3'
    * d2a193b Merge pull request #49792 from KaiSforza/fixscriptedpipes
      * 5b16996 Fix the new pipelines
  - dd27d80 Merge branch '2017.7' into '2018.3'
    * 8a71a43 Merge pull request #49774 from KaiSforza/declarativeToScripted
      * cae8f2 Move all pipelines to be fully scripted
    * 8fe8a9c Merge pull request #49736 from mattLLVW/fix-file-touch
      * 1da9f34 Fix test opts in append, prepend states/file.py

• **PR #49790**: (weswhet) fixing an issue where sentry logger would fail to get tags from grain... @ 2018-09-28 13:39:04 UTC
  - d191b08 Merge pull request #49790 from weswhet/fixing-sentry-logger-2018.3
  - 201697d fixing an issue where sentry logger would fail to get tags from grains and some other lint fixes for this file

• **ISSUE #49626**: (PabloLemos) target grains ip_interface no return received (refs: #49791)

• **PR #49791**: (terminalmage) Fix 3 bugs in subdict matching @ 2018-09-28 13:38:34 UTC
  - 4df6c7c Merge pull request #49791 from terminalmage/issue49626
  - 6795472 Add clarifying comment
  - ac0f800 Fix 3 bugs in subdict matching

• **PR #49806**: (isbm) Bugfix: zypper ZYPPER_EXIT_NO_REPOS exit code @ 2018-09-28 13:20:36 UTC
- 52b0472 Merge pull request #49806 from isbm/isbm-zypper-errcode-6-bp
- 756ef77 Update error list for zypper
- 5b02548 Add error logging

- **ISSUE** saltstack/salt-jenkins#1121: (rallytime) [2018.3] 4 related tests failing on 2018.3 Python 3 (refs: #49795)

- **PR #49795:** (gtmanfred) fix test_managed_file_with_grains_data @ 2018-09-26 22:48:36 UTC
  - fee6701 Merge pull request #49795 from gtmanfred/tests
  - c5c179 fix test_managed_file_with_grains_data

- **PR #49786:** (rallytime) Back-port #49759 to 2018.3 @ 2018-09-26 18:22:01 UTC
  - **PR #49759:** (mattp-) runners.state.orch: generate jid if missing (refs: #49786)
  - 04e5869 Merge pull request #49786 from rallytime/bp-49759
  - df3791c state.orch: generate jid if missing

- **PR #49770:** (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-09-25 19:03:25 UTC
  - 4138683 Merge pull request #49770 from rallytime/merge-2018.3
  - d9ed59b Merge branch '2017.7' into '2018.3'
  - f664515 Merge pull request #49760 from Ch3LL/raid_docs
    - 0eb90c1 Add mdadm as dependency in mdadm state docs
    - d5a75bf Merge pull request #49749 from erwindon/docufix
      - bae6678 fixed link in documentation
  - 5ef2def Merge pull request #49703 from twangboy/fix_49675_2017.7
    - 9127222 Merge branch '2017.7' into fix_49675_2017.7
    - 4f54422 Fix reboot needed detection
  - b5726d2 Merge pull request #49718 from vutny/doc/2017.7/add-missing-mock-kwarg
    - 3e19176 [DOC] Add missing mock argument for state.apply

- **PR #49757:** (bbinet) Fix influxdb_user state when test=True @ 2018-09-24 19:14:22 UTC
  - db668a Merge pull request #49757 from bbinet/fix-influxdb_user-test
  - 0d9ef1b Fix influxdb_user state when test=True

- **PR #49679:** (dwoz) Add more tests to whitelist @ 2018-09-22 17:46:50 UTC
  - ec2386e Merge pull request #49679 from dwoz/whitelist
  - 0a3d95f Fix linter issues
  - 4c457c9 Close handles only if they exist
  - 4a4b37a Merge remote-tracking branch 'saltstack/2018.3' into whitelist

- **PR #49722:** (meaksh) Fixes some issues on the Zypper module @ 2018-09-21 13:38:03 UTC
  - 6a3e127 Merge pull request #49722 from meaksh/2018.3-fix-zypper-issue-on-python3
  - bb9c66e Fix wrong queryformat for zypper list_provides
  - d40c034 Fix index error when running on Python 3
• PR #49720: (cstarke) Separate prlctl and prlsrvctl checks into each requiring function @ 2018-09-21 13:32:46 UTC
  - e7bb83 Merge pull request #49720 from cstarke/2018.3
  - b0be6aa Add documentation for prlctl and prlsrvctl binary requirement
  - 4f8476b Fix tests; add test for CommandExecutionError
  - 3c96dd2 Fix tests for parallels module
  - 9034c4e Add import for CommandExecutionError
  - 752b6f8 Separate prlctl and prlsrvctl checks into each requiring function

• PR #49615: (terminalmage) ping_interval: use service.restart instead of signaling @ 2018-09-21 13:26:41 UTC
  - f745e43 Merge pull request #49615 from terminalmage/ping-interval
  - b49b018 Move service name logic to a separate function
  - 2fddba3 ping_interval: use service.restart instead of signaling

• PR #49731: (terminalmage) Add warning about using jinja filters to dump dicts in Jinja @ 2018-09-21 13:16:04 UTC
  - 0a530d2 Merge pull request #49731 from terminalmage/jinja-filter-warning
  - 8393560 Add warning about using jinja filters to dump dicts in Jinja

• PR #49696: (jgleissner) loosen azure sdk dependencies in azurearm cloud driver @ 2018-09-20 19:17:15 UTC
  - 91ac882 Merge pull request #49696 from jgleissner/2018.3-azurearm-deps
  - 467e017 remove unused import from azurearm driver
  - bad28b6 loosen azure sdk dependencies in azurearm cloud driver

• PR #49684: (twangboy) Detect when system needs reboot after domain join @ 2018-09-20 16:17:50 UTC
  - d434e36 Merge pull request #49684 from twangboy/fix_49675
  - 3600467 Fix some try/except blocks, mark a lazy test
  - 871c11a Fix other functions in the same manner
  - 1b5bc66 Merge branch '2018.3' into fix_49675
  - 95e6f54 Detect when system needs reboot after domain join
    - 9048970 Add some debug info to assert
    - 536fce6 Increase function timeout
    - ed4de63 Fix file serialize test
    - 5ac3738 Merge remote-tracking branch 'saltstack/2018.3' into whitelist

• PR #49710: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-09-19 18:05:50 UTC
  - 936cae5 Merge pull request #49710 from rallytime/merge-2018.3
  - d19c67f Merge branch '2017.7' into '2018.3'
  - 6bd85b5 Merge pull request #49706 from garethgreenaway/1120_remove_mock_os_path_join
    - f1cc75 Removing mocking of os.path.join from two tests, one of which was failing when used with coverage argument. No reason we should be mocking os.path.join.
  - c38dc61 Merge pull request #49692 from rallytime/bp-49688
- **fde7575** Order the runtests suites
  - 1f60753 Do not use close_fds on Windows OS
  - 4a54c7c Fix file serialize test
  - 0ec1e1e Increase timeout on flaky test
  - 6ae924b Skip test that is not applicable on windows
  - 5980200 Increase timeout on flaky test
  - 1757ed3c Increase ModuleTest.run_function timeout
  - 7c7353c Add more tests to whitelist

- **PR #49708**: (rallytime) Back-port #49555 to 2018.3 @ 2018-09-19 13:12:12 UTC
  - PR #49555: (bermannf) Change StringIO and BytesIO imports (refs: #49708)
  - b082f79 Merge pull request #49708 from rallytime/bp-49555
  - ed25146 Change StringIO import in python2 to import the class.

- **PR #49707**: (rallytime) Back-port #49702 to 2018.3 @ 2018-09-19 13:09:10 UTC
  - PR #49702: (rallytime) Mark orchestration test as expensive (refs: #49707)
  - 0e97d9e Merge pull request #49707 from rallytime/bp-49702
  - 7ff24e5 Mark orchestration test as expensive

- **PR #49693**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-09-18 20:05:28 UTC
  - 0c4005d Merge pull request #49693 from rallytime/merge-2018.3
  - b39dacf Merge branch '2017.7' into '2018.3'
  - 37cbd27 Merge pull request #49685 from rallytime/pillar-headings
    - 02b2d54 Split intro docs for cmd_yamlex pillar into shorter lines.
    - c4be5b Fix heading line-lengths
  - 9bad295 Merge pull request #49689 from terminalmage/2017.7-docs
    - 7e5bab7 Fix docs build errors (2017.7 branch)

- **PR #49674**: (rallytime) [2018.3] Merge forward from 2018.3.3 to 2018.3 @ 2018-09-18 13:37:00 UTC
  - a12176d Merge pull request #49674 from rallytime/merge-2018.3
  - 7bcb809 Merge pull request #31 from dwoz/merge-2018.3
    - cb35ebb Account for filename changes
  - f3b122f Merge branch '2018.3.3' into '2018.3'

- **PR #49593**: (dwoz) Add more tests to whitelist for Windows @ 2018-09-17 14:57:44 UTC
  - e636d9c Merge pull request #49593 from dwoz/add_whitelist
  - 2e1bf13 Merge branch '2018.3' into add_whitelist
  - 2340a58 Fix runner returns test on Windows
  - f908cde Merge branch '2018.3' into add_whitelist
  - be5fccf Fix linter - blank lines
  - e51b0f8 Fix binary file manage test
- 9e3b44d Fix linter issues
- ca1b05e Fix multiple issues in x509 module and state
- e603e7a Fix encoding issues in file and x509 states
- 7f93c7f Fix map file loading on windows
- 2959da0 Add some runners test files to whitelist
- bee2902 Make windows file remove return like others
- 5770b05 Fix hitelist file order
- 10ec8be Fix linter issues
- ccbcb55 Add more tests to whitelist for Windows

- PR #49639: (isbm) Retire MD5 checksum for pkg mgmt plugins @ 2018-09-17 14:51:54 UTC
  - 7823839 Merge pull request #49639 from isbm/isbm-yumnotify-md5
  - 11a94ca Remove an empty line
  - adb8324 Use SHA256 algorithm for zyppnotify plugin
  - 27001cf Use SHA256 algorithm for yumnotify plugin

- PR #49652: (rallytime) [2018.3] Merge forwrad from 2018.3.3 to 2018.3 @ 2018-09-14 21:20:39 UTC
  - aecbe12 Merge pull request #49652 from rallytime/merge-2018.3
  - a8a3820 Merge branch '2018.3.3' into '2018.3'

- PR #49646: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-09-14 13:30:22 UTC
  - 530e281 Merge pull request #49646 from rallytime/merge-2018.3
  - 186f57e Merge branch '2017.7' into '2018.3'
  - 3c8ec8a Merge pull request #49644 from rallytime/mark-flaky-test
    - be8a187 Mark grains test as flaky
  - 8ac66f1 Merge pull request #49643 from rallytime/bp-49642
    - acce8c Skip some unreliable tests
  - 7a75d5e Merge pull request #49597 from rallytime/bp-47232
    - c477b70 Fixed usage of ipaddress
  - 2f6cdd9 Merge pull request #49614 from rallytime/bp-49546
    - 0f3881a Skip flaky test on Python 3

- PR #49642: (rallytime) Skip some unreliable tests (refs: #49643) @ 2018-09-13 18:24:43 UTC
  - bb1dcdff Merge pull request #49642 from rallytime/flaky-tests
  - 8e74d1c Skip some unreliable tests

- PR #49629: (rallytime) [2018.3] Merge forward from 2018.3.3 to 2018.3 @ 2018-09-13 14:00:08 UTC
  - e319ecc Merge pull request #49629 from rallytime/merge-2018.3
  - b628ad7 Merge branch '2018.3.3' into '2018.3'

- PR #49632: (garethgreenaway) [2018.3] Fixing integration.states.test_file.FileTest.test_directory_max_depth @ 2018-09-13 13:51:56 UTC
- 93d43fa Merge pull request #49632 from garethgreenaway/fixing_failing_test_python_3_7
- 588f744 Fixing failing test under python 3.7 caused by changes to how os.makedirs sets initial permissions.

**PR #49580: (garethgreenaway) [2018.3] Fixing tests for Python 3.7 @ 2018-09-12 16:33:35 UTC**
- 7042fc0 Merge pull request #49580 from garethgreenaway/fixing_failing_test_python_3_7
- b6afdae Fixing lint.
- d2fb68c Fixes various tests that were failing under python 3.7.

**PR #49606: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-09-12 14:26:33 UTC**
- ab19082 Merge pull request #49606 from rallytime/merge-2018.3
- c168268 Update old utils paths to use new paths
- 19598d8 Merge branch '2017.7' into '2018.3'
  * aa50c5 Merge pull request #49595 from rallytime/merge-2017.7
    - 09247a3 Merge branch '2017.7.8' into '2017.7'
    - 4d865b4 Merge pull request #49560 from rallytime/pkgng-fix
    - f3e1534 [2017.7.8] Use correct path for is_true function
    - 92369f0 Merge pull request #49541 from twangboy/fix_osx_build_2
    - 750d3fa Remove trusted host switches
    - 397296f Merge pull request #49539 from twangboy/fix_osx_build_2
    - 6b42e73 Fix issues with build script on OSX
  * e8171de Merge pull request #49596 from terminalmage/kill-bare-excepts-with-fire
    - 729dc08 Kill bare excepts with fire
  * 63b6643 Merge pull request #49578 from twangboy/fix_49566
    - 6a5a69c Merge branch '2017.7' into fix_49566
  * f9a01b7 Merge pull request #49584 from terminalmage/squelch-varstack-error
    - c79a823 Squelch error logging when varstack is not installed
  * d4d2b36 Merge pull request #49579 from dwoz/flaky_test
    - dbe40df Increase timeout for flaky git test
  * 5cbe60b Merge pull request #49570 from rallytime/doc-fixes
    - de80bda Fix docstring + import order, move pylint disable to own line
    - 393bc0f Fix doc build errors in saltnado documentation
    - 6105ebb Use setup.py clean --all

**PR #49620: (dwoz) Adding passing windows nacl runner tests to whitelist @ 2018-09-12 14:19:11 UTC**
- 0ce91d6 Merge pull request #49620 from dwoz/nacltest
- 51500ac Adding passing windows nacl runner tests to whitelist

**PR #49532: (meaksh) Fix wrong 'recurse' behavior on for linux_acl.present/absent states @ 2018-09-12 14:16:15 UTC**
- c1f97c4 Merge pull request #49532 from meaksh/2018.3-fix-linux_acl-recusive-problems
- 027069 Fix some pylint issues
- 0659d Fix recursive cases on linux_acl.absent state
- 08149 Add unit tests to cover recursive cases of linux_acl states
- 739b6f Fix typo on variable name
- c6d1d7 Fix wrong recurse behavior on for linux_acl.present state

• ISSUE #49027: (lachlanmunro) x509.certificate_managed certificate is mangled on process under py3 m2crypto (refs: #49561)

• ISSUE #49008: (lachlanmunro) x509.certificate_managed state fails under py3 m2crypto with "int too large" (refs: #49561)

• PR #49561: (dwoz) x509 module and state bug fixes @ 2018-09-11 14:01:43 UTC
  - 83e7d7 Merge pull request #49561 from dwoz/m2crypto_test
  - 5e591ea Merge branch '2018.3' into m2crypto_test

• PR #49592: (dwoz) Fix binary file manage test @ 2018-09-10 23:03:18 UTC
  - 4478a44 Merge pull request #49592 from dwoz/bin_file_fix
  - 85563c3d Fix binary file manage test

• PR #49571: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-09-09 12:58:15 UTC
  - 9004422 Merge pull request #49571 from rallytime/merge-2018.3
  - a0b09a9 Merge branch '2017.7' into '2018.3'
    * 5d267a2 Merge pull request #49547 from rallytime/bp-49518
      - 4bb09f7 Skip service module integration tests on CentOS 7
    * 4948071 Merge pull request #49549 from rallytime/codeowners-duplicate
      - 4b257d2 Remove duplicate comment in CODEOWNERS file
      - faafe74 Merge branch '2018.3' into m2crypto_test

• PR #49577: (dwoz) Multiple unittest fixes for 2018.3 Python 3 Windows @ 2018-09-08 05:53:38 UTC
  - 4669a9a Merge pull request #49577 from dwoz/unit_test_fixes
  - a0b03f3 Multiple unittest fixes for 2018.3 Python 3 Windows

• PR #49533: (silenius) [cherry-pick] Optimize postgres groups management @ 2018-09-07 18:58:57 UTC
  - 8b971e5 Merge pull request #49533 from silenius/2018.3.3
  - 7eb8d6c Postgress module unit test fix.
  - b56aede Optimize postgres groups management

• PR #49543: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-09-07 18:19:32 UTC
  - 1a41b47 Merge pull request #49543 from rallytime/merge-2018.3
  - cf508a4 Merge branch '2017.7' into '2018.3'
    * 75a3b52 Merge pull request #49527 from terminalmage/remove-special-envs-handling
      - 1a78a76 Remove special handling for file_envs fileserv func
    * 3f1d26 Merge pull request #49512 from rallytime/merge-2017.7
      - de7ef3d Add "in progress" notation back to 2017.7.8 release notes
- edad2dc Merge branch '2017.7.8' into '2017.7'
- d24c96f Merge pull request #49505 from Ch3LL/rn_7.8_2
- d40b644 Update 2017.7.8 ChangeLog with new fixes
- 0d7b173 Merge pull request #49498 from rallytime/pin-cherrypy-2017.7.8
- 81a6155 Pin CherryPy version to < 18.0.0 in requirements files for PY2
- 52ab2c0 Merge pull request #49466 from rallytime/bp-49461
- 5842800 Revert "Allow for not being prompted to supply a password to deploy keys to a..."
- 1bbe7df Merge pull request #49284 from twangboy/fix_installer_osx
- a112eaa Fix path to libsodium tarball
- e0e8779 Merge pull request #49272 from twangboy/fix_installer_more
- a8f054b Add 64bit binaries for KB2999226 to the x86 installer
- 0eb6ddf Merge pull request #49218 from twangboy/fix_installer
- e8a1d2f Add more descriptive error when KB not found
- 71737ea Suppress all ui on vcredist installation
- 7daefbb Fix Windows and OSX installers
- e48f26 Merge pull request #49116 from twangboy/fix_installer
- 1227095 Add nonfatal switch to VCRedist
- 0b9f2f8 Merge pull request #49113 from Ch3LL/rn_7.8
- f6b70bf Add changelog to 2017.7.8 release notes
  * 208cfe6 Merge pull request #49515 from rallytime/update-codeowners
    - 1faab8b Add some files to the CODEOWNERS files for team-core to own
  * 34e5174 Merge pull request #49327 from twangboy/fix_win_service
    - 74e944b Mark test_service_status_running as flaky
    - c69560c Merge branch '2017.7' into fix_win_service
    - 53e2e05 Merge branch '2017.7' into fix_win_service
    - cf3d287 Merge branch '2017.7' into fix_win_service
    - 1641851 Fix the name of the _cmd_quote test
    - 97567af Skip tests on Linux systems
    - 0ca9cd1 Fix some lint
    - 3800966 Add tests
    - b0d646d Add more details to the functioning of _cmd_quote
    - a985ec2 Fix issues with win_service

- **ISSUE #49452**: (gtmanfred) [python3.7] remove usage of collections.abc stuff from the collections shim (refs: #49487)

- **PR #49487**: (garethgreenaway) [2018.3] Swapping out collections imports @ 2018-09-07 15:36:04 UTC
  - baaf6de Merge pull request #49487 from garethgreenaway/49452_collections_abc
- 2fb3ef7 Merge branch '2018.3' into 49452_collections_abc
- ebfd7f9 Merge branch '2018.3' into 49452_collections_abc
- b27e86b Swapping out the version check for a try...except on the import from collections.abc with a fallback to importing from collections.
- d118a9f Updating various imports that have been moved from collections to collections.abc, and will be deprecated in collections beginning in 3.8.
  - abc9c1a Fix linter issues
  - 8e42384 Fix multiple issues in x509 module and state
  - 2a52158 Fix encoding issues in file and x509 states
  - 49a6da7 Fix map file loading on windows

• PR #49528: (dwoz) Fix merge wart @ 2018-09-06 23:12:39 UTC
  - 06935e9 Merge pull request #49528 from dwoz/mergetests
  - 6a4f823 Fix merge wart

• PR #49548: (garethgreenaway) [2018.3] Disabling State boto tests for Python 3.7+ @ 2018-09-06 21:50:10 UTC
  - 3298e70 Merge pull request #49548 from garethgreenaway/1075_disable_boto_tests_part_deux
  - 0f5191e Disable various boto tests when run under python 3.7 because of //github.com/spulec/moto/issues/1706. which was causing the test suite to hang on unit tests. This PR is disabling the tests in the test_boto_vpc state tests.

• PR #49521: (terminalmage) Fix _get_hash in splay executor @ 2018-09-06 14:06:54 UTC
  - c346825 Merge pull request #49521 from terminalmage/fixed-splay-executor
  - bbb8fe8 Fix _get_hash in splay executor

• PR #49526: (terminalmage) Prevent lookup error when trying to lookup fileserver function from LazyDict @ 2018-09-06 14:01:30 UTC
  - 3f7c89c Merge pull request #49526 from terminalmage/fixed-backends-error-logging
  - 1f0288e Prevent lookup error when trying to lookup fileserver function from LazyDict

• PR #49524: (garethgreenaway) [2018.3] Disable boto tests under 3.7 @ 2018-09-06 13:35:18 UTC
  - bf939f9 Merge pull request #49524 from garethgreenaway/1075_disable_boto_tests
  - 5ec5578 Disable various boto tests when run under python 3.7 because of //github.com/spulec/moto/issues/1706. which was causing the test suite to hang on unit tests.

• PR #49511: (rallytime) [2018.3] Merge forward from 2018.3.3 to 2018.3 @ 2018-09-05 19:52:25 UTC
  - f73fe5 Merge pull request #49511 from rallytime/merge-2018.3
  - 3f6c62 Merge branch '2018.3.3' into '2018.3'

• PR #49500: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-09-04 19:02:31 UTC
  - 81a9a8 Merge pull request #49500 from rallytime/merge-2018.3
  - 2317b5e Merge branch '2017.7' into '2018.3'
    - 1cdaea2 Merge pull request #49475 from dwoz/flaky_tests
      - f214929 Fix a flaky test and mark another as flaky
    - 4ac4305 Merge pull request #49457 from rallytime/label Docs
Salt Documentation, Release 3002.5

- d1e51db Remove references to unused milestones in docs
  - 41dce3f Merge pull request #49461 from saltstack/revert-47100-ssh
  - 0d7180a Revert "Allow for not being prompted to supply a password to deploy keys to a..."

- **PR #4947: (rallytime)** Back-port #49473 to 2018.3 @ 2018-09-04 18:44:25 UTC
  - **PR #49473: (rallytime)** Use correct and explicit paths for salt utils libs (refs: #49497)
  - 16ca360 Merge pull request #49473 from rallytime/bp-49473
  - 1aa3935 Lint: Add range import from six
  - d06f6a5 Use correct and explicit paths for salt utils libs

- **PR #49474: (dwoz)** Work around git-python resource leaks @ 2018-09-02 19:42:32 UTC
  - 93df5c4 Merge pull request #49474 from dwoz/gitfs_unit
  - 56068e9 Merge branch '2018.3' into gitfs_unit
  - e697ddc Work around git-python resource leaks

- **PR #49471: (Ch3LL)** Remove string conversion on frame object in sigusr1 handler @ 2018-09-02 18:05:13 UTC
  - 43ead5d Merge pull request #49471 from Ch3LL/debug_sigusr1
  - 1631b2f Remove string conversion on frame object in sigusr1 handler

- **PR #49454: (rallytime)** [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-08-31 21:36:34 UTC
  - 764b816 Merge pull request #49454 from rallytime/merge-2018.3
  - a97a7b0 Fix lint and test failures caused by bad merge
  - f7226f4 Merge branch '2017.7' into '2018.3'
    * 7a166bc Merge pull request #49376 from twangboy/fix_48608
      - bf32e0c Merge branch 'fix_48608' of https://github.com/twangboy/salt into fix_48608
      - 9766f0d Merge branch '2017.7' into fix_48608
      - fb97b00 Fix broken path to libsodium tarball
      - 535d83e Fix test for list_users
      - 40d3f2e Use dscl to get list of users
      - e426459 Use a set to avoid duplicates
    * 03d9750 Merge pull request #49434 from dwoz/cleanup_exception_handling
      - 9daa992 Fix group remove test logic
      - d74fab7 Clean up exception handling on py3
    * 7099164 Merge pull request #49389 from gtmanfred/2017.7
      - 6c01662 remove cmd key from load
      - bdf3df3 add cli example
      - 251f321 pass load on
      - be7c041 add test
      - 0ace5c1 make file envs compatible with transport format
    * 24f4aa5e Merge pull request #49408 from terminalmage/issue49269
• d02ec34 Allow our custom yaml dumper to NamespacedDictWrapper objects
• 5746fc8 Merge pull request #49402 from rallytime/bp-49321
  • 7dec9fc Add flaky decorator to serializer test
• 5c723b0 Merge pull request #49375 from terminalmage/revert-49185
  • aee62744 Merge branch '2017.7' into revert-49185
  • 7372e9d Add minion documentation for enable_gpu_grains
  • ea1b53c Fix incorrect master docs for enable_gpu_grains
  • 638210a Add validation type and default minion value for enable_gpu_grains
  • 49ed156 Add enable_gpu_grains to the minion config stub
  • d1b7fb4 Revert "Update documentation to correctly state enable_gpu_grains default"
• 11d87e4 Merge pull request #49387 from twangboy/fix_win_repo
  • 2bf7eda Import GLOBAL_ONLY
• 651631d Merge pull request #49390 from dwoz/archive_module
  • b332beb Fix archive tests for py3
• c591d2b Merge pull request #49385 from dwoz/sonofa
  • f9d7dbd The autoruns module has not been renamed
• 5d2ec9b6 Merge pull request #49371 from rallytime/bp-49064
  • bc52f7c Stop running lint on all files when no changes
• f1c904e Merge pull request #49380 from twangboy/doc_48758
  • 6cefbdf Add docs from a comment on issue 48758
• b22a43d Merge pull request #49324 from dwoz/windows_pr_builds
  • 7abd9c6c Merge branch '2017.7' into windows_pr_builds
• b2e4121 Merge pull request #49379 from dwoz/whitelistagain
  • 56ea4f64 Account for more tests that are not in 2017.7
• 7fa9120 Merge pull request #49366 from rallytime/bp-49232
  • 74b05ef Fix HTTP method for acl_info
  • b9fa7db3 Merge branch '2017.7' into windows_pr_builds
  • 77f5fd3 Merge branch '2017.7' into windows_pr_builds
  • 7cdaba27 Add ci scripts for windows PR builds

• PR #49025: (twangboy) Fix several issues with LGPO @ 2018-08-31 18:25:34 UTC
  • 4ea22e5 Merge pull request #49025 from twangboy/fix_48661
  • c27fd18 Merge branch '2018.3' into fix_48661
  • 222c503 Fix several issues with LGPO

• ISSUE #49281: (aarnaud) etcd_cache : Not working for mine (refs: #49283)

• PR #49283: (aarnaud) Fix #49281 etcd_cache with mine cache @ 2018-08-31 18:24:23 UTC
  • dd9ec94 Merge pull request #49283 from aarnaud/fix-etcd-cache
- 13e1a17 Merge branch '2018.3' into fix-etcd-cache
- 6c0fb9c Fix #49281 etcd_cache with mine cache

- **PR #49459**: (dwoz) Batch test fix cherry-pick @ 2018-08-30 23:02:12 UTC
  - 64227f9 Merge pull request #49459 from dwoz/batch_fix
  - fc39dcf Simplify cli test fixes

- **PR #49453**: (dwoz) Fix up py3 git config tests @ 2018-08-30 22:00:19 UTC
  - 75285a3 Merge pull request #49453 from dwoz/conffix
  - ac3c379 Fix up py3 git config tests

- **PR #49411**: (terminalmage) Allow our custom yaml dumper to NamespacedDictWrapper objects (2018.3 branch) @ 2018-08-30 13:05:37 UTC
  - a962ecf Merge pull request #49411 from terminalmage/issue49269-2018.3
  - a4cb35b Remove support for overriding the class name
  - 82a8b73 Allow our custom yaml dumper to NamespacedDictWrapper objects

- **PR #49407**: (rallytime) Mark pkg module tests and flaky @ 2018-08-30 13:01:31 UTC
  - 8022a3b Merge pull request #49407 from rallytime/pkg-flaky
  - 1609e11 Mark pkg module tests and flaky

- **PR #49406**: (rallytime) [2018.3] Merge forward from 2018.3.3 to 2018.3 @ 2018-08-30 13:00:34 UTC
  - 7f8c38a Merge pull request #49406 from rallytime/merge-2018.3
  - 4939ee3 Merge branch '2018.3.3' into '2018.3'

- **PR #49401**: (rallytime) Mark output file permissions test as flaky @ 2018-08-29 18:13:12 UTC
  - 68d630f Merge pull request #49401 from rallytime/flaky-output-test
  - e13216b Mark output file permissions test as flaky

- **PR #49400**: (rallytime) Mark pillar refresh test as flaky @ 2018-08-29 18:12:51 UTC
  - 23610ed Merge pull request #49400 from rallytime/flaky-pillar-test
  - fb62af6 Mark pillar refresh test as flaky

- **ISSUE #49150**: (sunyq) hosts.rm_host changes /etc/hosts file with odd characters (refs: #49394)
  - **PR #49394**: (sunyq) fix issue #49150`_ hosts.rm_host changes /etc/hosts with odd characters @ 2018-08-29 13:33:49 UTC
    - 502e91c Merge pull request #49394 from sunyq/2018.3
    - 76ba5b6 fix issue #49150`_ hosts.rm_host changes /etc/hosts with odd characters

- **PR #49386**: (dwoz) Cherry-pick whitelist fix. @ 2018-08-29 01:11:05 UTC
  - 2cf2e62 Merge pull request #49386 from dwoz/whitelistfix
  - 2b08cf1 Account for more tests that are not in 2017.7

- **PR #49372**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-08-28 19:03:53 UTC
  - ec04282 Merge pull request #49372 from rallytime/merge-2018.3
  - ab6cc1c Update old utils paths to use new paths
  - ac406c4 Merge branch '2017.7' into '2018.3'
- dfa3861 Merge pull request #49354 from dwoz/fix_whitelist
  * aeb0fa3 custom_grains tests do not exist
- 14b8094 Merge pull request #49346 from Ch3LL/bp-49345
  * cc2733e upgrade including linux kernels
- d8f2945 Merge pull request #49344 from cachedout/test_matcher_flaky
  * a34ef2e Matcher test marked flaky
- f08e720 Merge pull request #49353 from dwoz/boto_fix
  * 376019f Do not raise exception if passed bytes
- 4690ad0 Merge pull request #49339 from dwoz/more_tests
  * d50324b Merge branch '2017.7' into more_tests
- e371ad9 Merge pull request #49341 from terminalmage/issue48717
  * 1971d09 Update dynamic git_pillar docs to enclose env name in quotes
- 00b58ee Merge pull request #49337 from dwoz/win_service_test_fix
  * 1c1727e Fix broken service stop test
- 81428ed Merge pull request #49291 from dwoz/dedent
  * 1991198 Fix review nits
  * 6abc2da Re-factor dedent to fix warts
  * 75b2e3d Use salt.utils.to_* functions
  * fa78a7b Add dedent that sets line endings
    * cd6706e Fix merge wart
    * b9c344b Fix module.archive tests for win py3
    * ac60b8 Comment strange code
    * 5fefd6f Simplify cli test fixes
    * 1765d53 Fix archive tests on Windows platform
    * 06f271f Add archive module tests to whitelist.txt
    * 9cb8fe2 Add more tests to whitelist for windows
    * b8af238 Fix indent wart
    * bc971e4 add doc tests
    * 8899a5e Add more client tests to whitelist
    * 14cd7b48 Add cli tests to whitelist
    * 3e55d10 Platform module doesn't exist in 2017.7
    * 2733c02 Use double quotes on windows commands
    * 0394ece The set command does not work like inline env vars
- 1fd5cf1 Merge pull request #49320 from rallytime/fix-48694
  * 096ab5e Update documentation for #48694 and add deprecation warning
- c323096 Merge pull request #49314 from rallytime/bp-49277
- 6d691b2 Prepend current directory when path is just filename
- c7bae5e Merge pull request #49290 from rallytime/bp-44504
  - 6224f7b calling range is going up to the upper limit but not including it
- 7a44e59 Merge pull request #49289 from rallytime/bp-49170
  - 4c29c17 forcing mine update in the proxy minion as well
  - b1d581a force mine update on minion start
- 221ea22 Merge pull request #49278 from rallytime/bp-49253
  - b331b5c skip ID 7 for vmware hard drives

- PR #49356: (dwoz) Fix tests that use timed_subprocess for py3 @ 2018-08-28 13:30:08 UTC
  - 1fa6a7 Merge pull request #49356 from dwoz/cmdmod
  - 6ffeaae Fix tests that use timed_subprocess for py3

- ISSUE #48299: (dosercz) git.latest reports deleted tags in remote repo as new_tags in changes (refs: #49305)

- PR #49336: (terminalmage) Fix half-baked comment @ 2018-08-27 00:07:55 UTC
  - PR #49305: (terminalmage) Allow git.latest to remove local tags which have been removed remotely (refs: #49336)
  - 2d8055e Merge pull request #49336 from terminalmage/issue48299
  - 175e161 Fix half-baked comment

- PR #49331: (dwoz) Use salt.utils to ensure string type @ 2018-08-26 01:42:08 UTC
  - a2e7033 Merge pull request #49331 from dwoz/strfix
  - 7513474 Use salt.utils to ensure string type

- PR #49312: (Ch3LL) Fix keyerror in manage.bootstrap @ 2018-08-25 19:55:44 UTC
  - d70eda8 Merge pull request #49312 from Ch3LL/ssh_list_hosts
  - da71c97 Fix keyerror in manage.bootstrap

- PR #49316: (rallytime) [2018.3] Merge forward from 2018.3.3 to 2018.3 @ 2018-08-25 19:53:04 UTC
  - 6b2eba7 Merge pull request #49316 from rallytime/merge-2018.3
  - 39c442c Merge branch '2018.3.3' into '2018.3'

- ISSUE #48880: (damntoken) Can't run cmd.run with UTF-8 chars as arguments / parameters. With custom module. (refs: #49322)

- PR #49322: (dwoz) Encode shell commands explicitly. @ 2018-08-25 04:43:26 UTC
  - 5766e98 Merge pull request #49322 from dwoz/state_module_test_fix
  - 1f7d50d Encode shell commands explicitly.

- PR #49299: (dwoz) Work around cmd.run unicode issues in test for now @ 2018-08-25 04:43:03 UTC
  - b47da0a Merge pull request #49299 from dwoz/test_fix
  - 4fbd644 Fix string formatting wart in file state tests
  - e84e608 Fix wart in file state test
  - 71d4465 Work around cmd.run unicode issues in test for now

- ISSUE #48299: (dosercz) git.latest reports deleted tags in remote repo as new_tags in changes (refs: #49305)
• **PR #49305**: (terminalmage) Allow git.latest to remove local tags which have been removed remotely (refs: #49336) @ 2018-08-24 17:29:03 UTC
  
  - b65890c Merge pull request #49305 from terminalmage/issue48299
  - 4a093d9 lint
  - ed7b994 Gate tag manipulation behind a sync_tags argument
  - 29de855 Add test for a removed tag
  - eb9a459 Properly handle tags deleted from remote repository
  - 916c15a Add git.tag function

• **ISSUE #49009**: (msciciel) file_ignore_regex / file_ignore_glob not working properly (refs: #49308)

• **PR #49308**: (terminalmage) Don’t include ignored paths in mtime map @ 2018-08-24 17:28:41 UTC
  
  - 459354a Merge pull request #49308 from terminalmage/issue49009
  - 2badd7f Don’t include ignored paths in mtime map

• **PR #49282**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 @ 2018-08-24 16:45:50 UTC
  
  - 914bb09 Merge pull request #49282 from rallytime/merge-2018.3
  - 21a51c9 Add 'minion_data_cache: True' to mocked opts for minions unit tests
  - 196ce3f Call the with_tempfile decorator correctly for 2018.3
  - 37f24fd Fix unit test for file state
  - 6f9a158 Update old utils paths with new paths
  - c3ecfc Merge branch ‘2017.7’ into ‘2018.3’
    * 879c3ad Merge pull request #49262 from bloomberg/short-circuit
      - a3594db extend #488588 to cover SyncAuth class
    * 1900aff Merge pull request #49144 from twangboy/fix_48163
      - ff5ec86 Work with seconds
      - 7264008 Fix some lint (remove whitespace)’
      - 4f9973d Improve timeout in delete
      - a6ecb75 Remove testing debug stuff
      - 7dd7953 Fix start/stop functions
      - fade0a6 Merge pull request #10 from damon-atkins/patch-1
      - 57c4b9f 2017_win_service_damon
      - d44aee Add timeout support to the state
      - d579b3e Add timeout parameter
    * 395bae6 Merge pull request #49259 from gtmanfred/flaky-2017.7
      - 93a576e flaky tests are flaky yo
      - f518bd3 mark orchestration state tests as flaky
    * 62cc0df Merge pull request #49231 from minusf/mount-check-name
      - eb5cab3 fix some underhanging indent while here...
- ec2a091 check for mandatory parameters to avoid false positives
- d55d484 Merge pull request #49242 from dwoz/blockreplace_better_fix
  - 72c3727 Use six to make sure content is unicode
  - 1bf0b18 Better blockfix replace
  - dd4fcd3 Revert "Multiple block replace test fixes"
  - d335842 Use os.linesep.join instead of textwrap.dedent
- 85f6d36 Merge pull request #49236 from terminalmage/issue32737
  - 233bbae Allow compound matching in eauth config expressions
- 5ba7f60 Merge pull request #49187 from erwindon/py27fixnumberformat
  - 12261a5 trailing whitespace removal
  - 2149e22 Fix for #45620: "Salt CLI is rounding floats to 2 decimal places" (actually: Salt CLI is using only 12 digits for precision)
- f8c55b8 Merge pull request #49184 from ralish/external_nodes_docs
  - 4fe38dc Merge branch '2017.7' into external_nodes_docs
  - 2e29b29 Remove obsolete documentation on external_nodes setting
- 65205a4 Merge pull request #49185 from ralish/enable_gpus_grains_doc
  - 2fe675c Update documentation to correctly state enable_gpu_grains default
- 5aa282e Merge pull request #48032 from zer0def/parted-naming
  - 563ad25 Merge branch '2017.7' into parted-naming
  - 07f8631 Fixed partition names with spaces effectively containing only the first word.
- 0157ea1c Merge pull request #49164 from terminalmage/issue49154
  - c2aba7a Merge branch '2017.7' into issue49154
  - b4544d7 Add keep_source integration tests
  - 8263c6e Fix bug in keep_source for non-templated salt:// file sources
- b510441 Merge pull request #49179 from dwoz/test_unit_states_file
  - 913ea5e Fix directory unit test
  - 3363238 Account for normalized dirs in unit tests
- 7486fd5 Merge pull request #49162 from erwindon/wheel_error_error
  - ca5df04 Merge branch '2017.7' into wheel_error_error
  - 4335c5c Must have 2 lines between imports and code
  - ec1f013 Improved solution as per @dwoz's suggestion
  - 20f134e Fixed unknown 'exceptions' under Python3 (#49152)
- 7043286 Merge pull request #49143 from Ch3LL/bp-49142
  - d2e73cc Remove -Z script_arg for cloud tests
- 8ab55f5 Merge pull request #49167 from dwoz/filefix
  - b5ba073 Simplify dict keys lookup
- 6844251 Fix remaining file state integration tests (py3)
- 90bd560 Merge pull request #49163 from dwoz/tmp_dir
- 3384864 add Exception type
- 9da79dd0 Allow test suite to finish if tmp dir removal fails
- aa01a67 Merge pull request #49136 from Ch3LL/bootstrap_2017.7
- de40dfb [2017.7] Update bootstrap script to latest release (2018.08.15)
- 29fccbf Merge pull request #49118 from dwoz/test_file_fixes
- c6b781e Multiple fixes for integration.states.test_file
- 133e400 Merge pull request #49103 from dwoz/cmd_test_fix
- 566a4ea Install the launcher so we can execute py files

- **ISSUE** saltstack/salt-jenkins#1075: (Ch3LL) [2018.3.3] arch python3 tests do not finish (refs: #49303)
- **PR** #49303: (gtmanfred) use os._exit instead of sys.exit when daemonizing @ 2018-08-24 14:15:54 UTC
  - 4c81ec2e Merge pull request #49303 from gtmanfred/forking
  - e06ce49 use os._exit instead of sys.exit when daemonizing
- **PR** #49276: (terminalmage) Fix paths to moved functions @ 2018-08-23 16:38:55 UTC
  - 158c1ca Merge pull request #49276 from terminalmage/fix-moved-funcs
  - 322a988 Fix paths to moved functions
- **PR** #49270: (dwoz) Add async helper to test_sock_path_len @ 2018-08-23 16:17:54 UTC
  - f39f85 Merge pull request #49270 from dwoz/test_event_fix
  - 51bf79a Add async helper to test_sock_path_len
- **PR** #49199: (jacobweinstock) Fix typeerror unicode @ 2018-08-23 14:38:17 UTC
  - 5da743a Merge pull request #49199 from jacobweinstock/fix-typeerror-unicode
  - 25608ef Merge branch '2018.3' into fix-typeerror-unicode
  - 11ad11c add unicode_literals back to handle logging and other things.
  - 6944bf9 add salt.utils.stringutils.to_bytes. add comment on unicode_literals.

- **ISSUE** #49174: (rbthomp) Beacon diskusage reporting incorrect diskusage value. (refs: #49264)
- **PR** #49264: (gtmanfred) fix diskusage beacon @ 2018-08-23 14:36:07 UTC
  - e288f1 Merge pull request #49264 from gtmanfred/diskusage
  - 15857c2c fix diskusage
- **PR** #49253: (gtmanfred) skip ID 7 for vmware hard drives (refs: #49278) @ 2018-08-23 14:35:31 UTC
  - 6b7b93 Merge pull request #49253 from gtmanfred/vmware
  - 6e776ca skip ID 7 for vmware hard drives

- **ISSUE** #49159: (wenxin-wang) incorrect default value of minion's 'ipv6' option (refs: #49263)
- **PR** #49263: (terminalmage) Revert default value for ipv6 to None @ 2018-08-23 13:02:13 UTC
  - 2ad2d48 Merge pull request #49263 from terminalmage/issue49159
  - bf5d907 Revert default value for ipv6 to None
• PR #49244: (dwoz) Test fixes: unit.fileserver.test_gitfs @ 2018-08-22 20:19:42 UTC
  - ec32428 Merge pull request #49244 from dwoz/gitfs_fixes
  - b533fa1 Simplify by using to_unicode helper
  - 5a0cda5 Older GitPython version do not have a close method
  - 7452715 Fix up fileserver.test_gitfs tests on windows
  - 800aa25 Remove unicode filenames on windows python 2

• PR #49265: (terminalmage) Fix failing unit file module unit tests @ 2018-08-22 19:35:07 UTC
  - 2d7f846 Merge pull request #49265 from terminalmage/fix-failing-file-tests
  - 6b51f71 Fix failing unit file module unit tests

• PR #49240: (dwoz) file state test fixes @ 2018-08-22 18:16:42 UTC
  - 4634752 Merge pull request #49240 from dwoz/state_tests
  - 1679a19 Work around listdir encoding issues on py2 windows
  - 07ed841 file state test fixes

• PR #49260: (gtmanfred) [2018.3] flaky tests @ 2018-08-22 16:40:39 UTC
  - 55ded9f Merge pull request #49260 from gtmanfred/flaky-2018.3
  - 41973f3 flaky tests are flaky yo
  - e927f1b mark orchestration state tests as flaky

• PR #49245: (dwoz) Skip grep unit tests on windows @ 2018-08-22 15:18:08 UTC
  - 6d023ca Merge pull request #49245 from dwoz/skip_grep_windows
  - c305891 Skip grep unit tests on windows

• PR #49243: (dwoz) Revert newline translation change @ 2018-08-22 15:12:26 UTC
  - 75beede Merge pull request #49243 from dwoz/fileserver_tests
  - 86e3c46 Revert newline translation change

• PR #48545: (bbinet) Fix unreachable ssh-id-wrapper template when root_dir is relative @ 2018-08-21 15:12:01 UTC
  - 60605f0 Merge pull request #48545 from bbinet/fix-unreachable-ssh-id-wrapper
  - 284dc7f Fix unreachable ssh-id-wrapper template when root_dir is relative

• ISSUE #49204: (mchugh19) file.directory state fails if directory contains an invalid symlink (refs: #49209, #49827)

• PR #49209: (gtmanfred) don't blow up check_perms if lsattr file doesn't exist @ 2018-08-20 19:02:42 UTC
  - a4c51a9 Merge pull request #49209 from gtmanfred/lsattr
  - ab918ca don't blow up check_perms if lsattr file doesn't exist

• ISSUE #49060: (The-Loeki) On Py3, redis job cache throws TypeError bytes / str (refs: #49190)

• PR #49190: (The-Loeki) decode_responses=True on all Redis API interfaces @ 2018-08-20 18:57:26 UTC
  - d29af00 Merge pull request #49190 from The-Loeki/redis-fix
  - d126318 Merge branch '2018.3' into redis-fix
  - 7ff72eb redis cache no utf8 of course

30.2. Previous Releases 2215
- bdaef39 decode_reponses=True on all Redis API interfaces

- **PR #49197**: (dwoz) File state line ending fixes @ 2018-08-20 18:45:04 UTC
  - 644ba3d Merge pull request #49197 from dwoz/test_fix
  - a7cfe35 File state line ending fixes

- **PR #49192**: (dwoz) Test fixes flaky test and unicode environment key/value @ 2018-08-19 10:48:03 UTC
  - aaa9e37 Merge pull request #49192 from dwoz/git_test_fix_ng
  - 8ea89e9 Test fixes

- **PR #49191**: (The-Loeki) Make salt.utils.vault._get_connection publicly available @ 2018-08-19 10:39:35 UTC
  - 63cc737 Merge pull request #49191 from The-Loeki/vault_publ_conn
  - cab412 publicize salt.utils.get_vault_connection()

- **PR #49189**: (dwoz) Merge pull request #49171 from Ch3LL/bp-49103 @ 2018-08-18 20:51:59 UTC
  - **PR #49171**: (Ch3LL) [2018.3.3] cherry pick #49103 (refs: #49189)
  - **PR #49103**: (dwoz) Install the launcher so we can execute py files (refs: #49189, #49171)
  - 1d843d4 Merge pull request #49189 from dwoz/cmd_test_fix
  - 8fd0c38 Merge pull request #49171 from Ch3LL/bp-49103

- **PR #49188**: (cachedout) Fix bug in test_pkg @ 2018-08-18 17:36:22 UTC
  - 5f905d7 Merge pull request #49188 from cachedout/fix_test_pkg
  - 2cd6519 Fix bug in test_pkg

- **PR #49056**: (Ch3LL) Add orch runner with mine.get integration tests @ 2018-08-18 12:54:48 UTC
  - 6fb8d4a Merge pull request #49056 from Ch3LL/test_mine
  - 3a8fed5 Handle race condition when running mine.update in orch mine test
  - b4e421c Add orch runner with mine.get integration tests

- **PR #49126**: (The-Loeki) TLS cert_info fixes @ 2018-08-18 12:19:33 UTC
  - **PR #49123**: (The-Loeki) Fix return of tls.cert_info extensions (refs: #49126)
  - 0d0e11d Merge pull request #49126 from The-Loeki/tls-impr
  - 22240c0 Merge branch '2018.3' into tls-impr
  - 3ce2e3e tls.cert_info: strip newlines/spaces from extensions
  - d522d01 tls alt_names fix
  - d435dbc Fix bytes-return of tls.cert_info extensions
  - 9c7d3ea TLS cert_info: Accept IP Addresses as valid alt_names
  - 7d6ccae TLS.cert_info: Allow PEM as string input

- **PR #49186**: (dwoz) Fix typo in #49180 @ 2018-08-18 12:07:00 UTC
  - **PR #49180**: (dwoz) Cherry-pick test fixes (refs: #49186)
  - 7d70e0c Merge pull request #49186 from dwoz/test_fixes
  - b95e6c5 Fix typo

- **PR #49180**: (dwoz) Cherry-pick test fixes (refs: #49186) @ 2018-08-18 04:08:17 UTC
- 6d57ac1 Merge pull request #49180 from dwoz/test_fixes
- 3c49544 Account for file renames
- acc144d Fix directory unit test
- a7ee07a Fix is_windows checks
- 74b197f Account for normalized dirs in unit tests
- a18d937 Merge pull request #49167 from dwoz/filefix

- **PR #49091**: (terminalmage) Rename/re-organize test files in 2018.3 branch @ 2018-08-17 12:26:44 UTC
  - PR #47337: (terminalmage) Modify runtests.py to run a subset of tests based on filenames (refs: #49091)
  - 8bda1e5 Merge pull request #49091 from terminalmage/rename-test-files
  - 3d8523b Fix import for moved module
  - 613f061 Lint
  - 81f272f Rename outputter tests to match naming convention
  - fba0336 Rename venafi test module to bring it closer to the naming convention
  - 9c14500 Rename exec module integration test files to respect naming convention
  - 91fa09e Rename providers to clouds to respect naming convention
  - d56cdd Rename "providers" dir to "clouds" to respect naming convention
  - f1b7d54 Rename virtualenv state test module to respect naming convention
  - c1f94db Split ssh state tests into separate modules to respect naming convention
  - 9c8ba4a Split mysql database tests into two modules to respect naming convention
  - d51748e Rename some files to avoid them being identified as test modules
  - 1fcfbf7 Rename acl unit test module to confirm to naming convention
  - 160223d Consolidate/move fileclient/fileserver tests to conform to naming convention
  - 1aacf77 Rename/consolidate salt.utils unit tests to conform to naming convention
  - 5a0990b Rename pillar unit test modules to reflect naming convention
  - 516594b Consolidate netapi tests and move them to reflect naming convention
  - 8f5fe5f Consolidate and move salt-ssh unit tests to proper location
  - 9801ce3 Consolidate and move loader tests to test/unit/test_loader.py
  - f72bhc5 Rename beacon unit test modules to conform with naming convention
  - fa76cb6 Move inspectlib tests to conform with naming convention
  - 81e3823 Move shared kernelpkg test cases to tests/support/
  - e0d95b6 Consolidate misplaced tests into tests/unit/test_config.py
  - 3a1ec12 Rename slack engine test file to respect naming convention
  - c9c9d20 Rename test_map_conf test file to respect naming convention
  - 5c936c0 Rename the aptpkg state module to respect naming convention
  - ac50eb8 Remove redundant "test" from filename
  - b03a563 Move jinja templating tests alongside salt/utils/jinja.py's tests

---

### 30.2. Previous Releases
- b49d8df Fix bad copy pasta in docstring
- 069102b Rename sentry returner test to match naming convention
- 2398083 Use tests.support.paths instead of deprecated integration module
- ffb842d Move salt.utils.context tests to their proper location
- d69069b Move context cache tests to their proper location

- PR #49062: (weswhet) fix memoize on available macOS services @ 2018-08-15 15:34:25 UTC
  - c8510a6 Merge pull request #49062 from weswhet/fix-mac-available-services
  - f1b40c4 decorator link fix, updating context names, as well as updating macutils tests for latest changes
  - 1e4497d fixing an issue with memoize on macOS services, switching to useing __context__ instead

- ISSUE #49100: (pruiz) salt.utils.yamldumper.dump/safe_dump incorrectly return 'str' instead of unicode on python2.7 (centos) (refs: #49125)

- PR #49125: (terminalmage) Ensure that we don't feed jinja2.Markup() a str type @ 2018-08-15 04:02:30 UTC
  - 21435be Merge pull request #49125 from terminalmage/issue49100
  - ec258e2 Add integration tests for yaml and json filters
  - f5f16cf Ensure that we don't feed jinja2.Markup() a str type

### 30.2.37 Salt 2018.3.5 Release Notes

Version 2018.3.5 is a CVE-fix release for 2018.3.0.

Security Fix

CVE-2019-17361

With the Salt NetAPI enabled in addition to having a SSH roster defined, unauthenticated access is possible when specifying the client as SSH. Additionally, when the raw_shell option is specified any arbitrary command may be run on the Salt master when specifying SSH options.

### 30.2.38 Salt 2017.7.0 Release Notes - Codename Nitrogen

### 30.2.39 Python 3

The 2017.7 Salt Release adds initial Python 3 support.

The default Python version of Salt will remain Python 2, although Python 3 packages will be supplied for users who want to help test this new feature.
30.2.40 Python 2.6 Deprecation

Salt will no longer support Python 2.6. We will provide python2.7 packages on our repo for RedHat and CentOS 6 to ensure users can still run Salt on these platforms.

As this will impact the installation of additional dependencies for salt modules please use pip packages if there is not a package available in a repository. You will need to install the python27-pip package to get access to the correct pip27 executable: `yum install python27-pip`

30.2.41 Known Issues

The following salt-cloud drivers have known issues running with Python 3. These drivers will not work with Python 3, and Python 2.7 should be used instead:

• Joyent
  • When running under Python 3, users who require Unicode support should ensure that a locale is set on their machines. Users using the C locale are advised to switch to a UTF-aware locale to ensure proper functionality with Salt with Python 3.

Remember to update the Salt Master first

Salt's policy has always been that when upgrading, the minion should never be on a newer version than the master. Specifically with this update, because of changes in the fileclient, the 2017.7 minion requires a 2017.7 master.

Backwards compatibility is still maintained, so older minions can still be used.

More information can be found in the Salt FAQ

States Added for Management of systemd Unit Masking

The service.masked and service.umasked states have been added to allow Salt to manage masking of systemd units.

Additionally, the following functions in the systemd execution module have changed to accommodate the fact that indefinite and runtime masks can co-exist for the same unit:

• service.masked - The return from this function has changed from previous releases. Before, False would be returned if the unit was not masked, and the output of systemctl is-enabled <unit name> would be returned if the unit was masked. However, since indefinite and runtime masks can exist for the same unit at the same time, this function has been altered to accept a runtime argument. If True, the minion will be checked for a runtime mask assigned to the named unit. If False, then the minion will be checked for an indefinite mask. If one is found, True will be returned. If not, then False will be returned.

• service.masked - This function used to just run systemctl is-enabled <unit name> and based on the return from this function the corresponding mask type would be removed. However, if both runtime and indefinite masks are set for the same unit, then systemctl is-enabled <unit name> would show just the indefinite mask. The indefinite mask would be removed, but the runtime mask would remain. The function has been modified to accept a runtime argument, and will attempt to remove a runtime mask if that argument is set to True. If set to False, it will attempt to remove an indefinite mask.

These new runtime arguments default to False.
Pillar Encryption

Beginning in 2016.3.0 the CLI pillar data passed to several functions could conditionally be passed through a renderer to be decrypted. This functionality has now been extended to pillar SLS files as well. See here for detailed documentation on this feature.

Grains Changes

- The osmajorrelease grain has been changed from a string to an integer. State files, especially those using a templating language like Jinja, may need to be adjusted to account for this change.
- Add ability to specify disk backing mode in the VMWare salt cloud profile.

State Module Changes

- The service.running and service.dead states now support a no_block argument which, when set to True on systemd minions, will start/stop the service using the --no-block flag in the systemctl command. On non-systemd minions, a warning will be issued.
- The module.run state has dropped its previous syntax with m_prefix for reserved keywords. Additionally, it allows running several functions in a batch.

Note: It is necessary to explicitly turn on the new behavior (see below)

```yaml
# Before
run_something:
    module.run:
        - name: mymodule.something
        - m_name: 'some name'
        - kwargs: {
                  first_arg: 'one',
                  second_arg: 'two',
                  do_stuff: 'True'
                }

# After
run_something:
    module.run:
        - mymodule.something:
          - name: some name
          - first_arg: one
          - second_arg: two
          - do_stuff: True
```

Since a lot of users are already using module.run states, this new behavior must currently be explicitly turned on, to allow users to take their time updating their SLS files. However, please keep in mind that the new syntax will take effect in the next feature release of Salt (Oxygen) and the old usage will no longer be supported at that time.

Another feature of the new module.run is that it allows calling many functions in a single batch, such as:

```yaml
run_something:
    module.run:
        - mymodule.function_without_parameters:
```

(continues on next page)
In a rare case that you have a function that needs to be called several times but with the different parameters, an additional feature of “tagging” is to the rescue. In order to tag a function, use a colon delimiter. For example:

```
run_something:
  module.run:
    - mymodule.same_function:1:
    - mymodule.same_function:2:
      - myparam
      - my_other_param
    - mymodule.same_function:3:
      - foo: bar
```

The example above will run `mymodule.same_function` three times with the different parameters.

To enable the new behavior for `module.run`, add the following to the minion config file:

```
use_superseded:
  - module.run
```

- The default for the `fingerprint_hash_type` option used in the `present` function in the `ssh` state changed from `md5` to `sha256`.

### Execution Module Changes

- Several functions in the `systemd` execution module have gained a `no_block` argument, which when set to `True` will use `--no-block` in the `systemctl` command.
- In the `solarisips pkg` module, the default value for the `refresh` argument to the `list_upgrades` function has been changed from `False` to `True`. This makes the function more consistent with all of the other `pkg` modules (The other `pkg.list_upgrades` functions all defaulted to `True`).
- The functions which handle masking in the `systemd` module have changed. These changes are described above alongside the information on the new states which have been added to manage masking of systemd units.
- The `pkg.list_repo_pkgs` function for yum/dnf-based distros has had its default output format changed. In prior releases, results would be organized by repository. Now, the default for each package will be a simple list of versions. To get the old behavior, pass `byrepo=True` to the function.
- A `pkg.list_repo_pkgs` function has been added for both Debian/Ubuntu and Arch Linux-based distros.
- The `system` module changed its return format from "HH:MM AM/PM" to "HH:MM:SS AM/PM" for `get_system_time`.
- The default for the `fingerprint_hash_type` option used in the `ssh` execution module changed from `md5` to `sha256`.
Proxy Module Changes

The `proxy_merge_grains_in_module` configuration variable introduced in 2016.3, has been changed, defaulting to **True**.

The connection with the remote device is kept alive by default, when the module implements the `alive` function and `proxy_keep_alive` is set to **True**. The polling interval is set using the `proxy_keep_alive_interval` option which defaults to 1 minute.

The developers are also able to use the `proxy_always_alive`, when designing a proxy module flexible enough to open the connection with the remote device only when required.

Wildcard Versions in `pkg.installed` States

- The `pkg.installed` state now supports wildcards in package versions, for the following platforms:
  - SUSE/openSUSE Leap/Thumbleweed
  - Debian/Ubuntu
  - RHEL/CentOS
  - Arch Linux

  This support also extends to any derivatives of these distros, which use the `aptpkg`, `yumpkg`, or `pacman` providers for the `pkg` virtual module.

  Using wildcards can be useful for packages where the release name is built into the version in some way, such as for RHEL/CentOS which typically has version numbers like `1.2.34-5.el7`. An example of the usage for this would be:

  ```
  mypkg:
  pkg.installed:
    - version: '1.2.34*'
  ```

Master Configuration Additions

- `syndic_forward_all_events` - Option on multi-syndic or single when connected to multiple masters to be able to send events to all connected masters.
- `eauth_acl_module` - In case external auth is enabled master can get authenticate and get the authorization list from different auth modules.
- `keep_acl_in_token` - Option that allows master to build ACL once for each user being authenticated and keep it in the token.

Minion Configuration Additions

- `pillarenv_from_saltenv` - When set to `True` (default is `False`), the `pillarenv` option will take the same value as the effective saltenv when running states. This would allow a user to run `salt '*' state.apply mysls saltenv=dev`, and the SLS for both the state and pillar data would be sourced from the dev environment, essentially the equivalent of running `salt '*' state.apply mysls saltenv=dev pillarenv=dev`. Note that if `pillarenv` is set in the minion config file, or if `pillarenv` is provided on the CLI, it will override this option.
salt-api Changes

The `rest_cherrypy` netapi module has received a few minor improvements:

- A CORS bugfix.
- A new `/token` convenience endpoint to generate Salt eauth tokens.
- A proof-of-concept JavaScript single-page application intended to demonstrate how to use the Server-Sent Events stream in an application. It is available in a default install by visiting the `/app` URL in a browser.

Python API Changes

`expr_form` Deprecation

The `LocalClient`'s `expr_form` argument has been deprecated and renamed to `tgt_type`. This change was made due to numerous reports of confusion among community members, since the targeting method is published to minions as `tgt_type`, and appears as `tgt_type` in the job cache as well.

While `expr_form` will continue to be supported until the `2019.2.0` release cycle (two major releases after this one), those who are using the `LocalClient` (either directly, or implicitly via a `netapi module`) are encouraged to update their code to use `tgt_type`.

`full_return` Argument in `LocalClient` and `RunnerClient`

An `full_return` argument has been added to the `cmd` and `cmd_sync` methods in `LocalClient` and `RunnerClient` which causes the return data structure to include job meta data such as `retcode`.

This is useful at the Python API:

```
>>> import salt.client
>>> client = salt.client.LocalClient()
>>> client.cmd('x', 'cmd.run', ['return 1'], full_return=True)
{'jerry': {'jid': '20170520151213898053', 'ret': '', 'retcode': 1}}
```

As well as from salt-api:

```
% curl -b /tmp/cookies.txt -sS http://localhost:8000 \
   -H 'Content-type: application/json' \n   -d '[[
       "client": "local",
       "tgt": "x",
       "fun": "cmd.run",
       "arg": ["return 1"],
       "full_return": true
   ]]
{"return": [["jerry": {"jid": "20170520151213898053", "retcode": 1, "ret": ""}]]}
```
Jinja

Filters

New filters in 2017.7.0:

- to_bool
- exactly_n_true
- exactly_one_true
- quote
- regex_search
- regex_match
- uuid
- is_list
- is_iter
- min
- max
- avg
- union
- intersect
- difference
- symmetric_difference
- is_sorted
- compare_lists
- compare_dicts
- is_hex
- contains_whitespace
- substring_in_list
- check_whitelist_blacklist
- date_format
- str_to_num
- to_bytes
- json_decode_list
- json_decode_dict
- rand_str
- md5
- sha256
- sha512
• base64_encode
• base64_decode
• hmac
• http_query
• is_ip
• is_ipv4
• is_ipv6
• ipaddr
• ipv4
• ipv6
• network_hosts
• network_size
• gen_mac
• mac_str_to_bytes
• dns_check
• is_text_file
• is_binary_file
• is_empty_file
• file_hashsum
• list_files
• path_join
• which

Logs

Another new feature - although not limited to Jinja only - is being able to log debug messages directly from the template:

```{%- do salt.log.error('logging from jinja') -%}
```

See the logs paragraph.

Network Automation

NAPALM

Introduced in 2016.11, the modules for cross-vendor network automation have been improved, enhanced and widened in scope:
Manage network devices like servers: the NAPALM modules have been transformed so they can run in both proxy and regular minions. That means, if the operating system allows, the salt-minion package can be installed directly on the network gear. Examples of such devices (also covered by NAPALM) include: Arista, Cumulus, Cisco IOS-XR or Cisco Nexus.

Not always alive: in certain less dynamic environments, maintaining the remote connection permanently open with the network device is not always beneficial. In those particular cases, the user can select to initialize the connection only when needed, by specifying the field `always_alive: false` in the proxy configuration or using the `proxy_always_alive` option.

Proxy keepalive: due to external factors, the connection with the remote device can be dropped, e.g.: packet loss, idle time (no commands issued within a couple of minutes or seconds), or simply the device decides to kill the process. In 2017.7.0 we have introduced the functionality to re-establish the connection. One can disable this feature through the `proxy_keep_alive` option and adjust the polling frequency specifying a custom value for `proxy_keep_alive_interval`, in minutes.

New modules:

- **Netconfig state module** - Manage the configuration of network devices using arbitrary templates and the Salt-specific advanced templating methodologies.
- **Network ACL execution module** - Generate and load ACL (firewall) configuration on network devices.
- **Network ACL state** - Manage the firewall configuration. It only requires writing the pillar structure correctly!
- **NAPALM YANG execution module** - Parse, generate and load native device configuration in a standard way, using the OpenConfig/IETF models. This module contains also helpers for the states.
- **NAPALM YANG state module** - Manage the network device configuration according to the YANG models (OpenConfig or IETF).
- **NET finder** - Runner to find details easily and fast. It’s smart enough to know what you are looking for. It will search in the details of the network interfaces, IP addresses, MAC address tables, ARP tables and LLDP neighbors.
- **BGP finder** - Runner to search BGP neighbors details.
- **NAPALM syslog** - Engine to import events from the napalm-logs library into the Salt event bus. The events are based on the syslog messages from the network devices and structured following the OpenConfig/IETF YANG models.
- **NAPALM Helpers** - Generic helpers for NAPALM-related operations. For example, the Compliance report function can be used inside the state modules to compare the expected and the existing configuration.

New functions:

- **Configuration getter** - Return the whole configuration of the network device.
- **Optics getter** - Fetches the power usage on the various transceivers installed on the network device (in dBm).

New grains: Host, Host DNS, Username and Optional args.
Custom Refspecs in GitFS / git_pillar / winrepo

It is now possible to specify the refspecs to use when fetching from remote repositories for GitFS, git_pillar, and winrepo. More information on how this feature works can be found here in the GitFS Walkthrough. The git_pillar and winrepo versions of this feature work the same as their GitFS counterpart.

**git_pillar "mountpoints" Feature Added**

See here for detailed documentation.

**Big Improvements to Docker Support**

The old docker state and execution modules have been moved to salt-contrib. The dockerng execution module has been renamed to docker and now serves as Salt's official Docker execution module.

The old dockerng state module has been split into 4 state modules:

- docker_container - States to manage Docker containers
- docker_image - States to manage Docker images
- docker_volume - States to manage Docker volumes
- docker_network - States to manage Docker networks

The reason for this change was to make states and requisites more clear. For example, imagine this SLS:

```yaml
myuser/appimage:
  docker.image_present:
    - sls: docker.images.appimage

myapp:
  docker.running:
    - image: myuser/appimage
    - require:
      - docker: myuser/appimage
```

The new syntax would be:

```yaml
myuser/appimage:
  docker_image.present:
    - sls: docker.images.appimage

myapp:
  docker_container.running:
    - image: myuser/appimage
    - require:
      - docker_image: myuser/appimage
```

This is similar to how Salt handles MySQL, MongoDB, Zabbix, and other cases where the same execution module is used to manage several different kinds of objects (users, databases, roles, etc.).

**Note:** With the Moby announcement coming at this year's DockerCon, Salt's docker execution module (as well as the state modules) work interchangeably when docker is replaced with moby (e.g. moby_container.running, moby_image.present, moby.inspect_container, etc.)
The old syntax will continue to work until the 2019.2.0 release of Salt. The old docker naming will also continue to work until that release, so no immediate changes need to be made to your SLS files (unless you were still using the old docker states that have been moved to salt-contrib).

The docker_container.running state has undergone a significant change in how it determines whether or not a container needs to be replaced. Rather than comparing individual arguments to their corresponding values in the named container, a temporary container is created (but not started) using the passed arguments. The two containers are then compared to each other to determine whether or not there are changes, and if so, the old container is stopped and destroyed, and the temporary container is renamed and started.

Salt still needs to translate arguments into the format which docker-py expects, but if it does not properly do so, the skip_translate argument can be used to skip input translation on an argument-by-argument basis, and you can then format your SLS file to pass the data in the format that the docker-py expects. This allows you to work around any changes in Docker's API or issues with the input translation, and continue to manage your Docker containers using Salt. Read the documentation for skip_translate for more information.

Note: When running the docker_container.running state for the first time after upgrading to 2017.7.0, your container(s) may be replaced. The changes may show diffs for certain parameters which say that the old value was an empty string, and the new value is None. This is due to the fact that in prior releases Salt was passing empty strings for these values when creating the container if they were undefined in the SLS file, where now Salt simply does not pass any arguments not explicitly defined in the SLS file. Subsequent runs of the state should not replace the container if the configuration remains unchanged.

New SSH Cache Roster

The SSH cache Roster has been rewritten from scratch to increase its usefulness. The new roster supports all minion matchers, so it is now possible to target minions identically through salt and salt-ssh.

Using the new roster_order configuration syntax it’s now possible to compose a roster out of any combination of grains, pillar and mine data and even Salt SDB URLs. The new release is also fully IPv4 and IPv6 enabled and even has support for CIDR ranges.

Salt-SSH Default Options

Defaults for rosters can now be set, so that they don’t have to be set on every entry in a roster or specified from the commandline.

The new option is roster_defaults and is specified in the master config file:

```
roster_defaults:
    user: daniel
    sudo: True
    priv: /root/.ssh/id_rsa
    tty: True
```
Blacklist or Whitelist Extmod Sync

The modules that are synced to minions can now be limited.

The following configuration options have been added for the master:

- `extmod_whitelist`
- `extmod_blacklist`

and for the minion:

- `extmod_whitelist`
- `extmod_blacklist`

Additional Features

- The `mine.update` function has a new optional argument `mine_functions` that can be used to refresh mine functions at a more specific interval than scheduled using the `mine_interval` option. However, this argument can be used by explicit schedule. For example, if we need the mines for `net.lldp` to be refreshed every 12 hours:

```python
schedule:
  lldp_mine_update:
    function: mine.update
    kwargs:
      mine_functions:
        net.lldp: []
      hours: 12
```

- The `salt` runner has a new function: `salt.execute`. It is mainly a shortcut to facilitate the execution of various functions from other runners, e.g.:

```python
ret1 = __salt__['salt.execute']('*', 'mod.fun')
```

New Modules

Beacons

- `salt.beacons.log`

Cache

- `salt.cache.redis_cache`
Engines

- salt.engines.stalekey
- salt.engines.junos_syslog
- salt.engines.napalm_syslog

Execution modules

- salt.modules.apk
- salt.modules.at_solaris
- salt.modules.boto_kinesis
- salt.modules.boto3_elasticache
- salt.modules.boto3_route53
- salt.modules.capirca_acl
- salt.modules.freebsd_update
- salt.modules.grafana4
- salt.modules.heat
- salt.modules.icinga2
- salt.modules.kubernetesmod
- salt.modules.logmod
- salt.modules.mattermost
- salt.modules.namecheap_dns
- salt.modules.namecheap_domains
- salt.modules.namecheap_ns
- salt.modules.namecheap_users
- salt.modules.namecheap.ssl
- salt.modules.napalm
- salt.modules.napalm_acl
- salt.modules.napalm_yang_mod
- salt.modules.pdbedit
- salt.modules.solrcloud
- salt.modules.statuspage
- salt.modules.zonecfg
- salt.modules.zoneadm
Grains

- `salt.grains.metadata`
- `salt.grains.mdata`

Outputters

- `salt.output.table_out`

Pillar

- `salt.pillar.postgres`
- `salt.pillar.vmware_pillar`

Returners

- `salt.returners.mattermost_returner`
- `salt.returners.highstate_return`

Roster

- `salt.roster.cache`

Runners

- `salt.runners.bgp`
- `salt.runners.mattermost`
- `salt.runners.net`

SDB

- `salt.sdb.yaml`
- `salt.sdb.tism`
- `salt.sdb.cache`
States

- `salt.states.boto_kinesis`
- `salt.states.boto_efs`
- `salt.states.boto3_elasticache`
- `salt.states.boto3_route53`
- `salt.states.docker_container`
- `salt.states.docker_image`
- `salt.states.docker_network`
- `salt.states.docker_volume`
- `salt.states.elasticsearch`
- `salt.states.grafana4_dashboard`
- `salt.states.grafana4_datasource`
- `salt.states.grafana4_org`
- `salt.states.grafana4_user`
- `salt.states.heat`
- `salt.states.icinga2`
- `salt.states.influxdb_continuous_query`
- `salt.states.influxdb_retention_policy`
- `salt.states.kubernetes`
- `salt.states.logadm`
- `salt.states.logrotate`
- `salt.states.msteams`
- `salt.states.netacl`
- `salt.states.netconfig`
- `salt.states.netyang`
- `salt.states.nix`
- `salt.states.pdbedit`
- `salt.states.solrcloud`
- `salt.states.statuspage`
- `salt.states.vault`
- `salt.states.win_wua`
- `salt.states.zone`
Deprecations

General Deprecations

- Removed support for aliasing `cmd.run` to `cmd.shell`.
- Removed support for Dulwich from `GitFS`.
- Beacon configurations should be lists instead of dictionaries.
- The `PidfileMixin` has been removed. Please use `DaemonMixIn` instead.
- The `use_pending` argument was removed from the `salt.utils.event.get_event` function.
- The `pending_tags` argument was removed from the `salt.utils.event.get_event` function.

Configuration Option Deprecations

- The `client_acl` configuration option has been removed. Please use `publisher_acl` instead.
- The `client_acl_blacklist` configuration option has been removed. Please use `publisher_acl_blacklist` instead.
- The `win_gitrepos` configuration option has been removed. Please use the `winrepo_remotes` option instead.
- The `win_repo` configuration option has been removed. Please use `winrepo_dir` instead.
- The `win_repo_mastercache_file` configuration option has been removed. Please use the `winrepo_cache_file` option instead.

Module Deprecations

The `git` execution module had the following changes:

- The `fmt` argument was removed from the `archive` function. Please use `format` instead.
- The `repository` argument was removed from the `clone` function. Please use `url` instead.
- The `is_global` argument was removed from the `config_set` function. Please use `global` instead.
- The `branch` argument was removed from the `merge` function. Please use `rev` instead.
- The `branch` argument was removed from the `push` function. Please use `rev` instead.

The `glusterfs` execution module had the following functions removed:

- `create`: Please use `create_volume` instead.
- `delete`: Please use `delete_volume` instead.
- `list_peers`: Please use `peer_status` instead.

The `htpasswd` execution module had the following function removed:

- `useradd_all`: Please use `useradd` instead.

The `img` execution module has been removed. All of its associated functions were marked for removal in the 2017.7.0 release. The functions removed in this module are mapped as follows:

- `mount_image/mnt_image`: Please use `mount.mount` instead.
- `umount_image`: Please use `mount.umount` instead.
• **bootstrap**: Please use `genesis.bootstrap` instead.

The `smartos_virt` execution module had the following functions removed:

• **create**: Please use `start` instead.
• **destroy**: Please use `stop` instead.
• **list_vms**: Please use `list_domains` instead.

The `virt` execution module had the following functions removed:

• **create**: Please use `start` instead.
• **destroy**: Please use `stop` instead.
• **list_vms**: Please use `list_domains` instead.

The `virtualenv_mod` execution module had the following changes:

• The `package_or_requirement` argument was removed from both the `get_resource_path` and the `get_resource_content` functions. Please use `package` instead.
• The `resource_name` argument was removed from both the `get_resource_path` and `get_resource_content` functions. Please use `resource` instead.

The `win_repo` execution module had the following changes:

• The `win_repo_source_dir` option was removed from the `win_repo` module. Please use `winrepo_source_dir` instead.

The `xapi` execution module had the following functions removed:

• **create**: Please use `start` instead.
• **destroy**: Please use `stop` instead.
• **list_vms**: Please use `list_domains` instead.

The `zypper` execution module had the following function removed:

• **info**: Please use `info_available` instead.

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**Pillar Deprecations**

• Support for the `raw_data` argument for the `file_tree` ext_pillar has been removed. Please use `keep_newline` instead.
• SQLite3 database connection configuration previously had keys under pillar. This legacy compatibility has been removed.

**Proxy Minion Deprecations**

• The `proxy_merge_grains_in_module` default has been switched from `False` to `True`. 
Salt Documentation, Release 3002.5

Salt-API Deprecations

- The `SaltAPI.run()` function has been removed. Please use the `SaltAPI.start()` function instead.

Salt-Cloud Deprecations

- Support for using the keyword `provider` in salt-cloud provider config files has been removed. Please use `driver` instead. The `provider` keyword should now only be used in cloud profile config files.

Salt-SSH Deprecations

- The `wipe_ssh` option for `salt-ssh` has been removed. Please use the `ssh_wipe` option instead.

State Deprecations

The `apache_conf` state had the following functions removed:
- `disable`: Please use `disabled` instead.
- `enable`: Please use `enabled` instead.

The `apache_module` state had the following functions removed:
- `disable`: Please use `disabled` instead.
- `enable`: Please use `enabled` instead.

The `apache_site` state had the following functions removed:
- `disable`: Please use `disabled` instead.
- `enable`: Please use `enabled` instead.

The `chocolatey` state had the following functions removed:
- `install`: Please use `installed` instead.
- `uninstall`: Please use `uninstalled` instead.

The `git` state had the following changes:
- The `config` function was removed. Please use `config_set` instead.
- The `is_global` option was removed from the `config_set` function. Please use `global` instead.
- The `always_fetch` option was removed from the `latest` function, as it no longer has any effect. Please see the `2015.8.0` release notes for more information.
- The `force` option was removed from the `latest` function. Please use `force_clone` instead.
- The `remote_name` option was removed from the `latest` function. Please use `remote` instead.

The `glusterfs` state had the following function removed:
- `created`: Please use `volume_present` instead.

The `openvswitch_port` state had the following change:
- The `type` option was removed from the `present` function. Please use `tunnel_type` instead.
Build Notes

Windows Installer Packages

Windows Installer packages have been patched with the following PR: 42347

30.2.42 Salt 2017.7.1 Release Notes

Version 2017.7.1 is a bugfix release for 2017.7.0.

Statistics

- Total Merges: 16
- Total Issue References: 12
- Total PR References: 31
- Contributors: 11 (Ch3LL, TiteiKo, garethgreenaway, gtmanfred, llua, rallytime, seedickcode, skizunov, terminmage, twangboy, whiteinge)

Security Fix

CVE-2017-12791 Maliciously crafted minion IDs can cause unwanted directory traversals on the Salt-master

Correct a flaw in minion id validation which could allow certain minions to authenticate to a master despite not having the correct credentials. To exploit the vulnerability, an attacker must create a salt-minion with an ID containing characters that will cause a directory traversal. Credit for discovering the security flaw goes to: Vernhk@qq.com

Changelog for v2017.7.0..v2017.7.1

Generated at: 2018-05-26 20:28:44 UTC

- ISSUE saltstack/salt-jenkins#460: (Ch3LL) decorator tests failing on python3 (refs: #42548)
- PR #42595: (gtmanfred) make sure to pass arg as well @ 2017-07-28 16:21:58 UTC
  - PR #42548: (gtmanfred) pass in empty kwarg for reactor (refs: #42595)
  - a50fe5433a Merge pull request #42595 from gtmanfred/2017.7.1
  - 8f73804b24 make sure to pass arg as well
- PR #42597: (rallytime) Back-port #42590 to 2017.7.1 @ 2017-07-28 00:20:01 UTC
  - PR #42590: (TiteiKo) Fix missing tornado import (refs: #42597)
  - 3b583350de Merge pull request #42597 from rallytime/bp-42590
  - 8818b06f22 Fix missing tornado import
- ISSUE #42404: (gabekahen) [2017.7] file.managed with cmd_check "No such file or directory" (refs: #42411)
- ISSUE #33708: (pepinje) visudo check command leaves cache file in /tmp (refs: #38063, #42411)
- PR #42598: (rallytime) Back-port #42411 to 2017.7.1 @ 2017-07-28 00:19:13 UTC
  - PR #42411: (seedickcode) Fix file.managed check_cmd file not found - Issue #42404 (refs: #42598)
  - PR #38063: (llua) tmp file clean up in file.manage - fix for #33708 (refs: #42411)
- 76f1e53e10 Merge pull request #42598 from rallytime/bp-42411
- 190cdb8693 Fix file.managed check_cmd file not found - Issue #42404

- **PR #42564**: (rallytime) Back-port #42555 to 2017.7.1 @ 2017-07-26 17:32:02 UTC
  - PR #42555: (Ch3LL) add changelog to 2017.7.1 release notes (refs: #42564)
  - 5c7def9a43 Merge pull request #42564 from rallytime/bp-42555
  - 7bca5a4cc small markup fix for title
  - d066b599ca add changelog to 2017.7.1 release notes

- **ISSUE saltstack/salt-jenkins#460**: (Ch3LL) decorator tests failing on python3 (refs: #42548)

- **PR #42548**: (gtmanfred) pass in empty kwarg for reactor (refs: #42595) @ 2017-07-26 00:41:20 UTC
  - 711b742c54 Merge pull request #42548 from gtmanfred/2017.7.1
  - 0257c1dc32 pass in empty kwarg for reactor
  - b948e980d2 update chunk, not kwarg in chunk

- **ISSUE #4219**: (suhec) Error when installing package from file under Arch Linux (refs: #42522)

- **PR #42522**: (gtmanfred) pacman wildcard is only for repository installs @ 2017-07-24 20:51:05 UTC
  - 50c1635dcc Merge pull request #42522 from gtmanfred/2017.7.1
  - 7787fb9e1b pacman wildcard is only for repository installs

- **PR #42508**: (rallytime) Back-port #42474 to 2017.7.1 @ 2017-07-24 20:49:51 UTC
  - **PR #42474**: (whiteinge) Cmd arg kwarg parsing test (refs: #42508)
  - **PR #39646**: (terminalmage) Handle deprecation of passing string args to load_args_and_kwargs (refs: #42474)
  - 05c07ac049 Merge pull request #42508 from rallytime/bp-42474
  - 76fb074433 Add a test.arg variant that cleans the pub kwargs by default
  - 624fe3648e Lint fixes
  - d246a5fc61 Add back support for string kwargs
  - 854e098aa0 Add LocalClient.cmd test for arg/kwarg parsing

- **ISSUE #42427**: (grichmond-salt) Issue Passing Variables created from load_json as Inline Pillar Between States (refs: #42435)

- **PR #42472**: (rallytime) Back-port #42435 to 2017.7.1 @ 2017-07-24 15:11:13 UTC
  - PR #42435: (terminalmage) Modify our custom YAML loader to treat unicode literals as unicode strings (refs: #42472)
  - 95fe2558e4 Merge pull request #42472 from rallytime/bp-42435
  - 5c47af5b98 Modify our custom YAML loader to treat unicode literals as unicode strings

- **ISSUE #42374**: (tyhunt99) [2017.7.0] salt-run manage.versions throws exception if minion is offline or unresponsive (refs: #42436)

- **PR #42473**: (rallytime) Back-port #42436 to 2017.7.1 @ 2017-07-24 15:10:29 UTC
  - **PR #42436**: (garethgreenaway) Fixes to versions function in manage runner (refs: #42473)
  - 5b99d45f54 Merge pull request #42473 from rallytime/bp-42436
- 82ed919803 Updating the versions function inside the manage runner to account for when a minion is offline and we are unable to determine its version.

- **ISSUE #42381**: (zebooka) Git.detached broken in 2017.7.0 (refs: #42399)

- **ISSUE #38878**: (tomlaredo) [Naming consistency] git.latest "rev" option VS git.detached "ref" option (refs: #38898)

- **PR #42471**: (rallytime) Back-port #42399 to 2017.7.1 @ 2017-07-24 15:09:50 UTC
  - **PR #42399**: (rallytime) Update old "ref" references to "rev" in git.detached state (refs: #42471)
  - **PR #38898**: (terminalmage) git.detached: rename ref to rev for consistency (refs: #42399)
  - 3d1a2d3f9f Merge pull request #42471 from rallytime/bp-42399
  - b9a4669e5a Update old "ref" references to "rev" in git.detached state

- **ISSUE #42400**: (Enquier) Conflict in execution of passing pillar data to orch/reactor event executions 2017.7.0 (refs: #42031)

- **PR #42470**: (rallytime) Back-port #42031 to 2017.7.1 @ 2017-07-24 15:09:30 UTC
  - **PR #42031**: (skizunov) Fix: Reactor emits critical error (refs: #42470)
  - 09766bc1bc Merge pull request #42470 from rallytime/bp-42031
  - 0a0c6287a4 Fix: Reactor emits critical error

- **ISSUE #41949**: (jprorcaro) Event returner doesn't work with Windows Master (refs: #42027)

- **PR #42469**: (rallytime) Back-port #42027 to 2017.7.1 @ 2017-07-21 22:41:02 UTC
  - **PR #42027**: (gtmanfred) import salt.minion for EventReturn for Windows (refs: #42469)
  - d7b172a15b Merge pull request #42469 from rallytime/bp-42027
  - ed612b4ee7 import salt.minion for EventReturn for Windows

- **PR #42466**: (rallytime) Back-port #42452 to 2017.7.1 @ 2017-07-21 19:41:24 UTC
  - **PR #42452**: (Ch3LL) update windows urls to new py2/py3 naming scheme (refs: #42466)
  - 8777b1a825 Merge pull request #42466 from rallytime/bp-42452
  - c10196f68c update windows urls to new py2/py3 naming scheme

- **PR #42439**: (rallytime) Back-port #42409 to 2017.7.1 @ 2017-07-21 17:38:10 UTC
  - **PR #42409**: (twangboy) Add Scripts to build Py3 on Mac (refs: #42439)
  - fceaf41d0 Merge pull request #42439 from rallytime/bp-42409
  - 8176964b41 Remove build and dist, sign pkgs
  - 2c14d92a07 Fix hard coded pip path
  - 82fdd7c2e1 Add support for Py3
  - 2478447246 Update Python and other reqs

- **ISSUE #42403**: (astronouth7303) [2017.7] Pillar empty when state is applied from orchestrate (refs: #42433)

- **PR #42441**: (rallytime) Back-port #42433 to 2017.7.1 @ 2017-07-21 17:37:01 UTC
  - **PR #42433**: (terminalmage) Only force saltenv/pillarenv to be a string when not None (refs: #42441)
  - 660400560b Merge pull request #42441 from rallytime/bp-42433
  - 17f347123a Only force saltenv/pillarenv to be a string when not None
## 30.2.43 Salt 2017.7.2 Release Notes

Version 2017.7.2 is a bugfix release for 2017.7.0.

### Statistics

- Total Merges: 329
- Total Issue References: 73
- Total PR References: 236
- Contributors: 47 (Ch3LL, CorvinM, DmitryKuzmenko, Giandom, Mapel88, Mareo, SuperPommeDeTerre, TheLoekl, abulford, amendlik, blarghmatey, brejoc, cachedout, carsonoid, cro, damon-atkins, darcoli, dmurphy18, frankiexyz, garethgreenaway, gtmanfred, hibbert, isbm, ixs, jettero, jmarinaro, justinceard, kkoppel, llua, lomeroe, m03, mcalmer, mirceautilnic, morganwillcock, nhavens, pablo007, rallytime, seedickcode, shengis, skizunov, terminalmage, the-glu, thusoy, twangboy, vitaliyf, votny, whiteinge)

### Security Fix

**CVE-2017-14695** Directory traversal vulnerability in minion id validation in SaltStack. Allows remote minions with incorrect credentials to authenticate to a master via a crafted minion ID. Credit for discovering the security flaw goes to: Julian Brost (julian@0x4a42.net)

**CVE-2017-14696** Remote Denial of Service with a specially crafted authentication request. Credit for discovering the security flaw goes to: Julian Brost (julian@0x4a42.net)

### Changelog for v2017.7.1..v2017.7.2

*Generated at: 2018-05-26 21:06:12 UTC*

- **PR #43868**: (rallytime) Back-port #43847 to 2017.7.2 @ 2017-10-03 12:00:52 UTC
  - PR #43847: (cachedout) Fix to module.run (refs: #43868)
  - dd0b338cf Merge pull request #43868 from rallytime/bp-43847
  - e21d8e9583 Use six.iterkeys() instead of dict.keys()
  - c297ae5557 Improve failures for module.run states
  - 782e67c199 Lint
  - a6c2d78518 Fix typo found by @s0undt3ch
  - 0ca1ce5ec2 Fix to module.run [WIP]
- **PR #43871**: (rallytime) Add updated release notes to 2017.7.2 branch @ 2017-10-03 11:59:29 UTC
  - 47a4f4a38a Merge pull request #43871 from rallytime/update-release-notes
  - 2337904656 Add updated release notes to 2017.7.2 branch
- **PR #43756**: (gtmanfred) split build and install for pkg osx @ 2017-09-26 20:51:28 UTC
  - 8841d5f73 Merge pull request #43756 from gtmanfred/2017.7.2
  - f7df41fa94 split build and install for pkg osx
- **ISSUE #43077**: (Manoj2087) Issue with deleting key via wheel (refs: #43330)
- **PR #43585**: (rallytime) Back-port #43330 to 2017.7.2 @ 2017-09-19 17:33:34 UTC

### 30.2. Previous Releases
- **PR #43330**: (terminalmage) Fix reactor regression + unify reactor config schema (refs: #43585)
- 89f629233f Merge pull request #43585 from rallytime/bp-43330
- c4f693bae8 Merge branch '2017.7.2' into bp-43330

- **ISSUE #43447**: (UtahDave) When using Syndic with Multi Master the top level master doesn't reliably get returns from lower minion. (refs: #43526)

- **PR #43586**: (rallytime) Back-port #43526 to 2017.7.2 @ 2017-09-19 15:36:27 UTC
  - PR #43526: (DmitryKuzmenko) Forward events to all masters syndic connected to (refs: #43586)
  - abb7fe4422 Merge pull request #43586 from rallytime/bp-43526
  - e076e9b634 Forward events to all masters syndic connected to.
  - 7abd07fa07 Simplify client logic
  - b5f10696c2 Improve the reactor documentation
  - 7a2f12b96a Include a better example for reactor in master conf file
  - 531cac610e Rewrite the reactor unit tests
  - 2a35ab7f39 Unify reactor configuration, fix caller reactors
  - 4af179bad Un-deprecate passing kwarg outside of 'kwarg' param

- **PR #43551**: (twangboy) Fix preinstall script on OSX for 2017.7.2 @ 2017-09-18 18:35:35 UTC
  - 3d3b09302d Merge pull request #43551 from twangboy/osx_fix_preinstall_2017.7.2
  - b3dbaf035 Update win_pkg.py

- **PR #43509**: (rallytime) Back-port #43333 to 2017.7.2 @ 2017-09-15 21:21:40 UTC
  - PR #43333: (damon-atkins) Docs are wrong cache_dir (bool) and cache_file (str) cannot be passed as params + 1 bug (refs: #43509)
  - 24691da888 Merge pull request #43509 from rallytime/bp-43333-2017.7.2
  - f33395f1ee Fix logic in /etc/paths.d/salt detection

- **PR #43440**: (rallytime) Back-port #43421 to 2017.7.2 @ 2017-09-11 20:59:53 UTC
  - PR #43421: (gtmanfred) Revert "Reduce fileclient.get_file latency by merging _file_find and ... (refs: #43440)
  - 8964cacbf8 Merge pull request #43440 from rallytime/bp-43421
  - ea6661755 Revert "Reduce fileclient.get_file latency by merging _file_find and _file_hash"

- **ISSUE #42459**: (iavael) Broken ldap groups retrieval in salt.auth.ldap after upgrade to 2017.7 (refs: #43283)
• PR #43315: (rallytime) Back-port #43283 to 2017.7.2 @ 2017-09-05 20:04:25 UTC
  - PR #43283: (DmitryKuzmenko) Fix ldap token groups auth. (refs: #43315)
  - 85dba1e898 Merge pull request #43315 from rallytime/bp-43283
  - f295b0ccce Fix for tests: don’t require ‘groups’ in the eauth token.
  - 56938d5bf2 Fix ldap token groups auth.
• ISSUE #43259: (mahesh21) NameError: global name '__opts__' is not defined (refs: #43266)
• PR #43266: (gtmanfred) switch virtualbox cloud driver to use __utils__ @ 2017-08-30 18:36:20 UTC
  - 26ff8088cb Merge pull request #43266 from gtmanfred/virtualbox
  - 382bf9de7 switch virtualbox cloud driver to use __utils__
• ISSUE #42936: (Mapel88) bug in win_iis module & state - container_setting (refs: #43073)
• PR #43073: (Mapel88) Fix bug #42936 - win_iis module container settings @ 2017-08-30 18:34:37 UTC
  - ee209b144c Merge pull request #43073 from Mapel88/patch-2
  - b1a3d15b28 Remove trailing whitespace for linter
  - 25c8190e48 Fix pylint errors
  - 1eba8c48e Fix pylint errors
  - 290d7b54af Fix plint errors
  - f4f32421ab Fix plint errors
  - ec20e9a19a Fix bug #43110 - win_iis module
  - 009ef6686b Fix dictionary keys from string to int
  - dc793f9a05 Fix bug #42936 - win_iis state
  - 13404a47b5 Fix bug #42936 - win_iis module
• PR #43254: (twangboy) Fix unit.modules.test_inspect_collector on Windows @ 2017-08-30 15:46:07 UTC
  - ec1bedc646 Merge pull request #43254 from twangboy/win_fix_test_inspect_collector
  - b401340e6c Fix unit.modules.test_inspect_collector on Windows
• ISSUE #43241: (mirceaulinic) Error whilst collecting napalm grains (refs: #43255)
• PR #43255: (gtmanfred) always return a dict object @ 2017-08-30 14:47:15 UTC
  - 1fc7307735 Merge pull request #43255 from gtmanfred/2017.7
  - 83b0bab34b opt_args needs to be a dict
• PR #43229: (twangboy) Bring changes from #43228 to 2017.7 @ 2017-08-30 14:26:55 UTC
  - PR #43228: (twangboy) Win fix pkg.install (refs: #43229)
  - fa904ee225 Merge pull request #43229 from twangboy/win_fix_pkg.install-2017.7
  - e007a1c26e Fix regex, add .
  - 23ec47c74c Add _ to regex search
  - b1788b1e5f Bring changes from #43228 to 2017.7
• PR #43251: (twangboy) Skips unit.modules.test_groupadd on Windows @ 2017-08-30 13:56:36 UTC
  - 25666f88f7 Merge pull request #43251 from twangboy/win_skip_test_groupadd
- 5185071d5a Skips `unit.modules.test_groupadd` on Windows

- **PR #43256**: (twangboy) Skip mac tests for user and group @ 2017-08-30 13:18:13 UTC
  - a8e09629b2 Merge pull request #43256 from twangboy/win_skip_mac_tests
  - cee627a60b Skip mac tests for user and group

- **ISSUE #42279**: (dafyddj) `win_lgpo` matches multiple policies due to startswith() (refs: #43116, #43156, #43166, #43226)

- **PR #43226**: (lomeroe) Fixes for issues in PR #43166 @ 2017-08-29 19:05:39 UTC
  - PR #43166: (lomeroe) Backport #43116 to 2017.7 (refs: #43226)
  - PR #43156: (lomeroe) Backport #43116 to 2017.7 (refs: #43166)
  - PR #43116: (lomeroe) Fix 42279 in develop (refs: #43166, #43156)
  - PR #39773: (twangboy) Make `win_file` use the `win_dacl` salt util (refs: #43226)
  - ac2189c870 Merge pull request #43226 from lomeroe/fix_43166
  - 0c42d4a3 Merge branch '2017.7' into fix_43166
  - 324cf8d8d1e correcting bad format statement in search for policy to be disabled (fix for #43166) verify that file exists before attempting to remove (fix for commits from #39773)

- **PR #43227**: (twangboy) Fix `unit.fileserver.test_gitfs` for Windows @ 2017-08-29 19:03:36 UTC
  - 6199fb46dc Merge pull request #43227 from twangboy/win_fix_unit_test_gitfs
  - c956d2483 Fix is_windows detection when USERNAME missing
  - 869e8cc603 Fix `unit.fileserver.test_gitfs` for Windows

- **PR #43217**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-08-28 16:36:28 UTC
  - 6ad03e4b4 Merge pull request #43217 from rallytime/merge-2017.7
  - 3911df2f4b Merge branch '2016.11' into '2017.7'
  - 5308e279f9 Merge pull request #43202 from garethgreenaway/42642_2016_11_augeas_module_revert_fix
    - ef7e93eb3f Reverting this change due to it breaking other uses.
  - f16b7246ed4 Merge pull request #43103 from aogier/43101-genesis-bootstrap
    - db94f3bb1c better formatting
    - e5cc667762 tests: fix a leftover and simplify some parts
    - 1e5997457 lint
    - 216ced69e5 allow comma-separated pkgs lists, quote args, test deb behaviour
    - d8612ae006 fix debootstrap and enhance packages selection/deletion via cmdline
  - 4863771428 Merge pull request #42663 from StreetHawkInc/fix_git_tag_check
    - 2b5af5b59d Remove refs/tags prefix from remote tags
    - 3f2e96e561 Convert set to list for serializer
    - 27285d977 Only include new tags in changes
    - 4b1df2f223 Exclude annotated tags from checks
    - 389037285 Check remote tags before deciding to do a fetch #42329

- **PR #43201**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-08-25 22:56:46 UTC
- a563a9422a Merge pull request #43201 from rallytime/merge-2017.7
- d40eb6b37 Merge branch '2016.11' into '2017.7'
  - 4193e7f0a2 Merge pull request #43199 from corywright/disk-format-alias
  - f00d3a9ddc Add disk_format alias for disk_format_
  - 5471f9fe0c Merge pull request #43196 from gtmanfred/2016.11
  - cced241777 Pin request install to version
- ace2715c60 Merge pull request #43178 from terminalmage/issue43143
  - 2640833400 git.detached: Fix traceback when rev is a SHA and is not present locally
- 12e9507b9e Merge pull request #43179 from terminalmage/old-deprecation
  - 3adf8ad04b Fix missed deprecation
- b595440d90 Merge pull request #43171 from terminalmage/salt-utils-warning
  - 7b5943a31a Add warning about adding new functions to salt/utils/__init__.py
- 4f273ca4f Merge pull request #43173 from Ch3LL/add_branch_docs
  - 1b24244bd3 Add New Release Branch Strategy to Contribution Docs
- PR #42997: (twangboy) Fix unit.test_test_module_names for Windows @ 2017-08-25 21:19:11 UTC
  - ce04ab4286 Merge pull request #42997 from twangboy/win_fix_test_module_names
  - 2722e9521d Use os.path.join to create paths
- ISSUE #26995: (jbouse) Issue with artifactory.downloaded and snapshot artifacts (refs: #43006)
- PR #43006: (SuperPommeDeTerre) Try to fix #26995 @ 2017-08-25 21:16:07 UTC
  - c0279e491c Merge pull request #43006 from SuperPommeDeTerre/SuperPommeDeTerre-patch-#26995
  - 30dd65d12 Merge remote-tracking branch ‘upstream/2017.7’ into SuperPommeDeTerre-patch-#26995
    - 50ee3d5682 Merge remote-tracking branch ‘remotes/origin/2017.7’ into SuperPommeDeTerre-patch-#26995
    - 0b666e100b Fix typo.
    - 1b8729b3e7 Fix for #26995
  - e31402978 Fix typo.
  - db11e1985b Fix for #26995
- ISSUE #43162: (MorphBonehunter) docker_container.running interference with restart_policy (refs: #43184)
- PR #43184: (terminalmage) docker.compare_container: Perform boolean comparison when one side’s value is null/None @ 2017-08-25 18:42:11 UTC
  - b6c5314fe9 Merge pull request #43184 from terminalmage/issue43162
  - 081f42ad71 docker.compare_container: Perform boolean comparison when one side’s value is null/None
- PR #43165: (mirceaulinic) Improve napalm state output in debug mode @ 2017-08-24 23:05:37 UTC
  - 68b812b4b4 Merge pull request #43165 from cloudflare/fix-napalm-ret
  - c10717dc89 Lint and fix

30.2. Previous Releases 2243
- 1cd33cbaa9 Simplify the loaded_ret logic
- 0bbea6b04c Document the new compliance_report arg
- 3a906109bd Include compliance reports
- 3634055e34 Improve napalm state output in debug mode

**PR #43155**: (terminalmage) Resolve image ID during container comparison @ 2017-08-24 22:09:47 UTC
- a6a327b1e5 Merge pull request #43155 from terminalmage/issue43001
- 0186835ebf Fix doctest in test
- a0bb654e46 Fixing lint issues
- d5b2a0be68 Resolve image ID during container comparison

**PR #43170**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-08-24 19:22:26 UTC
- c071fd44c8 Merge pull request #43170 from rallytime/merge-2017.7
- 3daad5a3a2 Merge branch '2016.11' into '2017.7'
  - 669b376abf Merge pull request #43151 from ushmodin/2016.11
    - c5841e2ade state.sls hangs on file.recurse with clean: True on windows

**ISSUE #43040**: (darcoli) gitFS ext_pillar with branch name __env__ results in empty pillars (refs: #43041)

**PR #43168**: (rallytime) Back-port #43041 to 2017.7 @ 2017-08-24 19:07:23 UTC
- PR #43041: (darcoli) Do not try to match pillarenv with __env__ (refs: #43168)
  - 034c325a09 Merge pull request #43168 from rallytime/bp-43041
  - d010b74887 Do not try to match pillarenv with __env__

**PR #43172**: (rallytime) Move new utils/__init__.py funcs to utils.files.py @ 2017-08-24 19:05:30 UTC
- PR #43056: (damon-atkins) safe_filename_leaf(file_basename) and safe_filepath(file_path_name) (refs: #43172)
  - d48938e6b4 Merge pull request #43172 from rallytime/move-utils-funcs
  - 3c85e7901e Move new utils/__init__.py funcs to utils.files.py

**ISSUE #43043**: (pabloh007) docker.save and docker.load problem (refs: #43061)

**PR #43061**: (pabloh007) Have docker.save use the image name when valid if not use image id, i... @ 2017-08-24 16:32:02 UTC
- e60f386442 Merge pull request #43061 from pabloh007/fix-save-image-name-id
- 0ffcf57d1df Have docker.save use the image name when valid if not use image id, issue when loading and image is savid with id issue #43043

**ISSUE #42279**: (dafyddj) win_lgpo matches multiple policies due to startswith() (refs: #43116, #43156, #43166, #43226)

**PR #43166**: (lomeroe) Backport #43116 to 2017.7 (refs: #43226) @ 2017-08-24 15:01:23 UTC
- PR #43156: (lomeroe) Backport #43116 to 2017.7 (refs: #43166)
- PR #43116: (lomeroe) Fix 42279 in develop (refs: #43166, #43156)
- 9da57543f8 Merge pull request #43166 from lomeroe/bp-43116-2017.7
- af181b3257 correct fopen calls from salt.utils for 2017.7
Salt Documentation, Release 3002.5

- f74480f11e lint fix
- ecd446fd55 track xml namespace to ensure policies w/duplicate IDs or Names do not conflict
- 9f3047c420 add additional checks for ADM policies that have the same ADMX policy ID (#42279)

- **PR #43056**: (damon-atkins) safe_filename_leaf(file_basename) and safe_filepath(file_path_name) (refs: #43172) @ 2017-08-23 17:35:02 UTC
  - 44b3caeadd1 Merge pull request #43056 from damon-atkins/2017.7
  - 08ded1546e more lint
  - 6e9c0957fb fix typo
  - ee41171c9f lint fixes
  - 8c86f02c7 fix missing imports
  - 964cedb954 safe_filename_leaf(file_basename) and safe_filepath(file_path_name)

- **PR #43146**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-08-23 16:56:10 UTC
  - 6ca9131a23 Merge pull request #43146 from rallytime/merge-2017.7
  - bcb180fbc Merge branch '2016.11' into '2017.7'
    - ae9d2b7985 Merge pull request #42986 from renner/systemd-notify
      - 7c953f8f81 Fallback to systemd_notify_call() in case of socket.error
      - f1765472dd Notify systemd synchronously (via NOTIFY_SOCKET)
    - b420f8e618 Merge pull request #43037 from mcarlton00/fix-bhyve-grains
      - 73315f0cf0 Issue #43036 Bhyve virtual grain in Linux VMs
    - 0a86f2d884 Merge pull request #43100 from vutny/doc-add-missing-utils-ext
      - af743ff6c3 [DOCS] Add missing utils sub-dir listed for extension_modules

- **PR #43123**: (twangboy) Fix unit.utils.test_which for Windows @ 2017-08-23 16:01:39 UTC
  - 03f652159f Merge pull request #43123 from twangboy/win_fix_test_which
  - ed97ccf56f Fix unit.utils.test_which for Windows

- **ISSUE #42505**: (ikogan) selinux.fcontext_policy_present exception looking for selinux.filetype_id_to_string (refs: #43142)

- **PR #43142**: (rallytime) Back-port #43068 to 2017.7 @ 2017-08-23 15:56:48 UTC
  - PR #43068: (ixs) Mark selinux._filetype_id_to_string as public function (refs: #43142)
  - 5a4fc07863 Merge pull request #43142 from rallytime/bp-43068
  - efc18c506 Mark selinux._filetype_id_to_string as public function

- **PR #43038**: (twangboy) Fix unit.utils.test_url for Windows @ 2017-08-23 13:35:25 UTC
  - 0467a0e3bf Merge pull request #43038 from twangboy/win_unit_utils_test_url
  - 7f5ee555f7 Fix unit.utils.test_url for Windows

- **PR #43097**: (twangboy) Fix group.present for Windows @ 2017-08-23 13:19:56 UTC
  - e9ccaa61d2 Merge pull request #43097 from twangboy/win_fix_group
  - 43b0360763 Fix lint
  - 9ffe315d7d Add kwargs

30.2. Previous Releases
- 4f4e34c79f Fix group state for Windows

- **PR #43115**: (rallytime) Back-port #42067 to 2017.7 @ 2017-08-22 20:09:52 UTC
  - **PR #42067**: (vitaliyf) Removed several uses of name.split('\')[0] in SoftLayer driver. (refs: #43115)
  - 8140855627 Merge pull request #43115 from rallytime/bp-42067
  - 8a6ad0a9cf Fixed typo.
  - 9a5ae2bba1 Removed several uses of name.split('\')[0] in SoftLayer driver.

- **PR #42962**: (twangboy) Fix unit.test_doc test for Windows @ 2017-08-22 18:06:23 UTC
  - 1e1a81036c Merge pull request #42962 from twangboy/win_unit_test_doc
  - 201ceae4c4 Fix lint, remove debug statement
  - 37029c1a16 Fix unit.test_doc test

- **PR #42995**: (twangboy) Fix malformed requisite for Windows @ 2017-08-22 16:50:01 UTC
  - d347d1cf8f Merge pull request #42995 from twangboy/win_fix_invalid_requisite
  - 93390de88b Fix malformed requisite for Windows

- **PR #43108**: (rallytime) Back-port #42988 to 2017.7 @ 2017-08-22 16:49:27 UTC
  - **PR #42988**: (thusoy) Fix broken negation in iptables (refs: #43108)
  - 1c7992a832 Merge pull request #43108 from rallytime/bp-42988
  - 1a987c9b48 Fix broken negation in iptables

- **PR #43107**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-08-22 16:11:25 UTC
  - c6993faa84 Merge pull request #43107 from rallytime/merge-2017.7
  - 328dd6aa23 Merge branch '2016.11' into '2017.7'
  - e2bf2f448c Merge pull request #42985 from DSRCorporation/bugs/15171_recursion_limit
    - 651b1bab09 Properly handle prereq having lost requisites.
  - e5133306c Merge pull request #43092 from mitodl/2016.11
    - d4b113acdf Fixed issue with silently passing all tests in Testinfra module
  - 77a443ce8e Merge pull request #43060 from twangboy/osx_update_pkg_scripts
    - ef8a14c9f9 Remove /opt/salt instead of /opt/salt/bin
    - 2dd62aa1da Add more information to the description
    - f4f5b70dc Only stop services if they are running
    - 3b62bf953c Remove salt from the path
    - ebdc3a0f5 Update pkg-scripts
  - 1bb6da803 Merge pull request #43064 from terminalmage/issue42869
    - 093c0c2f77 Fix race condition in git.latest
  - 96e8e836d1 Merge pull request #43054 from lorengordon/fix/yumpkg/config-parser
    - 3b2cb81a72 fix typo in salt.modules.yumpkg
    - 38add0e4a2 break if leading comments are all fetched
    - d7f65dc7a7 fix configparser import & log if error was raised
• ca1b1bb633 use configparser to parse yum repo file

• PR #42996: (twangboy) Fix unit.test_stateconf for Windows @ 2017-08-21 22:43:58 UTC
  - f9b4976c02 Merge pull request #42996 from twangboy/win_fix_test_stateconf
  - 92dc30ece Use os.sep for path

• PR #43024: (twangboy) Fix unit.utils.test_find for Windows @ 2017-08-21 22:38:10 UTC
  - 19fc644c9b Merge pull request #43024 from twangboy/win_unit_utils_test_find
  - fbe54c9a33 Remove unused import six (lint)
  - b04d1a2f18 Fix unit.utils.test_find for Windows

• PR #43088: (gtmanfred) allow docker util to be reloaded with reload_modules @ 2017-08-21 22:14:37 UTC
  - 1a531169fc Merge pull request #43088 from gtmanfred/2017.7
  - 373a9a0be4 allow docker util to be reloaded with reload_modules

• PR #43091: (blarghmatey) Fixed issue with silently passing all tests in Testinfra module @ 2017-08-21 22:06:22 UTC
  - 83e528f0b3 Merge pull request #43091 from mitodl/2017.7
  - b502560e61 Fixed issue with silently passing all tests in Testinfra module

• PR #41994: (twangboy) Fix unit.modules.test_cmdmod on Windows @ 2017-08-21 21:53:01 UTC
  - 5482524270 Merge pull request #41994 from twangboy/win_unit_test_cmdmod
  - a5f7288ad9 Skip test that uses pwd, not available on Windows

• ISSUE #42873: (TheVakman) osquery Data Empty Upon Return / Reporting Not Installed (refs: #42933)

• PR #43093: (gtmanfred) Fix ec2 list_nodes_full to work on 2017.7 @ 2017-08-21 20:21:21 UTC
  - 53c2115769 Merge pull request #43093 from gtmanfred/ec2
  - c7c1f5a04 This block isn't necessary
  - b7283bcb6f_vm_provider_driver isn't needed anymore

• ISSUE #43085: (brejoc) Patch for Kubernetes module missing from 2017.7 and 2017.7.1 (refs: #43087)

• PR #43087: (rallytime) Back-port #42174 to 2017.7 @ 2017-08-21 18:40:18 UTC
  - PR #42174: (mcalmer) kubernetes: provide client certificate authentication (refs: #43087)
  - 32f9ade4db Merge pull request #43087 from rallytime/bp-42174
  - c6563645b add support for certificate authentication to kubernetes module

• PR #43029: (terminalmage) Normalize the salt caching API @ 2017-08-21 16:54:58 UTC
  - 882fcd846f Merge pull request #43029 from terminalmage/fix-func-alias

30.2. Previous Releases

2247
- f8f74a310c Update localfs cache tests to reflect changes to func naming
- c4ae79b229 Rename other refs to cache.ls with cache.list
- ee59d127e8 Normalize the salt caching API

- ISSUE #42843: (brejoc) Kubernetes module won’t work with Kubernetes Python client > 1.0.2 (refs: #42845)
- PR #43039: (gtmanfred) catch ImportError for kubernetes.client import @ 2017-08-21 14:32:38 UTC
  - PR #42845: (brejoc) API changes for Kubernetes version 2.0.0 (refs: #43039)
  - dbee735f6e Merge pull request #43039 from gtmanfred/kube
  - 7e269cb368 catch ImportError for kubernetes.client import

- PR #43058: (rallytime) Update release version number for jenkins.run function @ 2017-08-21 14:13:34 UTC
  - c56a849b83 Merge pull request #43058 from rallytime/fix-release-num
  - d7eef70d0f Update release version number for jenkins.run function

- PR #43051: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-08-18 17:05:57 UTC
  - 7b0c94768a Merge pull request #43051 from rallytime/merge-2017.7
  - 153a463b86 Lint: Add missing blank line
  - 84829a6f8c Merge branch '2016.11' into '2017.7'
  - 43aad46512 Merge pull request #43048 from rallytime/bp-43031
    - 35e45049e2 use a ruby gem that doesn't have dependencies
  - ad89ff3104 Merge pull request #43023 from terminalmage/fix-jenkins-xml-caching
    - 33fd08ff939 Update jenkins.py
    - fc306fc8c3 Add missing colon in if statement
    - 82eabcc81 Catch exceptions raised when making changes to jenkins
    - 91b583b493 Improve and correct exception raising
    - f096917a0e Raise an exception if we fail to cache the config xml
  - 2957467ed7 Merge pull request #43026 from rallytime/bp-43020
    - 0eb15a1f67 test with gem that appears to be abandoned
  - 4150b094fe Merge pull request #43033 from rallytime/bp-42760
    - 3e3f7f5d8e Catch TypeError thrown by m2crypto when parsing missing subjects in certificate files.
  - b124d3667e Merge pull request #43032 from rallytime/bp-42547
    - ea4d7f4176 Updated testinfra modules to work with more recent versions
  - a8836ad44 Merge pull request #43027 from pabloh007/fix-docker-save-push-2016-11
    - d0fd949f85 Fixes ignore push flag for docker.push module issue #42992
  - 51d16840bb Merge pull request #42890 from DSRCorporation/bugs/42627_salt-cp
    - cfddbf1c75 Apply code review: update the doc
    - afedd3b654 Typos and version fixes in the doc.
    - 9fedf6012e Fixed 'test_valid_docs' test.
    - 999388680c Make chunked mode in salt-cp optional (disabled by default).
- b3c253cd6 Merge pull request #43009 from rallytime/merge-2016.11
  * 566ba4fe76 Merge branch '2016.3' into '2016.11'
    - 13b8637d53 Merge pull request #42942 from Ch3LL/2016.3.6_follow_up
    - f281e1795f move additional minion config options to 2016.3.8 release notes
    - 166e04ba6b remove merge conflict
    - 8a0795212 update release notes with cve number
    - 364633fdca Add release notes for 2016.3.7 release
    - 7a4cddcd95 Add clean_id function to salt.utils.verify.py
    - bbb1b29ecb Merge pull request #42954 from Ch3LL/latest_2016.3
    - b551e66744 [2016.3] Bump latest and previous versions
    - 565d54b7 Merge pull request #42949 from Ch3LL/2016.3.7_docs
    - 756128a896 Merge branch '2017.7.1' into '2017.7'
    - 4089b7b1bc Use socket.AF_INET6 to get the correct value instead of doing an OS check
    - 8f6423247c Merge pull request #43019 from rallytime/bootstrap_2017.08.17
      * 2f762b3a17 Update bootstrap script to latest stable: v2017.08.17
      - ff1caee68 Merge pull request #43014 from Ch3LL/fix_network_mac
        * b8e9e401e Change AF_INET6 family for mac in test_host_to_ips
      - d3e3af76 Merge pull request #43021 from terminalmage/fix-network-test
        * 0d6423247c Merge pull request #43019 from rallytime/bootstrap_2017.08.17
          * 4089b7b1bc Use socket.AF_INET6 to get the correct value instead of doing an OS check
          - 8f6423247c Merge pull request #43019 from rallytime/bootstrap_2017.08.17
            * 2f762b3a17 Update bootstrap script to latest stable: v2017.08.17
            - ff1caee68 Merge pull request #43014 from Ch3LL/fix_network_mac
              * b8e9e401e Change AF_INET6 family for mac in test_host_to_ips
    - PR #43035: (rallytime) [2017.7] Merge forward from 2017.7.1 to 2017.7 @ 2017-08-18 12:58:17 UTC
      - PR #42948: (Ch3LL) [2017.7.1] Add clean_id function to salt.utils.verify.py (refs: #43035)
      - PR #42945: (Ch3LL) [2017.7] Add clean_id function to salt.utils.verify.py (refs: #43035)
      - d15bca9f37 Merge pull request #43035 from rallytime/merge-2017.7
      - 756128a896 Merge branch '2017.7.1' into '2017.7'
        * ab1b099730 Merge pull request #42948 from Ch3LL/2017.7.0_follow_up
      - ISSUE #42989: (blbradley) GitFS GitPython performance regression in 2017.7.1 (refs: #43002)
      - PR #43034: (rallytime) Back-port #43002 to 2017.7 @ 2017-08-17 23:18:16 UTC
        - PR #43042: (the-glu) Try to fix #42989 (refs: #43034)
        - bcbb973a71 Merge pull request #43034 from rallytime/bp-43002
        - 350c0767dc Try to fix #42989 by doing sslVerify and refsspecs for origin remote only if there is no remotes
      - ISSUE #42375: (dragonpaw) salt.modules."__virtualname__" doesn't work as documented. (refs: #42523, #42958)
      - PR #42958: (gtmanfred) runit module should also be loaded as runit @ 2017-08-17 22:30:23 UTC
        - 9182f55bb Merge pull request #42958 from gtmanfred/2017.7
        - 4d07466b8b runit module should also be loaded as runit
      - PR #43031: (gtmanfred) use a ruby gem that doesn't have dependencies (refs: #43048) @ 2017-08-17 22:26:25 UTC
        - 5985cc4e8e Merge pull request #43031 from gtmanfred/test_gem
- ba80a7d4b5 use a ruby gem that doesn’t have dependencies

- **PR #43030**: (rallytime) Small cleanup to dockermod.save @ 2017-08-17 22:26:00 UTC
  - 246176b1a6 Merge pull request #43030 from rallytime/dockermod-minor-change
  - d6a5e85632 Small cleanup to dockermod.save

- **ISSUE #42992**: (pablo007) docker.save flag push does is ignored (refs: #42993, #43027)

- **PR #42993**: (pablo007) Fixes ignored push flag for docker.push module issue #42992 @ 2017-08-17 18:50:37 UTC
  - 160001120b Merge pull request #42993 from pablo007/fixed-docker-save-push
  - fe7554cfeb Fixes ignored push flag for docker.push module issue #42992

- **ISSUE #42941**: (danlsiga) pkg.installed fails on installing from HTTPS rpm source (refs: #42967)

- **PR #42967**: (terminalmage) Fix bug in on_header callback when no Content-Type is found in headers @ 2017-08-17 18:48:52 UTC
  - 9009a971b1 Merge pull request #42967 from terminalmage/issue42941
  - b838460816 Fix bug in on_header callback when no Content-Type is found in headers

- **ISSUE #43008**: (evelineraine) states.service.running always succeeds when watched state has changes (refs: #43016)

- **PR #43016**: (gtmanfred) service should return false on exception @ 2017-08-17 18:08:05 UTC
  - 58f070d7a7 Merge pull request #43016 from gtmanfred/service
  - 21c26f5e55 service should return false on exception

- **PR #43020**: (gtmanfred) test with gem that appears to be abandoned (refs: #43026) @ 2017-08-17 16:40:41 UTC
  - 973d288eca Merge pull request #43020 from gtmanfred/test_gem
  - 0a1f40a664 test with gem that appears to be abandoned

- **PR #42999**: (garethgreenaway) Fixes to slack engine @ 2017-08-17 15:46:24 UTC
  - 9cd0607fd4 Merge pull request #42999 from garethgreenaway/slack_engine_allow_editing_messages
  - 0ece2a8f0c Fixing a bug that prevented editing Slack messages and having the commands resent to the Slack engine.

- **PR #43010**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-08-17 15:10:29 UTC
  - 31627a9163 Merge pull request #43010 from rallytime/merge-2017.7
  - 8a0f948e4a Merge branch ‘2016.11′ into ‘2017.7’
  - 1ee9499d28 Merge pull request #42968 from vutny/doc-salt-cloud-ref
    * 44ed53b1df [DOCS] Fix link to Salt Cloud Feature Matrix
  - 923f9741fe Merge pull request #42291 from vutny/fixed-38839
    * 5f8f98a0f1 Fix #38839: remove state from Reactor runner kwags
  - c20bc7d515 Merge pull request #42940 from gtmanfred/2016.11
    * 253e216a8d fix IP address spelling
    * bd63074e7a create new ip address before checking list of allocated ips
  - d6496eca72 Merge pull request #42959 from rallytime/bp-42883
Salt Documentation, Release 3002.5

- c6b9ca4b9e Lint fix: add missing space
- 5597b1a30e Skip 2 failing tests in Python 3 due to upstream bugs
- a0b19bdc27 Update account id value in boto_secgroup module unit test
- 60b40ee088 @mock_elb needs to be changed to @mock_elb_deprecated as well
- 6ae1111295 Replace @mock_ec2 calls with @mock_ec2_deprecated calls
  - 6366e05d0d Merge pull request #42944 from Ch3LL/2016.11.6_follow_up
  - 7e0a20afca Add release notes for 2016.11.7 release
  - 63823f8c3e Add clean_id function to salt.utils.verify.py
  - 49d339c976 Merge pull request #42952 from Ch3LL/latest_2016.11
  - 74e706554 [2016.11] Bump latest and previous versions
  - b0d2e05a79 Merge pull request #42950 from Ch3LL/2016.11.7_docs
  - a6f902db40 Add Security Notice to 2016.11.77 Release Notes
  - c0ff2988c Merge pull request #42836 from lyft/backport-utils.versions-to-2016.11
  - 6366e05d0d Merge pull request #42836 from lyft/backport-utils.versions-to-2016.11
  - 74e706554 [2016.11] Bump latest and previous versions
  - 63823f8c3e Add clean_id function to salt.utils.verify.py
- 1cc86592ed Update return data before calling returners
- ISSUES #42842: (Giandom) retrieve kwargs passed with slack engine (refs: #42884)
- PR #42884: (Giandom) Convert to dict type the pillar string value passed from slack @ 2017-08-16 22:38:43 UTC
  - 82be93dcb6 Merge pull request #42884 from Giandom/2017.7.1-fix-slack-engine-pillar-args
  - 80fd733c99 Update slack.py
- PR #42963: (twangboy) Fix unit.test_fileclient for Windows @ 2017-08-16 14:18:18 UTC
  - 42bd553b98 Merge pull request #42963 from twangboy/win_unit_test_fileclient
  - e9febe4893 Fix unit.test_fileclient
- PR #42964: (twangboy) Fix salt.utils.recursive_copy for Windows @ 2017-08-16 14:17:27 UTC
  - 7ddf5ed8d Merge pull request #42964 from twangboy/win_fix_recursive_copy
  - 121cd4ef81 Fix salt.utils.recursive_copy for Windows
- ISSUE #42943: (mirceaulinic) extension_modules defaulting to /var/cache/minion although running under proxy minion (refs: #42946)
- PR #42946: (mirceaulinic) extension_modules should default to $CACHE_DIR/proxy/extmods @ 2017-08-15 21:26:36 UTC
- 6da4d1d95e Merge pull request #42946 from cloudflare/px_extmods_42943
- 73f9135340 extension_modules should default to /proxy/extmods

**PR #42945: (Ch3LL) [2017.7] Add clean_id function to salt.utils.verify.py (refs: #43035) @ 2017-08-15 18:04:20 UTC**
- 95645d49f9 Merge pull request #42945 from Ch3LL/2017.7.0_follow_up
- dcd92042e3 remove extra doc
- 693a504ef0 update release notes with cve number

**ISSUE #42427: (grichmond-salt) Issue Passing Variables created from load_json as Inline Pillar Between States (refs: #42435)**

**PR #42812: (terminalmage) Update custom YAML loader tests to properly test unicode literals @ 2017-08-15 17:50:22 UTC**
- PR #42435: (terminalmage) Modify our custom YAML loader to treat unicode literals as unicode strings (refs: #42812)
- 47ff9d5627 Merge pull request #42812 from terminalmage/yaml-loader-tests
- 9d8486a894 Add test for custom YAML loader with unicode literal strings
- a0118becce Remove bytestrings and use textwrap.dedent for readability

**PR #42953: (Ch3LL) [2017.7] Bump latest and previous versions @ 2017-08-15 17:23:28 UTC**
- 5d0c2198ac Merge pull request #42953 from Ch3LL/latest_2017.7
- cbecf65823 [2017.7] Bump latest and previous versions

**PR #42951: (Ch3LL) Add Security Notice to 2017.7.1 Release Notes @ 2017-08-15 16:49:56 UTC**
- 730e71db17 Merge pull request #42951 from Ch3LL/2017.7.1_docs
- 1d8f827c58 Add Security Notice to 2017.7.1 Release Notes

**PR #42868: (carsonoid) Stub out required functions in redis_cache @ 2017-08-15 14:33:54 UTC**
- c1e8cb9bfa Merge pull request #42868 from carsonoid/redisjobcachefix
- 885bee2a7d Stub out required functions for redis cache

**PR #42810: (amendlik) Ignore error values when listing Windows SNMP community strings @ 2017-08-15 03:55:15 UTC**
- e192d6e0af Merge pull request #42810 from amendlik/win-snmp-community
- dc20e651b Ignore error values when listing Windows SNMP community strings

**PR #42920: (cachedout) pid_race @ 2017-08-15 03:49:10 UTC**
- a1817f1de3 Merge pull request #42920 from cachedout/pid_race
- 5e930b8cbf If we catch the pid file in a transistory state, return None

**PR #42925: (terminalmage) Add debug logging to troubleshoot test failures @ 2017-08-15 03:47:51 UTC**
- 11a33fe692 Merge pull request #42925 from terminalmage/f26-debug-logging
- 8165f46165 Add debug logging to troubleshoot test failures

**PR #42913: (twangboy) Change service shutdown timeouts for salt-minion service (Windows) @ 2017-08-14 20:55:24 UTC**
- a537197030 Merge pull request #42913 from twangboy/win_change_timeout
- ffb23fbc47 Remove the line that wipes out the cache
- a3becf8342 Change service shutdown timeouts

- **PR #42800**: (skizunov) Fix exception when master_type=disable @ 2017-08-14 20:53:38 UTC
  - ca055f5616 Merge pull request #42800 from skizunov/develop6
  - fa5822009f Fix exception when master_type=disable

- **PR #42679**: (mirceaaulnic) Add multiprocessing option for NAPALM proxy @ 2017-08-14 20:45:06 UTC
  - 3af264b664 Merge pull request #42679 from cloudflare/napalm-multiprocessing
  - 9c4566db0c multiprocessing option tagged for 2017.7.2
  - 37bca1b902 Add multiprocessing option for NAPALM proxy
  - a2565ba8e5 Add new napalm option: multiprocessing

- **ISSUE #42611**: (nhavens) selinux.boolean state does not return changes (refs: #42612)

- **PR #42657**: (nhavens) back-port #42612 to 2017.7 @ 2017-08-14 19:42:26 UTC
  - PR #42612: (nhavens) fix for issue #42611 (refs: #42657)
  - 4fcdab3ae9 Merge pull request #42657 from nhavens/2017.7
  - d73cb55b7 back-port #42612 to 2017.7

- **PR #42709**: (whiteinge) Add token_expire_user_override link to auth runner docstring @ 2017-08-14 19:03:06 UTC
  - d2b6ce327a Merge pull request #42709 from whiteinge/doc-token_expire_user_override
  - c7ea631558 Add more docs on the token_expire param
  - 4a96ba44f Add token_expire_user_override link to auth runner docstring

- **ISSUE #42803**: (gmcwhistler) master_type: str, not working as expected, parent salt-minion process dies. (refs: #42848)

- **ISSUE #42753**: (grichmond-salt) SaltReqTimeout Error on Some Minions when One Master in a Multi-Master Configuration is Unavailable (refs: #42848)

- **PR #42848**: (DmitryKuzmenko) Execute fire_master asynchronously in the main minion thread. (refs: #42918) @ 2017-08-14 18:28:38 UTC
  - c6a7bf02e9 Merge pull request #42848 from DSRCorporation/bugs/42753_mmaster_timeout
  - 7f5412c19e Make lint happier.
  - ff66b7aa0f Execute fire_master asynchronously in the main minion thread.

- **PR #42911**: (gtmanfred) cloud driver isn’t a provider @ 2017-08-14 17:47:16 UTC
  - 6a3279ea50 Merge pull request #42911 from gtmanfred/2017.7
  - 99046b441f cloud driver isn’t a provider

- **PR #42860**: (skizunov) hash_and_stat_file should return a 2-tuple @ 2017-08-14 15:44:54 UTC
  - 4456f7383d Merge pull request #42860 from skizunov/develop7
  - 5f85a03636 hash_and_stat_file should return a 2-tuple

- **PR #42889**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-08-14 14:16:20 UTC
  - c6ca7d639f Merge pull request #42889 from rallytime/merge-2017.7
- fb7117f2ac Use salt.utils.versions.LooseVersion instead of distutils
- 29ff19ce587 Merge branch ‘2016.11’ into ‘2017.7’
  - c15d0034fe Merge pull request #41977 from redmatter/fix-dockerng-network-ignores-test
    - 1cc2a503a Fix dockerng.network_* ignoring of tests=True
  - 3b9e3c5671 Merge pull request #42886 from sarcasticadmin/adding_docs_salt_outputs
    - 744bf954ff Adding missing output flags to salt cli
  - e5b98c8a88 Merge pull request #42882 from gtmanfred/2016.11
    - da3402a53d make sure cmd is not run when npm isn’t installed
  - 5962c9588b Merge pull request #42788 from amendlik/saltify-timeout
    - 928b523797 Remove waits and retries from Saltify deployment
  - 227ecddd13 Merge pull request #42777 from terminalmage/add-cron-state-virtual
    - f1de196740 Add virtual func for cron state module
  - ab9f6cef33 Merge pull request #42859 from terminalmage/gitpython-git-cli-note
    - 35e05e9515 Add note about git CLI requirement for GitPython to GitFS tutorial
  - 682b4a8d14 Merge pull request #42856 from gtmanfred/2016.11
    - b458b9f88 skip cache_clean test if npm version is >= 5.0.0
  - 01e854029 Merge pull request #42849 from whiteinge/syndic-log-root_dir
    - 4b4f655da9c Make syndic_log_file respect root_dir setting

- **PR #42898**: (mirceaulinic) Minor eos doc correction @ 2017-08-14 13:42:21 UTC
  - 4b6fe2ee59 Merge pull request #42898 from mirceaulinic/patch-11
  - 93be79a135 Index eos under the installation instructions list
  - f903e7bc39 Minor eos doc correction

- **PR #42883**: (rallytime) Fix failing boto tests (refs: #42959) @ 2017-08-11 20:29:12 UTC
  - 1764878754 Merge pull request #42883 from rallytime/fix-boto-tests
  - 6a7f99848 Lint fix: add missing space
  - 43643227c6 Skip 2 failing tests in Python 3 due to upstream bugs
  - 7f46603e9c Update account id value in boto_secgrou module unit test
  - 7c1d493fdd @mock_elb needs to be changed to @mock_elb_deprecated as well
  - 3055e17d5 Replace @mock_ec2 calls with @mock_ec2_deprecated calls

- **PR #42885**: (terminalmage) Move weird tearDown test to an actual tearDown @ 2017-08-11 19:14:42 UTC
  - b21778efac Merge pull request #42885 from terminalmage/fix-f26-tests
  - 462d653082 Move weird tearDown test to an actual tearDown

- **ISSUE #42870**: (boltronics) webutil.useradd marked as deprecated:: 2016.3.0 by mistake? (refs: #42887)

- **PR #42887**: (rallytime) Remove extraneous "deprecated" notation @ 2017-08-11 18:34:25 UTC
  - 9868a6f3b Merge pull request #42887 from rallytime/fix-42870
  - 71e7581a2d Remove extraneous "deprecated" notation
• PR #42881: (gtmanfred) fix vmware for python 3.4.2 in salt.utils.vmware @ 2017-08-11 17:52:29 UTC
  - da71f2a11b Merge pull request #42881 from gtmanfred/vmware
  - 05ec66ac8d fix vmware for python 3.4.2 in salt.utils.vmware

• ISSUE #42843: (brejoc) Kubernetes module won’t work with Kubernetes Python client > 1.0.2 (refs: #42845)

• PR #42845: (brejoc) API changes for Kubernetes version 2.0.0 (refs: #43039) @ 2017-08-11 14:04:30 UTC
  - c7750d5717 Merge pull request #42845 from brejoc/updates-for-kubernetes-2.0.0
  - 81674a88aa Version info in :optdepends: not needed anymore
  - 71995505bc Not depending on specific K8s version anymore
  - d8f7d7a7c0 API changes for Kubernetes version 2.0.0

• PR #42678: (frankiexyz) Add eos.rst in the installation guide @ 2017-08-11 13:58:37 UTC
  - 459fdedc67 Merge pull request #42678 from frankiexyz/2017.7
  - 1598571f52 Add eos.rst in the installation guide

• ISSUE #42646: (gmacon) SPM fails to install multiple packages (refs: #42778)

• PR #42778: (gtmanfred) make sure to use the correct out_file @ 2017-08-11 13:44:48 UTC
  - 4ce96eb1a1 Merge pull request #42778 from gtmanfred/spm
  - 7ef691e8da make sure to use the correct out_file

• ISSUE saltstack/salt-jenkins#480: (rallytime) [2017.7] PY3 Debian 8 has several vmware unit tests failing (refs: #42857)

• PR #42857: (gtmanfred) use older name if _create_unverified_context is unavailable @ 2017-08-11 13:37:59 UTC
  - 3d05d89e09 Merge pull request #42857 from gtmanfred/vmware
  - c1f673eca4 use older name if _create_unverified_context is unavailable

• PR #42866: (twangboy) Change to GitPython version 2.1.1 @ 2017-08-11 13:23:52 UTC
  - 7e8cfff21c Merge pull request #42866 from twangboy/osx_downgrade_gitpython
  - 28053a84a6 Change GitPython version to 2.1.1

• PR #42855: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-08-10 21:40:39 UTC
  - 3ce18637be Merge pull request #42855 from rallytime/merge-2017.7
  - 08bbcf5790 Merge branch '2016.11' into '2017.7'
  - 2dde1f77e9 Merge pull request #42851 from terminalmage/bp-42651
    * a3da86eee8 fix syntax
    * 6ecdbcec1d make sure names are correct
    * f83b553d6e add py3 for versionlock
    * 21934f61bb python2- prefix for fedora 26 packages
  - c746f79a3a Merge pull request #42806 from rallytime/fx-42683
    * 8c8640d788 Update doc references in glusterfs.volume_present
  - 27a8a2d95a Merge pull request #42829 from twangboy/win_pakc_fix_install
    * 83b9b320cd Add winrepo to docs about supporting versions in pkgs

30.2. Previous Releases
• 81fefa6e67 Add ability to pass version in pkgs list
• 3c3ace6ab2 Merge pull request #42838 from twangboy/win_doc_pki
  • f0a1d06b46 Standardize PKI Client
  • 7de687a57 Document requirements for win_pki
• b3e2a0c5e8 Merge pull request #42805 from rallytime/bp-42552
  • 5a91c1f2d1 update consul module following this documentation https://www.consul.io/api/acl/acl.html
• d2ee7934ed Merge pull request #42804 from rallytime/bp-42784
  • ddbd29e4aa only read file if it is not a string
• 4cbf80b7b3 Merge pull request #42826 from terminalmage/fixed-spelling
  • 00f93142e4 Fix misspelling of "versions"
• de97edd90 Merge pull request #42786 from Ch3LL/fixed typo
  • 90a2b66a2 Fix typo for template_dict in http docs
• bf6153eb5 Merge pull request #42795 from lomeroe/bp-4244_201611
  • 6595f8c1ae4 fix #42600 in develop
• 61fad97286 Merge pull request #42748 from whiteinge/save-before-output
  • de60b77e82 Workaround Orchestrate problem that highstate outputter mutates data
• a43e377e86 Merge pull request #42764 from amendil/how-cloud-win-loop
  • f3d9c4a40 Fix infinite loops on failed Windows deployments
• da85326ad4 Merge pull request #42694 from gtmanfred/patch-1
  • 1a0457af51 allow adding extra remotes to a repository

• ISSUE #42774: (rossengeorgiev) pkg.installed succeeds, but fails when you specify package version (refs: #42808)
• PR #42808: (terminalmage) Fix regression in yum/dnf version specification @ 2017-08-10 15:59:22 UTC
  • f954f4f33a Merge pull request #42808 from terminalmage/issue42774
  • c69f17dd18 Add integration test for #42774
  • 78d826dd14 Fix regression in yum/dnf version specification
• ISSUE #42639: (amnonbc) k8s module needs a way to manage configmaps (refs: #42807)
• PR #42807: (rallytime) Update modules --> states in kubernetes doc module @ 2017-08-10 14:10:40 UTC
  • d9b0f44885 Merge pull request #42807 from rallytime/fix-42639
  • 152eb88d8f Update modules --> states in kubernetes doc module
• ISSUE #42818: (Mapel88) Bug in win_iis module - "create_cert_binding" (refs: #42841)
• PR #42841: (Mapel88) Fix bug #42818 in win_iis module @ 2017-08-10 13:44:21 UTC
  • b8c7bda68d Merge pull request #42841 from Mapel88/patch-1
  • 497241f8bcb Fix bug #42818 in win_iis module
• ISSUE #42697: (Ch3LL) [Python3] NameError when running salt-run manage.versions (refs: #42782)
• PR #42782: (rallytime) Add a cmp compatibility function utility @ 2017-08-09 22:37:29 UTC
- 135f9522d0 Merge pull request #42782 from rallytime/fix-42697
- d70f94863 Update all other calls to "cmp" function
- 5605104285 Add a cmp compatibility function utility

- **PR #42784**: (gtmanfred) only read file if ret is not a string in http.query (refs: #42804) @ 2017-08-08 17:20:13 UTC
  - ac75222ad Merge pull request #42784 from gtmanfred/http
  - d397c90e92 only read file if it is not a string

- **ISSUE #42600**: (twangboy) Unable to set 'Not Configured' using win_lgpo execution module (refs: #42744, #42794, #42795)

- **PR #42794**: (lomeroe) Backport #42744 to 2017.7 @ 2017-08-08 17:16:31 UTC
  - PR #42744: (lomeroe) fix #42600 in develop (refs: #42794, #42795)
  - 44995b1abf Merge pull request #42794 from lomeroe/bp-42744
  - 0acff6d5f Merge pull request #42600 in develop

- **ISSUE #42707**: (cro) Service module and state fails on FreeBSD (refs: #42708)

- **PR #42708**: (cro) Do not change the arguments of the function when memoizing @ 2017-08-08 13:47:01 UTC
  - dcf474c47c Merge pull request #42708 from cro/dont_change_args_during_memoize
  - a260e913b5 Do not change the arguments of the function when memoizing

- **PR #42783**: (rallytime) Sort lists before comparing them in python 3 unit test @ 2017-08-08 13:25:15 UTC
  - PR #42206: (rallytime) [PY3] Fix test that is flaky in Python 3 (refs: #42783)
  - ddb61b8fe Merge pull request #42783 from rallytime/fix-flaky-py3-test
  - 998834f88 Sort lists before comparing them in python 3 unit test

- **PR #42721**: (hibbert) Allow no ip sg @ 2017-08-07 22:07:18 UTC
  - d698f6c2e93 Merge pull request #42721 from hibbert/allow_no_ip_sg
  - f58256b02a allow_no_ip_sg: Allow user to not supply ipaddress or securitygroups when running boto_efs.create_mount_target

- **ISSUE #42538**: (marnovdm) docker_container.running issue since 2017.7.0: passing domainname gives Error 500: json: cannot unmarshal array into Go value of type string (refs: #42769)

- **PR #42769**: (terminalmage) Fix domainname parameter input translation @ 2017-08-07 20:46:07 UTC
  - b7f938f8e0 Merge pull request #42769 from terminalmage/issue42538
  - 6650c2d49 Fix domainname parameter input translation

- **PR #42388**: (The-Loeki) pillar.items pillar_env & pillar_override are never used @ 2017-08-07 17:51:48 UTC
  - 7f2c2b363 Merge pull request #42388 from The-Loeki/patch-1
  - 664fb577b pillar.items pillar_env & pillar_override are never used

- **PR #42770**: (rallytime) [2017.7] Merge forward from 2017.7.1 to 2017.7 @ 2017-08-07 16:21:45 UTC
  - 9a8c9ebfbc Merge pull request #42770 from rallytime/merge-2017.7.1-into-2017.7
  - 6d17c9d227 Merge branch '2017.7.1' into '2017.7'

- **PR #42768**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-08-07 16:21:17 UTC

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### 30.2. Previous Releases

2257
- c765e528d0 Merge pull request #42768 from rallytime/merge-2017.7
- 0f75482c37 Merge branch ‘2016.11’ into ‘2017.7’
  * 7b2119f0ee Merge pull request #42669 from garethgreenaway/42642_2016_11_augeas_module_fix
    - 24413084e2 Updating the call to shlex_split to pass the posix=False argument so that quotes are preserved.
  * 30725769ed Merge pull request #42629 from xiaoanyunfei/tornadoapi
    - 1e13383b95 tornado api
  * f0f00fcee Merge pull request #42655 from whiteinge/rest_cherrypy-reenable-stats
    - 6bd91c8b03 Reenable cpstats for rest_cherrypy
  * 21cf159c3 Merge pull request #42693 from gilbsgilbs/fix-rabbitmq-tags
    - 78fecd7e2 Cast to list in case tags is a tuple.
    - 287b57b5c5 Fix RabbitMQ tags not properly set.
  * f2b0c94fa Merge pull request #42574 from sbojarski/boto-cfn-error-reporting
    - 5c945f10c2 Fix debug message in "boto_cfn._validate" function.
    - 181a1beec6c Fixed error reporting in "boto_cfn.present" function.
  * bc1efc4f2 Merge pull request #42623 from terminalmage/fix-unicode-constructor
    - fcf458f89dd Fix unicode constructor in custom YAML loader
- PR #42651: (gtmanfred) python2- prefix for fedora 26 packages (refs: #42851) @ 2017-08-07 14:35:04 UTC
  - 3f5827f61e Merge pull request #42651 from gtmanfred/2017.7
  - 8784899942 fix syntax
  - 178cc1bd81 make sure names are correct
  - 1f1b997b52 add py3 for versionlock
  - 1958d18634 python2- prefix for fedora 26 packages
- ISSUE #42688: (hibbert) salt.modules.boto_efs module Invalid type for parameter Tags - type: <type 'dict'>, valid types: <type 'list'>, <type 'tuple'> (refs: #42689)
- PR #42689: (hibbert) boto_efs_fix_tags: Fix #42688 invalid type for parameter tags @ 2017-08-06 17:47:07 UTC
  - 791248e398 Merge pull request #42689 from hibbert/boto_efs_fix_tags
  - 157f29851 boto_efs_fix_tags: Fix #42688 invalid type for parameter tags
- ISSUE #42705: (hbruch) salt.states.docker_container.running replaces container on subsequent runs if oom_kill_disable unsupported (refs: #42745)
- PR #42745: (terminalmage) docker.compare_container: treat null oom_kill_disable as False @ 2017-08-05 15:28:20 UTC
  - 1b3407649Merge pull request #42745 from terminalmage/issue42705
  - 710bd6115 docker.compare_container: treat null oom_kill_disable as False
- ISSUE #42649: (tehsu) local_batch no longer working in 2017.7.0, 500 error (refs: #42704)
- PR #42704: (whiteinge) Add import to work around likely multiprocessing scoping bug @ 2017-08-04 23:03:13 UTC
Salt Documentation, Release 3002.5

- 5d5b22021b Merge pull request #42704 from whiteinge/expr_form-warn-scope-bug
- 03b675a618 Add import to work around likely multiprocessing scoping bug
- ISSUE #42741: (kkoppel) docker_container.running keeps re-creating containers with links to other containers (refs: #42743)
- PR #42743: (kkoppel) Fix docker.compare_container for containers with links @ 2017-08-04 16:00:33 UTC
- 888e954e73 Merge pull request #42743 from kkoppel/fix-issue-42741
- de6d3cc0cf Update dockermodule.py
- 58b997c67f Added a helper function that removes container names from container HostConfig:Links values to enable compare_container() to make the correct decision about differences in links.
- ISSUE #42668: (UtahDave) Minions under syndics don't respond to MoM (refs: #42710)
- ISSUE #42545: (paul-mulvihill) Salt-api failing to return results for minions connected via syndics. (refs: #42710)
- PR #42710: (gtmanfred) use subtraction instead of or @ 2017-08-04 15:14:14 UTC
- 03af9bbee Merge pull request #42710 from gtmanfred/syndic
- 683561a711 use subtraction instead of or
- PR #42670: (gtmanfred) render kubernetes docs @ 2017-08-03 20:30:56 UTC
- 005182b6a1 Merge pull request #42670 from gtmanfred/kube
- bca17902f5 add version added info
- 4b6c751ae render kubernetes docs
- PR #42712: (twangboy) Remove master config file from minion-only installer @ 2017-08-03 20:25:02 UTC
- df354ddabf Merge pull request #42712 from twangboy/win_build_pkg
- 8604312a7b Remove master conf in minion install
- PR #42714: (cachedout) Set fact gathering style to 'old' for test_junos @ 2017-08-03 13:39:40 UTC
- bb1df4a42 Merge pull request #42714 from cachedout/workaround_jnpr_test_bug
- 834d6c605e Set fact gathering style to 'old' for test_junos
- PR #42481: (twangboy) Fix unit.test_crypt for Windows @ 2017-08-01 18:10:50 UTC
- 4c1d931654 Merge pull request #42481 from twangboy/win_unit_test_crypt
- 102509029e Remove chown mock, fix path seps
- PR #42654: (morganwillcock) Disable ZFS in the core grain for NetBSD @ 2017-08-01 17:52:36 UTC
- 8bceb5e67 Merge pull request #42654 from morganwillcock/zfsgrain
- 49023deb94 Disable ZFS grain on NetBSD
- ISSUE #42421: (bfilipek) archive.extracted on Windows failed when dir not exist (refs: #42453)
- PR #42453: (gtmanfred) don't pass user to makedirs on windows @ 2017-07-31 19:57:57 UTC
- 5baf2650fc Merge pull request #42453 from gtmanfred/makedirs
- 559d432930 fix tests
- af6a7a13ce5 use logic from file.directory for makedirs
- PR #42603: (twangboy) Add runas_pwd as a global for states @ 2017-07-31 19:49:49 UTC

30.2. Previous Releases 2259
- fb81e78f71 Merge pull request #42603 from twangboy/win_fix_runsas
- 0c9e40012b Remove deprecation, add logic to state.py
- 464ec34713 Fix another instance of runas_passwd
- 18d6ce4d55 Add global vars to cmd.call
- 6c71ab6f80 Remove runas and runas_password after state run
- 4ea264e3db Change to runas_password in docs
- 61aba35718 Deprecate password, make runas_password a named arg
- 41f0f75a06 Add new var to list, change to runas_password
- b9c91eba60 Add runas_passwd as a global for states

- **PR #42541:** (Mareo) Avoid confusing warning when using file.line @ 2017-07-31 19:41:58 UTC
  - 75ba23c253 Merge pull request #42541 from epita/fix-file-line-warning
  - 2fd172e07b Avoid confusing warning when using file.line

- **PR #42625:** (twangboy) Fix the list function in the win_wua execution module @ 2017-07-31 19:27:16 UTC
  - 3d328eba80 Merge pull request #42625 from twangboy/fix_win_wua
  - 1340c15ce7 Add general usage instructions
  - 19f34bda55 Fix docs, formatting
  - b17495ec9c8 Fix problem with list when install=True

- **ISSUE #42514:** (rickh563) module.run does not work as expected in 2017.7.0 (refs: #42602)

- **PR #42602:** (garethgreenaway) Use superseded and deprecated configuration from pillar @ 2017-07-31 18:53:06 UTC
  - 25094ad9b1 Merge pull request #42602 from garethgreenaway/42514_2017_7_superseded_deprecated_from_pillar
  - 2e132daa73 Slight update to formatting
  - 74bae13939 Small update to something I missed in the first commit. Updating tests to also test for pillar values.
  - 928a4808dd Updating the superseded and deprecated decorators to work when specified as pillar values.

- **PR #42621:** (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-07-28 19:45:51 UTC
  - b7cd30d3ee Merge pull request #42621 from rallytime/merge-2017.7
  - 58dcb58a47 Merge branch '2016.11' into '2017.7'
    - cbf752cd73 Merge pull request #42515 from gtmanfred/backslash
      - cc4e45656d Allow not interpreting backslashes in the repl
    - 549495831f Merge pull request #42586 from gdubroecuq/2016.11
      - 9e0b5cc1d6 Remove extra newline
      - d2ef4483e4 yumpkg.py: clean
      - a967c09e0 yumpkg.py: add option to the command "check-update"
    - 6b45deb2f8 Merge pull request #41988 from redmatter/fix-dockerng-network-matching
      - 9eea796da8 Add regression tests for #41982
      - 3369f0072f Fix broken unit test test_network_absent
- 0ef6c634c Add trace logging of dockerngenetworks result
- 515c612808 Fix dockerng.network_* name matching

- **ISSUE #34245**: (Talkless) ini.options_present always report state change (refs: #41690)
- **PR #42618**: (rallytime) Back-port #41690 to 2017.7 @ 2017-07-28 19:27:11 UTC
  - **PR #41690**: (m03) Fix issue #34245 with ini.options_present reporting changes (refs: #42618)
  - d48749b476 Merge pull request #42618 from rallytime/bp-41690
  - 22c6a7c7ff Improve output precision
  - ee4ea6b860 Fix #34245 ini.options_present reporting changes

- **ISSUE #42588**: (ixs) salt-ssh fails when using scan roster and detected minions are uncached (refs: #42589)
- **PR #42619**: (rallytime) Back-port #42589 to 2017.7 @ 2017-07-28 19:26:36 UTC
  - **PR #42589**: (ixs) Fix ssh-salt calls with scan roster for uncached clients (refs: #42619)
  - e671242a4f Merge pull request #42619 from rallytime/bp-42589
  - cd5eb93903 Fix ssh-salt calls with scan roster for uncached clients

- **ISSUE #41982**: (abulford) dockerng.network_* matches too easily (refs: #42006, #41988)
- **PR #42006**: (abulford) Fix dockerng.network_* name matching @ 2017-07-28 15:52:52 UTC
  - **PR #41988**: (abulford) Fix dockerng.network_* name matching (refs: #42006)
  - 7d385f8bdc Merge pull request #42006 from redmatter/fixedockerng-network-matching-2017.7
  - f83960c0a2a Lint: Remove extra line at end of file.
  - c73d64ec56 Add regression tests for #41982
  - d31f2913bd Fix broken unit test test_network_absent
  - d42f781c64 Add trace logging of docker.networks result
  - 8c00c63b55 Fix dockerng.network_* name matching

- **ISSUE #12587**: (Katafalkas) salt-cloud custom functions/actions (refs: #42616)
- **PR #42616**: (amendlik) Sync cloud modules @ 2017-07-28 15:40:36 UTC
  - ee8ae1496 Merge pull request #42616 from amendlik/sync-clouds
  - ab21bd9b5b Sync cloud modules when saltutil.sync_all is run

- **PR #42601**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-07-27 22:32:07 UTC
  - e2dd43002 Merge pull request #42601 from rallytime/merge-2017.7
  - 36a1bfc8c5 Merge branch '2016.11' into '2017.7'
    - 4b16109122 Merge pull request #42339 from isbm/isbm-jobs-scheduled-in-a-future-bsc1036125
      - bbb84ace2d Bugfix: Jobs scheduled to run at a future time stay pending for Salt minions (bsc#1036125)
    - 6c5a7c604a Merge pull request #42077 from vutny/fixed-jobs-scheduled-with-whens
      - b1960c4ae4 Fix scheduled job run on Master if when parameter is a list
    - f9cb536589 Merge pull request #42414 from vutny/unify-hash-params-format
      - d1f2a93368 DOCS: unify hash sum with hash type format

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30.2. Previous Releases
• 535c922511 Merge pull request #42523 from rallytime/fix-42375
  • 685c2cced6 Add information about returning a tuple with an error message
  • fa466519c4 Add a mention of the True/False returns with __virtual__()
• 0df0e7e749 Merge pull request #42527 from twangboy/win_wua
  • 0373791f2a Correct capatilization
  • af3bcc9227b Document changes to Windows Update in 10/2016
• 69b06886da Merge pull request #42551 from binocvlar/fix-lack-of-align-check-output
  • c4faba192 Remove `-s` (--script) argument to parted within align_check function
• 9e0b4e9faf Merge pull request #42573 from rallytime/bp-42433
  • 0293429e24 Only force saltenv/pillarenv to be a string when not None
• e931ed2517 Merge pull request #42571 from twangboy/win_add_pythonpath
  • d55a44dd1a Avoid loading user site packages
  • 9af1eb2741 Ignore any PYTHON* environment vars already on the system
  • 4e2b03a95 Add pythonpath to batch files and service
• de2f397041 Merge pull request #42387 from DSRCorporation/bugs/42371_KeyError_WeakValueDict
  • e72c7ee2e2 Don’t use key in weakvaluedict because it could lie.
• 641a9d7f6d Merge pull request #41968 from root360-AndreasUlm/fix-rabbitmqctl-output-handler
  • 76fd941d91 added tests for rabbitmq 3.6.10 output handler
  • 3602af1e1b Fix rabbitmqctl output handler for 3.6.10
• 66fede378a Merge pull request #42479 from gtmanfred/interface
  • c32c1b2803 fix pylint
  • 99ece6346b validate ssh_interface for ec2
• a925c7029a Merge pull request #42516 from rallytime/fix-42405
  • e3a6717efa Add info about top file to pillar walk-through example to include edit.vim

• ISSUE #42148: (sjorge) [2017.7.0rc1] use_superseded and module.run changes from release notes do nothing? (refs: #42270)

• PR #42290: (ismb) Backport of #42270 @ 2017-07-27 22:30:05 UTC
  • PR #42270: (The-Loeki) State module.run/wait misses args when looking for kwargs (refs: #42290)
  • 22eaa389fa Merge pull request #42290 from isbm/isbm-module_run_parambug_42270_217
  • e38d432f90 Fix docs
  • 1e8a56eda5 Describe function tagging
  • 1d7233224b Describe function batching
  • 1391a05d5e Bugfix: syntax error in the example
  • 8c71257a4b Call unnamed parameters properly
  • 94c97a8f25 Update and correct the error message
  • ea8351362c Bugfix: args gets ignored alongside named parameters
- 74689e3462 Add ability to use tagged functions in the same set

- **PR #42251**: (twangboy) Fix `unit.modules.test_win_ip` for Windows @ 2017-07-27 19:22:03 UTC
  - 4c20f1cbb Merge pull request #42251 from twangboy/unit_win_test_win_ip
  - 97261bfe69 Fix `win_inet_pton` check for malformed ip addresses

- **PR #42255**: (twangboy) Fix `unit.modules.test_win_system` for Windows @ 2017-07-27 19:12:42 UTC
  - 2985e4c0e6 Merge pull request #42255 from twangboy/win_unit_test_win_system
  - acc0345b8 Fix unit tests

- **PR #42528**: (twangboy) Namespace `cmp_to_key` in the pkg state for Windows @ 2017-07-27 18:30:23 UTC
  - a573386260 Merge pull request #42528 from twangboy/win_fix_pkg_state
  - a040443fa1 Move `functools` import inside `pylint` escapes
  - 118d5134e2 Remove namespaced function `cmp_to_key`
  - a02c91adda Namespace `cmp_to_key` in the pkg state for Windows

- **ISSUE #42521**: (rickh563) chocolatey.installed broken on 2017.7.0 (refs: #42534)

- **PR #42534**: (jmarinaro) Fixes `AttributeError` thrown by chocolatey state @ 2017-07-27 17:59:50 UTC
  - 62ae12bcd9 Merge pull request #42534 from jmarinaro/2017.7
  - b242d2d6b5 Fixes `AttributeError` thrown by chocolatey state Fixes #42521

- **ISSUE #40354**: (exc414) CentOS 6.8 Init Script - Sed unterminated address regex (refs: #42557)

- **ISSUE #37312**: (gtmanfred) CLI flags should take overload settings in the config files (refs: #42557)

- **PR #42557**: (justincbeard) Fixing output so --force-color and --no-color override master and minion config color value @ 2017-07-27 17:07:33 UTC
  - 52605c249d Merge pull request #42557 from justincbeard/bugfix_37312

- **PR #42567**: (skizunov) Fix `disable_<tag-name>` config option @ 2017-07-27 17:05:00 UTC
  - ab3351e3b7 Merge pull request #42567 from skizunov/develop3
  - 0f0b7e3e0a Fix `disable_<tag-name>` config option

- **PR #42577**: (twangboy) Compile scripts with `-E -s` params for Salt on Mac @ 2017-07-26 22:44:37 UTC
  - 69d5973651 Compile scripts with `-E -s` params for python

- **PR #42524**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-07-26 22:41:06 UTC
  - 60d078164 Merge pull request #42524 from rallytime/merge-2017.7
  - 14d8d795f6 Merge branch '2016.11' into '2017.7'
    - 1bd5bbccc2 Merge pull request #42509 from clem-compilatio/fix-42417
    - 72924b06b8 Fix `_assign_floating_ips` in openstack.py
    - 4bf35a74de Merge pull request #42464 from garethgreenaway/2016_11_remove_tmp_identity_file
      - ff24102d51 Uncomment the line that removes the temporary identity file.
    - e2120dbd0e Merge pull request #42443 from garethgreenaway/23357_pass_args_kwargs_correctly
- 635810b3e3 Updating the slack engine in 2016.11 to pass the args and kwrags correctly to LocalClient
- 8262cc9054 Merge pull request #42200 from shengis/sqlite3_fix_row_absent_2016.11
- 407b8f4bb3 Fix #42198 If where_args is not set, not using it in the delete request.
- d9df97e5a3 Merge pull request #42424 from goten4/2016.11
- 1c0574d05e Fix error message when tornado or pycurl is not installed

**PR #42575**: (rallytime) [2017.7] Merge forward from 2017.7.1 to 2017.7 @ 2017-07-26 22:39:10 UTC
- 2ace837df Merge pull request #42575 from rallytime/merge-2017.7.1-into-2017.7
- 63bb0fb2c4 pass in empty kwarg for reactor
- 2868061ee4 update chunk, not kwarg in chunk
- 46715e9d94 Merge branch '2017.7.1' into '2017.7'

**PR #42555**: (Ch3LL) add changelog to 2017.7.1 release notes @ 2017-07-26 14:57:43 UTC
- 1d93e92194 Merge pull request #42555 from Ch3LL/7.1_add_changelog
- fb69e71093 add changelog to 2017.7.1 release notes

**PR #42266**: (twangboy) Fix unit.states.test_file for Windows @ 2017-07-25 20:26:32 UTC
- 07c2793e86 Merge pull request #42266 from twangboy/win_unit_states_test_file
- 669aee10d Mock file exists properly
- a4231e9827 Fix ret mock for linux
- 0c484f8979 Fix unit tests on Windows

**PR #42484**: (shengis) Fix a potential Exception with an explicit error message @ 2017-07-25 18:34:12 UTC
- df417eae17 Merge pull request #42484 from shengis/fix-explicit-error-msg-x509-sign-remote
- 0b548c72e1 Fix a potential Exception with an explicit error message

**ISSUE saltstack/salt-jenkins#396**: (Ch3LL) Python3 Fix Test: JoyentTest.test_instance (refs: #42529)

**ISSUE #41720**: (rallytime) [Py3] Some salt-cloud drivers do not work using Python 3 (refs: #42529)

**PR #42529**: (gtmanfred) [2017.7] Small fix to modules/git.py @ 2017-07-25 16:37:48 UTC
- 0f25ec76f9 Merge pull request #42529 from gtmanfred/2017.7
- b7ebb4d81a these drivers do not actually have an issue.
- e90ca7a114 use salt encoding for joyent on 2017.7

**PR #42465**: (garethgreenaway) [2017.7] Small fix to modules/git.py @ 2017-07-24 17:24:55 UTC
- 488457c5a0 Merge pull request #42465 from garethgreenaway/2017.7_remove_tmp_identity_file
- 1920dc6079 Uncomment the line that removes the temporary identity file.

**ISSUE #23516**: (dkiser) BUG: cron job scheduler sporadically works (refs: #42077)

**PR #42107**: (vutny) [2017.7] Fix scheduled jobs if when parameter is a list @ 2017-07-24 17:04:12 UTC
- **PR #42077**: (vutny) Fix scheduled job run on Master if when parameter is a list (refs: #42107)
- **PR #41973**: (vutny) Fix Master/Minion scheduled jobs based on Cron expressions (refs: #42077)
- 4f044999fa Merge pull request #42107 from vutny/2017.7-fix-jobs-scheduled-with-whens
- 905be493d4 [2017.7] Fix scheduled jobs if `when` parameter is a list

- **PR #42506:** (terminalmage) Add PERREMOTEONLY to init_remotes call in git_pillar runner @ 2017-07-24 16:59:21 UTC
  - 6ea0763e1 Merge pull request #42506 from terminalmage/fix-git-pillar-runner
  - 6352f447ce Add PERREMOTEONLY to init_remotes call in git_pillar runner

- **PR #42502:** (shengis) Fix azurerm query to show IPs @ 2017-07-24 15:54:45 UTC
  - b88e645f10 Merge pull request #42502 from shengis/fix_azurerm_request_ips
  - 92f1890701 Fix azurerm query to show IPs

- **PR #42180:** (twangboy) Fix `unit.modules.test_timezone` for Windows @ 2017-07-24 14:46:16 UTC
  - c793d83d26 Merge pull request #42180 from twangboy/win_unit_test_timezone
  - 832a3d86dd Skip tests that use os.symlink on Windows

- **PR #42474:** (whiteinge) Cmd arg kwarg parsing test @ 2017-07-24 14:13:30 UTC
  - PR #39646: (terminalmage) Handle deprecation of passing string args to load_args_and_kwargs (refs: #42474)
    - 083ff00410 Merge pull request #42474 from whiteinge/cmd-arg-kwarg-parsing-test
    - 0cc0c967a Lint fixes
    - 66093738c8 Add back support for string kwargs
    - 622ff5be40 Add `LocalClient.cmd` test for arg/kwarg parsing
    - 9f4eb80d90 Add a test.arg variant that cleans the pub kwargs by default

- **PR #42425:** (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-07-21 22:43:41 UTC
  - c91a5e539e Merge pull request #42425 from rallytime/merge-2017.7
  - ea457aa0a5 Remove ALIASES block from template util
  - c673b64583 Merge branch ’2016.11’ into ’2017.7’
    - 42bb1a64ca Merge pull request #42350 from twangboy/win_fix_ver_grains_2016.11
      - 8c048403d7 Detect Server OS with a desktop release name
    - 0a72e56f6e6 Merge pull request #42356 from meaksh/2016.11-AliasesLoader-wrapper-fix
      - 915d94219e Allow to check whether a function is available on the AliasesLoader wrapper
    - 10eb7b7a79 Merge pull request #42368 from twangboy/win_fix_build_2016.11
      - a7c910c31e Remove build and dist directories before install
    - 016189f6f2f Merge pull request #42370 from rallytime/merge-2016.11
      - 0aa5d6e1e Merge branch ’2016.3’ into ’2016.11’
      - e9b0f20f8a Merge pull request #42359 from Ch3LL/doc-update-2016.3
      - dc85b5edbe [2016.3] Update version numbers in doc config for 2017.7.0 release
      - f06a6f1796 Merge pull request #42360 from Ch3LL/doc-update-2016.11
    - b90b7a7506 [2016.11] Update version numbers in doc config for 2017.7.0 release
    - e0595b0a0f Merge pull request #42319 from rallytime/config-docs
Salt Documentation, Release 3002.5

- b40f980632 Add more documentation for config options that are missing from master/minion docs
  - 78940400e3 Merge pull request #42352 from CorvinM/issue42333
  - 5266ee14d Multiple documentation fixes

- ISSUE #42357: (Giandom) Salt pillarenv problem with slack engine (refs: #42443, #42444)
- PR #42444: (garethgreenaway) [2017.7] Fix to slack engine @ 2017-07-21 22:03:48 UTC
  - 10e4d9234b Merge pull request #42444 from garethgreenaway/2017.7_pass_args_kwrags_correctly
  - f411cfc2a9 Updating the slack engine in 2017.7 to pass the args and kwrags correctly to LocalClient
- PR #42461: (rallytime) Bump warning version from Oxygen to Fluorine in roster cache @ 2017-07-21 21:33:25 UTC
  - 723be49fac Merge pull request #42461 from rallytime/bump-roster-cache-deprecations
  - c0df0137f5 Bump warning version from Oxygen to Fluorine in roster cache
- ISSUE #42374: (tyhunt99) [2017.7.0] salt-run mange.versions throws exception if minion is offline or unresponsive (refs: #42436)
- PR #42436: (garethgreenaway) Fixes to versions function in manage runner @ 2017-07-21 19:41:07 UTC
  - 09521602c1 Merge pull request #42436 from garethgreenaway/42374_manage_runner_minion_offline
  - 0fd39498c0 Updating the versions function inside the manage runner to account for when a minion is offline and we are unable to determine its version.
- ISSUE #42427: (grichmond-salt) Issue Passing Variables created from load_json as Inline Pillar Between States (refs: #42435)
- PR #42435: (terminalmage) Modify our custom YAML loader to treat unicode literals as unicode strings (refs: #42812) @ 2017-07-21 19:40:34 UTC
  - 54193ea543 Merge pull request #42435 from terminalmage/issue42427
  - 31273c7ec1 Modify our custom YAML loader to treat unicode literals as unicode strings
- ISSUE #42381: (zebooka) Git.detached broken in 2017.7.0 (refs: #42399)
- ISSUE #38878: (tomlaredo) [Naming consistency] git.latest "rev" option VS git.detached "ref" option (refs: #38898)
- PR #42399: (rallytime) Update old "ref" references to "rev" in git.detached state @ 2017-07-21 19:38:59 UTC
  - PR #38898: (terminalmage) git.detached: rename ref to rev for consistency (refs: #42399)
  - 0b3179135e Merge pull request #42399 from rallytime/fixed-42381
  - d9d94fe02f Update old "ref" references to "rev" in git.detached state
- ISSUE #42400: (Enquier) Conflict in execution of passing pillar data to orch/reactor event executions 2017.7.0 (refs: #42031)
- PR #42031: (skizunov) Fix: Reactor emits critical error @ 2017-07-21 19:38:34 UTC
  - bd4adb483d Merge pull request #42031 from skizunov/develop3
  - 540977b4b1 Fix: Reactor emits critical error
- ISSUE #41949: (jrporcaro) Event returner doesn't work with Windows Master (refs: #42027)
- PR #42027: (gtmanfred) import salt.minion for EventReturn for Windows @ 2017-07-21 19:37:03 UTC
  - 3abf7ad7d7 Merge pull request #42027 from gtmanfred/2017.7
- fd4458b6c7 import salt.minion for EventReturn for Windows

- **PR #42454**: (terminalmage) Document future renaming of new rand_str jinja filter @ 2017-07-21 18:47:51 UTC
  - 994d3dc74a Merge pull request #42454 from terminalmage/jinja-docs-2017.7
  - 98b661406e Document future renaming of new rand_str jinja filter

- **PR #42452**: (Ch3LL) update windows urls to new py2/py3 naming scheme @ 2017-07-21 17:20:47 UTC
  - 4480075129 Merge pull request #42452 from Ch3LL/fix_url_windows
  - 3f4a918f73 update windows urls to new py2/py3 naming scheme

- **ISSUE #42404**: (gabekahen) [2017.7] file.managed with cmd_check "No such file or directory" (refs: #42411)

- **ISSUE #33708**: (pepinje) visudo check command leaves cache file in /tmp (refs: #42411, #38063)

- **PR #42411**: (seedickcode) Fix file.managed check_cmd file not found - Issue #42404 @ 2017-07-20 21:59:17 UTC
  - PR #38063: (luu) tmp file clean up in file.manage - fix for #33708 (refs: #42411)
  - 33e90be1fe Merge pull request #42411 from seedickcode/check_cmd_fix
  - 4ae391f01 Fix file.managed check_cmd file not found - Issue #42404

- **PR #42409**: (twangboy) Add Scripts to build Py3 on Mac @ 2017-07-20 21:36:34 UTC
  - edde31376a Merge pull request #42409 from twangboy/mac_py3_scripts
  - ac0e04a972 Remove build and dist, sign pkgs
  - 9d66e273c4 Fix hard coded pip path
  - 7b8d6cbbd2 Add support for Py3
  - aa4ed93c8 Update Python and other reqs

- **ISSUE #42403**: (astronouth7303) [2017.7] Pillar empty when state is applied from orchestrate (refs: #42433)

- **PR #42433**: (terminalmage) Only force saltenv/pillarenv to be a string when not None (refs: #42573) @ 2017-07-20 21:32:24 UTC
  - 82982940d Merge pull request #42433 from terminalmage/issue42403

- **PR #42408**: (CorvinM) Fix documentation misformat in salt.states.file.replace @ 2017-07-20 00:45:43 UTC
  - a71938cefe Merge pull request #42408 from CorvinM/file-replace-doc-fix
  - 246a2b3e74 Fix documentation misformat in salt.states.file.replace

- **PR #42347**: (twangboy) Fixes problem with Version and OS Release related grains on certain versions of Python @ 2017-07-19 17:05:43 UTC
  - d35dfd19d Merge pull request #42347 from twangboy/win_fix_ver_grains
  - e3f663fc9 Detect server OS with a desktop release name

- **PR #42366**: (twangboy) Remove build and dist directories before install @ 2017-07-19 16:37:41 UTC
  - eb9e4206c9 Merge pull request #42366 from twangboy/win_fix_build
  - 0946002713 Add blank line after delete
  - f7c0b4f46 Remove build and dist directories before install

- **PR #42373**: (Ch3LL) Add initial 2017.7.1 Release Notes File @ 2017-07-19 16:28:46 UTC
  - af7820f25d Merge pull request #42373 from Ch3LL/add_2017.7.1
  - ce1c16d28 Add initial 2017.7.1 Release Notes File

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30.2. Previous Releases
• **PR #42150:** (twangboy) Fix `unit.modules.test_pip` for Windows @ 2017-07-19 16:01:17 UTC  
  - 59e012b485 Merge pull request #42150 from twangboy/win_unit_test_pip  
  - 4e2c2420fc Fix unit tests for test_pip

• **PR #42154:** (twangboy) Fix `unit.modules.test_reg_win` for Windows @ 2017-07-19 16:00:38 UTC  
  - ade25c6b34 Merge pull request #42154 from twangboy/win_unit_test_reg  
  - 00d9a52802 Fix problem with handling REG_QWORD in list values

• **PR #42182:** (twangboy) Fix `unit.modules.test_useradd` for Windows @ 2017-07-19 15:55:33 UTC  
  - 07593675e2 Merge pull request #42182 from twangboy/win_unit_test_useradd  
  - 8260a71c07 Disable tests that require pwd in Windows

• **PR #42364:** (twangboy) Windows Package notes for 2017.7.0 @ 2017-07-18 19:24:45 UTC  
  - a175c40c1d Merge pull request #42364 from twangboy/release_notes_2017.7.0  
  - 96517d1355 Add note about patched windows packages

• **PR #42361:** (Ch3LL) [2017.7] Update version numbers in doc config for 2017.7.0 release @ 2017-07-18 19:23:22 UTC  
  - 4dfe50e558 Merge pull request #42361 from Ch3LL/doc-update-2017.7  
  - dc5bb301f7 [2017.7] Update version numbers in doc config for 2017.7.0 release

• **PR #42363:** (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-07-18 18:40:48 UTC  
  - 587138d771 Merge pull request #42363 from rallytime/merge-2017.7  
  - 7aa31ff030 Merge branch '2016.11' into '2017.7'

  - b256001760 Merge pull request #42353 from terminalmage/git-test  
  - 14cf6ce322 is_windows is a function, not a propery/attribute

  - 866a1febb4 Merge pull request #42264 from rallytime/fix-41116  
  - bd638880e3 Add mono-spacing to salt-minion reference for consistency  
  - 30d62f43da Update minion restart section in FAQ doc for windows

  - 9a707088ad Merge pull request #42275 from terminalmage/issue42194  
  - 663874908a pkg.installed: pack name/version into pkgs argument

  - e588f235e0 Merge pull request #42269 from rallytime/fix-41721  
  - f2250d474a Add a note about using different styles of quotes.  
  - 38d9b3d553 Add some clarity to "multiple quotes" section of yaml docs

  - 5aaa21a75 Merge pull request #42282 from rallytime/fix-42152  
  - f032223843 Handle libcloud objects that throw RepresenterErrors with --out=yaml

  - fb5697a4bc Merge pull request #42308 from lubyou/42295-fix-file-absent-windows  
  - 026ccf401a Force file removal on Windows. Fixes #42295

  - da2a8a518f Merge pull request #42314 from rallytime/fix-42267  
  - c406046940 Add clarification to salt ssh docs about key auto-generation.

  - acadd54013 Merge pull request #41945 from garethgreen-away/41936_allow_identity_files_with_user
• 44841e5626 Moving the call to cp.get_file inside the with block to ensure the umask is preserved when we grab the file.
• f9ba60eed8 Merge pull request #1 from terminalmage/pr-41945
• 1b6026177c Restrict set_umask to mktemp call only
• 68549f3496 Fixing umask to we can set files as executable.
• 4949bf3f3 Updating to swap on the new salt.utils.files.set_umask context_manager
• 8f8aa9f6d92 Updating PR with requested changes.
• 494765e939 Updating the git module to allow an identity file to be used when passing the user parameter
• f90e04a2bc Merge pull request #42289 from CorvinM/bp-41543
• 357dc22f05 Fix user creation with empty password
• a91a3f81b1 Merge pull request #42123 from vutny/fix-master-utils-import
  • 6bb88f898c Add missing doc for utils_dirs Minion config option
  • f1bc58f6d5 Utils: add example of module import
• e2aa5114e4 Merge pull request #42261 from rallytime/minor-doc-fix
  • 8c76bbb53d Some minor doc fixes for dnsutil module so they’ll render correctly
• 3e9dfbc9cc Merge pull request #42262 from rallytime/bp-42224
  • c31ded341c Remove duplicate instruction in Openstack Rackspace config example
• 7780579c36 Merge pull request #42181 from garethgreenaway/42137_backport_fix_from_2017_7
  • a34970b45b Back porting the fix for 2017.7 that ensures the order of the names parameter.
• 72537868a6 Merge pull request #42253 from gtmanfred/2016.11
  • 53e25760be Only use unassociated ips when unable to allocate
• b2a4698b5d Merge pull request #42252 from UtahDave/2016.11local
  • e6a9563d47 simple doc updates
• 781fe13be7 Merge pull request #42235 from astronaut7303/parch-1-2016.3
  • 4cb51bd03a Make note of dig partial requirement.
  • 08e7d8351a Abolish references to dig in examples.
• 83cb7d7f616 Merge pull request #42215 from twangboy/win_iis_docs
  • c07e22041a Add missing config to example
• 274946ab00 Merge pull request #42211 from terminalmage/issue40928
  • 22a18fa2ed Only pass a saltenv in orchestration if one was explicitly passed (2016.11)
• 89261cf06c Merge pull request #42173 from rallytime/bp-37424
  • 01addb6053 Avoid Early Convert ret[‘comment’] to String
• 3b17fb7f83 Merge pull request #42175 from rallytime/bp-39366
  • 53f7b987e8 Pass sig to service.status in after_toggle
• ea16f47f0a Merge pull request #42172 from rallytime/merge-2016.11
  • b1fa332a11 Merge branch ’2016.3’ into ’2016.11’
• 6307b9873f Merge pull request #42176 from rallytime/bp-42109
  • 68692da255 Update aws.rst - add Debian default username
• 28c4e4c3b7 Merge pull request #42095 from terminalmage/docker-login-debugging
  • bd27870a71 Add debug logging to dockerng.login
• 2b754b5eaf Merge pull request #42119 from terminalmage/issue42116
  • 9a268949e3 Add integration test for 42116
  • 1bb42bb609 Fix regression when CLI pillar override is used with salt-call
• 8c0a83cbb5 Merge pull request #42121 from terminalmage/issue42114
  • d14291267f Fix pillar.get when saltenv is passed
• 687992c240 Merge pull request #42094 from terminalmage/quiet-exception
  • 47d61fbed7 Prevent command from showing in exception when output_loglevel=quiet
• dad255160c Merge pull request #42163 from vutny/fix-42115
  • b27b1e340a Fix #42115: parse libcloud "rc" version correctly
• 2a8ae2b3b6 Merge pull request #42164 from Ch3LL/fixed_doc
  • 7c0bf248ec Fix kerberos create_keytab doc
• 678d0d409e Merge pull request #42141 from rallytime/bp-42098
  • db80243233 Change repo_ng to repo-ng
• c8af7a3c9 Merge pull request #42140 from rallytime/bp-42097
  • 9c4e132540 Import datetime
  • 1435bf177c require large timediff for ipv6 warning
• c23966c88b Merge pull request #42142 from Ch3LL/change_builds
  • e1694af39c Update builds available for rc1

- **PR #42340:** (isbm) Bugfix: Jobs scheduled to run at a future time stay pending for Salt ... @ 2017-07-18 18:13:36 UTC
  - 55b7ac5b4a Merge pull request #42340 from isbm/isbm-jobs-scheduled-in-a-future-2017.7-bsc1036125
  - 774d204d65 Bugfix: Jobs scheduled to run at a future time stay pending for Salt minions (bsc#1036125)
- **PR #42327:** (mirceaulinic) Default skip_verify to False @ 2017-07-18 18:04:36 UTC
  - e7261ec5f1 Merge pull request #42327 from mirceaulinic/patch-10
  - c83057b2da Trailing whitespaces
  - c83e6fc696 Default skip_verify to False
- **ISSUE #42151:** (sjorge) Doc errors in jinja doc for develop branch (refs: #42179)
- **PR #42179:** (rallytime) Fix some documentation issues found in jinja filters doc topic @ 2017-07-18 18:01:57 UTC
  - ba799b2831 Merge pull request #42179 from rallytime/fix-42151
- 798d29276e Add note about "to_bytes" jinja filter issues when using yaml_jinja renderer
- 1bbff572ab Fix some documentation issues found in jinja filters doc topic

**ISSUE #42076**: (abulford) dockerng.volume_present test looks as though it would cause a change (refs: #42087, #42086)

**PR #42087**: (abulford) Make result=true if Docker volume already exists @ 2017-07-17 18:41:47 UTC
  - PR #42086: (abulford) Make result=true if Docker volume already exists (refs: #42087)
  - 8dbb93851d Merge pull request #42087 from redmatter/dockerng-volume-present-result-2017.7
  - 2e1de95500 Make result=true if Docker volume already exists

**ISSUE #42166**: (sjorge) [2017.7.0rc1] jinja filter network_hosts fails on large IPv6 networks (refs: #42186)

**PR #42186**: (rallytime) Use long_range function for IPv6Network hosts() function @ 2017-07-17 18:39:35 UTC
  - c84d6b548 Merge pull request #42186 from rallytime/fixed-42166
  - b8bca0d599 Add note to various network_hosts docs about long_run for IPv6 networks
  - 11862743c2 Use long_range function for IPv6Network hosts() function

**PR #42210**: (terminalmage) Only pass a saltenv in orchestration if one was explicitly passed (2017.7) @ 2017-07-17 18:22:39 UTC
  - e7b79e6fd2 Merge pull request #42210 from terminalmage/issue40928-2017.7
  - 771ade5fd3 Only pass a saltenv in orchestration if one was explicitly passed (2017.7)

**PR #42236**: (mirceaulinic) New option for napalm proxy/minion: provider @ 2017-07-17 18:19:56 UTC
  - 0e4902b0e Merge pull request #42236 from cloudflare/napalm-provider
  - 1ac69bd737 Document the provider option and rearrange the doc
  - 4b4b14161 New option for napalm proxy/minion: provider

**PR #42257**: (twangboy) Fix unit.pillar.test_git for Windows @ 2017-07-17 17:51:42 UTC
  - 3ec5bb1c2f Merge pull request #42257 from twangboy/win_unit_pillar_test_git
  - 45be32666a Add error-handling function to shutil.rmtree

**PR #42258**: (twangboy) Fix unit.states.test_environ for Windows @ 2017-07-17 17:50:38 UTC
  - 36395625c2 Merge pull request #42258 from twangboy/win_unit_states_tests_environ
  - 55b27e8c478 Mock the reg.read_value function

**PR #42265**: (rallytime) Gate boto_elb tests if proper version of moto isn't installed @ 2017-07-17 17:47:52 UTC
  - 894bdd2b19 Merge pull request #42265 from rallytime/gate-moto-version
  - 78cedee51d5 Gate boto_elb tests if proper version of moto isn't installed

**PR #42277**: (twangboy) Fix unit.states.test_winrepo for Windows @ 2017-07-17 17:37:07 UTC
  - baf04f2a2d Merge pull request #42277 from twangboy/win_unit_states_test_winrepo
  - ed89cd0b93 Use os.sep for path seps

**PR #42309**: (terminalmage) Change "TBD" in versionadded to "2017.7.0" @ 2017-07-17 17:11:45 UTC
  - be6b211683 Merge pull request #42309 from terminalmage/fix-versionadded
  - 603f5b7de6 Change "TBD" in versionadded to "2017.7.0"

**PR #42206**: (rallytime) [PY3] Fix test that is flaky in Python 3 (refs: #42783) @ 2017-07-17 17:09:53 UTC
• PR #42126: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-07-17 17:07:19 UTC
  – 8f1cb287cf Merge pull request #42126 from rallytime/merge-2017.7

• PR #42078: (damon-atkins) pkg.install and pkg.remove fix version number input. @ 2017-07-05 06:04:57 UTC
  – 4780d7830a Merge pull request #42078 from damon-atkins/fix_convert_flt_str_version_on_cmd_line
  – 09d37d0892 Fix comment typo
  – 7167549425 Handle version=None when converted to a string it becomes 'None' parm should default to empty string rather than None, it would fix better with existing code.
  – 4fb2bb1856 Fix typo
  – cf55c3361c pkg.install and pkg.remove on the command line take number version numbers, store them within a float. However version is a string, to support versions numbers like 1.3.4

• PR #42105: (Ch3LL) Update releasecanddiate doc with new 2017.7.0rc1 Release @ 2017-07-04 03:14:42 UTC
  – 46d575acbc Merge pull request #42105 from Ch3LL/update_rc
  – d4c7b91e08 Update releasecanddiate doc with new 2017.7.0rc1 Release

• ISSUE #41885: (astronouth7303) Recommended pip installation outdated? (refs: #42099)

• ISSUE #42076: (abulford) dockerng.volume_present test looks as though it would cause a change (refs: #42087, #42086)

• PR #42086: (abulford) Make result=true if Docker volume already exists (refs: #42087) @ 2017-07-03 15:48:33 UTC
  – 81d606a8cb Merge pull request #42086 from redmatter/fix-dockerng-volume-present-result
  – 8d549685a7 Make result=true if Docker volume already exists

• ISSUE #25842: (shikhartanwar) Running salt-minion as non-root user to execute sudo commands always returns an error (refs: #42021)

• PR #42021: (gtmanfred) Set concurrent to True when running states with sudo @ 2017-06-30 21:02:15 UTC
  – 7160697123 Merge pull request #42021 from gtmanfred/2016.11
  – 26beb18aa5 Set concurrent to True when running states with sudo

• PR #42029: (terminalmage) Mock socket.getaddrinfo in unit.utils.network_test.NetworkTestCase.test_host_to_ips @ 2017-06-30 20:58:56 UTC
  – b784fbbd8f Merge pull request #42029 from terminalmage/host_to_ips
  – 26f848e111 Mock socket.getaddrinfo in unit.utils.network_test.NetworkTestCase.test_host_to_ips

• PR #42055: (dmurphy18) Upgrade support for gnupg v2.1 and higher @ 2017-06-30 20:54:02 UTC
  – e067020b9b Merge pull request #42055 from dmurphy18/handle_gnupgv21
  – e20ce6350 Upgrade support for gnupg v2.1 and higher

• PR #42048: (Ch3LL) Add initial 2016.11.7 Release Notes @ 2017-06-30 16:00:05 UTC
- 74ba2abc48 Merge pull request #42048 from Ch3LL/add_11.7
- 1de5e008a0 Add initial 2016.11.7 Release Notes

30.2.44 Salt 2017.7.3 Release Notes

Version 2017.7.3 is a bugfix release for 2017.7.0.

Statistics

- Total Merges: 501
- Total Issue References: 94
- Total PR References: 423
- Contributors: 86 (3add3287, BenoitKnecht, Ch3LL, CorvinM, Da-Juan, DmitryKuzmenko, Giandom, The-Loeki, UtahDave, adelcast, amendlik, angeloudy, anlutro, arthurlogilab, basepi, benediktwerner, brejoc, cachedout, campbellnc, chrxn, clan, corywright, damon-atkins, dincamihai, dmurphy18, eliasp, eradman, forksaber, frogunder, gaborn57, garethgreenaway, golmaal, gracinet, gtmanfred, haam3r, isbm, jettoro, jf, jubrad, keesbos, kris-anderson, lomeroe, mateiw, mattLLVW, mephi42, mirceaulinic, mkurtak, morganwillcock, msummers42, mtorromeo, multani, mvivaldi, mz-bmcqueen, nasenbaer13, nicholasmhughes, oarmstrong, pkruk, pratik705, psagers, rallytime, rbjorklin, rcallphin, renner, rhots, richardsimko, rklaren, roaldnefs, s0undt3ch, samodid, skizunov, skjaro, steverweber, sumeetisp, t0fik, techhat, terminalmage, timfreund, timka, tkwilliams, twangboy, unthought, vernondcole, vutny, wedge-jarrad, whytewolf, xuhcc)

Windows Changes

**pkg Execution Module**

Significant changes (PR #43708 & #45390, damon-atkins) have been made to the pkg execution module. Users should test this release against their existing package sls definition files.

- **pkg.list_available** no longer defaults to refreshing the winrepo meta database.
- **pkg.install** without a version parameter no longer upgrades software if the software is already installed. Use **pkg.install version=latest** (or simply use a **pkg.latest** state to get the old behavior.
- **pkg.list_pkgs** now returns multiple versions if software installed more than once.
- **pkg.list_pkgs** now returns *Not Found* when the version is not found instead of *(value not set)* which matches the contents of the sls definitions.
- **pkg.remove** will wait up to 3 seconds (normally about a second) to detect changes in the registry after removing software, improving reporting of version changes.
- **pkg.remove** can remove *latest* software, if *latest* is defined in sls definition.
- Documentation was update for the execution module to match the style in new versions, some corrections as well.
- All install/remove commands are prefix with cmd.exe shell and cmdmod is called with a command line string instead of a list. Some sls files in saltstack/salt-winrepo-ng expected the commands to be prefixed with cmd.exe (i.e. the use of &).
- Some execution module functions results, now behave more like their Unix/Linux versions.
**cmd Execution Module**

Due to a difference in how Python's `subprocess.Popen()` spawns processes on Windows, passing the command as a list of arguments can result in problems. This is because Windows' `CreateProcess` requires the command to be passed as a single string. Therefore, `subprocess` will attempt to re-assemble the list of arguments into as string. Some escaped characters and quotes can cause the resulting string to be incorrectly-assembled, resulting in a failure to execute the command.

Salt now deals with these cases by joining the list of arguments correctly and ensuring that the command is passed to `subprocess.Popen()` as a string.

**Changelog for v2017.7.2..v2017.7.3**

*Generated at: 2018-05-26 21:36:50 UTC*

- **ISSUE #45743**: (frogunder) Multi-master PKI not working on Py3 (refs: #45755)
- **PR #45755**: (terminalmage) salt.crypt: Ensure message is encoded before signing @ 2018-01-29 19:04:50 UTC
  - 1439da8d76 Merge pull request #45755 from terminalmage/issue45743
  - 8af1251c59 salt.crypt: Ensure message is encoded before signing
- **PR #45700**: (Ch3LL) Add PRs to 2017.7.3 Release Notes @ 2018-01-25 20:56:45 UTC
  - fe194d755f Merge pull request #45700 from Ch3LL/7.3_rn
  - 84e8216901 Add PRs to 2017.7.3 Release Notes
- **PR #45681**: (damon-atkins) 2017.7.3 Release notes for Windows @ 2018-01-25 15:13:18 UTC
  - ce41f6a66e Merge pull request #45681 from damon-atkins/2017.7.3_win_release_notes
  - 1d21f86228 Update 2017.7.3.rst
- **PR #45672**: (rallytime) Back-port #45667 to 2017.7.3 @ 2018-01-25 14:04:54 UTC
  - **PR #45667**: (gtmanfred) default to upgrading when refreshing on archlinux (refs: #45672)
  - 2f303439b7 Merge pull request #45672 from rallytime/bp-45667
  - 74bbaeb7ce we should default to upgrading when refreshing on archlinux
- **PR #45669**: (rallytime) Update man pages for 2017.7.3 release @ 2018-01-24 21:04:59 UTC
  - 23ff1264e0 Merge pull request #45669 from rallytime/man-pages-2017.7.3
  - d31b41adeb Update man pages for 2017.7.3 release
- **PR #45666**: (terminalmage) Fix failing pkg integration tests for releases with no `.' @ 2018-01-24 17:19:10 UTC
  - 9a17405ba6 Merge pull request #45666 from terminalmage/salt-jenkins-793
  - 4a6ab729dd Fix failing pkg integration tests for releases with no `.'
- **PR #45644**: (rallytime) Back-port #45452 to 2017.7.3 @ 2018-01-24 15:33:13 UTC
  - **PR #45452**: (adelcast) opkg.py: make owner function return value, instead of iterator (refs: #45644)
  - 0717f7a578 Merge pull request #45644 from rallytime/bp-45452
  - 369720677b opkg.py: make owner function return value, instead of iterator
- **PR #45649**: (rallytime) Back-port #45634 to 2017.7.3 @ 2018-01-24 14:59:43 UTC
  - **PR #45634**: (Ch3LL) Add different service name for Mac 10.13 test (refs: #45649)
- 7934372b7b Merge pull request #45649 from rallytime.bp-45634
- 1c78fc23ea Add different service name for Mac 10.13 test

**PR #45654:** (twangboy) Merge forward #45638 @ 2018-01-24 14:59:14 UTC
- PR #45638: (twangboy) Win fix shell info (refs: #45654)
- 770f0c4664 Merge pull request #45654 from twangboy/win_fix_shell_info_2017.7.3
- 5bb01ae88c Merge forward #45638

**PR #45653:** (rallytime) Back-port #45611 to 2017.7.3 @ 2018-01-24 05:20:11 UTC
- PR #45611: (terminalmage) Fix unnecessary/incorrect usage of six.binary_type (refs: #45653)
- 6fc293da46 Merge pull request #45653 from rallytime.bp-45611
- 0a6b06d8ea Fix unnecessary/incorrect usage of six.binary_type

**PR #45642:** (rallytime) Back-port #45636 to 2017.7.3 @ 2018-01-23 22:00:30 UTC
- PR #45636: (Ch3LL) Fix mac service and pkg tests for 10.13 (refs: #45642)
- da0827e05a Merge pull request #45642 from rallytime.bp-45636
- df0ad54c9a remove unnecessary variable for test
- acb14fd43d fix pylint
- 6a9b12cd1ea Fix mac service and pkg tests for 10.13

**PR #45645:** (rallytime) Back-port #45606 to 2017.7.3 @ 2018-01-23 21:54:45 UTC
- PR #45606: (terminalmage) Fix bug affecting salt-ssh when root_dir differs from the default (refs: #45645)
- f37a5b6d8d Merge pull request #45645 from rallytime.bp-45606

**PR #45641:** (rallytime) Back-port #45508 to 2017.7.3 @ 2018-01-22 00:13:59 UTC
- PR #45508: (frogunder) fix test_archive test for mac on 2017.7 branch (refs: #45641)
- e659793c09 Merge pull request #45541 from rallytime.bp-45508
- e6917a291e fix test_archive test for mac on 2017.7 branch

**PR #45591:** (gtmanfred) mark minion_blackout tests as flaky @ 2018-01-22 00:14:31 UTC
- 4672baac6c8 Merge pull request #45591 from gtmanfred/2017.7.3
- f7fd35fc4a test updating the minion blackout timeout to 10 seconds

**PR #45585:** (rallytime) Back-port #45579 to 2017.7.3 @ 2018-01-22 00:13:59 UTC
- PR #45579: (terminalmage) Test suite stability fixes (refs: #45585)
- 2a992f9017 Merge pull request #45585 from rallytime/bp-45579
- 0292e8345b Lint fix: use six's map
- 108d8cheef Use correct utils path for 2017.7
- a38f4cb6d6 Restrict pyzmq optimizations to pyzmq >= 14.3.0
- 58ad558346 Fix event unpack

• PR #45573: (gtmanfred) update 2017.7.3 tests @ 2018-01-20 20:05:13 UTC
  - 19cd97ed3b Merge pull request #45573 from gtmanfred/2017.7.3
  - bd3cb47fa7 fix mock for opensuse
  - 808e26e69a test simple website

• PR #45570: (gtmanfred) Fix tests for 2017.7.3 @ 2018-01-20 15:01:21 UTC
  - e72d81e6f22 Merge pull request #45570 from gtmanfred/2017.7.3
  - 1f71f301ba specify checking man page path
  - 2ddbc45c1 fix pkg_resources for usage with testing pip
  - 0ba39a7108 switch systemd-journald for sshd for arch service test

• PR #45538: (gtmanfred) Backport test fixes to 2017.7.3 @ 2018-01-19 14:39:44 UTC
  - 7bc60c56d4 Merge pull request #45538 from gtmanfred/2017.7.3
  - 801e639b6 Merge branch '2017.7.3' into 2017.7.3

• PR #45533: (rallytime) Back-port #45529 to 2017.7.3 @ 2018-01-18 22:52:29 UTC
  - PR #45529: (Ch3LL) Fix UnboundLocalError for pacman pkg installs (refs: #45533)
  - 8ad65e3359 Merge pull request #45533 from rallytime/bp-45529
  - 6d56c64d88 Fix UnboundLocalError for pacman pkg installs
    - 8d907e1a0 fix moto version
    - 1241ab5fc6 fix test boto imports
    - f4b3637cf9 fix fedora pkg test

• ISSUE #45394: (dmurphy18) git.latest fails when "depth" is used with a non-default branch (refs: #45399)

• PR #45442: (rallytime) Back-port #45399 to 2017.7.3 @ 2018-01-17 17:20:48 UTC
  - PR #45399: (terminalmage) Fix git.latest failure when rev is not the default branch (refs: #45442)
  - 73799e3e5 Merge pull request #45442 from rallytime/bp-45399
  - 590a06d626 Lint: use support TMP path instead of integration TMP path
  - c081b26c2c Fix git.latest failure when rev is not the default branch

• PR #45468: (twangboy) Fix some issues with reg.py @ 2018-01-16 22:23:47 UTC
  - ee509069b Merge pull request #45468 from twangboy/win_reg
  - a0d21c6354 Fix some issues with reg.py

• ISSUE #44913: (ari) FreeBSD packaging install performance regression (refs: #45174)

• PR #45434: (rallytime) Back-port #45174 to 2017.7.3 @ 2018-01-14 12:43:16 UTC
  - PR #45174: (eradman) Do not force pkg reinstall on FreeBSD (refs: #45343)
- ef7a896eb6 Merge pull request #45434 from rallytime/bp-45174
- b310ff7ab8 Do not force pkg reinstall on FreeBSD

- **PR #45395**: (rallytime) Back-port #45380 to 2017.7.3 @ 2018-01-12 18:49:20 UTC
  - PR #45380: (twangboy) Backport changes from #45308 (refs: #45395)
  - PR #45308: (twangboy) Fix integration.modules.test_state for Windows (refs: #45380)
  - c3fdd1dcd4 Merge pull request #45395 from rallytime/bp-45380
  - 0356b3d56f Backport changes from #45308

- **ISSUE #44107**: (anlutro) salt-ssh 2017.7 doesn’t work with Python 3, missing backports_abc (refs: #45294)

- **PR #45294**: (gtmanfred) include backports_abc @ 2018-01-11 18:18:16 UTC
  - f7da716d32 Merge pull request #45294 from gtmanfred/2017.7
  - 3633ceea7 Merge branch '2017.7' into 2017.7
  - 29806e4496 ignore salt.ext in pylint
  - 8b597a4890 include backports_abc

- **ISSUE #43130**: (boltronics) module.run documentation issues (refs: #45381)

- **PR #45381**: (gtmanfred) fix module.run docs @ 2018-01-11 18:02:38 UTC
  - f77a3e9cd4 Merge pull request #45381 from gtmanfred/module.run
  - 230e899192 fix module.run docs

- **ISSUE #43995**: (dragonpaw) Using zmq built with --enable-draft breaks Salt (refs: #45368)

- **PR #45368**: (DmitryKuzmenko) Fixes to work with pyzmq with --enable-drafts @ 2018-01-11 17:53:16 UTC
  - 8efd29fdd9 Merge pull request #45368 from DSRCorporation/bugs/zmq_draft
  - 7622e355cf Minor: removed a stale comment.
  - 00f31bf9b5 Fixes to work with pyzmq with --enable-drafts

- **PR #45371**: (rallytime) Back-port #45158 to 2017.7 @ 2018-01-11 17:51:38 UTC
  - PR #45158: (terminalmage) Fix integration.modules.test_state.StateModuleTest.test_exclude (refs: #45371)
  - 22c3efda06 Merge pull request #45371 from rallytime/bp-45158
  - 3565bc2bf2 Don't use include-test SLS in orch tests
  - 8bc17e0d7a Fix integration.modules.test_state.StateModuleTest.test_exclude

- **PR #45387**: (renner) Set SHELL environment variable @ 2018-01-11 16:23:21 UTC
  - PR #40630: (mateiw) develop: SUSE specific changes to salt-api.service (refs: #45387)
  - PR #40620: (mateiw) SUSE specific changes to salt-api.service (refs: #40630, #45387)
  - 3a0e2de995 Merge pull request #45387 from renner/patch-2
  - 530ddd2d29 Set SHELL environment variable

- **PR #45388**: (terminalmage) Fix loader error in 2017.7 tests @ 2018-01-11 16:13:53 UTC
  - dcf98a2260 Merge pull request #45388 from terminalmage/fix-test-loader-error
  - 5473c085d9 Fix loader error in 2017.7 tests
• PR #45382: (terminalmage) Skip flaky test on 2017.7 branch @ 2018-01-11 14:23:05 UTC
  – d15f9e1020 Merge pull request #45382 from terminalmage/salt-jenkins-686
  – ff309db6c Skip flaky test on 2017.7 branch
• PR #45369: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2018-01-10 22:14:05 UTC
  – dbe21b2c0d Merge pull request #45369 from rallytime/merge-2017.7
  – f6e091df8 Merge branch '2016.11' into '2017.7'
    * 0959ae4ea3 Merge pull request #45327 from lomeroe/bp-44861_2016.11
      - 784139f734 Check for values other than 0 or 1
    * a6db5f95f0 Merge pull request #45268 from damon-atkins/2016.11_win_pkg_pkg_install_latest
      - 325a9f0f66 Update 2016.11.9.rst
      - 4da9200b9c Update 2016.11.9.rst
      - 126aee36ac Update 2016.11.9.rst
      - 1c01967943 Update 2016.11.9.rst
      - a0d89882b8 Fix pkg.install packagename version=latest i.e. if on an old version upgrade to the latest
• PR #45379: (rhoths) Minor spelling/grammar fixes in the highstate returner documentation @ 2018-01-10 20:09:52 UTC
  – 55979b3a48 Merge pull request #45379 from rhoths/rhoths-doc-highstate-1
  – a6bd492c2d Merge pull request #45383 from rhoths/doc-highstate-2
• PR #45358: (UtahDave) gate the minion data cache refresh events. @ 2018-01-10 17:21:05 UTC
  – PR #45299: (garethgreenaway) [2017.7] config gate auth_events (refs: #45358)
  – 541e59fa75 Merge pull request #45358 from UtahDave/gate_data_cache_refresh
  – 379b6cd23e should be self, not salt
  – a82e158f2d gate the minion data cache refresh events.
• PR #45297: (Ch3LL) Allow macosx service state tests to check for pid return @ 2018-01-09 20:47:24 UTC
  – fb87010461 Merge pull request #45297 from Ch3LL/mac_service_state
  – 4e569b5802 Allow macosx service state tests to check for pid return
• PR #45351: (dmurphy18) Update debbuild to explicitly include source code for Debian, Ubuntu @ 2018-01-09 17:21:51 UTC
  – beedf6e815 Merge pull request #45351 from dmurphy18/upd_debbuild
  – 478dc70092 Update debbuild flags
• PR #45299: (garethgreenaway) [2017.7] config gate auth_events (refs: #45358) @ 2018-01-09 15:00:30 UTC
  – 66da9b47bc Merge pull request #45299 from garethgreenaway/config_gate_auth_events
  – 9a15ec3430 Updating versionadded string. Fixing typo.
  – ede3dc078 Adding in documention for auth_events configuration option
  – 3ee4eabff Fixed small typo
  – 6a28bdcc9 Adding some code to config gate if auth_events are sent
• **PR #44856**: (Ch3LL) Add state.running ssh integration test @ 2018-01-08 21:40:50 UTC
  - 8d04c2b3d4 Merge pull request #44856 from Ch3LL/running_test
  - 9a35a73711 add time limit to while loop
  - aeb5f4e248 Add state.running ssh integration test

• **ISSUE saltstack/salt-jenkins#675**: (rallytime) [2017.7] unit.states.test_file.TestFileState.test_directory is failing on Fedora 27 and CentOS 6 (refs: #45295)

• **PR #45295**: (gtmanfred) test directory that doesn’t exist @ 2018-01-08 20:59:53 UTC
  - d0e5e70277 Merge pull request #45295 from gtmanfred/test_directory
  - e6178fe6d4 Merge branch '2017.7' into test_directory
  - 24114e91c1 test was different slightly on 2017.7
  - d20fc93625 test directory that doesn’t exist

• **ISSUE saltstack/salt-jenkins#678**: (rallytime) [2017.7] Proxy Minion Tests for Py3 are failing (refs: #45302)

• **PR #45302**: (gtmanfred) fix proxy tests for py3 on 2017.7 @ 2018-01-08 17:41:58 UTC
  - f49b204b75 Merge pull request #45302 from gtmanfred/proxyp3
  - b295ec0429 make dummy proxy module py3 compatible
  - 8736e21f65 fix starting proxy minion on py3
  - e2824a7253 fix py3 tests

• **PR #45279**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2018-01-08 17:26:49 UTC
  - eea7158e82 Merge pull request #45279 from rallytime/merge-2017.7
  - 8025b14584 Merge branch '2016.11' into '2017.7'
    - 1c5e905b61 Merge pull request #45256 from rallytime/bp-45034
      - 68f971b38f Apply test fixes from #45034 to parsers_test.py
      - 9454236694 Fix for pidfile removal logging

• **PR #44853**: (gtmanfred) remove not from vault utils @ 2018-01-05 17:43:18 UTC
  - dab4a8ceff3 Merge pull request #44853 from gtmanfred/vault
  - bfee1cede9 set role for loading minion config
  - c5af2e5048 if utils is not loaded, load it
  - 6a5e0f9ac1 remove not from vault utils

• **PR #45277**: (rallytime) Back-port #45025 to 2017.7 @ 2018-01-05 15:35:53 UTC
  - PR #45025: (steverweber) Fix pillar include merge order (refs: #45277)
  - f09d0e5fd8 Merge pull request #45277 from rallytime/bp-45025
  - 942c14bb29 pillar body overrides includes
  - 1152202fde fix pillar includes from merging over the current sls defines

• **PR #45276**: (rallytime) Back-port #45260 to 2017.7 @ 2018-01-05 14:45:40 UTC
  - PR #45260: (gtmanfred) Make some kitchen-salt tests blue (refs: #45276)
  - fc84f1104f Merge pull request #45276 from rallytime/bp-45260
- 9ab1af738f switch kitchen-salt to use rsync transport to preserve symlinks
- c98ed472e fix up symlinks

**ISSUE #43340:** (syphernl) Upgrading Salt via Salt results in dying minions and broken dpkg (refs: #45255)

**PR #45255:** (rallytime) Back-port #44427 to 2017.7 @ 2018-01-04 21:46:17 UTC
  - PR #44427: (samodid) use KillMode=process for salt-minion.service (refs: #45255)
  - ff9880c498 Merge pull request #45255 from rallytime/bp-44427
  - 6ceafbbf3a use KillMode=process for salt-minion.service

**ISSUE #23454:** (HontoNoRoger) SLS rendering error with Salt-SSH (pydsl) (refs: #45251)

**PR #45251:** (forksaber) Fix #23454: make pydsl work with salt-ssh @ 2018-01-04 21:33:09 UTC
  - e715e6063f Merge pull request #45251 from forksaber/salt-ssh-pydsl
  - b3660d5190 [#23454] make pydsl work with salt-ssh

**PR #45254:** (Ch3LL) Add darwin value for ssh grain items tests on MacOSX @ 2018-01-04 21:31:35 UTC
  - 2934b60d53 Merge pull request #45254 from Ch3LL/fix_mac_grain_ssh
  - b4b59b88cd remove platform from salt.utils call for 2017.7
  - 85e853a63d Add darwin value for ssh grain items tests on MacOSX

**PR #45153:** (twangboy) Fix win_dacl problems with SIDs @ 2018-01-04 21:01:48 UTC
  - af2d880303 Merge pull request #45135 from twangboy/win_fix_dacl
  - b31e08946a Merge branch '2017.7' into win_fix_dacl
  - 35a4175f10 Fix win_dacl problems with SIDs

**ISSUE #43806:** (Ch3LL) Add spm man Test to Auto Test Suite (refs: #44930)

**PR #44930:** (frogunder) man_spm_test @ 2018-01-04 20:58:02 UTC
  - d0a3770035 Merge pull request #44930 from frogunder/man_spm
  - 48e6953e1f fix_string_error
  - c9fa4ed2a7 man_spm_test

**PR #45259:** (Ch3LL) Fix MacOSX Service Status Check and integration test @ 2018-01-04 14:25:01 UTC
  - 543eebf411 Merge pull request #45259 from Ch3LL/fix-mac-service-test
  - 74e66ed60ea Fix MacOSX Service Status Check and integration test

**PR #45263:** (sumeetisp) Updating python version for 2017.7 @ 2018-01-04 14:16:26 UTC
  - bbd1872a7 Merge pull request #45263 from sumeetisp/2017.7
  - e3a5ee3a08 Merge branch '2017.7' into 2017.7
  - 71ae9a3bc Merge pull request #1 from sumeetisp/sumeetisp-python-version
    * 1b4806e2b9 Updating python version

**PR #45244:** (twangboy) Fix search/replace in Py3 @ 2018-01-04 14:02:22 UTC
  - d4e61197be Merge pull request #45244 from twangboy/win_fix_portable.py
  - e3a8279c01 Get path to python binary based on executable
  - 03aec37040 Fix search/replace in Py3
• **PR #45233**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2018-01-03 15:34:00 UTC
  - eba360870a Merge pull request #45233 from rallytime/merge-2017.7
  - a3d251b2cd Merge branch ’2016.11’ into ’2017.7’
    * b75f50afe3 Merge pull request #45235 from rallytime/bp-45209
      * 2d0a9bf7e enable UsePAM for ssh tests
  - 5d9a1e91e9 Merge branch ’2016.11’ into ’2017.7’
    * 3ab962b01a Merge pull request #44965 from gtmanfred/2016.11
      * a5d8a6340e check if VALUE is a string_type
    * 40fb30f63f Merge pull request #45232 from rasathus/2016.11
      * 7a2bd8f49b Merge branch ’2016.11’ into 2016.11
      * de53c45c29 Backport #27160 to 2016.11
• **PR #45175**: (amendlik) Pkg uptodate @ 2018-01-02 17:38:36 UTC
  - 693cc807e8 Merge pull request #45175 from amendlik/pkg-uptodate
  - 4f514a29a7 Merge branch ’2017.7’ into pkg-uptodate
• **PR #45226**: (gtmanfred) Update kitchen to use runtests verifier on 2017.7 @ 2017-12-31 18:13:28 UTC
  - 1b3f5ba1be Merge pull request #45226 from gtmanfred/2017.7
  - 4f3b089e0e fix copying back
  - f56f062a6a download xml for junit
  - 7cc342a5d6 use new runtests verifier
• **PR #45221**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-12-30 18:08:29 UTC
  - 7d3a6cbc65 Merge pull request #45221 from rallytime/merge-2017.7
  - 508599e159 Merge branch ’2016.11’ into ’2017.7’
  - 707ef55175 Merge pull request #45161 from lomeroe/bp-44944_2016.11
    * 0a4c6b5a83 remove references to six.unichr
    * f3196d795d lint fixes for static regexes
    * 11b637d108 lint fixes
    * c14d6282ad do not decode registry.pol file wholesale, but instead decode individual elements of the file
  - 6f52034ec0 Merge pull request #45199 from gtmanfred/status
    * fb07f9ea7d status.pid returns pid ids not process names
• **ISSUE #45176**: (thuhak) osquery execution module does’t work with attrs parameter (refs: #45204)
• **PR #45204**: (garethgreenaway) [2017.7] Fixes to osquery module & addition of unit tests @ 2017-12-30 13:25:38 UTC
  - abed378981 Merge pull request #45204 from garethgreenaway/45176_fixes_to_osquery_module
  - dc933e9e24 Fixing typo
  - d834bd1b6f Fixing some minor lint issues.
  - 4738205154 Fixing a bug when attributes are passed to various osquery module functions.
- 6684334d9 Update states.pkg for Python3 compatibility
- 2a7d76ad6e Fail pkg.uptodate if expected packages are not upgraded
- 29ef67bac2 Test pkg.uptodate with failed upgrades
- 23ab93353b Produce changes dict for pkg.uptodate dry-run mode
- 7c67ec39d9 Add tests for pkg.uptodate state

**PR #45203:** (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-12-29 01:11:03 UTC
  - 5991d8ca15 Merge pull request #45203 from rallytime/merge-2017.7
  - 430c913c8c Merge branch '2016.11' into '2017.7'
    - d3381e27d0 Merge pull request #45118 from garethgreenaway/44728_nodegroups_seq
      - 0ff811de70 Swapping import to be the old path for 2016.11
      - b3e2f388f5 Fix to allow nodegroups to include sequences
    - f969aca3a3 Merge pull request #45127 from twangboy/win_fix_pkg
      - 14639739f2 Fix issue with 1641 return code
    - de357b39f0 Merge pull request #45137 from twangboy/win_fix_reg_tests
      - b6f4ef8d73 Catch correct error type in list_keys and list_values
    - 0aa1662731 Merge pull request #45130 from rallytime/api-groups
      - 2dcc8d845 Resolve groups for salt api
    - 7dc3cc4641 Merge pull request #4514 from twangboy/win_fix_pam
      - cf5eae1f77 Move pam library load to try/except block

**PR #45201:** (rallytime) [2017.7] Check for running on python3 before decoding bytes @ 2017-12-28 22:59:14 UTC
  - PR #45090: (angeloudy) fix TypeError in python 3 (refs: #45201)
  - 882267314f Merge pull request #45201 from rallytime/fix-jinja-template-test-failure
  - b4af3bdf8 Check for running on python3 before decoding bytes

**PR #45200:** (rallytime) [2017.7] Fix docstring integration test failure @ 2017-12-28 22:58:34 UTC
  - PR #44552: (Da-Juan) pip_state: Check if available upgrades fulfill version requirements. (refs: #45200)
  - 2e18398f12 Merge pull request #45200 from rallytime/fix-docstring-test-failure
  - a26d4795bd [2017.7] Fix docstring integration test failure

**PR #45186:** (rallytime) Back-port #44922 to 2017.7 @ 2017-12-28 19:02:51 UTC
  - PR #44922: (dincamihai) Fix salt-master for old psutil (refs: #45186)
  - 67d97303b5 Merge pull request #45186 from rallytime/bp-44922
  - 6970fe8103 Fix salt-master for old psutil

**PR #44624:** (eliasp) Fix Traceback when using the service.enabled state on non-booted systems @ 2017-12-28 10:58:43 UTC
  - 30d7f7257a Merge pull request #44624 from eliasp/fix-upstart-utmp-exception
  - 43d44e051a Do not blindly assume presence of either /var/run/utmp or /run/utmp, none of both might be available (e.g. on non-booted systems).
• **PR #45183**: (twangboy) Add libnacl dependency @ 2017-12-27 22:08:32 UTC
  - 3832e7b227 Merge pull request #45183 from twangboy/win_add_libnacl_2017.7
  - b46845888d Add libnacl dependency

• **ISSUE #44928**: (rcallphin) Duplicating master token when no match for Minion policy (Vault Module) (refs: #44966)

• **PR #44966**: (rcallphin) Fix bug with vault runner creating token on empty policy @ 2017-12-22 20:30:37 UTC
  - fbbf33574e Merge pull request #44966 from rcallphin/fix-bug-vault-empty-policy
  - 7f9327ab760 Lint: Remove extra whitespace
  - 04a86a5e9d Merge branch '2017.7' into fix-bug-vault-empty-policy
  - 5be463bb46 Merge branch '2017.7' into fix-bug-vault-empty-policy
  - 48d9c3674e Fix bug with vault runner creating token on empty policy

• **PR #44552**: (Da-Juan) pip_state: Check if available upgrades fulfill version requirements. (refs: #45200) @ 2017-12-22 19:25:17 UTC
  - 487207f61d Merge pull request #44552 from Da-Juan/avoid_unneeded_pip_install
  - 49a6a8f02e Merge branch '2017.7' into avoid_unneeded_pip_install
  - 3a86e2493d pip_state: Check if available upgrades fulfill version requirements
  - 62252d74d9 pip_state: Compare versions using pkg_resources.parse_version
  - 5219ab974c Add list_all_versions function to pip module

• **PR #45090**: (angeloudy) fix TypeError in python 3 (refs: #45201) @ 2017-12-22 18:11:13 UTC
  - 5ae26f0c09 Merge pull request #45090 from angeloudy/2017.7
  - cf11f8984 Merge branch '2017.7' into 2017.7
  - 177fd18671 fix TypeError in python 3

• **ISSUE #44315**: (whytewolf) cmd.** cwd does not escape spaces. 2017.7.2 (refs: #45134)

• **PR #45134**: (garethgreenaway) [2017.7] fix to cmd.script for cwd with space @ 2017-12-22 15:31:24 UTC
  - a1946730a9 Merge pull request #45134 from garethgreenaway/44315_cmd_script_cwd_with_space
  - 48eafe3206 Adding some tests to tests cmd.script with cwd
  - 8dfdeb71b08 Adding _cmd_quote to handle cases when the current working directory for cmd.script might have a space in it.

• **PR #44964**: (Giandom) added-highstate-output-to-slack-engine @ 2017-12-21 21:32:01 UTC
  - f41adfc913 Merge pull request #44964 from Giandom/2017.7-added-highstate-output-to-slack-engine
  - 4526c158f1 added-highstate-output-to-slack-engine
  - 573a0a4143 added-highstate-output-to-sack-engine
  - 9a6e03ce6e added-highstate-output-to-slack-engine

• **PR #45124**: (gtmanfred) enable using kitchen-salt with ec2 on 2017.7 @ 2017-12-21 19:11:27 UTC
  - b49ee97938 Merge pull request #45124 from gtmanfred/2017.7
  - d0586013eb fix pylint
  - 59e2e56d13 chmod the xml files before trying to copy

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**30.2. Previous Releases**

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**2283**
- a5c1410e23 catch IOError when copying xml files back
- 23bd38ad66 enable using kitchen-salt on ec2

- PR #45087: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-12-20 22:24:51 UTC
  - 42e894570d Merge pull request #45087 from rallytime/merge-2017.7
  - fe81e2d39a Merge branch '2016.11' into '2017.7'
    * 7e128e8f15 Merge pull request #45100 from rallytime/bp-45070
      - 0db46dab9 add clouds modules to index
    * bf93f339d Merge pull request #45098 from rallytime/bp-45092
      - 80b6dd813 Fix integration.states.test_pip.PipStateTest.test_pip_installed_weird_install
  - 4f21a2bbfd Merge branch '2016.11' into '2017.7'
    * 324bd4058 Merge pull request #44078 from rossengeorgiev/fix-41044
      - a81a6fe23c fix #41044; allow for date param to be 0
    * 48a59761df Merge pull request #44970 from rallytime/update-bootstrap-script
      - b2c8057427 Update bootstrap script to latest release: 2017.12.13
    * 637fdaed58 Merge pull request #45069 from rallytime/bp-45040
      - a4438e1605 Installation Fails on headless machines.
    * 4d66d40381 Merge pull request #44969 from rallytime/bp-41305
      - 5c4bee43dc correct accept_vpc_peering_connection
    * 10de468f13 Merge pull request #45031 from terminalmage/fix-mysql-returner
      - 8ec7870c1f Fix invalid exception class in mysql returner
  - 7e1740620f Merge pull request #44972 from terminalmage/bp-44958
    * a416bf0112 No need to manually do connect_pub, use listen=True in run_job
    * 3ec004bd2e Fix a race condition in manage runner
  - 33f7e239e7 Merge pull request #44385 from gtmanfred/schedule
    * 9e15c38da2 add comma
    * 855d933cb7 schedule should be a dict

- PR #45112: (Ch3LL) Fix spm big file build test to check /tmp @ 2017-12-20 22:09:21 UTC
  - 9550e742ac Merge pull request #45112 from Ch3LL/fix-arch
  - 1bd7110a14 Fix spm big file build test to check /tmp

- ISSUE #44303: (mwerickso) boto3_route53 module times out on retries (refs: #44976)

- PR #45068: (rallytime) Back-port #44976 to 2017.7 @ 2017-12-20 16:31:22 UTC
  - PR #44976: (tkwilliams) Fix bad variable name in boto3_route53 module - resolves #44303 (refs: #45068)
  - 71f9c7ee49 Merge pull request #45068 from rallytime/bp-44976
  - 0ca0f37805 44303 - resolves #44303

- ISSUE #44961: (golmaal) The archive tar function fails to untar file when dest argument is passed (refs: #44983)

- PR #45099: (rallytime) Back-port #44983 to 2017.7 @ 2017-12-20 14:41:22 UTC
- **PR #44983**: (golmaal) Ref:44961 - Modified archive.tar to add dest at the end of the tar cmd (refs: #45099)
- 54a33c0e1d Merge pull request #45099 from rallytime/bp-44983
- 23361de82a Ref:44961 - Modified archive.tar to add dest argument at the end of the tar cmd.

- **ISSUE #43533** (Ch3LL) Add status.pid Test to Auto Test Suite (refs: #44650)
- **PR #44650**: (frogunder) add status.pid test @ 2017-12-19 16:21:09 UTC
  - e0d7b330fa Merge pull request #44650 from frogunder/status
  - 904c0da893 Merge branch '2017.7' into status
  - 619bd2be1e fix lint error
  - d406cb07a3 add status.pid test

- **ISSUE #44516** (doesitblend) Windows PY3 Minion Returns UTF16 UnicodeError (refs: #45161, #44944)
- **PR #44944**: (lomeroe) win_lgpo registry.pol encoding updates (refs: #45161) @ 2017-12-19 14:42:49 UTC
  - 422d8b8f1b Merge pull request #44944 from lomeroe/update_regpol_encoding
  - 07d04c7bc7 lint fixes for static regexes
  - d17c46ce41 lint fixes
  - ab8e431729 do not decode registry.pol file wholesale, but instead decode individual elements of the file

- **PR #44938**: (The-Loeki) Libcloud dns fixes @ 2017-12-18 15:47:18 UTC
  - d9a4b9681e Merge pull request #44938 from The-Loeki/libcloud_dns_fixes
  - 276e8828ae libcloud_dns: pylint fix
  - c994423286 Merge branch '2017.7' into libcloud_dns_fixes

- **PR #44951**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-12-16 13:16:24 UTC
  - 5137be01ec Merge pull request #44951 from rallytime/merge-2017.7
  - a0d2dd2069 Lint fix
  - 9db4179462 Merge branch '2016.11' into '2017.7'
    * 68d901b12c Merge pull request #44770 from cruscio/2016.11
      - e262bf441 Fix minion ping_interval documentation
    * d4ab55ec47 Merge pull request #44335 from gtmanfred/2016.11
      - 3f1268d67f fix patching for python 2.6
      - 1d0b5b32 Merge branch '2016.11' into 2016.11
      - f02b02032d Merge pull request #4 from terminalmage/pr-44335
      - b4eb1527a6 Add test for PR 44335
      - a30af3252e add docker-ce to docker subtype grains check

- **PR #44995**: (twangboy) Fix unit.modules.test_file for Windows @ 2017-12-15 17:05:49 UTC
  - 698b04779e Merge pull request #44995 from twangboy/win_fix_atomicfile
  - 8316481944 Comment the salt import
  - fe340c877 Set owner properly on Windows
2286 Chapter 30. Release Notes

- **ISSUE #44934**: (vernondcole) `http.wait_for_successful_query` does not pause for documented intervals (refs: #44968)
- **PR #44968**: (gtmanfred) fix `http.wait_for_state` @ 2017-12-14 20:06:01 UTC
  - 2e1a57b9bc Merge pull request #44968 from gtmanfred/http
  - ca6936f6eb fix `http.wait_for_state`
    - c72db283d5 `libcloud_dns`: Further fixes to state output, pylint fixes
    - e9bb23b11 Merge branch '2017.7' into `libcloud_dns_fixes`
- **ISSUE #44811**: (xuhcc) `rbenv.installed` fails when rbenv installed globally (refs: #44900)
- **PR #44900**: (xuhcc) Fix `TypeError` during rbenv ruby installation when rbenv is not found @ 2017-12-14 17:37:14 UTC
  - c4f0894689 Merge pull request #44900 from xuhcc/rbenv-ret-fix
  - fdd8310c31 Merge branch '2017.7' into rbenv-ret-fix
  - bfd0972d25 Fix `TypeError` during rbenv ruby installation when rbenv is not found
- **PR #44974**: (twangboy) Skip `test_log_created` on Windows @ 2017-12-14 13:59:25 UTC
  - f0c2cf3cecc Merge pull request #44974 from twangboy/win_skip_test_parsers
  - 40665d7b08 Skip `test_log_created` on Windows
- **ISSUE #44820**: (msteed) Custom returner breaks manage runner (refs: #44958)
- **PR #44958**: (terminalmage) Fix a race condition in manage runner (refs: #44972) @ 2017-12-13 15:20:36 UTC
  - dad2d723ca Merge pull request #44958 from terminalmage/issue44820
  - ef749abf6 No need to manually do `connect_pub`, use `listen=True` in `run_job`
  - 2ac70cfab5 Fix a race condition in manage runner
- **PR #44956**: (terminalmage) Avoid traceback when bogus value in pidfile @ 2017-12-13 14:30:12 UTC
  - db58345abb Merge pull request #44956 from terminalmage/fix-get_pidfile
  - d66f5a98d7 Avoid traceback when bogus value in pidfile
- **ISSUE #44932**: (knine) ACLs Not Completely Verified (refs: #44945)
- **PR #44945**: (gtmanfred) Fix handling of effective acls @ 2017-12-12 21:49:34 UTC
  - e8e3b3c8ff Merge pull request #44945 from gtmanfred/2017.7
  - 66b7557515 add test for effective acls
  - 0ff52a93dd use last entry in acl
- **PR #44942**: (rallytime) Update README with SaltConf18 info @ 2017-12-12 21:47:23 UTC
  - 47dc7b7a5f Merge pull request #44942 from rallytime/readme-saltconf-update
  - d1317c44e2 Update README with SaltConf18 info
- **ISSUE #44665**: (mvivaldi) Documentation of `saltrenders` Jinja (refs: #44943, #44895)
- **PR #44943**: (mvivaldi) Fix for the Jinja documentation @ 2017-12-12 20:20:41 UTC
  - 7572982419 Merge pull request #44943 from mvivaldi/filters-doc
  - d23ac4eabc Fix for the Jinja documentation
- **ISSUE #43417**: (damon-atkins) `win_pkg`: `pkg.install` and `pkg.remove` general issues (refs: #44832, #43708)
- **PR #44832**: (damon-atkins) win_pkg: Merge full copy of 2016.11 with many fixes and improvements to 2017.7 @ 2017-12-12 18:30:06 UTC
  - 465cacad83 Merge pull request #44832 from damon-atkins/2017.7_replace_with_newer_2016.11_win_pkg
  - a4f0b41ba2 Should be a smaller change set since recent update from 2016.11
  - 69534b201 Merge branch `2017.7_replace_with_newer_2016.11_win_pkg` of github.com:damon-atkins/salt into 2017.7_replace_with_newer_2016.11_win_pkg
    - 843e204582 Merge branch `2017.7` into 2017.7_replace_with_newer_2016.11_win_pkg
  - 4b60b1ec84 Merge remote branch 'refs/remotes/upstream/2017.7' into 2017.7_replace_with_newer_2016.11_win_pkg
  - b46f818a57 Raise a PR to fix 2016 issues committed here, fixed issues with merge.
  - 32ef1e12ae Merge branch '2017.7' into 2017.7_replace_with_newer_2016.11_win_pkg
  - 494835c3f2 I backported develop and applied a long list of fixes to 2016.11 this brings these fixes into 2017.7 - Software was not always being removed, general if & was in the string or msi was downloaded to uninstall the software - pkg.list_upgrades failed. Added support for 'latest' and 'Not Found' for version_cmp() to fix this. - output fixes - pkg.list_available no longer forces a pkg.refresh_db this is no longer required, as by default it will update if older than 6 hours - cmd /s /c is prefixed for all commands i.e. installs and removes. - cmd are now strings, instead of a list when using cmd.run. As windows only supports strings. And the ” were being broken
  - 3475d3fa01 add missing parenthis to keep integration with python3
  - adf38ca3fe add missing parenthis to keep integration with python3

- **PR #44754**: (twangboy) Fix inet_pton for Windows on Py3 @ 2017-12-12 14:04:20 UTC
  - a811a92b17 Merge pull request #44754 from twangboy/win_fix_inet_pton
  - 25a20109fe Merge branch '2017.7' into win_fix_inet_pton
  - 849b99eb34 Merge branch '2017.7' into win_fix_inet_pton
  - df1e6a202b Use salt.ext.six
  - 5ac8112585 Use six to ensure unicode value
  - 9b5d8c421b Handle unicode values

- **PR #44931**: (pkruk) add missing parenthis to keep integration with python3 @ 2017-12-12 13:49:39 UTC
  - 53b34e243d Merge pull request #44931 from pkruk/fix-missing-parenthis
  - b1ed739b44 Merge branch '2017.7' into fix-missing-parenthis
  - 4f1b1f12d2 Merge branch 'fix-missing-parenthis' of https://github.com/pkruk/salt into fix-missing-parenthis
    - 3475d3fa01 add missing parenthis to keep integration with python3
    - adf38ca3fe add missing parenthis to keep integration with python3
    - a68d5943a libcloud_dns: copy args before deleting from them

- **PR #44891**: (twangboy) Fix issue with unsafe path in Windows jenkins tests @ 2017-12-11 21:10:43 UTC
  - ba6146250a Merge pull request #44891 from twangboy/win_fix_verify
  - 7232579167 Allow test suite file_roots as a safe path

- **PR #44921**: (Ch3LL) Add test to ensure log files are created @ 2017-12-11 18:24:16 UTC
  - 85160fd297 Merge pull request #44921 from Ch3LL/log_test
- 3bb58f577 skip salt-key log creation test
- 6a379195bc Add test to ensure log files are created

- **PR #44787:** (rallytime) GroupAdd test: Add destructive test decorator to entire class @ 2017-12-11 18:14:18 UTC
- 54d29a01cb Merge pull request #44787 from rallytime/groupadd-destructive-clean
- 817ac002b0 Add destructive test decorator to test class

- **ISSUE #44665:** (mvivaldi) Documentation of salt renders jinja (refs: #44943, #44895)

- **PR #44895:** (mvivaldi) Jinja Filters doc @ 2017-12-11 15:32:07 UTC
- 0292e3612a Merge pull request #44895 from mvivaldi/filters-doc
- 62409d608a Added Escape Filters and Set Theory Filters in jinja documentation

- **PR #44879:** (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-12-10 16:53:44 UTC
- PR #44855: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 (refs: #44879)
- df28f312ac Merge pull request #44879 from rallytime/merge-2017.7
- 23c5a4ca3e Merge branch '2016.11' into '2017.7'
  - bb1f8dceaf Merge pull request #44579 from roaldnefs/fixed-cron-identifier
    - df73a4c051 Merge branch '2016.11' into fixed-cron-identifier
  - af0131fa0f Merge pull request #44852 from damon-atkins/2016.11_win_pkg_type_fix
    - 0e7c1908b0f Lint: Remove extra whitespace
    - 7c7e21f94d Fix spelling typo, and fix backwards compatible minion option for repo location
  - 88c0d66b4e Merge pull request #44794 from terminalmage/issue44365
    - 3eb8b625a6e Remove debugging line
    - 153bf45b03 Fix regression in file.managed when source_hash used with local file
  - c8bb9d5b8a Merge pull request #44738 from rallytime/bump-oxygen-warnings
    - ead3569e1 Bump deprecation warnings from Oxygen to Fluorine
  - 88e3aa8b06d Merge pull request #44741 from gtmanfred/rhip
    - 439d8c8d6e6 if gateway is not specified use iface
    - 3ec4329307 Merge branch '2016.11' into fix-cron-identifier
    - 99fa05a456 Fix for bug in crontatate
    - 97328faeac Fix for bug in cron module

- **PR #44880:** (UtahDave) Determine windows hardware arch correctly @ 2017-12-08 22:24:09 UTC
- 8e14bc3941 Merge pull request #44880 from UtahDave/2017.7/local
- 6eb37ac1ac Merge branch '2017.7' into 2017.7/local

- **PR #44861:** (twangboy) Fix win_lgpo for unknown values (refs: #45327) @ 2017-12-08 18:52:05 UTC
- dc51174670 Merge pull request #44861 from twangboy/win_fix_lgpo_invalid_value
- 89f65e19f9 Check for values other than 0 or 1

- **PR #44621:** (isbm) Bugfix: errors in external pillar causes crash, instead of report of them @ 2017-12-08 18:46:56 UTC
- f5a143f8c5 Merge pull request #44621 from isbm/isbm-bsc1068446-2017.7
- 0d2675c4fe Use variable, instead of direct value
- 1ddc47da0a Add unit test for _get_pillar_errors when external pillar is clean and internal contains errors
- 68480d5dc9 Add unit test for _get_pillar_errors when both external and internal pillars contains errors
- 218a59e93b Add unit test for _get_pillar_errors when external pillar has errors and internal is clean
- 3ce19356c2 Add unit test for _get_pillar_errors when external and internal pillars are clean
- 67034139d9 Fix unit test: wrong error types in side effect
- d9359bca13 Bugfix: unit test mistakenly expects pillar errors as a string, while it is a list
- 8c2bdc696b Bugfix: do not pull '_errors' from unchecked objects
- d5e30999c7 Remove unused variable (no exception, within the try/finally block)
- aad668d559 Fix and clarify docstring.
- c2c47e4e71 Rename function from ambiguous name
- 265de8e61c Bugfix the logic according to the exact described purpose of the function.
  - dae96aa5c Determine windows hardware arch correctly

- **PR #43379**: (twangboy) Fix file.managed on Windows with test=True @ 2017-12-07 21:10:43 UTC
  - abe089ad54 Merge pull request #43379 from twangboy/win_fix_file.managed
  - edcd581ca5 Merge branch '2017.7' into win_fix_file.managed
  - a27bb6993a Fix py3 error
  - 0ff9fa498a Fix test_directory
  - 187bc1e61e Add back the try/finally blocks
  - d7241d004f Fix 2 more tests
  - d5dd42aebc Fix integration tests for Windows
  - d56bc9aae9 Fix typo
  - af5565859e Use file functions for symlink and remove
  - 72ac59c991 Fix some more integration tests for Linux
  - 3f0499cb6c Fix some integration tests
  - a24b964ea5 Fix unit test to handle new Exception
  - e3c3845f73 Raise CommandExecutionError when file doesn't exist
  - 4602f499a2 Remove loader module mixin, add linux paths
  - 99b27c037f Add tests to avoid future regression
  - 5c215edc8c2 Fix documentation formatting
  - 6a4e77e4b9 Return empty or unmodified dict on file not found

- **ISSUE #44565**: (arthurlogilab) NameError: global name '__jid_event__' is not defined when running a runner in the scheduler (refs: #44570)

- **PR #44570**: (gtmanfred) Include client mixin globals in scheduler for runner modules @ 2017-12-07 20:23:33 UTC
  - cf4cbcd340 Merge pull request #44570 from gtmanfred/2017.7
- 7b17f9f63c Merge branch '2017.7' into 2017.7

- **PR #44494**: (skizunov) Fix broken `beacons_before_connect` feature @ 2017-12-07 18:24:49 UTC
  - **PR #38289**: (skizunov) Add config options for running beacons/scheduler before connect (refs: #44494)
  - febb913743 Merge pull request #44494 from skizunov/develop2
  - 7adcfb8ec Merge branch '2017.7' into develop2

- **ISSUE #44298**: (skjaro) ipset state check problem (refs: #44356)
- **ISSUE #39552**: (Xiami2012) ipset.check new implementation by @lingonl has countless critical bugs (refs: #44356)

- **PR #44512**: (rallytime) Back-port #44356 to 2017.7 @ 2017-12-07 14:44:50 UTC
  - **PR #44356**: (skjaro) Fix ipset state with multiple entries and subtypes separated with comma (refs: #44512)
  - 284a817565 Merge pull request #44512 from rallytime/bp-44356
  - 6f92c71834 Merge branch '2017.7' into bp-44356
  - 9a325146df Fix lint violation
  - 5aac729855 Fix check multiple entries with subtypes separated with comma

- **PR #44748**: (twangboy) Fix auto login support for OSX @ 2017-12-07 14:22:23 UTC
  - 74ee7ce541 Merge pull request #44748 from twangboy/osx_fix_auto_login
  - 068e463870 Fix lint, add integration tests
  - 3df8869f7 Fix lint, add gtmanfreds change
  - 16cb24614f Add kcpassword functionality

- **PR #44842**: (twangboy) Win fix lgpo unicode on Py3 issue @ 2017-12-07 14:21:14 UTC
  - b60ca174c Merge pull request #44842 from twangboy/win_fix_lgpo
  - efe77999d1 Gate log.debug statement behind successful pop
  - 1c9e1c7cd1 Fix py3 issue

- **PR #44843**: (twangboy) Fix 2 typos in lgpo module @ 2017-12-06 17:56:44 UTC
  - bb58e2f0c0 Merge pull request #44843 from twangboy/win_fix_lgpo_typo
  - c8f93e6dd7 Fix 2 types, shorten line lengths for spellchecking

- **PR #44827**: (mz-bmcqueen) add more clone options to virtualbox and add better dhcp handling @ 2017-12-06 15:02:23 UTC
  - d6c37ea19c Merge pull request #44827 from mz-bmcqueen/2017.7
  - 4ead301b7 Merge branch '2017.7' into 2017.7
  - b7ce154014 Merge branch '2017.7' of https://github.com/mz-bmcqueen/salt into 2017.7
    * 2f80f431b3 Merge branch '2017.7' into 2017.7
    - c2018c9021 fix pylint complaints
    - c38f74261 add more clone options to virtualbox and add better dhcp handling

- **PR #44824**: (Ch3LL) Add spm -y and -f arg integration tests @ 2017-12-05 21:49:32 UTC
  - 019169ed61 Merge pull request #44824 from Ch3LL/spm_args
- d8f81d2e4d fix pylint
- 61ac5cf157 Add spm -y and -f arg integration tests

- **PR #44742**: (Ch3LL) Add salt-cloud action rename integration test @ 2017-12-05 17:44:50 UTC
  - 59b930668c Merge pull request #44742 from Ch3LL/cloud_action_test
  - 951d09ea2f remove unnecessary try/except block
  - c329ced7ee Add salt-cloud action rename integration test

- **ISSUE #42676**: (mind-code) Changes in Pillar defined Beacons only apply after Minion restart (refs: #44771)

- **PR #44771**: (garethgreenaway) [2017.7] Back porting #44071 @ 2017-12-05 17:16:06 UTC
  - **PR #44071**: (garethgreenaway) [develop] Various fixes to beacons (refs: #44771)
  - 10442d9211 Merge pull request #44771 from garethgreenaway/42676_backport_44071
  - ec2a8b2032 Merge branch '2017.7' into 42676_backport_44071
  - 180971203e Updating minion to respond to list_available events for beacons
  - db6fcee62 Adding list_available which is used by the add function to verify that a becaon exists.
  - e9e0318bc6 Backporting fixes related to having beacons in pillar from #44071

- **PR #44784**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-12-05 17:13:49 UTC
  - **PR #44732**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 (refs: #44784)
  - 23d151b40a Merge pull request #44784 from rallytime/merge-2017.7-1
  - 3d9ea4c4bd Lint: Remove extra empty lines at end of files
  - 239f3511bf Merge branch '2016.11' into '2017.7'
    - 97e0cf569c Merge pull request #44699 from jfindlay/attr_file
      - 9e5a40ea7c Merge branch '2016.11' into attr_file
      - 5c34607f6c utils/files remove temp file upon move failure
    - 7434e0afdf Merge pull request #44714 from rallytime/fix-44556
      - 1bbe1aeb2b Allow --static option to display state runs with highstate output
    - 998d714ee7 Merge pull request #44517 from whytewolf/publish_port_doc_missing
      - 4b5855283a missed one place where i didnt chanbge master_port from my copy to publish_port
      - e4610bae5 update doc to have publish port
    - 6169b52749 Merge pull request #41279 from Ch3LL/add_grain_tests
      - 1b64f15692 Merge branch '2016.11' into add_grain_tests
    - dc6de050a9 Merge pull request #44563 from creideiki/pgjsonb-timestamps-44544
      - 231e412ca4 Merge branch '2016.11' into pgjsonb-timestamps-44544
    - 4369df020b Merge pull request #44602 from rallytime/fix-44601
      - ff303fd60 Handle timeout_monitor/TimeoutError issues for new versions of CherryPy
    - 4a4756fc37 Merge pull request #44604 from lorengordon/doc-exclude
      - c4a6c40eb3 Documents the exclude argument in state execution module

**30.2. Previous Releases**
- 15c445e6b9 Send Unix timestamps to database in pgjsonb
- 095f1b7d7a Merge branch '2016.11' into add_grain_tests
* 91d46d4cfc Merge pull request #44434 from whytwolf/1837
  - d148e39dda change from md to rst for code reference
  - 955e305bda fix bad english, as requested by cachedout
  - 7256fcc1c9 update note to take into account grains_cache
  - 7a2981585e Merge branch '2016.11' into 1837
  - aca0405b26 add a note that describes grain rebuilding on restart and refresh
  - 9e4adb422e mock socket.getaddrinfo
  - 78a07e30f4 add more fqdn tests and remove some of the mocking
  - 5dfb4144ce add ipv6 in opts
  - eabc1b4f9c Add fqdn and dns core grain tests
* a3bd99317f Merge pull request #44321 from gvengel/fix-file-line-diff-output
  - 69a50204a6 Add newline for lint.
  - ef7b6b881 Fixed issue with file.line on Windows running Python 2.
  - 8f89c99fa5 Fix FileModuleTest setUp and tearDown to work on Windows.
  - 3ac5391f5f Namespace missing functions for file.line on Windows.
  - b28b075b9 Fixed test to work on Windows.
  - 5a5a2dd026 Added integration test for issue #41474
  - 2d7315f1a Fix file.line diff formatting.
* 9ca563718d Merge pull request #43708 from damon-atkins/2016.11_43417_Backport_and_Fixes
  - 04d03ea6b8 Updated comment
  - 1dd565e585 Merge remote branch 'upstream/2016.11' into 2016.11_43417_Backport_and_Fixes
  - dd48ba2616 Merge remote branch 'upstream/2016.11' into 2016.11_43417_Backport_and_Fixes
  - a0d08598bf dco fix
  - 9467899fc6 Merge remote branch 'upstream/2016.11' into 2016.11_43417_Backport_and_Fixes
  - 6dc180fd0e dco fixes
  - 2496a42ea4 lint fix
  - 2e937f8e19 Merge remote branch 'upstream/2016.11' into 2016.11_43417_Backport_and_Fixes
  - c9c8e48a4d all remove/install commands are passed to cmd.exe /s /c and commands are passed as strings to cmdmod
  - 350244bd93 typo in comments and doc strings.
  - ec31f5a9bd 2017.11/develop version() was ignoring saltenv setting.
  - b314549a32 Backport of devlop to 2016.11 with additional bug fixes
* 68ea22188e Merge pull request #44477 from rallytime/bp-44424
  * 4a9f8dce96 Fix #44423: Handle index=None and index=0 distinctly
* 2c89050a24 Merge pull request #44483 from terminalmage/issue44034
  * a9db8beceea salt-call: account for instances where __pillar__ is empty
* b5c2028680 Merge pull request #44489 from whytewolf/1956_log-granular-levels
  * 9cdeb4e903 update log-granular-levels to describe what they are filtering on
* ea07f9c54c Merge pull request #44193 from twangboy/win_fix_reg
  * 4dd6df9d Remove unused import (lint)
  * f7502436bd Fix various issues
  * 221e6e3b91 make salt.utils.to_unicode return none when passed none
  * ce41acc788 Fix many issues with reg.py
  * 4a19df177f Use six.text_type instead of str
  * 1b12acd303 Check type before casting
  * 03fa37b445 Cast vdata to its proper type
* ed8da2450b Merge pull request #43863 from nicholasmhughes/fix-atomicfile-permission-copy
  * ea852ec53d remove index use with stat module attributes
  * dbbe0e917 fixes #38452 atomicfile only copies mode and not user/group perms

  `PR #44788: (kris-anderson) Example yaml of influxdb_user state @ 2017-12-04 14:28:45 UTC`
  * 4643a112e7 Merge pull request #44788 from kris-anderson/example-yaml-of-influxdb-user-state
  * afd23d058c converted yaml example to use 2 spaces
  * 29e410c1ea added a code-block example of how the yaml should be formatted

  `ISSUE #42713: (boltronics) 2017.7.0 master upgrade breaks mine data on non-glob matching on minions (refs: #44735)`

  `PR #44735: (gracinet) Backported issue #42713 to 2017.7 @ 2017-12-04 01:43:23 UTC`
  * 4ebac09f60 Merge pull request #44735 from gracinet/42713_backport_2017.7
  * 6806d83314 Merge branch '2017.7' into 42713_backport_2017.7
  * fb586c6dce Backported issue #42713 to 2017.7

  `PR #44766: (twangboy) Fix unit.utils.test_process for Windows @ 2017-12-02 13:15:53 UTC`
  * 06ce7b7328 Merge pull request #44766 from twangboy/win_fix_test_process
  * a5737e8fc3 Fix lint errors
  * be96de09cc Fix pickling error by decorating

  `ISSUE #44083: (ari) timezone.system fails when /etc/localtime is missing on FreeBSD (refs: #44605)`

  `PR #44716: (rallytime) Back-port #44605 to 2017.7 @ 2017-12-01 23:12:24 UTC`
  * PR #44605: (campbellmc) Add handling for FreeBSD in timezone.zone_compare (refs: #44716)
  * f8b8a8966d Merge pull request #44716 from rallytime/bp-44605
  * 9d43221422 Correct indentation

30.2. Previous Releases
- d6e28bed1 Add handling for FreeBSD in method zone_compare to avoid exception when /etc/ localtime file does is absent. This is valid configuration on FreeBSD and represents UTC.

- ISSUE #41869: (mirceaulinic) Thorium: unable to execute runners (refs: #44781)

- PR #44781: (mirceaulinic) Correct the thorium runner @ 2017-12-01 22:55:52 UTC
  - 8ed6287762 Merge pull request #44781 from cloudflare/thorium-fix-41869
  - 83c73a69cb Instance the Runner class instead of the RunnerClient as we’re running on the Master
  - b72b7c5402 Correct the thorium runner

- PR #44466: (twangboy) Fix unit.modules.test_disk for Windows @ 2017-12-01 22:31:42 UTC
  - 52596be102 Merge pull request #44466 from twangboy/win_fix_test_disk
  - 5615862f23 Fix some lint
  - 627d5ab0c9 Mock salt.utils.which
  - e5a96fe00f Skip test_fstype on Windows

- ISSUE #42763: (xuhcc) acme.cert state falsely reports about renewed certificate (refs: #44667)

- PR #44719: (rallytime) Back-port #44667 to 2017.7 @ 2017-12-01 15:20:49 UTC
  - PR #44667: (oarmstrong) Fix acme.cert to run certbot non-interactively (refs: #44719)
  - b9ad4bb2ad Merge pull request #44719 from rallytime/bp-44667
  - 3d85a260c4 Fix acme.cert to run certbot non-interactively

- ISSUE #44744: (brmzkw) roster_defaults breaks salt-ssh globbing (refs: #44747)

- PR #44747: (gtmanfred) use a copy so roster_defaults doesn't mangle @ 2017-12-01 15:13:48 UTC
  - d23192e492 Merge pull request #44747 from gtmanfred/roster_defaults
  - 91141ed8f add unit test
  - eefc719c use a copy so roster_defaults doesn't mangle

- ISSUE #44694: (thuhak) state module at.absent doesn't work (refs: #44717)

- PR #44717: (garethgreenaway) [2017.7] Fixes to at module @ 2017-12-01 14:37:05 UTC
  - 20f20ad9e1 Merge pull request #44717 from garethgreenaway/44694_at_absent_failing_to_find_jobs
  - 1f2b3c5f46 Merge branch '2017.7' into 44694_at_absent_failing_to_find_jobs
  - 3bb385b44e removing debugging logging
  - 7f0ff5a8b0 When passing IDs on the command line convert them all the strings for later comparision.
  - 99e436add4 When looking for job ids to remove based on the tag_name the comparision was comparing an INT to a STR, so the correct job id was not being returned.

- ISSUE #44136: (dupsatou) KeyError: ‘runas’ after updating to latest salt in yum repo. (refs: #44695)

- PR #44695: (gtmanfred) pop None for runas and runas_password @ 2017-12-01 14:35:01 UTC
  - 6e61aa787f Merge pull request #44695 from gtmanfred/pop
  - 0eb90b6f7 Merge branch '2017.7' into pop

- PR #44725: (whytwolf) document note suggesting systemctl-run --scope with cmd.run_bg @ 2017-11-30 19:18:06 UTC
  - 20391c54c0 Merge pull request #44725 from whytwolf/1919_cmd.run_no_daemons
• ISSUE #42300: (mirceaulinic) Grains state doesn’t work (fine) with proxy minions (refs: #44760)
• ISSUE #42074: (mirceaulinic) How to configure static grains for proxy minions (refs: #44549)
• PR #44760: (mirceaulinic) Fix the grains.setvals execution function when working with proxy minions @ 2017-11-30 18:27:02 UTC
  – PR #44549: (mirceaulinic) Allow proxy minions to load static grains (refs: #44760)
  – 85451ae977 Merge pull request #44760 from cloudflare/px-grains-set-42300
  – 655139d01c Different path to the static grains file when running under a proxy minion
  – 3ee8d8c6d3 Dummy proxy: catch EOFError instead of IOError
• ISSUE #44583: (creideiki) Using splay in cron schedule throws exception "unsupported operand type(s) for +: 'NoneType' and 'int'" (refs: #44640)
• PR #44640: (vutny) Fix #44583: splay with cron-like scheduled jobs @ 2017-11-30 15:30:41 UTC
  – 06fb80b69c Merge pull request #44640 from vutny/fix-cron-schedule-splay
  – d1f247e49e Add basic unit tests for schedule util eval func
  – 6ff8e75ac6 Fix #44583: splay with cron-like scheduled jobs
• PR #44712: (Ch3LL) Add pillar ssh integration tests @ 2017-11-30 15:29:33 UTC
  – e5a1401b82 Merge pull request #44712 from Ch3LL/ssh_pillar_items
  – 97ec066ea0 Merge branch ‘2017.7’ into ssh_pillar_items
  – c7f5af1274 Add pillar ssh integration tests
• PR #44763: (mirceaulinic) Just a small improvement to the Thorium documentation @ 2017-11-30 14:38:03 UTC
  – 2e1c946990 Merge pull request #44763 from cloudflare/thorium-doc
  – f8d9dd0b9a Add thorium_roots configuration example
  – 4610f4e62 thorium_roots not thorium_roots_dir
• PR #44531: (mirceaulinic) Add deprecation notes for the NAPALM native templates @ 2017-11-30 14:18:56 UTC
  – 8ba2df1ea0 Merge pull request #44531 from cloudflare/deprecate-napalm-tpl
  – b46277d824 Add deprecation notes for the NAPALM native templates
• PR #44737: (twangboy) Skip unit.transport.test_ipc for Windows @ 2017-11-29 19:18:21 UTC
  – 7bd48282e Merge pull request #44737 from twangboy/win_skip_test_ipc
  – 4e0359b603 Skip IPC transport tests in Windows, not supported
• PR #44629: (Ch3LL) Add masterless state.highstate integration test @ 2017-11-29 19:05:23 UTC
  – c5206113ce Merge pull request #44629 from Ch3LL/high_masterless
  – 977421b261 Change check to the state id
  – 9c8c53ed55 Add masterless state.highstate integration test
• PR #44613: (Ch3LL) Add pillar.items test for masterless @ 2017-11-29 14:43:11 UTC
  – 2dc9e5c42a Merge pull request #44613 from Ch3LL/pillar_masterless
  – 2c2e1e2332 Merge branch ‘2017.7’ into pillar_masterless
  – 69134e83ca Change order of local kwarg in run_call method

30.2. Previous Releases
- b3b5ecc6ff Add pillar.items test for masterless

- **PR #44659**: (Ch3LL) Add state.sls_id to ssh wrapper and tests @ 2017-11-29 14:41:47 UTC
  - cc05481026 Merge pull request #44659 from Ch3LL/ssh_sls_id
  - 04b5a3dd4e Add state.sls_id to ssh wrapper and tests

- **PR #44698**: (Ch3LL) Add salt-ssh mine.get integration test @ 2017-11-28 22:15:29 UTC
  - 642e0d1e11 Merge pull request #44698 from Ch3LL/mine_ssh
  - f6a72acf3e Merge branch '2017.7' into mine_ssh
  - 9e67babf85 Add teardown to remove ssh dir
  - f90bf7653 Add salt-ssh mine.get integration test

- **PR #44697**: (Ch3LL) Sort the show_top results for test_state_show_top test @ 2017-11-28 20:35:41 UTC
  - 5d82df5667 Merge pull request #44697 from Ch3LL/show_top_test
  - 974db59dc1 convert the assert to a union set instead
  - add4c4cfe Sort the show_top results for test_state_show_top test

- **PR #44608**: (Ch3LL) Add jinja to ssh sls test file @ 2017-11-27 22:00:28 UTC
  - f2f6817e86 Merge pull request #44608 from Ch3LL/ssh_jinja
  - dfe69b551d Merge branch '2017.7' into ssh_jinja
  - ca97517795 Add jinja to ssh sls test file

- **ISSUE #33957**: (ghost) grains.setval doesn't setval if set in /etc/salt/minion (refs: #44663)

- **PR #44663**: (whytwowolf) Update notes around grains topic, and salt.modules.grains and salt.state.grains @ 2017-11-27 21:33:38 UTC
  - 04b97bcfad Merge pull request #44663 from whytwowolf/ZD1777_ensure_understanding_of_minion_config_over_grains_file
  - c9122e4b85 fixed pylint error, and updated description on at the top the the module and state.
  - 7fb208b5ad Update note in topics/grains to reflect that not all grains are ignored. only those set in the minion config

- **PR #44332**: (mirceaaulinic) Improve the net.load_config execution function @ 2017-11-27 21:22:18 UTC
  - 364dee6e6ac Merge pull request #44332 from cloudflare/improve-net-load
  - cd0bac78e6 Merge branch '2017.7' into improve-net-load
  - 6d86f19a74 Disable pylint warning
  - 3a0945e3d Merge pull request #11 from tonybaloney/gh_44332_clone
    - 88ef9f18fc ignore lint error on import
    - 25427d845e convert key iterator to list as python 3 wont index an iterator
  - bce50154e5 Merge branch '2017.7' into improve-net-load
  - ba4a62769c Fix trailing spaces
  - 0a47a7acb1 Merge pull request #10 from tonybaloney/gh_44332_clone
    - ba0280e727 linting updates
    - 78b90f3d0c add remaining tests
    - 38c4e5791 add tests for all the getters
- f3d2d1aaa Merge pull request #9 from tonybaloney/gh_44332_clone
  - c63222358b update tests with correct assertions and mock methods on device instance
  - b69c559c52 fix kwargs typo
- edea76d3f3 Improve the net.load_config function

- PR #44664: (mvivaldi) Patch 1 @ 2017-11-27 21:17:20 UTC
  - b6a1ed06b8 Merge pull request #44664 from mvivaldi/patch-1
  - 4551999ec7 Update jinja.py
  - ae13d57307 Update file.py

- ISSUE #42074: (mirceaulinic) How to configure static grains for proxy minions (refs: #44549)

- PR #44549: (mirceaulinic) Allow proxy minions to load static grains (refs: #44760) @ 2017-11-27 20:57:09 UTC
  - 9ea4ee1479 Merge pull request #44549 from cloudflare/fix-proxy-grains
  - 7b03574ab6 Merge branch '2017.7' into fix-proxy-grains
  - 032017ae44 Add doc note regarding static grains on proxy minions
  - 509d1a83f2 Allow proxy minions to load static grains

- PR #44572: (Ch3LL) Add watch_in integration test @ 2017-11-27 20:52:31 UTC
  - 5ec7ea0b5 Merge pull request #44572 from Ch3LL/watchin_test
  - 0a54584dd8 Merge branch '2017.7' into watchin_test
  - 898f28e639 Merge branch '2017.7' into watchin_test
  - 3df0f936ed remove iter for watch_in failure test
  - ac437dd90 add order check and remove iter
  - 5f2b45434e Add watch_in integration test
    - c6733ac1ee pop None

- PR #44616: (Ch3LL) Add Non Base Environment salt:// source integration test @ 2017-11-22 16:13:54 UTC
  - d6cccf4bb3 Merge pull request #44616 from Ch3LL/nonbase_test
  - 80b71652e3 Merge branch '2017.7' into nonbase_test
  - c9b33432e Add Non Base Environment salt:// source integration test

- PR #44617: (Ch3LL) Add ssh thin_dir integration test @ 2017-11-22 16:12:51 UTC
  - 3ace504c8c Merge pull request #44617 from Ch3LL/thindir_ssh
  - 071a1bd65b Merge branch '2017.7' into thindir_ssh

- PR #44625: (Ch3LL) Add salt-key -d integration test @ 2017-11-22 03:15:23 UTC
  - 2cd618999b Merge pull request #44625 from Ch3LL/delete_key_test
  - 443de1c16b Merge branch '2017.7' into delete_key_test

- ISSUE #44601: (rallytime) CherryPy 12.0 removed support for "engine.timeout_monitor.on" config option (refs: #44602)

- PR #44614: (rallytime) [2017.7] Move PR #44602 forward to 2017.7 @ 2017-11-21 21:21:06 UTC
  - PR #44602: (rallytime) Handle timeout_monitor attribute error for new versions of CherryPy (refs: #44614)
- 4f30e845ee Merge pull request #44614 from rallytime/44602-2017.7
- 628f015c1b Move TimeoutError check lower down in exception list
- d26df5e4 Handle timeout_monitor/TimeoutError issues for new versions of CherryPy
- 359a59dd64 Add salt-key -d integration test
- 74ededafa7 Add ssh thin_dir integration test
  * 4d0806e28c Merge branch '2017.7' into develop2
  * 4d0d023115 Fix broken beacons_before_connect feature
    - 98536110d9 Merge branch '2017.7' into 2017.7

- PR #44571: (rallytime) Back-port #43822 to 2017.7 @ 2017-11-20 19:01:26 UTC
  - PR #43822: (chnrxn) check_result: Correctly check the __extend__ state. (refs: #44571)
  - 136b9e3bc4 Merge pull request #44571 from rallytime/bp-43822
  - f81b61f2d check_result: Correctly check the __extend__ state.

- PR #44588: (rallytime) Add documentation about logging before modules are loaded @ 2017-11-20 18:43:18 UTC
  - PR #44576: (rallytime) Remove logging from top of napalm util file (refs: #44588)
  - PR #44439: (mirceaulinic) Adapt napalm modules to the new library structure (refs: #44576)
  - bea7f65291 Merge pull request #44588 from rallytime/logging-in-virtual-funcs
  - 90d1cb221d Add documentation about logging before modules are loaded

- PR #44513: (rallytime) Back-port #44472 to 2017.7 @ 2017-11-20 16:09:02 UTC
  - PR #44472: (mephi42) nova: fix endpoint URL determination in _v3_setup() (refs: #44513)
  - a8044b73c3 Merge pull request #44513 from rallytime/bp-44472
  - 6e00e415d3 nova: fix endpoint URL determination in _v3_setup()

- PR #44596: (roaldnefs) Fixed Mattermost module documentation @ 2017-11-19 23:30:53 UTC
  - f55b9daa63 Merge pull request #44596 from roaldnefs/fix-mattermost-doc
  - 549f4806ce Add documentation in Mattermost module

- PR #44528: (tkwilliams) INFRA-5978 - fix for https://github.com/saltstack/salt/issues/44290 @ 2017-11-17 17:35:44 UTC
  - f8a42b5ab1 Merge pull request #44528 from bodhi-space/infra5978
  - ba1d57f5eb Merge branch '2017.7' into infra5978
  - 021692b6c9 INFRA-5978 - pylint / whitespace fix
  - c2210aaf7c INFRA-5978 - fix for https://github.com/saltstack/salt/issues/44290

- PR #44537: (Ch3LL) Add multiple salt-ssh state integration tests @ 2017-11-17 17:17:48 UTC
  - 7f2dd0382c Merge pull request #44537 from Ch3LL/ssh_highlow
  - b98d6f6e24 Add known_hosts_file to salt-ssh opts_pkg in wfuncs
  - 913eedc699 Add multiple salt-ssh state integration tests

- PR #44576: (rallytime) Remove logging from top of napalm util file (refs: #44588) @ 2017-11-17 14:55:13 UTC
  - PR #44439: (mirceaulinic) Adapt napalm modules to the new library structure (refs: #44576)
- 1975fb41bc Merge pull request #44576 from rallytime/remove-napalm-logging
- eb91af999e Remove logging from top of napalm util file

**PR #44575:** (Ch3LL) Add service.running integration state test @ 2017-11-16 22:27:57 UTC
- c2c3048f46 Merge pull request #44575 from Ch3LL/ser_run_test
- 7536150567 Add service.running integration state test

**PR #44518:** (twangboy) Pass root_dir to the win_verify_env function @ 2017-11-16 20:57:49 UTC
- 24bd17a3f3 Merge pull request #44518 from twangboy/win_fix_verify_env
- 47114f03d0 Pass root_dirs to the win_verify_env function
  * 3385f7fa3 fix pylint
  * a2af3cb857 Include client mixin globals in scheduler for runner modules

**PR #44551:** (mirceautilinic) Removes proxy minions false alarms and security risks @ 2017-11-16 15:09:14 UTC
- 1643bb7fd4 Merge pull request #44551 from cloudflare/annoying-tmpnam
- ce188293d Use salt.utils.files.mkstemp() instead
- 6689bd3b2d Dont use dangerous os.tmpnam
- 2d6176b0bc Fix2 proxy minion: clean return, like all the other modules

**ISSUE #30454:** (favoretti) Using yaml serializer inside jinja template results in unicode being prepended by '‼python/unicode' (refs: #30481, #42064, #38554)

**PR #44541:** (terminalmage) Fix test to reflect changes in YAML dumper @ 2017-11-15 13:23:58 UTC
- PR #42064: (The-Loeki) utils.jinja: use utils.yamlvalidator for safe yaml dumping (refs: #44541)
- PR #38554: (multani) Fix YAML deserialization of unicode (refs: #42064)
- PR #30481: (basepi) Add yaml_safe jinja filter (refs: #38554)
- 60083ac27b Merge pull request #44541 from terminalmage/fix-yaml-test
- 5b8f54084b Merge branch ‘2017.7’ into fix-yaml-test

**PR #44538:** (gtmanfred) Fix up some test kitchen stuff @ 2017-11-14 20:36:56 UTC
- 5c123eb551 Merge pull request #44538 from gtmanfred/kitchen
- 3e04d2d44c use kitchen-sync for copying files
- 9bc70f31b back up to 2017.7.1 for kitchen tests
- 3b93aa58b ubuntu 14 and centos 6 should not have py3 tests
- 9581ae8b8d Fix test to reflect changes in YAML dumper

**ISSUE #30454:** (favoretti) Using yaml serializer inside jinja template results in unicode being prepended by '‼python/unicode' (refs: #30481, #42064, #38554)

**PR #42064:** (The-Loeki) utils.jinja: use utils.yamlvalidator for safe yaml dumping (refs: #44541) @ 2017-11-13 19:45:14 UTC
- PR #38554: (multani) Fix YAML deserialization of unicode (refs: #42064)
- PR #30481: (basepi) Add yaml_safe jinja filter (refs: #38554)
- 27a7b607b1 Merge pull request #42064 from The-Loeki/jinja_unicode
- b1cf43c02d Merge branch ‘2017.7’ into jinja_unicode
- 8c2ac58523 Merge branch '2017.7' into jinja_unicode
- 57dc6226a2 Merge branch '2017.7' into jinja_unicode
- 0a8346b585 Merge branch '2017.7' into jinja_unicode
- 393fe061b2 jinja utils: yaml import still necessary
- 3c9130f9f0 utils.jinja: use utils.yaml_dumper for safe yaml dumping

**PR #43692**: (mirceaaulinic) Addressing a bug in the network find runner @ 2017-11-13 19:42:24 UTC
- b1f14c7518 Merge pull request #43692 from cloudflare/fix-net-runner
- 02ff4f38e Merge branch '2017.7' into fix-net-runner
- 4b2f791bd2 Check if addr is short IPv6
- 765504c137 Add all the possible keys to the result

**ISSUE #42393**: (The-Loeki) pillar env ignored with Salt Master pillar_cache: True (refs: #43689)

**ISSUE #36153**: (krcroft) Pillarenv doesn't allow using separate pillar environments (refs: #43689)

**PR #43689**: (The-Loeki) make cached pillars use pillarenv rather than saltenv @ 2017-11-13 19:30:00 UTC
- 1e94a5bd5f Merge pull request #43689 from The-Loeki/cached_pillarenv
- 395c0c424d Merge branch '2017.7' into cached_pillarenv
- 60e001733b make cached pillars use pillarenv rather than saltenv

**PR #43837**: (twangboy) Fix unit.states.test_archive for Windows @ 2017-11-13 19:12:19 UTC
- f9b273a894 Merge pull request #43837 from twangboy/win_unit_test_archive
- 5505a8819a Merge branch '2017.7' into win_unit_test_archive
- 1bf69c3c8 Format patching with statements for easier reading
- ba2f2eb788 Add Erik's changes
- 4e4fe3eb97 Fix unit.states.test_archive for Windows

**PR #44507**: (Ch3LL) Increase sleep timeout for pillar refresh test @ 2017-11-13 18:29:06 UTC
- caa81728a0 Merge pull request #44507 from Ch3LL/pillar_time
- ff4bdddac Increase sleep timeout for pillar refresh test

**PR #44302**: (morganwillcock) Fix traceback and incorrect message when resolving an unresolvable SID @ 2017-11-13 18:19:01 UTC
- cffea5ac71 Merge pull request #44302 from morganwillcock/badsid
- f3af106e33 Merge branch 'badsid' of https://github.com/morganwillcock/salt into badsid
  - 95733fbb3b Merge branch '2017.7' into badsid
  - faccc2d16e Merge branch '2017.7' into badsid
- c7cf5f670 Format pywintypes.error
- 9572aab667 Fix traceback and incorrect message when resolving an unresolvable SID

**PR #44439**: (mirceaaulinic) Adapt napalm modules to the new library structure (refs: #44576) @ 2017-11-13 17:43:24 UTC
- 32fc952000 Merge pull request #44439 from cloudflare/fix-napalm
- f45378af04 Lint: remove extra spaces
- c6a38258a3 Add napalm>2.0.0 note and update URLs
- 52f73835b8 Adapt napalm modules to the new library structure

- **PR #44457**: (twangboy) Remove wmi monkeypatching @ 2017-11-13 17:38:52 UTC
  - ebbe5949eaa Merge pull request #44457 from twangboy/win_remove_wmi_monkeypatching
  - 6c872e95e6 Add back the setup_loader_modules function
  - 20273e3697 No need for setup_loader_modules since we're actually importing wmi
  - 8c107873cd Remove wmi monkeypatching

- **PR #44490**: (Ch3LL) Enable test_deploy ssh test @ 2017-11-13 17:12:48 UTC
  - 1da1a97d7 Merge pull request #44490 from Ch3LL/ssh_ping
  - e952cd6712 Enable test_deploy ssh test

- **PR #44491**: (Ch3LL) Add salt-ssh raw integration tests @ 2017-11-13 15:47:12 UTC
  - 18624d6798 Merge pull request #44491 from Ch3LL/ssh_raw
  - 3dc8673417 change class name to raw
  - 308596ac8d Add salt-ssh raw integration tests

- **PR #44492**: (twangboy) Fix unit.utils.test_cloud for Windows @ 2017-11-13 15:44:31 UTC
  - aa17ba8e Merge pull request #44492 from twangboy/win_skip_mode_check
  - 2f30ad93b1 Skips mode check in Windows

- **PR #44484**: (Ch3LL) Add orchestration tests when target exists or not @ 2017-11-10 19:24:22 UTC
  - 5b95495e75 Merge pull request #44484 from Ch3LL/orch_test
  - f3ec6df76e Add orchestration tests when target exists or not

- **PR #44480**: (Ch3LL) Add integration pillar command line test @ 2017-11-10 19:14:31 UTC
  - 62c42ca6b Merge pull request #44480 from Ch3LL/override_pillar
  - 12fed14d8 Add integration pillar command line test

- **PR #44317**: (Ch3LL) Add state tests and state request system to salt-ssh @ 2017-11-10 18:28:43 UTC
  - cc08ad2edc Merge pull request #44317 from Ch3LL/ssh_test
  - 46bec3bd5e add additional parser argument for ssh integration tests
  - e9231430b5 remove logic similar to cloud/proxy tests
  - c731eb8ea6 add ssh dir to test runner when --ssh-tests set
  - 8089a885c2 add wipe function to other run_ssh method
  - 200b12ae6a change versionadded salt version
  - e3ebbe5eb3 fix comment and variables
  - faef0886a7 Add state tests and state request system to salt-ssh

- **PR #44478**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-11-10 18:00:56 UTC
  - 6669035a30 Merge pull request #44478 from rallytime/merge-2017.7
  - 9fcc2a705 Merge branch ’2016.11’ into ’2017.7’
    - a66cd67d15 Merge pull request #44260 from seanjnkns/issue-39901
· ed8ccf457 #39901: Fix pylint
· 43c81dfdee #39901: Add unit tests
· 613d500876 Merge branch '2016.11' into issue-39901
· b97e8046ca Utilize salt.utils.validate.net and _raise_error_iface
· 6818f3631d Fixes #39901 for RH/CentOS 7

- PR #44444: (twangboy) LGPO: Issue with Maximum Password Age @ 2017-11-10 17:26:53 UTC
  - 60719d0683 Merge pull request #44444 from twangboy/win_lgpo_non_zero
  - de6b394445 Remove unneeded functions
  - ee0914f7e9 Fix some lint, remove unnecessary function
  - d52a7c12db Fix typo in PasswordComplexity policy
  - 44f8f43812 Fix problem where 0 isn't 0
- PR #44467: (twangboy) Fix unit.test_doc for Windows @ 2017-11-10 15:21:58 UTC
  - 4f3a79df07 Merge pull request #44467 from twangboy/win_fix_test_doc
  - 0a9e862bf4 Use regex to split
- PR #44443: (Ch3LL) Add salt-ssh grains.items test @ 2017-11-09 00:42:11 UTC
  - ff4f13877f Merge pull request #44443 from Ch3LL/ssh_grains
  - 5d1a9af4b5 Add salt-ssh grains.items test
- PR #44429: (Ch3LL) Fix orch doc from pillat.get to pillar.get @ 2017-11-07 23:06:38 UTC
  - dcd8d4c90 Merge pull request #44429 from Ch3LL/orch_doc
  - 38ca5520f0 Fix orch doc from pillat.get to pillar.get
- ISSUE #42568: (clallen) Orchestration runner doesn’t populate __pillar__ based on pillarenv (refs: #43817)
- PR #43817: (The-Loeki) Orchestrate runner forces pillarenv and saltenv to None @ 2017-11-07 06:00:16 UTC
  - 62c4adef8 Merge pull request #43817 from The-Loeki/orch-pillarenv
  - 3fd652623c orchestrate runner: retain default envs
- PR #44408: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-11-06 15:53:00 UTC
  - 9e4708b7b9 Merge pull request #44408 from rallytime/merge-2017.7
  - edbbd5f2cb Merge branch '2016.11' into '2017.7'
  - 5e289f42ba Merge pull request #44383 from gtmanfred/2016kitchen
    * b65f4ea4ea switch salt-jenkins over to saltstack
    * cab54e34b5 Merge pull request #44173 from twangboy/win_system_docs
      * 8e1111b413d Fix some of the wording and grammer errors
      * a12bc5ae41 Use google style docstrings
    - 7aaea1d179 Merge pull request #44304 from jfindlay/cron_id
      * cc038c5bec states.cron identifier defaults to name
    - e4dbbd734 Merge pull request #44322 from rossengeorgiev/saltssh-docs-update
      * b18f2e5a6d fix program name and description for --static
• 5b10918f02 updated CLI docs for salt-ssh
  • PR #44358: (The-Loeki) Kubernetes client certificate file usage fix @ 2017-11-03 21:51:27 UTC
    – b11da0d2da Merge pull request #44358 from The-Loeki/kube-client-cert-file
    – 35a8b0bb38 Kubernetes client certificate file usage fix
• PR #44347: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-11-03 21:48:21 UTC
  – 1974e52c06 Merge pull request #44347 from rallytime/merge-2017.7
  – 9bad04b94b Merge branch '2016.11' into '2017.7'
    • 4e6f09e3eb Merge pull request #44345 from gtmanfred/2016kitchen
      – 79b8b2d0bf remove binding
    • 209847c8c2 Merge pull request #44342 from gtmanfred/2016kitchen
      – c50508f0b7 render template files platforms.yml and driver.yml
    • 1be65224cb Merge pull request #44339 from corywright/issue-44336-fix-archive-tar-docs-2016-11
      – 9c1c35a59f Remove leading dash (-) from options in archive.tar documentation
    • beb33daf5 Merge pull request #44295 from HeinleinSupport/issue44272
      – f972715a45 fixes issue #44272
    • e7ca9f8407 Merge pull request #44286 from gtmanfred/2016.11
      – 193e715e37 use our git repo for kitchen-salt
  • PR #44364: (Ch3LL) Include disk size check for test_spm_build_big_file test @ 2017-11-01 13:57:24 UTC
    – aea94a115 Merge pull request #44364 from Ch3LL/fix_size_test
    – 952c6bfea4 Include file size check for test_spm_build_big_file test
• ISSUE #44239: (boltronics) --progress fails when hosts routed via syndic (refs: #44273)
• PR #44273: (DmitryKuzmenko) Workaround progressbar failure if minion is behind syndic. @ 2017-10-31 17:07:17 UTC
  – 609de93767a Merge pull request #44273 from DSRCorporation/bugs/44239_syndic_progress
  – e1a7605623 Workaround progressbar failure if minion is behind syndic.
• PR #44350: (gtmanfred) update salt-jenkins repo to 2017.7 @ 2017-10-30 21:31:30 UTC
  – ee6d6fa58 Merge pull request #44350 from gtmanfred/2017.7
  – cf71e3d9f2 update salt-jenkins repo to 2017.7
• PR #44346: (gtmanfred) remove binding from erb template rendering (2017.7) @ 2017-10-30 20:57:19 UTC
  – d586b3bf97 Merge pull request #44346 from gtmanfred/2017.7
  – bf577c3d8b remove binding
• PR #44343: (gtmanfred) render template files platforms.yml and driver.yml (2017.7) @ 2017-10-30 20:04:22 UTC
  – 547aac6658 Merge pull request #44343 from gtmanfred/2017.7
  – ec24fbc0c2 render template files platforms.yml and driver.yml
• ISSUE #44336: (corywright) Docs for archive.tar should not use leading dash for tar options (refs: #44339, #44338)
• **PR #44338**: (corywright) Remove leading dash from options in archive.tar docs (2017.7 and develop) @ 2017-10-30 18:59:33 UTC
  - 6e2a74c18b Merge pull request #44338 from corywright/issue-44336-fix-archive-tar-docs-2017-7-and newer
  - 49b0abc284 Remove leading dash (-) from options in archive.tar documentation

• **PR #44265**: (Ch3LL) Add service.status integration test @ 2017-10-30 15:00:12 UTC
  - 71923bed97 Merge pull request #44265 from Ch3LL/service_test
  - 716aabc0bf Merge branch '2017.7' into service_test
  - dd5c823210 remove skipif import
  - f92f31cbe remove skipfor docker
  - c13f37ee4 change service name depending on os
  - 980c43ebc9 change skip message check to docker
  - 395557609 change skip if check to docker
  - aa8875a0e2 change service name to docker
  - 654071028b change service to crond
  - 7911b4b3eb Add service.status integration test

• **PR #44294**: (nasenbaer13) Boto asg fixes, Backport of #43858 @ 2017-10-30 14:48:52 UTC
  - PR #43858: (nasenbaer13) Boto_ASG fixes for scaling policy rate limiting and tag conversion (refs: #44294)
  - 8ae9769bfb Merge pull request #44294 from eyj/boto_asg
  - f5ad6aeb70 Debug log added when throttled by API
  - c05d9aced Encode tags as utf-8, retry policy readout

• **PR #44312**: (rallytime) Back-port #44287 to 2017.7 @ 2017-10-30 14:25:35 UTC
  - PR #44287: (jf) Fix utils.files.guess_archive_type to recognize the "tbz" extension as well (refs: #44312)
  - 68a9beb90 Merge pull request #44312 from rallytime/bp-44287
  - 4d02e61f97 Merge branch '2017.7' into bp-44287
  - ba0eaa95e Fix utils.files.guess_archive_type to recognize the "tbz" extension as well (also tidy up list of extensions)

• **ISSUE #44258**: (oarmstrong) docker_container.running recreates containers with multiple links (refs: #44262)

• **PR #44314**: (gtmanfred) update .kitchen.yml to run py3 tests too @ 2017-10-30 14:23:15 UTC
  - 48df79ef77 Merge pull request #44314 from gtmanfred/2017.7
  - 54265676c4 Merge branch '2017.7' into 2017.7
• **PR #44316**: (rallytime) Fix lint failure on 2017.7 branch @ 2017-10-27 18:36:08 UTC
  - dbc5e224e9 Merge pull request #44316 from rallytime/fix-lint
  - 6d2490f6a0 Fix lint failure on 2017.7 branch
  - 39262b625e update .kitchen.yml to run py3 tests too

• **PR #44279**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-10-27 16:17:19 UTC
  - b2b0c770a4 Merge pull request #44279 from rallytime/merge-2017.7
  - 8237f45a46 Add print_function to __future__ import list
  - 055b0701de Lint fix from sloppy merge conflict resolution
  - 1c3cb5c6a4 Merge branch '2016.11' into '2017.7'
    * 8a1ea165af Merge pull request #44259 from gtmanfred/2016.11
      - 56a3ad8f68 fix pylint comments
      - 4add666db1 add comment to Gemfile and move copyartifacts
      - b4c8f7eb57 fix pylint
      - 392fd4f837 try newest salttesting
      - 79251287d0 add logging
      - 38963d5a82 use transport if not set in state_file
      - 10e309a64f which vagrant should go to stderr
      - 9307564de0 fix output columns
      - 2da22f87e1 test opennebula
      - 9f38f16905 add opennebula to Gemfile
      - 7465f9b27a add script for copying back artifacts
      - 255118cfd7 run tests with kitchen
    * 9d6bc8509b Merge pull request #44268 from twangboy/win_fix_lgpo_typo
      - a6a4c10a77 Fix typo
    * 0beb65a283 Merge pull request #44269 from terminalmage/fix-log-message
      - bc9cd65496 Fix log message in salt.utils.gifs
    * 304dd2529d Merge pull request #44160 from gtmanfred/directory
      - a7d3d668f4 missed removing changes in the next test
      - ac0b5ec440 fix test
      - d3d00c3e62 add changes to test return
    * e10395483d Merge pull request #44205 from rallytime/bp-44177
      - b9940f8521 Fixing default redis.host in documentation

• **PR #44291**: (Ch3LL) add saltutil.refresh_pillar test @ 2017-10-27 15:19:43 UTC
  - bd5b9d0aa Merge pull request #44291 from Ch3LL/pillar_test
  - 34e2955445 add saltutil.refresh_pillar test

• **PR #44267**: (twangboy) Fix type and Py3 issues in LGPO module @ 2017-10-27 14:27:50 UTC
- ba17a1c4d0 Merge pull request #44267 from twangboy/win_fix_lgpo
- 5d22d34c8c Use unicode_literals
- 4063697d88 Fix set for Py3
- 8f8c706426 Fix typo

- **PR #44285:** (Ch3LL) add spm integration tests for remove and build @ 2017-10-26 21:20:10 UTC
  - e1670c403d Merge pull request #44285 from Ch3LL/all_spm
  - 1f77f36ea33d add skipif logic for fallocate cmd
  - 03b5c4bc6d add spm integration tests for remove and build

- **PR #44301:** (twangboy) Fix test_pydsl on Windows @ 2017-10-26 21:14:21 UTC
  - 6392896a22 Merge pull request #44301 from twangboy/win_fix_test_pydsl
  - 6db23757bc Fix test_pydsl on Windows

- **PR #44293:** (UtahDave) Fix documentation grammar and spelling errors @ 2017-10-26 13:05:31 UTC
  - 8787402688 Merge pull request #44293 from UtahDave/fix_unittest_docs
  - 9e19648ab4 Fix documentation grammar and spelling errors

- **PR #44248:** (Ch3LL) SPM tests: use _spm_build_files method during test_build setup @ 2017-10-25 19:45:03 UTC
  - 6e33743c1a Merge pull request #44248 from Ch3LL/spm_create_repo
  - 0a387c2ecd Fix pylintr
  - f38f05a93 Add SPM create_repo integration test

- **PR #44253:** (Ch3LL) Add multiple spm integration tests @ 2017-10-25 13:36:03 UTC
  - bd75eb24ca Merge pull request #44253 from Ch3LL/spm_install
  - 9e2e785034 Add spm tests to test runner
  - 4729c3d32b Add multiple spm integration tests

- **PR #44254:** (twangboy) Add unit.test_win_groupadd for Windows @ 2017-10-25 13:33:40 UTC
  - 75ee1ebc50 Merge pull request #44254 from twangboy/win_fix_test_win_groupadd
  - 609361bf48 Fix some lint errors
  - 1f44d8d5ee6 Document helper functions
  - b0caec320e Move _get_all_groups up to the top
  - 7a3ff9387d Move the rest of the tests
  - 5ce14d882c Change how members are retrieved in win_groupadd
  - 6ab82394be Set up mocking

- **PR #44266:** (Ch3LL) Add state, grains and service proxy tests @ 2017-10-25 13:08:50 UTC
  - 4c23fa63bb Merge pull request #44266 from Ch3LL/proxy_tests
  - e5701b472d Add state, grains and service proxy tests

- **ISSUE #43187:** (mirceaaulinic) How to point from an execution module that a certain function failed (refs: #44244)

- **PR #44244:** (mirceaaulinic) Add explicit non-zero retcode to napalm config functions @ 2017-10-24 09:23:40 UTC
- 09ddf00c08 Merge pull request #44167 from garethgreenaway/44140_debian_ip_fixes
  - 5f7555846f When looping through the various pre, post, up and down commands put them into the interface dict using the right internet family variable.
- 9f9e936b52 Merge pull request #43830 from rallytime/bp-43644
  - 12845ae802 Several fixes for RDS DB parameter group management
- 07db6a3d88 Merge pull request #43994 from oeuftete/fix-manage-runner-presence
  - f3980d7d83 Fix manage.present to show lost minions
- a07537e258 Merge pull request #44188 from terminalmage/issue44150
  - 0692f442db yumpkg: Check pkgname instead of name to see if it is a kernel pkg
- 715edc0cea Merge pull request #44158 from rallytime/bp-44089
  - 534fa0b7a Catch on empty Virtualbox network addr #43427
- PR #44208: (twangboy) Fix some lint in PR: 44080 @ 2017-10-20 16:42:02 UTC
  - d7dc2bd0e8 Merge pull request #44208 from twangboy/win_fix_group.present
  - 61e2e9ccda Fix some lint
- PR #43843: (twangboy) Fix unit.states.test_mount for Windows @ 2017-10-20 14:27:25 UTC
  - c6d27ada51 Merge pull request #43843 from twangboy/win_unit_test_mount
  - a862e0bf2d Remove unneeded import
- d78f27466d Fix `unit.state.test_mount` for Windows

- **PR #44111**: (anlutro) Try to correctly parse debian codename from `/etc/os-release` @ 2017-10-19 22:23:26 UTC
  - 372820ea38 Merge pull request #44111 from alprs/fix-deb8-py3-oscodename
  - 1e1e5a3ff6 try to correctly parse debian codename from `/etc/os-release`

- **PR #44187**: (twangboy) Fix pickling errors on Windows @ 2017-10-19 20:36:51 UTC
  - 75136152c1 Merge pull request #44187 from twangboy/win_fix_unit_test_daemons.py
  - 64d2e4f732 Fix pickling errors on Windows

- **ISSUE #44181**: (jonans) Scheduler with multiple when values doesn't run (refs: #44186)

- **PR #44186**: (garethgreenaway) [2017.7] scheduler fixes @ 2017-10-19 20:36:04 UTC
  - 7a89cd8697 Merge pull request #44186 from garethgreenaway/44181_scheduler_multiple_whens
  - 7eeef3b3571 Adding a copy.deepcopy to the for loop that looks for old jobs to avoid stale jobs ending up in the list.

- **PR #43896**: (twangboy) Fix win_lgpo execution module @ 2017-10-19 20:13:18 UTC
  - 1d16ea8b7 Merge pull request #43896 from twangboy/win_fix_lgpo_scom
  - 648d1b8d99 Catch CommandExecutionError
  - 0040082d0a Fix pylint error
  - 91258cd6a8 Fix typo
  - 261d3a347d Put the file.remove in a try/except/else block
  - 020c2a2b85 Fix syntax error
  - d5beec99126 Fix some lint
  - b96186d6d0 Fix INSTALL_LANGUAGE
  - 5471bd521f Fix problem with file handle
  - 5ec58c6200 Use System Install Language as default fallback
  - f9ad446019 Fix win_lgpo execution module

- **PR #44080**: (twangboy) Fix a regression in `group.present` in Windows @ 2017-10-19 20:10:44 UTC
  - 9835b86af Merge pull request #44080 from twangboy/win_fix_group.present
  - 29b80f87 Improve `get.sam.name`
  - ef759a3875 Fix example in function docs for `get.sam.name`
  - 43740c5fed Document 15 character limit
  - 83f36cc2ef Account for 15 character limit in hostname
  - aa278966de Remove *args, pass gid as a keyword
  - 5230ecd7e1 Accept *args

- **PR #44171**: (Ch3LL) Add SPM Build Integration Tests @ 2017-10-19 19:49:14 UTC
  - 5ef124bf2d Merge pull request #44171 from Ch3LL/spm_int
  - cd79e444e remove unneded kwarg
  - 1541376c4f Add spm build test
• PR #44157: (benediktwerner) Added 'versionadded' tags to sensehat modules @ 2017-10-19 14:13:31 UTC
  - 34a843252d Merge pull request #44157 from benediktwerner/2017.7
  - bd825b51cc Changed sensehat versionadded from 2017.7 to 2017.7.0
  - f1d3c5bbcf Added 'versionadded' tags to sensehat modules
• PR #44164: (terminalmage) Fix examples in docker_container.[stopped,absent] docstrings @ 2017-10-19 14:12:37 UTC
  - 1427c72e1e Merge pull request #44164 from terminalmage/fix-docker-docstring
  - 7b46489e33 Fix examples in docker_container.[stopped,absent] docstrings
• PR #44168: (twangboy) Fix unit.test_auth for Windows @ 2017-10-19 14:12:22 UTC
  - 77969c4161 Merge pull request #44168 from twangboy/win_skip_pam_eath
  - bb1d2eb85b Skip tests that are failing on PAM eauth
• PR #44151: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-10-18 16:52:30 UTC
  - 88a776d9d2 Merge pull request #44151 from rallytime/merge-2017.7
  - 6aa8f034a4 Merge branch '2016.11' into '2017.7'
    * 0cd493b691 Merge pull request #44131 from rallytime/bp-44029
      - bebf301976 fixed test addressing issue #43307, disk.format_ to disk.format
      - b4b7a7e2fa addresses issue #43307, disk.format_ to disk.format
    * 3a68e356f8 Merge pull request #44093 from gtmanfred/fix-44087
      - 5455c5053b fix pylint
      - f749c3a2b5 don’t filter if return is not a dict
    * c785d7a847 Merge pull request #44122 from cachedout/gpg_pr_template
      - e41e3d76be Typo fix
      - 37c7980880 Add note about GPG signing to PR template
    * bf90ea1f51 Merge pull request #44124 from rallytime/merge-2016.11
      - 59861291c8 Merge branch '2016.11.8' into '2016.11'
      - 5762e2abe Merge pull request #44028 from rallytime/bp-44011
      - 89e084bda3 Do not allow IDs with null bytes in decoded payloads
      - 206ae23f15 Don’t allow path separators in minion ID
    * 13f3f8a83a Merge pull request #44097 from gtmanfred/openneb
      - c29655b2ce Merge branch '2016.11' into openneb
      - bd2490b149 OpenNebula does not require the template_id to be specified
    * ae34ed9f64 Merge pull request #44110 from roaldnefs/fix-doc-local-returner
      - efd58f7594 Merge branch '2016.11' into fix-doc-local-returner
      - 881f822f2 Format fix code example local returner doc
• ISSUE #43918: (mwerickso) subset argument does not work with saltmod.state (refs: #43933)
• PR #43933: (gtmanfred) if expect_minions is passed use that instead @ 2017-10-18 16:43:39 UTC
- 0b47eb7242 Merge pull request #43933 from gtmanfred/2017.7
- 272dc6ba5 add inline comment about popping expect_minions
- b615ce1762 if expect_minions is passed use that instead

• **PR #44081**: (skizunov) Windows: Fix usage of pkgrepo state @ 2017-10-18 16:16:46 UTC
  - 36da1a7fac Merge pull request #44081 from skizunov/develop3
  - 351d6840b Move strip_uri to salt/utils/pkg/deb.py
  - f54c7a60f0 Windows: Fix usage of pkgrepo state

• **PR #43913**: (twangboy) Fix `unit.templates.test_jinja` for Windows @ 2017-10-17 21:09:05 UTC
  - afca0c591 Merge pull request #43913 from twangboy/win_fix_test_jinja
  - a4e2d8059c Fix `unit.templates.test_jinja` for Windows

• **PR #43917**: (twangboy) Fix `unit.test_pillar` for Windows @ 2017-10-17 21:06:46 UTC
  - fc5754c6a1 Merge pull request #43917 from twangboy/win_unit_test_pillar
  - 00dbba5712 Fix `unit.test_pillar` for Windows

• **PR #44133**: (cachedout) Fix typos in parallel states docs @ 2017-10-17 15:24:19 UTC
  - 6252f82f58 Merge pull request #44133 from cachedout/fix_parallell_docs
  - 8d1c1e21f0 Fix typos in paralell states docs

• **PR #44135**: (timfreund) Insert missing verb in gitfs walkthrough @ 2017-10-17 14:32:13 UTC
  - 0d3f5db867 Merge pull request #44135 from timfreund/insert_missingVerb
  - 957504b75 Fix missing verb in gitfs walkthrough

• **PR #44055**: (nasenbaer13) Activate jid_queue also for SingleMinions to workaround (Backport) @ 2017-10-16 20:14:52 UTC
  - **PR #43860**: (nasenbaer13) Activate jid_queue also for SingleMinions (occurs on reconnect) (refs: #44055)
    - a9700f6061 Merge pull request #44055 from eyj/jid_queue
    - 4bd55b6b6 Merge branch '2017.7' into jid_queue
    - fac622277 Merge branch '2017.7' into jid_queue
    - 2fedec6dd Merge branch '2017.7' into jid_queue
    - 255aa94e64 Activate jid_queue also for SingleMinions to workaround 0mq reconnection issues

• **PR #44125**: (rallytime) [2017.7] Merge forward from 2017.7.2 to 2017.7 @ 2017-10-16 20:02:25 UTC
  - 2fba45cd3f Merge pull request #44125 from rallytime/merge-2017.7
  - c4a4a6b50 Merge branch '2017.7.2' into '2017.7'
    - 5d719a2219 Merge pull request #44027 from rallytime/bp-44012
    - f7824e41f3 Don’t allow path separators in minion ID
    - 44060dc9c1 Do not allow IDs with null bytes in decoded payloads

• **ISSUE #43307**: (marek-knappe) Filesystem creation is failing on newly created LV (refs: #44029)

• **PR #44029**: (msummers42) addresses issue #43307, disk.format_ to disk.format (refs: #44131) @ 2017-10-16 19:59:20 UTC
  - 68974aa74d Merge pull request #44029 from msummers42/2017.7
- 16e1c1dfc8 fixed test addressing issue #43307, disk.format_ to disk.format
- 3d597db51c Merge branch '2017.7' into 2017.7
- 18f0be96a addresses issue #43307, disk.format_ to disk.format

**PR #44079**: (skizunov) opkg: Fix usage with pkgrepo.managed @ 2017-10-16 19:58:13 UTC
- d0bbe65ffa Merge pull request #44079 from skizunov/develop2
- 0614d1af30 Merge branch '2017.7' into develop2
- b6b12fe495 opkg: Fix usage with pkgrepo.managed

**PR #44090**: (pratik705) Fix create_attach_volumes salt-cloud action for gcp @ 2017-10-16 19:04:22 UTC
- 22a8253595 Merge pull request #44090 from pratik705/fixed-create_attach_volumes_salt-cloud_action-GCP
- 3eef334c5 Fixed "create_attach_volumes" salt-cloud action for GCP

**PR #44121**: (benediktwerner) Fixed code snippet in unit testing documentation @ 2017-10-16 18:28:36 UTC
- 888ef5f1a2 Merge pull request #44121 from benediktwerner/2017.7
- 1319c822bd Fixed code snippet in unit testing doc

**PR #44098**: (twangboy) Return multiprocessing queue in LogSetupMock class @ 2017-10-16 18:14:30 UTC
- 9fe94d7843 Merge pull request #44098 from twangboy/win_mock_testparsers
- cc43ca27af Return multiprocessing queue in LogSetupMock class

**PR #44118**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-10-16 17:01:38 UTC
- 0ee04eaf1d Merge pull request #44118 from rallytime/merge-2017.7
- bbec47afbc Merge branch '2016.11' into '2017.7'
  - c960ca32c2 Merge pull request #44092 from techhat/awsunicode
    - bbd9db4d00 One more encoding
    - 0e8b325667 Apparently __salt_system_encoding__ is a thing
    - 1e7211838d Use system encoding
    - 1af21bbe5e Made sure that unicoded data is sent to sha256()
  - d89c317d96 Merge pull request #44021 from whiteinge/cpstats-attribute-error
    - bf14e5f578 Also catch cpstats AttributeError for bad CherryPy release ~5.6.0
  - bbdbae242a Merge pull request #44025 from dayid/lover_typo
    - 385980c21a Merge branch '2016.11' of https://github.com/saltstack/salt into lover_typo
    - 266dc00a23 Typo correction of lover to lower
  - d8f3891a5e Merge pull request #44030 from rallytime/merge-2016.11
    - 53eaf0d75c Merge branch '2016.3' into '2016.11'
    - 64fd839377 Merge pull request #44010 from Ch3LL/2016.3.7_follow_up
    - 9a00302cd8 fix 2016.3.7 release notes merge conflict
    - 63da1214db Do not allow IDs with null bytes in decoded payloads
    - e792581fc Don't allow path separators in minion ID
2312 Chapter 30. Release Notes

- 8aab65c718 fix 2016.3.7 release notes merge conflict
- bd73dcb02c Merge pull request #43977 from Ch3LL/3.8_sec
- 5fb3f56b1 Add Security Notes to 2016.3.8 Release Notes

- **PR #44099**: (twangboy) Skip Master, Minion, and Syndic parser tests @ 2017-10-16 16:07:00 UTC
  - 28fa097b9b Merge pull request #44099 from twangboy/win_skip_test_parsers
  - caf086c05a Skip Master, Minion, and Syndic parser tests

- **PR #44106**: (roaldnefs) Fix mattermost returner documentation @ 2017-10-16 13:12:23 UTC
  - dbf112ead7 Merge pull request #44106 from roaldnefs/fix-doc-mattermost_returner
  - b3761a0401 Fix doc indentation in mattermost_returner

- **PR #44054**: (nasenbaer13) Backport of missing delete_on_termination @ 2017-10-13 15:45:25 UTC
  - PR #43859: (nasenbaer13) Add missing delete_on_termination passthrough. Adapt docs. (refs: #44054)
  - fd2c51b76c Merge pull request #44054 from eyj/boto_lc
  - 34d4629a64 Merge branch '2017.7' into boto_lc
  - 9efd63526a Adapted documentation of delete_on_termination parameter
  - eb2hf047b Add missing delete_on_termination passthrough. Adapt docs.

- **PR #44076**: (Ch3LL) Add spm shell tests @ 2017-10-13 14:32:19 UTC
  - b61ed96268 Merge pull request #44076 from Ch3LL/spm_test
  - d2e91c3bd Add spm shell tests

- **PR #44051**: (twangboy) Fix some documentation formatting issues in the win_dacl state @ 2017-10-12 15:40:17 UTC
  - e38f313ac0 Merge pull request #44051 from twangboy/win_fix_docs_dacl
  - 377d6b6171 Fix some docs in the win_dacl state module

- **PR #44066**: (Ch3LL) Add Known CherryPy Issue to 2017.7.2 Release Notes @ 2017-10-12 15:18:25 UTC
  - a85837d72b Merge pull request #44066 from Ch3LL/cherry_release
  - 8e597fcce9 Add Known CherryPy Issue to 2017.7.2 Release Notes

- **ISSUE #43643**: (doublez13) salt-ssh: multiple targets fails after upgrade to 2017.7 (refs: #43889)

- **ISSUE #43449**: (ecgg) salt-ssh -L with hosts down or unreachable returns wrong results (refs: #43889)

- **PR #43889**: (CorvinM) Fix issue with using roster_defaults with flat or cloud rosters. @ 2017-10-11 23:22:11 UTC
  - fcab77ac7b Merge pull request #43889 from CorvinM/issue43449
  - fefd28d896 Add futureproofing to roster_defaults to support roster dictionary options
  - aeebe76b6f8 Fix issue with using roster_defaults with flat or cloud rosters. fixes #43449 fixes #43643

- **PR #44031**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-10-11 22:03:31 UTC
  - 3ad1c6d1d9 Merge pull request #44031 from rallytime/merge-2017.7
  - 1d4a6c3949 Lint: Fixup undefined variable errors
  - 788ad0609a Merge branch '2016.11' into '2017.7'
    - 0dbf41e79e Merge pull request #44011 from Ch3LL/2016.11.7_follow_up
· c0149101c0 Do not allow IDs with null bytes in decoded payloads
· 19481423dd Don’t allow path separators in minion ID
* d61300df20 Merge pull request #44023 from Ch3LL/11.9rn
· 7f9015eb41 Add 2016.11.9 Release Note File
· 9ff53bf63a Merge pull request #44019 from benediktwerner/2016.11
· bc53598027 Fixed spelling mistake in salt_bootstrap tutorial
· 6c30344824 Added missing tutorial docs to the tutorial index
· 364523f5f8 Merge pull request #43955 from meaksh/2016.11-fix-2291
· a81b78381b Merge branch '2016.11' into 2016.11-fix-2291
· 44bc91bb98 Enable ‘--with-salt-version’ parameter for setup.py script
· fec714b91d Merge pull request #43962 from bobrik/kmod-built-in
· 95ab901553 Require that bindpw be non-empty if auth.ldap.anonymous=False
· 9df3d91d8f Release notes blurb for change to bindpw requirements
· e9dfda2177 Merge pull request #43991 from Ch3LL/3.8_sec_2
· 1977df8462 Add Security Notes to 2016.3.8 Release Notes
· 2346d2691e Merge pull request #43968 from rossengeorgiev/fix-zenoss-prod_state
· 6d31c1ea66 fix zenoss state module not respecting test=true
· 8d56a5ac45 Merge pull request #43776 from Ch3LL/2016.11.8_docs
· f72bc00000 [2016.11] Bump latest and previous versions
· 21b71c3f5f Merge pull request #43976 from Ch3LL/11.8_sec
· f0c3184288 Add Security Notes to 2016.11.8 Release Notes
· 1d5397ab5b Merge pull request #43973 from terminalmage/fix-grains.has_value
· bf45ae666a Fix grains.has_value when value is False
· 9ac3f2ea7b Merge pull request #43888 from rallytime/bp-43841
· 87d676f08a add -n with netstat so we don’t resolve
· f8804c4c08 Merge pull request #43916 from dereckson/fixed-typo-cloud-scaleway
· 15b889a9f4 Fix typo in salt-cloud scaleway documentation

* PR #44045: (isbm) Bugfix: always return a string ”list” on unknown job target type. @ 2017-10-11 21:58:12 UTC
  · 5db1e8c6ca Merge pull request #44045 from isbm/isbm-tgtype-fix-2017-port
  · 471ff35c2f Bugfix: always return a string ”list” on unknown job target type.

* ISSUE #43949: (arthurlogilab) [logger] [sentry] KeyError: ‘SENTRY_PROJECT’ (refs: #43950)

* PR #44026: (rallytime) Back-port #43950 to 2017.7 @ 2017-10-11 15:27:49 UTC
  · PR #43950: (arthurlogilab) [log/sentry] avoid KeyError: ‘SENTRY_PROJECT’ (refs: #44026)
  · 6c8f7fbd5ec Merge pull request #44026 from rallytime/bp-43950
- a37e0bad62 [log/sentry] avoid KeyError: 'SENTRY_PROJECT'

**PR #44012: (Ch3LL) Security Fixes for 2017.7.2 (refs: #44027) @ 2017-10-10 20:04:08 UTC**
- 369ee8a132 Merge pull request #44012 from Ch3LL/2017.7.1_follow_up
- 92e05cf1c0 Don’t allow path separators in minion ID
- 70133a305 Do not allow IDs with null bytes in decoded payloads

**PR #44024: (Ch3LL) Add 2017.7.3 Release Note File @ 2017-10-10 20:03:12 UTC**
- 4fe029a0ab Merge pull request #44024 from Ch3LL/7.3rn
- 027f509368 Add 2017.7.3 Release Note File

**ISSUE #43997: (unthought) gce cloud provider breaks for make_master: True (refs: #43998)**

**PR #43998: (unthought) Fix gce make_master @ 2017-10-10 20:01:25 UTC**
- e484d16817 Merge pull request #43998 from unthought/fixed-gce-make_master
- 6e9f0fa24e Fix GCE provider: #create returns bootstrap result

**ISSUE #44013: (DenisBY) pkgrepo.managed broken in 2017.7.2 (refs: #44016)**

**PR #44016: (terminalmage) Fix on_header callback when not redirecting and no Content-Type present @ 2017-10-10 19:59:24 UTC**
- 82b92d54b3 Merge pull request #44016 from terminalmage/issue44013
- d594b95f92 No need to set a specific encoding if one hasn’t been provided via the headers
- 425ede4b84 Fix on_header callback when not redirecting and no Content-Type present

**PR #43952: (t0fik) add requisites to stateconf (backport #43920) @ 2017-10-10 13:03:31 UTC**
- PR #43920: (t0fik) Added missing requisites to stateconf renderer (refs: #43952)
- bd879eb66e Merge pull request #43952 from jdsieci/2017.7_add_requisites_to_stateconf
- 9994c64670 Merge branch ‘2017.7′ into 2017.7_add_requisites_to_stateconf

**PR #43777: (Ch3LL) [2017.7] Bump latest and previous versions @ 2017-10-09 17:21:57 UTC**
- a4358dfa36 Merge pull request #43777 from Ch3LL/2017.7.2_docs
- 410c624f7a [2017.7] Bump latest and previous versions

**PR #43978: (Ch3LL) Add Security Notes to 2017.7.2 Release Notes @ 2017-10-09 17:20:04 UTC**
- 2a064c1a72 Merge pull request #43978 from Ch3LL/7.2_sec
- 57fd6f7bcb Add Security Notes to 2017.7.2 Release Notes

**PR #43932: (techhat) Don’t try to modify dict while looping through it @ 2017-10-06 21:20:54 UTC**
- d9530e3c52 Merge pull request #43932 from techhat/moddict
- 4a77560646 Don’t try to modify dict while looping through it

**PR #43956: (terminalmage) Fix fileclient’s get_url when redirecting to a redirect @ 2017-10-06 21:19:41 UTC**
- 39893a1dab Merge pull request #43956 from terminalmage/fix-get_url-redirects
- 9a4f8a260f Fix fileclient’s get_url when redirecting to a redirect

**PR #43943: (twangboy) Fix unit.utils.test_utils for Windows @ 2017-10-06 19:35:24 UTC**
- 1baf286719 Merge pull request #43943 from twangboy/win_unit_test_utils
- 254dac7723 Fix `unit.utils.test_utils` for Windows
  * 89200ff28e rebase from 2017.7.2

- **PR #43939**: (terminalmage) Fix typo in log message @ 2017-10-05 23:20:04 UTC
  - a8f1750323 Merge pull request #43939 from terminalmage/fix-typo
  - 29d8cf4f26 Fix typo in log message

- **ISSUE #43909**: (frogunder) state.highstate not working on py3 setup (refs: #43910)

- **ISSUE #43605**: (cruscio) Module.Run: Passed invalid arguments to state.apply: can't serialize dict_keys(['task.create_task']) (refs: #43910)

- **PR #43910**: (terminalmage) Don't put unserializable dict.keys() into state return @ 2017-10-05 20:33:47 UTC
  - 1a718eb1ed Merge pull request #43910 from terminalmage/issue43605
  - 042e092ac8 Don't put unserializable dict.keys() into state return

- **ISSUE #41894**: (DR3EVR8u8c) Salt-cloud can't resize root volume with public ami images (refs: #43907)

- **ISSUE #39257**: (aig787) Using del_root_vol_on_destroy option in salt-cloud gives IndexError (refs: #43907)

- **PR #43927**: (rallytime) Back-port #43907 to 2017.7 @ 2017-10-05 20:10:16 UTC
  - **PR #43907**: (richardsimko) Make sure EBS volume exists before querying (refs: #43927)
  - **PR #33115**: (rbjorklin) Fix override of ec2 volumetype (refs: #43907)
  - a7a59868c8 Merge pull request #43927 from rallytime/bp-43907
  - f6e8ca87f Make sure volume exists before querying

- **PR #43934**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-10-05 20:07:36 UTC
  - 4fcd4709ea Merge pull request #43934 from rallytime/merge-2017.7
  - eca3291e2 Merge branch '2016.11' into '2017.7'
    - 2ab7549d48 Merge pull request #43884 from UtahDave/2016.11local
      - e3b2857285 Merge branch '2016.11' into 2016.11local
    - 4b882d4272 Merge pull request #43869 from terminalmage/issue43522
      - fe28b0d4fb Only join cmd if it's not a string
      - 8c671fd0c1 Update SaltConf banner per Rhett's request
    - a2161efda3 Merge pull request #43707 from terminalmage/issue43373
      - 3ebde1895f Merge branch '2016.11' into issue43373
      - e580ed4c9a Merge branch '2016.11' into issue43373
      - 5b3b9e8af Fix failing unit test
      - f73764481b Add missing support for use/use_in requisites to state.sls_id

- **ISSUE #43658**: (kvnaveen) KeyError: 'as_dict' [DEBUG ] LazyLoaded nested.output (refs: #43886)

- **PR #43886**: (techhat) Fix object_to_dict in azure @ 2017-10-05 19:33:56 UTC
  - 7d174172a0 Merge pull request #43886 from techhat/azuredict
  - 223a1eea83 Fix object_to_dict in azure

- **PR #43899**: (gtmanfred) enable tox for tests @ 2017-10-04 15:08:16 UTC
- 7038248820 Merge pull request #43899 from gtmanfred/2017.7
- 51eca1a6bd enable tox for tests

- **PR #43828:** (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-10-04 13:10:13 UTC
  - a5abe3e1c Merge pull request #43828 from rallytime/merge-2017.7
  - 2ff02e4320 Merge branch '2016.11' into '2017.7'
    - * 85b3aa332a Merge pull request #43807 from terminalmage/issue43522
    - d8708b698 cmdmod: Don't list-ify string commands on Windows
    - * ea8d273c2b Merge pull request #43768 from vutny/fix-pylint-deprecation-warnings
    - f8b3fa9da1 Merge branch '2016.11' into fix-pylint-deprecation-warnings
    - 651ed16ad3 Fix Pylint deprecated option warnings

- **PR #43854:** (keesbos) Map __env__ in git_pillar before sanity checks @ 2017-10-02 20:44:53 UTC
  - **PR #43656:** (keesbos) Git pillar fixes (refs: #43854)
  - 36b0b1174b Merge pull request #43854 from keesbos/2017.7
  - f8b3fa9da1 Map __env__ in git_pillar before sanity checks

- **PR #43847:** (cachedout) Fix to module.run @ 2017-10-02 19:25:03 UTC
  - c81e8457b8 Merge pull request #43847 from cachedout/module_run_compare
  - b11f8c8f29 Merge pull request #17 from terminalmage/pr-43847
    - * 93eaba7c54 Use six.iterkeys() instead of dict.keys()
    - 5d56a03a67 Improve failures for module.run states
  - 71780beb5a Merge branch '2017.7' into module_run_compare

- **ISSUE #43819:** (mephi42) archive.extracted shows the http password in the comment field on failure (refs: #43844)

- **PR #43844:** (garethgreenaway) [2017.7] Changes to states/file.py and states/archived.py @ 2017-10-01 09:08:48 UTC
  - dd01e0ce67 Merge pull request #43844 from garethgreenaway/43819_redact_url_additions
  - c58c72aff9 When using URLs in archive.extracted, on failure the username & password is in the exception. Calling salt.utils.url.redact_http_basic_auth to ensure the credentials are redacted.
    - * f0b985cbb6 Merge branch 'module_run_compare' of ssh://github.com/cachedout/salt into module_run_compare
      - aefc773c2f Merge branch '2017.7' into module_run_compare

- **PR #43840:** (twangboy) Fix unit.states.test_augeas for Windows @ 2017-09-29 21:53:21 UTC
  - 1f52546eab Merge pull request #43840 from twangboy/win_fix_test_augeas
  - fd1dc31de Fix unit.states.test_augeas for Windows

- **ISSUE #43553:** (dafyddj) Vagrant setup (Windows guest) broken on upgrade to 2017.7 (refs: #43801)

- **PR #43801:** (terminalmage) Properly handle UNC paths in salt.utils.path.readlink() @ 2017-09-29 09:58:02 UTC
  - c6fd2cd452 Merge pull request #43801 from terminalmage/issue43553
  - 66e6e89dc7 Properly handle UNC paths in salt.utils.path.readlink()
• **PR #43800**: (Ch3LL) Add note to nitrogen release notes about pip for cent6 @ 2017-09-28 17:36:49 UTC
  - 7304907db6 Merge pull request #43800 from Ch3LL/update_7.0
  - 50779c3b1c Add note to nitrogen release notes about pip for cent6
• **PR #43779**: (twangboy) Fix `unit.modules.test_state` for Windows @ 2017-09-28 14:27:03 UTC
  - 6f687fdceff Merge pull request #43779 from twangboy/win_fix_test_state
  - a64fe75816 Use os agnostic paths
• **PR #43782**: (twangboy) Fix `unit.modules.test_virt` for Windows @ 2017-09-28 14:25:16 UTC
  - db0f569f7a Merge pull request #43782 from twangboy/win_fix_test_virt
  - 7192332758 Fix `unit.modules.test_virt` for Windows
• **PR #43723**: (nicholasmhughes) Fix ini_manage error and change handling @ 2017-09-28 09:52:09 UTC
  - dd4f5c5f1e Merge pull request #43723 from nicholasmhughes/ini_manage-error-handling
  - d68c5c4be0 prevent exception when test=True
  - cfe37916c3 handling changes per section
  - 1c48f6ad5 prevent exception when test=True
• **PR #43781**: (twangboy) Fix `unit.modules.test_status` for Windows @ 2017-09-28 09:06:19 UTC
  - 5e29507c21 Merge pull request #43781 from twangboy/win_fix_test_status
  - 16ae8253c1 Mock which, use os.linesep for cmd.run return
• **PR #43785**: (twangboy) Fix `unit.modules.test_znc` for Windows @ 2017-09-28 08:56:11 UTC
  - 05c78ae649 Merge pull request #43785 from twangboy/win_fix_test_znc
  - 7d90721f6b Merge branch '2017.7' into win_fix_test_znc
  - 228e74c8e3 Fix `unit.modules.test_znc` for Windows
• **PR #43786**: (twangboy) Fix `unit.modules.test_zypper` for Windows @ 2017-09-28 08:51:59 UTC
  - 10dd8491c Merge pull request #43786 from twangboy/win_fix_test_zypper
  - 1c05e37a66 Merge branch '2017.7' into win_fix_test_zypper
  - aafe7aba06 Fix `unit.modules.test_zypper` for Windows
• **PR #43773**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-09-28 08:48:39 UTC
  - 9615ca32d5 Merge pull request #43773 from rallytime/merge-2017.7
  - f7035ed7da Merge branch '2017.7' into merge-2017.7
  - ddef4a722c Merge branch '2016.11' into '2017.7'
    * 1a8cc60bb4 Merge pull request #43772 from gtmanfred/2016.11
      • 01946c60960 dont print Minion not responding with quiet
    * 9dee896fb9 Merge pull request #43747 from rallytime/gpg-verification
      • 7a70de19f4 Merge branch '2016.11' into gpg-verification
      • 23bb4a5d0d Add GPG Verification section to Contributing Docs
• **PR #43784**: (twangboy) Fix `unit.modules.test_win_service` @ 2017-09-28 03:14:39 UTC
  - 9a9cc69d55 Merge pull request #43784 from twangboy/win_fix_test_win_service
- 058e50e530 Fix `unit.modules.test_win_service`

- **PR #43774:** (The-Loeki) typo fix aka what is a 'masterarpi' @ 2017-09-27 18:52:19 UTC
  - 1254da1df5 Merge pull request #43774 from The-Loeki/patch-1
  - 84bbe85e60 typo fix aka what is a 'masterarpi'

- **PR #43732:** (twangboy) Skip `unit.stats.test_mac_packages` on Windows @ 2017-09-27 14:48:08 UTC
  - 3f888753d4 Merge pull request #43732 from twangboy/win_skip_mac_pkg_tests
  - 1c01e06097 Only skip test on Windows
  - ec99a3ce3c Fix lint error
  - 61f8a2f7ff Skip mac specific tests

- **PR #43761:** (Ch3LL) Release Notes for 2017.7.2 @ 2017-09-27 14:34:52 UTC
  - fb86935d99 Merge pull request #43761 from Ch3LL/release_2017.7.2
  - caf5795856 add mac patch notes
  - 3d5fcee9955 Add 2017.7.2 Release Notes

- **PR #43767:** (twangboy) Skip `unit.modules.test_snapper` on Windows @ 2017-09-27 14:10:27 UTC
  - 5ea603cf16 Merge pull request #43767 from twangboy/win_skip_test_snapper
  - b41b9c8378 Skip snapper tests on Windows

- **PR #43759:** (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-09-27 13:30:38 UTC
  - 77c2c7cbf7 Merge pull request #43759 from rallytime/merge-2017.7
  - 120f49f2c4 Merge branch '2016.11' into '2017.7'
    - 1cc3ad1c8d Merge pull request #43733 from terminalmage/issue43729
      - 6e5c99bda0 Allow docker_events engine to work with newer docker-py
    - 5d38be4ff7 Merge pull request #43458 from terminalmage/issue42082
      - 5f90812b12 Fix missing PER_REMOTE_ONLY in cache.clear_git_lock runner
    - 023a563657 Merge pull request #43727 from rallytime/fix-43650
      - babad12d83 Revise "Contributing" docs: merge-forwards/release branches explained!

- **ISSUE #43737:** (syedaali) `salt.loaded.int.module.boto_kinesis.__virtual__() is wrongly returning None`. It should either return `True, False` or a new name. If you're the developer of the module 'boto_kinesis', please fix this. (refs: #43748)

- **PR #43748:** (rallytime) Add message to boto_kinesis modules if boto libs are missing @ 2017-09-27 13:19:33 UTC
  - 5c203df056 Merge pull request #43748 from rallytime/fix-43737
  - 5a2593dbd3 Add message to boto_kinesis modules if boto libs are missing

- **PR #43731:** (twangboy) Fix `unit.beacons.test_status` for Windows @ 2017-09-26 16:25:12 UTC
  - 2581098595 Merge pull request #43731 from twangboy/win_unit_beacons_test_status
  - dc1b36b7e2 Change expected return for Windows

- **PR #43724:** (brejoc) Improved delete_deployment test for kubernetes module @ 2017-09-26 16:19:31 UTC
  - 10f3d47498 Merge pull request #43724 from brejoc/2017.7.kubernetes_delete_test
- 85b0a8c401 Improved delete_deployment test for kubernetes module

**PR #43734:** (twangboy) Fix `unit.modules.test_poudriere` for Windows @ 2017-09-26 14:13:47 UTC
  - 13cc27bdab Merge pull request #43734 from twangboy/win_unit_test_poudriere
  - 922e60fa67 Add os agnostic paths

**PR #43742:** (terminalmage) Fix incorrect value in docstring @ 2017-09-26 13:55:00 UTC
  - 41ae07ca58 Merge pull request #43742 from terminalmage/fix-docstring
  - 553355b1c9 Fix incorrect value in docstring

**PR #41998:** (twangboy) Fix `unit.modules.test_environ` for Windows @ 2017-09-26 12:25:48 UTC
  - d78b9a3294 Merge pull request #41998 from twangboy/win_unit_test_environ
  - d73e44ecf6 Mock with uppercase KEY
  - 048e16883f Use uppercase KEY

**PR #42036:** (twangboy) Fix `unit.modules.test_file` for Windows @ 2017-09-26 12:23:10 UTC
  - 7bb0a3806 Merge pull request #42036 from twangboy/win_unit_test_file
  - 05b3bb4c0 Use with to open temp file
  - 352fe69e35 Clarify the purpose of the for loop
  - b551725de5 Split by Windows and Linux style line endings
  - e20a5539b0 Fix line, use os.sep instead of os.linesep
  - d5f27901e3 Fix additional bytestring issue
  - 716e99c453 Fix py3 bytestring problems
  - 54361057c0 Fix bytestring issues, fix errored tests
  - 9fe83a34a5 Remove old variable declaration
  - 5cf5e921c1 Fix many tests

**PR #43557:** (clan) disable modify yaml constructor @ 2017-09-25 14:03:47 UTC
  - a81d4b8d8d Merge pull request #43557 from clan/yaml
  - 485417c8a7 Merge branch '2017.7' into yaml
  - da1568304 remove modify yaml constructor

**PR #43566:** (damon-atkins) 2017.7 update salt.utils.files.safe_filename_func @ 2017-09-25 13:58:29 UTC
  - b55ee816e8 Merge pull request #43566 from damon-atkins/2017.7_update_safe_filename_func
  - 155405ed7c remove blank line at end of file
  - 9751d499b Merge branch '2017.7' into 2017.7_update_safe_filename_func
  - 3b41b9b7f Merge branch '2017.7' into 2017.7_update_safe_filename_func
  - 4c88e80ef9 Merge branch '2017.7' into 2017.7_update_safe_filename_func
  - 4171d41838 utils.files.safe_filename_func add support to override the os default directory separator

**ISSUE #43711:** (wedge-jarrad) fccontext_get_policy emits command error if policy doesn't exist (refs: #43712)

**PR #43712:** (wedge-jarrad) Ignore retcode on call to grep in selinux.py module @ 2017-09-25 15:56:17 UTC
  - 3bb337cf6a Merge pull request #43712 from wedge-jarrad/fix-43711
- 96c1ef48e6 Ignore retcode on call to grep in selinux.py module

- **ISSUE #43659:** (gaborn57) unable to retrieve pillar data in postgres db (refs: #43716)

- **PR #43716:** (gaborn57) Corrected custom port handling @ 2017-09-25 13:44:58 UTC
  - 5b7411e335 Merge pull request #43716 from gaborn57/2017.7
  - 78137c0860 Corrected custom port handling

- **PR #43700:** (rklaren) Ensure salt-cloud with libvirt provider does not write low level errors to stderr @ 2017-09-25 01:47:25 UTC
  - PR #43684: (rklaren) salt-cloud libvirt updates (refs: #43700)
  - 6b5d50c453 Merge pull request #43700 from rklaren/fix-libvirt-stderr-spam
  - 88530c4cb6 Lint fixes
  - 235bec492e salt-cloud + libvirt: Mention Fedora 26 support
  - 9aef5f847 Remove stderr spam when using salt-cloud with libvirt

- **PR #43702:** (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-09-25 01:26:20 UTC
  - 437ae03801 Merge pull request #43702 from rallytime/merge-2017.7
  - 132b1b343b Merge branch '2017.7' into merge-2017.7

- **ISSUE #38971:** (morganwillcock) archive.extracted: lots of unnecessary file transferring, copying, and hashing (refs: #43681, #43518)

- **PR #43681:** (terminalmage) Backport the non-fileclient changes from PR 43518 to 2017.7 @ 2017-09-22 19:27:25 UTC
  - PR #43518: (terminalmage) Reduce unnecessary file downloading in archive/file states (refs: #43681)
  - 47cd8723c6 Merge pull request #43681 from terminalmage/issue38971-2017.7
  - 91edf965e2 Merge branch '2017.7' into issue38971-2017.7
  - 84f34c93be Backport the non-fileclient changes from PR 43518 to 2017.7

- **ISSUE #43396:** (mkurtak) yumpkg pkg.installed slowed down due to wildcard namig support (refs: #43687)

- **PR #43687:** (mkurtak) yumpkg.py: install calls list_repo_pkgs only if wildcard is used in pkg name @ 2017-09-22 19:23:18 UTC
  - 0a1c5185f5 Merge pull request #43687 from mkurtak/fix-43396
  - b1e64b11fb yumpkg.py: install calls list_repo_pkgs only if wildcard in pkg name is used

- **ISSUE #43124:** (UtahDave) publisher_acl with regex on username not working and has no documentation (refs: #43467)

- **PR #43467:** (DmitryKuzmenko) Bugs/43124 users regex @ 2017-09-22 19:21:09 UTC
  - 3a79549af4 Merge pull request #43467 from DSRCorporation/bugs/43124_users_regex
  - 14bf2dd8ff Support regex in publisher_acl.
  - 9fe32f8b6e Regex support for user names in external_auth config.

- **ISSUE #43381:** (V3XATI0N) Sharing minion data cache causes false errors in returns (refs: #43670)

- **PR #43670:** (DmitryKuzmenko) Fix for list and contains redis cache logic. @ 2017-09-22 17:56:58 UTC
  - 0e86266b93 Merge pull request #43670 from DSRCorporation/bugs/43381_redis_cache_fix
  - 1c979d5809 Update redis cache contains logic to use more efficient sismember.
- 039d236948 Fixed list and contains redis cache logic.
  - 6e5cf65d65 Merge branch '2016.11' into '2017.7'
  - f46c858f25 Merge pull request #43648 from runtime/handle-boto-vpc-errors
  - 54842b5012 Handle VPC/Subnet ID not found errors in boto_vpc module
- PR #43697: (runtime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-09-22 17:31:09 UTC
  - aa47da35dd Merge pull request #43697 from runtime/merge-2017.7
  - cb4e45bec4 Lint: Remove extra line at end of file
  - fca4e5563a Merge branch '2016.11' into '2017.7'
  - 9dba34a06 Merge pull request #43575 from akissa/fix-csr-not-recreated-if-key-changes
    - b1b4dafd39 Fix CSR not recreated if key changes
  - 1d4fa8209 Merge pull request #43672 from runtime/bp-43415
    - 3fb42bc238 Fix env_order in state.py
  - ff832ee607 Merge pull request #43673 from runtime/bp-43652
    - d91c47c6f0 Salt Repo has Deb 9 and 8
  - 365cb9fb38 Merge pull request #43677 from terminalmage/merge-2016.11
    - 2fd88e94fa Fix RST headers for runners (2016.11 branch)
  - be38239e5d Merge pull request #43534 from twangboy/win_fix_pkg.install_2016.11
    - 1546c1ca04 Add posix=False to call to salt.utils.shlex_split
  - 0d3fd3f73a Merge pull request #43661 from moio/2016.11-multiprocessing-doc-fix
    - 625ebb83f multiprocess minion option: documentation fixes
  - 6b4516c025 Merge pull request #43646 from brejoc/2016.11.4-pidfile-tests
    - 9639a420b Fixed linting
    - 08fa98735 Fixed several issues with the test
    - 3a989e450f Added tests for pid-file deletion in DaemonMixIn
  - cfb1625741 Merge pull request #43591 from runtime/merge-2016.11
    - 57b9d642c2 Merge branch '2016.11.8' into '2016.11'
      - e8342169f4 Merge pull request #43550 from twangboy/osx_fix_preinstall_2016.11.8
      - 1b0a4d39d2 Fix logic in /etc/paths.d/salt detection
      - a648f75949 Merge pull request #43508 from runtime/bp-43333
      - d4981a2717 Update doco
      - a7c8b9e048 Update win_pkg.py
      - 1d6dc5f6b72 Docs are wrong cache_dir (bool) and cache_file (str) cannot be passed on the cli (#2)
      - e7099877bc Merge pull request #43434 from runtime/2016.11.8-release-notes
      - 685f29ee5e Add 2016.11.8 release notes
  - 8671b91f62 Merge pull request #43572 from vutny/fix-salt-cloud-list-min-instance-set
21966e7ce8 cloud.action: list_nodes_min returns all instances

- **PR #43314**: (twangboy) Fix unit.utils.test_verify for Windows @ 2017-09-21 22:26:13 UTC
  
  - 6e6dc4d4df Merge pull request #43314 from twangboy/win_fix_unit.utils.test_verify
  
  - 9ada7f626c Merge branch '2017.7' into win_fix_unit.utils.test_verify
  
  - c0dc3f73ef Use sys.platform instead of salt.utils to detect Windows
  
  - e496d28cbf Fix unit.utils.test_verify for Windows

- **ISSUE #43599**: (vernondcole) Incorrect default for salt.cache.Cache() if opts does not define "cache" (refs: #43680)

- **PR #43680**: (vernondcole) correct default value for salt.cache.Cache @ 2017-09-21 20:09:36 UTC
  
  - ec34df2c27 Merge pull request #43680 from vernondcole/fix-salt.cache.Cache-default
  
  - 292f8c79b8 correct default value for salt.cache.Cache

- **PR #43530**: (twangboy) Fixes removal of double-quotes by shlex_split in winrepo @ 2017-09-21 18:04:48 UTC
  
  - 99d9d784b1 Merge pull request #43530 from twangboy/win_fix_pkg.install
  
  - 7f59119f95 Merge branch '2017.7' into win_fix_pkg.install
  
  - f146399f7a Use posix=False for shlex.split

- **PR #43671**: (rallytime) [2017.7] Merge forward from 2017.7.2 to 2017.7 @ 2017-09-21 16:39:49 UTC
  
  - 12b5e62d81 Merge pull request #43671 from rallytime/merge-2017.7
  
  - 4a01166bd5 Merge branch '2017.7.2' into '2017.7'

- **PR #43676**: (terminalmage) Fix RST headers for runners (2017.7 branch) @ 2017-09-21 16:36:21 UTC
  
  - e3a2fbc2a3 Merge pull request #43676 from terminalmage/runners-docs-2017.7
  
  - 9b74634b23 Fix badly-formatted RST in mattermost runner docstring
  
  - c0a79c70a4 Fix RST headers for runners (2017.7 branch)

- **PR #43235**: (brejoc) Improve delete_deployment handling @ 2017-09-20 21:33:33 UTC
  
  - d02953ce6a Merge pull request #43235 from brejoc/improve-async-operation-handling-in-kubernetes-module
  
  - 4e8da3045f Fixed logic for windows fallback
  
  - 3b1cb884b9 Merge branch '2017.7' into improve-async-operation-handling-in-kubernetes-module
  
  - d1b5ec098c Merge branch '2017.7' into improve-async-operation-handling-in-kubernetes-module
  
  - 35cf69bc50 Moved exception Salt core
  
  - 7431ec64e3 Removed unused sys import
  
  - 0c71da95f6 Using salt method to identify MS Windows, single instead of double quotes
  
  - 20619b24c4 Fixed test for delete_deployment
  
  - 91076bbafa Merge branch '2017.7' into improve-async-operation-handling-in-kubernetes-module
  
  - 7b600e2832 Added pylint-disable statements and import for salt.ext.six.moves.range
  
  - 99fe138325 Code styling and added log message for timeout
  
  - dcd8d4f639 Merge branch '2017.7' into improve-async-operation-handling-in-kubernetes-module
  
  - 702a058c38 Fixed linting
- 3fe623778e Added Windows fallback
- 52b1cb8147 Compatibility with Python3.6
- 767af9bb4f Added timeout for checking the deployment
- 32d7d34fe5 First simple draft for the deletion verification

**PR #43554**: (twangboy) Win fix chocolatey @ 2017-09-20 16:06:18 UTC
- 73cb0c27b5 Merge pull request #43554 from twangboy/win_fix_chocolatey
- e04ac6216 Merge branch '2017.7' into win_fix_chocolatey
- 56be5c35eb Improve logic for handling chocolatey states
- bcb7b4e68 Add logic for test=True

**ISSUE #43598**: (davidvon) Passed invalid arguments to mysql.file_query: unsupported operand type(s) for +=: 'int' and 'tuple' (refs: #43625)

**PR #43625**: (gtmanfred) results and columns are lists for mysql returns @ 2017-09-20 15:42:59 UTC
- ed7eeaaaf8 Merge pull request #43625 from gtmanfred/2017.7
- 84b5a06b results and columns are lists for sql returns

**ISSUE #43560**: (smitelli) salt.states.linux_acl requires setfacl/getacl binaries but this is not obvious (refs: #43587, #43580)

**PR #43587**: (rallytime) Add reason to linux_acl state loading failure @ 2017-09-19 16:26:51 UTC
- PR #43580: (garethgreenaway) Updating ACL module and state module documentation (refs: #43587)
- 1bda483ef8 Merge pull request #43587 from rallytime/fixed-virtual
- e5297c3869 Add reason to linux_acl state loading failure

**PR #43584**: (cachedout) Enhance engines docs @ 2017-09-18 20:40:57 UTC
- 2e19533ec3 Merge pull request #43584 from cachedout/engines_doc_clarification
- 634536b0ff Merge branch '2017.7' into engines_doc_clarification
- 1a619708c1 Enhance engines docs

**PR #43519**: (terminalmage) Fix incorrect handling of pkg virtual and os_family grain @ 2017-09-18 20:35:01 UTC
- 50b134ef4c Merge pull request #43519 from terminalmage/fixed-apt/pkg
- 0e3c447567 Fix incorrect handling of pkg virtual and os_family grain

**PR #43520**: (clan) _search_name is "" if acl type is other @ 2017-09-18 20:33:51 UTC
- dd953f36ae Merge pull request #43520 from clan/acl
- 5421d677c1 _search_name is "" if acl type is other

**PR #43561**: (wedge-jarrad) Clean up doc formatting in selinux state & module @ 2017-09-18 20:28:47 UTC
- ad9663a7fe Merge pull request #43561 from wedge-jarrad/selinux-doc-clean-up
- 1bd263edc51 Clean up doc formatting in selinux state & module

**ISSUE #43560**: (smitelli) salt.states.linux_acl requires setfacl/getacl binaries but this is not obvious (refs: #43587, #43580)

**PR #43580**: (garethgreenaway) Updating ACL module and state module documentation (refs: #43587) @ 2017-09-18 20:11:26 UTC
- cc3d9c1a01 Merge pull request #43580 from garethgreenaway/43560_update_linux_acl_documentation
- e63fae4c91 Merge branch '2017.7' into 43560_update_linux_acl_documentation

**PR #43523:** (skizunov) Add back lost logic for multifunc_ordered @ 2017-09-18 17:46:16 UTC
- PR #38168: (skizunov) Add support for a multi-func job using same func more than once (refs: #43523)
- bf7b23316f Merge pull request #43523 from skizunov/develop2
- fb579321a9 Add back lost logic for multifunc_ordered
  - 117a0ddjbc Updating the documentation to call out the requirement for the getfacl and setfacl binaries
    - 49f25b9f19 Lint
    - 31d17c0124 Fix typo found by @s0undt3ch
    - 5dba74d2cb Fix to module.run [WIP]

**ISSUE #43447:** (UtahDave) When using Syndic with Multi Master the top level master doesn’t reliably get returns from lower minion. (refs: #43526)

**PR #43526:** (DmitryKuzmenko) Forward events to all masters syndic connected to @ 2017-09-18 16:54:46 UTC
- e29efefc4f Merge pull request #43526 from DSRCorporation/bugs/43447_syndic_events_forwarding
- 64d6109654 Merge branch '2017.7' into bugs/43447_syndic_events_forwarding
- 3b2a529385 Merge branch '2017.7' into bugs/43447_syndic_events_forwarding
- 0e4a744d95 Forward events to all masters syndic connected to.

**ISSUE #43077:** (Manoj2087) Issue with deleting key via wheel (refs: #43330)

**PR #43330:** (terminalmage) Fix reactor regression + unify reactor config schema @ 2017-09-18 16:46:11 UTC
- 56b671e087 Merge pull request #43330 from terminalmage/issue43077
- a7b4e1f782 Simplify client logic
- b85c8510c7 Improve the reactor documentation
- 20f6f3cc39 Include a better example for reactor in master conf file
- 4243a2211d Rewrite the reactor unit tests
- 9db3f5ae6d Unify reactor configuration, fix caller reactors
- 34b6c3b65f Un-deprecate passing kwargs outside of ‘kwarg’ param

**ISSUE #33793:** (nstarostik) states.ssh_auth adds bogus newline before newly added keys (refs: #43483)

**PR #43483:** (rallytime) Back-port #43483 to 2017.7 @ 2017-09-15 21:22:12 UTC
- PR #43483: (3add3287) Handle bogus newline before newly added keys (refs: #43505)
- 078d5d17de Merge pull request #43483 from rallytime/bp-43483
- c68dd5b8a4 Lint: fix spacing
- 406f61ac9a Fix indentation from tabs to spaces
- 923ec62771 Copy paste typo
- 6f6619242f Fix checking for newline on end of file by properly checking the last byte of the file if the file is non empty.

**ISSUE #43464:** (psagers) acme.cert state: IOErrror on failure to create a new certificate (refs: #43465)
• PR #43491: (rallytime) Back-port #43465 to 2017.7 @ 2017-09-15 18:24:47 UTC
  - PR #43465: (psagers) acme.cert: avoid IOError on failure. (refs: #43491)
  - a6df3f2acc Merge pull request #43491 from rallytime/bp-43465
    - 3118fac0a acme.cert: avoid IOError on failure.
• PR #43492: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-09-15 18:23:49 UTC
  - 3620c15c9a Merge pull request #43492 from rallytime/merge-2017.7
    - f2b86fa2db Merge pull request #43461 from twangboy/win_norestart
      - 2d269d1a76 Change all comment markers to '#'
      - d80ae16cb Handle ErrorCodes returned by VCredist installer
      - fb31e9a530 Add /norestart switch to vcredist install
  - 90e8ca9c36 Merge pull request #43366 from brejoc/2016.11.pidfile-fix
    - 6e3eb76c79 Removed unused format argument
    - daf4948b3d Catching error when PIDfile cannot be deleted
  - 6ac458607a Merge pull request #43442 from garethgreen-away/43386_2016_11_schedule_kwargs_pub
    - e637ece86 Merge branch '2016.11' into 43386_2016_11_schedule_kwargs_pub
    - 6114df8dc3 Adding a small check to ensure we do not continue to populate kwargs with __pub_ items from the kwargs item.
  - 3e429299f9 Merge pull request #43456 from rallytime/43445_follow_up
    - 35c1d8898d Add Neon to version list
  - 6db7a721c0 Merge pull request #43441 from meaksh/2016.11-salt-bash-completion-fix
    - be4f26ab21 Use $HOME to get the user home directory instead using ‘~’ char
  - 05ff44a50 Merge pull request #43445 from rallytime/bump-deprecation-warning
    - c91d1c6d9 Bump deprecation warning for boto_vpc.describe_route_table
  - c57dc5f0e3 Merge pull request #43432 from rallytime/bp-43419
    - c471a29527 make cache dirs when spm starts
• ISSUE #43479: (haam3r) Mattermost runner failing to retrieve config values due to unavailable config runner (refs: #43513)
• PR #43513: (haam3r) Issue #43479 No runners.config in 2017.7 branch @ 2017-09-15 14:58:27 UTC
  - 8a90c7059b Merge pull request #43513 from haam3r/2017.7
  - 58f7d051c9 Issue #43479 No runners.config in 2017.7 branch
• ISSUE #42926: (nixjdm) network.system not setting hostname in hosts file, preventing sudo. (refs: #43431)
• PR #43431: (mattLLVW) Fix /etc/hosts not being modified when hostname is changed @ 2017-09-13 18:35:55 UTC
  - c39e2d9b2 Merge pull request #43431 from mattLLVW/fix-hosts-deb
  - c6320b1dff Merge branch '2017.7' into fix-hosts-deb
- a3b2e19149 Fix /etc/hosts not being modified when hostname is changed

- **PR #43403**: (twangboy) Proper timestamp conversion in `redis.lastsave` @ 2017-09-12 21:18:06 UTC
  - a09f289fb9 Merge pull request #43403 from twangboy/win_fix_redismod
  - 6d3a2e1aa Properly handle timestamp conversion

- **PR #43463**: (twangboy) Add `/norestart` switch to vcredist installer @ 2017-09-12 20:29:27 UTC
  - 0eaa5acb72 Merge pull request #43463 from twangboy/win_norestart_2017.7
  - 6984b8fd60 Add `/norestart` to vcredist installer

- **ISSUE #43386**: (rajvidhimar) Scheduler's `job_kwargs` not working as expected. (refs: #43443, #43442)

- **PR #43443**: (garethgreenaway) [2017.7] Fixes to scheduler __pub values in kwargs @ 2017-09-12 18:14:46 UTC
  - 2fc237a806 Merge pull request #43443 from garethgreenaway/43386_2017_7_schedule_kwarg__pub
  - a29a9855a6 Fixing typo.
  - 2681b7d3fa Merge branch '2017.7' into 43386_2017_7_schedule_kwarg__pub

- **ISSUE #39775**: (mirceaulinic) Proxy `mine_interval` config ignored (refs: #41547)

- **PR #41547**: (mirceaulinic) Override proxy minion opts with pillar data @ 2017-09-11 21:47:51 UTC
  - 5378ac7756 Merge pull request #41547 from cloudflare/px_merge_pillar_opts
  - aad39ba665 Document the new opts
  - cdc0d9674a Allow disabling the mines details merge
  - 732b63b09 Merge mine details whenever possible
  - 96b31d5643 Override proxy opts with pillar data when required
  - fd499887f9 Define new proxy merge pillar in opts... opts
  - abab6fd91c Override minion opts with pillar data

- **PR #41943**: (twangboy) Fix `unit.returners.test_local_cache` for Windows @ 2017-09-11 21:34:03 UTC
  - 08d102c869 Merge pull request #41943 from twangboy/win_unit_test_local_cache
  - 3777b34572 Merge branch '2017.7' into win_unit_test_local_cache
  - 35b799ce66 Remove `cur` variable, use time.time() in comparison
  - 9b61533b09 Get more accurate current time in local_cache
  - 845e36f5bc Fix unit tests for Windows

- **PR #43424**: (twangboy) Fix `unit.modules.test_hosts` for Windows @ 2017-09-11 21:28:41 UTC
  - 50ab790c97 Merge pull request #43424 from twangboy/win_unit_test_hosts
  - 90dc8237c Fix `unit.modules.test_hosts` for Windows

- **PR #42652**: (skizunov) Fix loader.py's `raw_mod()` to look in all module dirs @ 2017-09-11 19:43:48 UTC
  - 060ed5a093 Merge pull request #42652 from skizunov/develop3
  - d82e406f15 Fix loader.py's `raw_mod()` to look in all module dirs

- **PR #43438**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-09-11 18:33:39 UTC
  - ca091bc8a4 Merge pull request #43438 from rallytime/merge-2017.7
  - ef7b4242c3 Merge branch '2016.11' into '2017.7'
* 57cccd75d0 Merge pull request #43390 from aogier/43387-genesis-qemu
  - 496f14a7e7 forgot to mock the proper one
  - 51c7a1ba00 only check if static_qemu is_executable()
  - 70642e495d better qemu_static parameter mangle in debootstrap management, tests

* 6106ae696 Merge pull request #43356 from gtmanfred/2016.11
  - 3f19b247f3 Add handler.messages back in for test comparison
  - 9911b04208 fix test
  - 3c6ae99a77 never-download got readded

* e638fac54e Merge pull request #43325 from doesitblend/salt-mine-doc-fix
  - 1e94d0ac3a Lint: Remove trailing whitespace
  - 51af8f8757 Fix mine_interval phrasing in default file
  - ba0cdd4536 Fix phrasing for mine_interval description
  - 9ff03c2d43 Update Salt Mine documentation to show that the mine_interval option is configured in minutes.

* fc587f784a Merge pull request #43105 from aogier/43086-no-member
  - 5111cf8bad Merge branch '2016.11' into 43086-no-member

* d97a680372 Merge pull request #43333 from damon-atkins/2016.11
  - 92de2bb498 Update doco
  - fc9c61d12e Update win_pkg.py
  - c91fc14704 Merge branch '2016.11' into 2016.11
  - cb3af2bbbd Docs are wrong cache_dir (bool) and cache_file (str) cannot be passed on the cli (#2)
  - 42a118ff56 fixed cmd composition and unified his making across module
  - 3fd59ed369 Adding a small check to ensure we do not continue to populate kwargs with __pub_ items from the kwargs item.

- **PR #43320:** (twangboy) Fix `unit.modules.test_alternatives` for Windows @ 2017-09-11 17:28:00 UTC
  - a9592dd3e2 Merge pull request #43320 from twangboy/win_fix_alternatives
  - a909813fa5 Remove unused import (lint)
  - 3ef8d714cb Fix unit tests to mock salt.utils.path.readlink
  - c0d81aa1ce Use salt.utils.path.readlink
  - 7c4460164b Fix alternatives for Windows

- **PR #43363:** (twangboy) Fix `unit.modules.test_ini_manage` for Windows @ 2017-09-11 17:10:31 UTC
  - 9b89e49846 Merge pull request #43363 from twangboy/scratch_ini_tests
  - a94319a082 Make sure formatting of TEST_FILE_CONTENT matches original
  - 6263bc8983 Remove print statement
  - 79cd3831ae Fix empty value preserved test
  - 85997391f1 Is this handled the same on Linux and Windows
• PR #43421: (gtmanfred) Revert "Reduce fileclient.get_file latency by merging _file_find and ... @ 2017-09-11 17:07:18 UTC
  − 673ce387c1 Merge pull request #43421 from gtmanfred/compat
  − f85bf8c18f Revert "Reduce fileclient.get_file latency by merging _file_find and _file_hash"

• ISSUE #42165: (arount) top_file_merging_strategy: merge does not works (refs: #43415)

• PR #43415: (mattLLVW) Fix env_order in state.py (refs: #43672) @ 2017-09-11 15:18:08 UTC
  − 47d982fd37 Merge pull request #43415 from mattLLVW/fix-env-order
  − f6313a1b2c Merge branch '2017.7' into fix-env-order
  − e93a962980 Fix env_order in state.py

• PR #43422: (twangboy) Fix unit.cloud.clouds.test_ec2 for Windows @ 2017-09-11 15:17:20 UTC
  − e89e23a32e Merge pull request #43422 from twangboy/win_unit_cloud_ec2
  − 1379627334 Merge pull request #43422 from twangboy/win_unit_cloud_ec2

• PR #43423: (twangboy) Fix unit.modules.test_gem for Windows @ 2017-09-11 15:15:28 UTC
  − 5af833ac59 Merge pull request #43423 from twangboy/win_unit_test_gem
  − b2ce18d13 Fix unit.modules.test_gem for Windows

• PR #43419: (gtmanfred) make cache dirs when spm starts (refs: #43432) @ 2017-09-11 13:42:50 UTC
  − b3116109e5 Merge pull request #43419 from gtmanfred/2017.7
  − 5837886e5 Make make cache dirs when spm starts

• PR #43371: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-09-08 15:39:12 UTC
  − 9b27473763 Merge pull request #43371 from rallytime/merge-2017.7
  − 7b07b58396 Merge branch '2016.11' into '2017.7'
  − 0c986f5eba Merge pull request #43361 from rallytime/bp-43329
  − b09e5b4379 Fix #43295, better handling of consul initialization issues
  − 222874396e Merge pull request #42903 from junovitch/issue-35840-fix-preserve-minion-cache-2016.11
  − c9d4fd8d4f Merge branch '2016.11' into issue-35840-fix-preserve-minion-cache-2016.11
  − 93a68e32a5 Merge branch '2016.11' into issue-35840-fix-preserve-minion-cache-2016.11
  − 079f97985 Fix 'preserve_minion_cache: True' functionality (fixes #35840)
  − 4860e10757 Merge pull request #43360 from terminalmage/sj-496
  − 433bca14b1 Fix KeyError in yumpkg configparser code on Python 3
  − f6c16935d8 Move --showduplicates before repository-packages
  − 4ba2d6b41e Merge pull request #43244 from rallytime/release-branch-clarifications
  − 0d5a46dbaa Update release branch section with a few more details
  − 1a012eb3d7 Merge pull request #43359 from gtmanfred/ipaddr
  − 23d9abb560 ipaddr_start ipaddr_end for el7
  − 8f88111be8 Merge pull request #43247 from rallytime/mentionbot-backports
  − 2b85757d73 Always notify tkwilliams when changes occur on boto files
- 40b5a29f90 Add basepi to userBlacklist for mention bot
- bad8f5e9f9 Always notify ryan-lane when changes occur on boto files

**PR #43398**: (twangboy) Fix *unit.modules.test_mount* for Windows @ 2017-09-08 13:39:29 UTC
  - 97f05ff603 Merge pull request #43398 from twangboy/win_fix_test_mount
  - 4a8d7e522c Fix tests, Use full path to salt.utils.which

**PR #43399**: (twangboy) Fix *unit.modules.test_pam* for Windows @ 2017-09-08 13:37:50 UTC
  - 6a4cc5c1b0 Merge pull request #43399 from twangboy/win_fix_test_pam
  - 6257aa964a Fix *unit.modules.test_pam* for Windows

**PR #43400**: (twangboy) Fix *unit.modules.test_parted* for Windows @ 2017-09-08 13:37:00 UTC
  - 2b5cfae3f8 Merge pull request #43400 from twangboy/win_unit_test_parted
  - 8e3e89f7ee2 Fix *unit.modules.test_parted* for Windows

**PR #43401**: (twangboy) Fix *unit.modules.test_pw_group* for Windows @ 2017-09-08 13:35:45 UTC
  - 322deeb013 Merge pull request #43401 from twangboy/win_unit_test_pw_group
  - 78e39a1b9d Fix *unit.modules.test_pw_group* for Windows

**PR #43402**: (twangboy) Fix *unit.modules.test_qemu_nbd* for Windows @ 2017-09-08 13:34:58 UTC
  - 20840f0e1 Merge pull request #43402 from twangboy/win_unit_test_qemu_nbd
  - 531ce822b Fix *unit.modules.test_qemu_nbd* for Windows

**PR #43404**: (twangboy) Fix *unit.modules.test_seed* for Windows @ 2017-09-08 13:32:41 UTC
  - be88fbb45f Merge pull request #43404 from twangboy/win_unit_test_seed
  - 6ce89f5a84 Use os.path.join for paths

**PR #43301**: (twangboy) Fix *unit.test_spm* for Windows @ 2017-09-08 13:24:35 UTC
  - 6126ca8f76 Merge pull request #43301 from twangboy/win_fix_unit_test_spm
  - 8608ab303 Merge branch '2017.7' into win_fix_unit_test_spm
  - b8da04e04d Add Mike's changes
  - f36e6bd6a7 Fix *unit.test_spm* for Windows

**PR #43372**: (skizunov) Fix system.set_system_time when no hw clock is present @ 2017-09-07 17:45:33 UTC
  - f959113694 Merge pull request #43372 from skizunov/develop5
  - 281e471853 Fix system.set_system_time when no hw clock is present

**PR #43193**: (jettero) Prevent spurious "Template does not exist" error @ 2017-09-06 20:16:58 UTC
  - PR #39516: (jettero) Prevent spurious "Template does not exist" error (refs: #43193)
    - 6d135350e0 Merge pull request #43193 from jettero/template-dne-again
    - cde8ade2cf Merge branch '2017.7' into template-dne-again

**ISSUE #42706**: (blarghmatey) Parallel Cache Failure (refs: #43018, #43159)

**PR #43159**: (jubrad) Bp 43018 @ 2017-09-05 22:29:16 UTC
  - PR #43056: (damon-atkins) safe_filename_leaf(file_basename) and safe_filepath(file_path_name) (refs: #43159, #43172)
• PR #43018: (jubrad) Update state.py (refs: #43159, #43727)
  - 015cbe57d9 Merge pull request #43159 from jubrad/bp-43018
  - 25419a56db Merge branch '2017.7' into bp-43018
  - 971b4c0e80 Merge branch '2017.7' into bp-43018
  - 4f86c65e5 access safe_filename_leaf through utils.files, changed in #43172
  - 42064883ea state.py remove unused urllib import
  - 4957268b37 update state.py to use safe_filename_leaf
  - b8ead879ed Fixing lint issues
  - 446457d017 Swapping from for import
  - fb80e17400 state.py: fix import and utf8 encode before quote

• PR #43232: (terminalmage) Improve inheritance in salt.utils.gitfs @ 2017-09-05 20:37:06 UTC
  - 6e1b541b46 Merge pull request #43232 from terminalmage/gitfs-inheritance
  - 53bd3aee23 Improve inheritance in salt.utils.gitfs

• PR #43238: (s0undt3ch) Include the line number by default on the log file format @ 2017-09-05 20:31:54 UTC
  - 086b220091 Merge pull request #43238 from s0undt3ch/2017.7
  - 630a1db3a6 Include the line number by default on the log file format

• PR #43294: (twangboy) Win build scripts @ 2017-09-05 20:12:54 UTC
  - 09dc58cde5 Merge pull request #43294 from twangboy/win_build_scripts
  - 9979ch613 Remove Py2 and Py3 in the same run
  - a5df85db6 Modifications to build scripts

• PR #43322: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-09-05 18:21:26 UTC
  - 21ab306ef4 Merge pull request #43322 from rallytime/merge-2017.7
  - b1062f8c15 Merge branch '2016.11' into '2017.7'
    * 02867fdd2 Merge pull request #43277 from rallytime/owners-file
      - 2b4da0f0e7 Add CODEOWNERS file
    * 1c1c484e79 Merge pull request #43312 from lordcirth/fixed-cron-docs
      - ec94a13750 cron docs: Remind user to use quotes for special strings
    * 0d1e4b750 Merge pull request #43290 from lordcirth/fixed-file-path-docs
      - 14a4591854 file.py docs: correct group and mode
      - d4214ca283 file.py docs: specify absolute paths
    * 26ff895e9 Merge pull request #43274 from terminalmage/fixed-int-types
      - d533877743 Use six.integer_types instead of int
    * cf21f91fb2 Merge pull request #43271 from twangboy/win-fix_pkg.install
      - 91b062f564 Fix formatting issue, spaces surrounding +

• PR #43324: (twangboy) Fix unit.modules.test_chef for Windows @ 2017-09-05 16:40:11 UTC
- 62429c547d Merge pull request #43324 from twangboy/fix_unit.modules.test_chef
- 5bd5ea042a Fix unit.modules.test_chef for Windows

- **PR #43268**: (rallytime) Back-port #43237 to 2017.7 @ 2017-09-01 18:17:13 UTC
  - PR #43237: (timka) .utils.aws.get_location() expects a dict (refs: #43268)
  - 367668a0a3 Merge pull request #43268 from rallytime/bp-43237
  - 047ad07da4 .utils.aws.get_location() expects a dict

- **PR #43270**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2017-09-01 18:09:46 UTC
  - 02504add363 Merge pull request #43270 from rallytime/merge-2017.7
  - f8b025f6dc Merge branch '2016.11' into '2017.7'
  - 3a0b02f3ae Merge pull request #43228 from twangboy/win_fix_pkg.install
    - 13dfabb1ce Fix regex statement, add .
    - 31ff69f0ad Add underscore to regex search
    - 3cf2b6575c Fix spelling
    - ed030a35a5 Use regex to detect salt-minion install
    - e5daf495a Fix pkg.install
  - b4c689df5 Merge pull request #43191 from viktorkrivak/fixed-apache-config-multi-entity
    - c15bcbe1cc Merge remote-tracking branch 'upstream/2016.11' into fixed-apache-config-multi-entity
    - 4164047951 Fix apache.config with multiple statement At this moment when you post more than one statement in config only last is used. Also file is rewrited multiple times until last statement is written. Example: salt '*' apache.config /etc/httpd/conf.d/ports.conf config="[{'Listen': '8080'}, {'Proxy': "Something"}]" Ends only with Proxy Something and ignore Listen 8080. This patch fix this issue.
  - b90e59ede9 Merge pull request #43154 from lomeroe/bp-43116-2016.11
  - 8f593b0b02 verify that files exist before trying to remove them, win_file.remove raises an exception if the file does not exist
  - 33a30bac06 correcting bad format statement in search for policy to be disabled
  - acc3d7ac82 correct fopen calls from salt.utils for 2016.11’s utils function
  - 2da1cdd109 lint fix
  - 61bd12c0de track xml namespace to ensure policies w/duplicate IDs or Names do not conflict
  - f232bed9f9 add additional checks for ADM policies that have the same ADMX policy ID (#42279)

- **ISSUE #42459**: (iavael) Broken ldap groups retrieval in salt.auth.ldap after upgrade to 2017.7 (refs: #43283)

- **PR #43283**: (DmitryKuzmenko) Fix ldap token groups auth. @ 2017-09-01 17:49:46 UTC
  - ece0393ef Merge pull request #43283 from DSRCorporation/bugs/42459_broken_ldap_groups
  - 3ad96911210 Fix for tests: don’t require ‘groups’ in the eauth token.
  - 1f104cf858 Fix ldap token groups auth.

- **PR #43149**: (BenoitKnecht) Fix iptables.get_rules when rules contain --nfmask or --ctmask @ 2017-09-01 15:57:05 UTC
  - 4f023c4cb6 Merge pull request #43149 from BenoitKnecht/2017.7.1
- 3c1ddc9bde modules: iptables: correctly parse --nfmask/--ctmask

- ISSUE #43258: (nomeelnoj) metadata_server_grains problems (refs: #43265)
- PR #43265: (gtmanfred) make sure meta-data grains work on ec2 @ 2017-09-01 15:31:12 UTC
  - cf2b75bb86 Merge pull request #43265 from gtmanfred/2017.7
  - 04dd8edbedb make sure meta-data grains work on ec2
- PR #43299: (twangboy) Fix unit.netapi.rest_cherrypy.test_tools for Windows @ 2017-09-01 15:13:43 UTC
  - 618b221895 Merge pull request #43299 from twangboy/win_fix_netapi_cherrypy
  - fd74ac6b03 Merge branch '2017.7' into win_fix_netapi_cherrypy
- PR #43300: (twangboy) Fix unit.netapi.rest_tornado.test_handlers for Windows @ 2017-09-01 13:10:11 UTC
  - aee654da92 Merge pull request #43300 from twangboy/win_fix_netapi_rest_tornado
  - c93d2ed38f Use os.sep instead of '/'
  - 3fb2b91a Use os.sep instead of '/'
- ISSUE #43259: (mahesh21) NameError: global name '__opts__' is not defined (refs: #43266)
- PR #43278: (gtmanfred) bootstrap can come from dunders @ 2017-08-31 13:31:20 UTC
  - PR #43266: (gtmanfred) switch virtualbox cloud driver to use __utils__ (refs: #43278)
  - aed2975979 Merge pull request #43278 from gtmanfred/virtualbox
  - c4ae2de30f bootstrap can come from dunders
- PR #42975: (brejoc) Added unit tests for Kubernetes module @ 2017-08-30 20:30:16 UTC
  - 479e0e6ac Merge pull request #42975 from brejoc/tests-for-kubernetes-module
  - fdad9177b5 Merge branch '2017.7' into tests-for-kubernetes-module
  - c227cb25ad Skipping test on ImportError
  - bd76a870ce Dunder vars are now defined via setup_loader_modules
  - 3c99e61637 Renamed test to match new convention
  - caf78d206d Fixed imports for pytest
  - c8e98c8d8a Added unit tests for Kubernetes module
- ISSUE #42935: (BenjaminSchubert) docker_image.present always ends up failing even on correct result. (refs: #43176)
- PR #43176: (terminalmage) docker_image states: Handle Hub images prefixed with "docker.io/" @ 2017-08-30 20:08:13 UTC
  - ca7df1d4cf Merge pull request #43176 from terminalmage/issue42935
  - df18a9836 Lint: Remove unused import
  - 7279f98e92 docker_image states: Handle Hub images prefixed with "docker.io/"
  - f7c945f6e4 Prevent spurious "Template does not exist" error
30.2.45 Salt 2017.7.4 Release Notes

Version 2017.7.4 is a bugfix release for 2017.7.0.

Statistics

- Total Merges: 8
- Total Issue References: 4
- Total PR References: 11
- Contributors: 6 (Ch3LL, garethgreenaway, gtmanfred, marccardinal, rallytime, terminalmage)

Changelog for v2017.7.3..v2017.7.4


- PR #46074: (Ch3LL) Update 2017.7.4 Release Notes with new fixes @ 2018-02-16 16:47:56 UTC
  - b5b083fd26 Merge pull request #46074 from Ch3LL/update-7.4
  - 8d0eeeb059 Update 2017.7.4 Release Notes with new fixes
- ISSUE #45790: (bdarnell) Test with Tornado 5.0b1 (refs: #46066)
- PR #46066: (rallytime) Pin tornado version in requirements file @ 2018-02-16 16:40:05 UTC
  - 32f3d00e44 Merge pull request #46066 from rallytime/pin-tornado
  - 6dc1a3b9dc Pin tornado version in requirements file
- PR #46036: (terminalmage) git.latest: Fix regression with identity file usage @ 2018-02-16 13:57:23 UTC
  - 85761ee650 Merge pull request #46036 from terminalmage/issue43769
  - e2140d9a84 Mock the ssh.key_is_encrypted utils func
  - 169924b3fe Move ssh.key_is_encrypted to a utils module temporarily
  - 54f4d78f7a Only keep ssh.py in the Windows installer
  - 5f04531e1b Keep ssh state and execution modules in the installer
  - f2b69f703d git.latest: Fix regression with identity file usage
- PR #46009: (Ch3LL) Add 2017.7.4 Release Notes with PRs @ 2018-02-13 16:40:30 UTC
  - 6d534c6e7e Merge pull request #46009 from Ch3LL/rn_7.4
  - ac0baf4b34 Add 2017.7.4 Release Notes with PRs
- ISSUE #45976: (ghost) 6a5e0f9 introduces regression that breaks Vault module for salt masterless (refs: #45981)
- PR #45981: (gtmanfred) use local config for vault when masterless @ 2018-02-13 15:22:01 UTC
  - ca76a0b328 Merge pull request #45981 from gtmanfred/2017.7.3
  - 0d448457dc apparently local is not set by default
  - 2a92f4bc16 use local config for vault when masterless
- ISSUE #45915: (MatthiasKuehneEllerhold) 2017.7.3: Salt-SSH & Vault Pillar: Permission denied "minion.pem" (refs: #45928)
- PR #45953: (rallytime) Back-port #45928 to 2017.7.3 @ 2018-02-09 22:29:10 UTC
Functional Changes

- PR #45928: (garethgreenaway) [2017.7] Fixing vault when used with pillar over salt-ssh (refs: #45953)
- 6530649dbc Merge pull request #45953 from rallytime/bp-45928-2017.7.3
- 85363189d1 Fixing vault when used with pillar over salt-ssh

• ISSUE #45893: (CrackerJackMack) archive.extracted ValueError “No path specified” in 2017.7.3 (refs: #45902)

• PR #45934: (rallytime) Back-port #45902 to 2017.7.3 @ 2018-02-09 16:31:08 UTC
  - PR #45902: (terminalmage) Check the effective saltenv for cached archive (refs: #45934)
  - fb378cebb0 Merge pull request #45934 from rallytime/bp-45902
  - bb83e8b345 Add regression test for issue 45893
  - cdda66d759 Remove duplicated section in docstring and fix example
  - 4b6351eda6 Check the effective saltenv for cached archive

• PR #45935: (rallytime) Back-port #45742 to 2017.7.3 @ 2018-02-09 14:02:26 UTC
  - PR #45742: (marccardinal) list.copy() is not compatible with python 2.7 (refs: #45935)
  - 0d74151c71 Merge pull request #45935 from rallytime/bp-45742
  - 6a0b5f7af3 Removed the chained copy
  - ad1150fad4 list.copy() is not compatible with python 2.7

30.2.46 Salt 2017.7.5 Release Notes

Version 2017.7.5 is a bugfix release for 2017.7.0.

Statistics

- Total Merges: 213
- Total Issue References: 58
- Total PR References: 202
- Contributors: 52 (Ch3LL, DmitryKuzmenko, GwiYeong, L4rS6, SteffenKockel, The-Loeki, amendlik, andreaspe, angeloudy, aphor, bdrung, cebe, ciqiq, damon-atkins, danlsiga, ddoh94, dmurphy18, dwoz, eliasp, frogunder, garethgreenaway, gclin, gtmanfred, jfindlay, kstreee, marccardinal, mcalmer, mchugh19, meaksh, michelsen, nullify005, oarmstrong, oeufette, philpep, racker-markh, rallytime, redbaron4, roaldnefs, rongshengfang, rongzeng54, rrroo, samilaine, samodid, skizunov, terminalmage, tintoy, twangboy, viktordaniel, vutny, while0pass, whytewolf, zer0def)

Changes to file.blockreplace State

The append_newline argument was added to this state. Additionally, to improve idempotence, if the string represented by marker_end is found in the middle of the line, the content preceding the marker will be removed when the block is replaced. This allows one to remove append_newline: False from the SLS and have the block properly replaced if the end of the content block is immediately followed by the marker_end (i.e. no newline before the marker).

Note: This will require changes to your SLS if your marker_end does not include the very beginning of the content you want to keep.
Salt Documentation, Release 3002.5

See the file.blockreplace state documentation for further information.

Changelog for v2017.7.4..v2017.7.5

Generated at: 2018-05-26 21:50:00 UTC

- **PR #46612**: (Ch3LL) Add changelog to 2017.7.5 release notes @ 2018-03-19 20:47:38 UTC
  - 19bb725698 Merge pull request #46612 from Ch3LL/7.5_rn
  - 6076ba2ee Add changelog to 2017.7.5 release
- **PR #46572**: (dmurphy18) Addition of -sa flag to allow for revision numbers other than -0 or -1 @ 2018-03-19 20:07:26 UTC
  - 31c78aef11 Merge pull request #46572 from dmurphy18/update_7xxbuild
  - c87511570d Add branch '2017.7.5' into update_7xxbuild
- **ISSUE saltstack/salt-jenkins#884**: (gtmanfred) [2017.7.5][Fedora 27][py2/py3] integration.states.test_npm.NpmStateTest.test_npm_install_url_referenced_package (refs: #46577)
- **PR #46577**: (gtmanfred) Fix npm issue @ 2018-03-19 11:51:04 UTC
  - cdd768fa4d Merge pull request #46577 from gtmanfred/2017.7.5
  - 78cb7b5cd Fix npm issue
  - c76f7eb028 enable debug logging on the minionlog
- **PR #46551**: (terminalmage) Fix failing pkg integration test on OpenSUSE @ 2018-03-19 11:50:12 UTC
  - e66682c660c Merge pull request #46551 from terminalmage/salt-jenkins-885
  - 703b5e7e65 Change versionadded to show that 2018.3.0 will not have this function
  - 010d260d06 Rewrite failing Suse pkg integration test
  - f3f5dec239 zypper.py: fix version argument being ignored
  - 214f26ad3 Add pkg.list_repo_pkgs to zypper.py
    - 0a541613f2 Additon of -sa flag to allow for revision numbers other than -0 or -1
- **ISSUE saltstack/salt-jenkins#886**: (gtmanfred) [2017.7.5][Fedora 26/Ubuntu 17.10][py3] integration.states.test_pip.PipStateTest.test_46127_pip_env_vars (refs: #46563)
- **PR #46563**: (gtmanfred) virtualenv version too old for python3.6 @ 2018-03-15 20:17:16 UTC
  - bd62699cc Merge pull request #46563 from gtmanfred/2017.7.5
  - 8d5ab72983 virtualenv version too old for python3.6
- **PR #46561**: (gtmanfred) disable verbose @ 2018-03-15 16:36:41 UTC
  - 2e670812d Merge pull request #46561 from gtmanfred/2017.7.5
  - 2c39ac6dfb disable verbose
- **PR #46537**: (rallytime) Back-port #46529 to 2017.7.5 @ 2018-03-14 14:47:28 UTC
  - PR #46529: (gtmanfred) retry if there is a segfault (refs: #46537)
  - ee3bbfe3e Merge pull request #46537 from rallytime/bp-46529
  - 289c7a228f retry if there is a segfault
- **PR #46519**: (rallytime) Update man pages for 2017.7.5 @ 2018-03-13 20:00:51 UTC
- 1271536a89 Merge pull request #46519 from rallytime/man-pages-2017.7.5
- 782a5584f5 Update man pages for 2017.7.5

- **ISSUE #46207**: (seanjnkns) Issue #44034 still unresolved (refs: #46493)
- **ISSUE #44034**: (seanjnkns) salt-call pillar overrides broken in 2016.11.8 and 2017.7.2 (refs: #44483)
- **PR #46493**: (terminalmage) salt-call: don’t re-use initial pillar if CLI overrides passed @ 2018-03-12 20:41:52 UTC
  - **PR #44483**: (terminalmage) salt-call: account for instances where __pillar__ is empty (refs: #46493)
  - 0e90c8ca6f Merge pull request #46493 from terminalmage/issue46207
  - f066f8f10 salt-call: don’t re-use initial pillar if CLI overrides passed

- **PR #46450**: (gtmanfred) load grains for salt.cmd runner @ 2018-03-12 18:52:22 UTC
  - b11a8fc8e0 Merge pull request #46450 from gtmanfred/salt_runner
  - 7974f7264 load grains for salt.cmd runner

- **ISSUE #30115**: (gtmanfred) [BUG] listen does not appear to respect the special names directive (refs: #46337)
- **PR #46337**: (gtmanfred) Fix using names with listen and listen_in @ 2018-03-12 18:50:00 UTC
  - 22d753364b Merge pull request #46337 from gtmanfred/2017.7
  - d6d9e36359 add tests for names and listen/listen_in
  - 3f8e0db572 let listen_in work with names
  - 7161f4d4df fix listen to be able to handle names

- **PR #46413**: (meaksh) Explore ‘module.run’ state module output in depth to catch "result" properly @ 2018-03-12 18:49:07 UTC
  - b7191b8782 Merge pull request #46413 from meaksh/2017.7-explore-result-in-depth
  - 885751634e Add new unit test to check state.apply within module.run
  - 9f19ad5264 Rename and fix recursive method
  - 1476ace558 Fix Python3 and pylint issue
  - 726a3044d Explore ‘module.run’ response to catch the ‘result’ in depth

- **PR #46496**: (gtmanfred) more test kitchen clean up @ 2018-03-12 18:28:34 UTC
  - 02a79a2014 Merge pull request #46496 from gtmanfred/kitchen
  - da002f78d0 include virtualenv path for py3 windows
  - fe2efe03ea remove duplicate setup

- **ISSUE #46329**: (bdrung) test_create_deployments fails with python-kubernetes 4.0.0 (refs: #46330)
- **PR #46330**: (bdrung) Fix ValueError for template in AppsV1beta1DeploymentSpec @ 2018-03-12 16:56:18 UTC
  - 5c4c182d75 Merge pull request #46330 from bdrung/fix_kubernetes_test_create_deployments
  - 5008c53c44 Fix ValueError for template in AppsV1beta1DeploymentSpec

- **ISSUE #46479**: (rongshengfang) boto_ec2.instance_present throwing KeyError exception when associating EIP to an existing instance (refs: #46482)
- **PR #46482**: (rongshengfang) Fix KeyError in salt/states/boto_ec2.py @ 2018-03-12 15:13:13 UTC
  - c7e05d3ff4 Merge pull request #46482 from rongshengfang/fix-keyerror-in-instance_present
- ed8c83e89a Fix KeyError in salt/states/boto_ec2.py when an EIP is being associated to an existing instance with the instance_present state.

- **PR #46463**: (terminalmage) Update requirements files to depend on mock>=2.0.0 @ 2018-03-09 19:24:41 UTC
  - 573d51afec Merge pull request #46463 from terminalmage/mock-2.0
  - b958b4699 Update requirements files to depend on mock>=2.0.0

- **ISSUE #46299**: (gclinch) debconf module fails on Python 3 (refs: #46300)

- **PR #46422**: (rallytime) Back-port #46300 to 2017.7 @ 2018-03-09 19:19:25 UTC
  - **PR #46300**: (gclinch) Python 3 support for debconfmod (fixes #46299) (refs: #46422)
  - a154d35fc7 Merge pull request #46422 from rallytime/bp-46300
  - 829dfde8e8 Change stringutils path to old utils path for 2017.7
  - 91db2e0782 Python 3 support

- **PR #46320**: (mcalmer) add warning about future config option change @ 2018-03-09 17:48:29 UTC
  - 2afaca17a1 Merge pull request #46320 from mcalmer/warn-kubernetes
  - c493ced415 add warning about future config option change

- **PR #46449**: (bdrung) Make documentation theme configurable @ 2018-03-09 17:47:15 UTC
  - c795581e3 Merge pull request #46449 from bdrung/make-doc-theme-configurable
  - 4a5da2d144 Make documentation theme configurable

- **PR #46162**: (rallytime) Add team-suse to CODEOWNERS file for zypper files @ 2018-03-09 17:46:13 UTC
  - 10ce9e9e20 Merge pull request #46162 from rallytime/team-suse-zypper-owner
  - 13a295a3b7 Add pkg and snapper to team-suse
  - 35c7b7b0d3 Add btrfs, xfs, yumpkg, and kubernetes file to team-suse
  - 485d777ac0 Add team-suse to CODEOWNERS file for zypper files

- **PR #46434**: (gtmanfred) split return key value correctly @ 2018-03-09 17:45:21 UTC
  - cac096b311 Merge pull request #46434 from gtmanfred/highstate_return
  - d18f1a55a7 fix pylint
  - 9e2c3f7991 split return key value correctly

- **ISSUE #44452**: (konstest) salt-cloud can't create snapshots, because there is a bug in the Unicode name of the virtual machine (refs: #44455)

- **PR #44455**: (whytewolf) .format remove fix for #44452 @ 2018-03-09 17:37:19 UTC
  - 7dd71101ce Merge pull request #44455 from whytewolf/issue_44452_unicode_cloud
  - 5fe474b1a8 .format remove fix for #44452

- **PR #44428**: (twangboy) Fix issue with dev env install on Windows @ 2018-03-09 14:52:46 UTC
  - 4c8d9026d3 Merge pull request #44428 from twangboy/win_fix_reqs
  - e7ab97cc17 Remove six as a hard dep for Salt
  - cc67e5c2ef Set six to 1.11.0

- **PR #44454**: (gtmanfred) fix windows for kitchen @ 2018-03-08 21:19:31 UTC
  - e83d9a63b Merge pull request #44454 from gtmanfred/kitchen

30.2. Previous Releases
- b8ab8434a5 fix windows for kitchen

- **ISSUE #46451**: (gmacon) SPM fails to start with customized cache location (refs: #46452)

- **PR #46452**: (gtmanfred) make spm cache_dir instead of all cachedirs @ 2018-03-08 21:12:20 UTC
  - 2886da88f Merge pull request #46452 from gtmanfred/spm_cache_dir
  - 169cf7a4e2 make spm cache_dir instead of all cachedirs

- **PR #46446**: (bdrung) Fix various typos @ 2018-03-08 21:11:47 UTC
  - a188984cd9 Merge pull request #46446 from bdrung/fix-typos
  - 7e6e80be87 heat: Fix spelling mistake of environment
  - a3c54506f Fix various spelling mistakes

- **ISSUE #20581**: (notpeter) Many environments: one pillar_root (all your envs are belong to base) (refs: #46309)

- **PR #46309**: (bdrung) Support dynamic pillar_root environment @ 2018-03-08 19:15:35 UTC
  - e35fc5263c Merge pull request #46309 from bdrung/dynamic-pillarenv
  - 584b451fd1 Support dynamic pillar_root environment

- **ISSUE #44032**: (PhilippeAB) blockreplace marker_end isn't applied with newline (refs: #46430)

- **PR #46430**: (terminalmage) Improve reliability/idempotence of file.blockreplace state @ 2018-03-08 15:41:38 UTC
  - 35fe9827fe Merge pull request #46430 from terminalmage/issue44032
  - f9f187e915 Improve reliability/idempotence of file.blockreplace state

- **PR #46429**: (twangboy) Fix problem with __virtual__ in win_snmp @ 2018-03-07 23:26:46 UTC
  - 2bad0a21c0 Merge pull request #46429 from twangboy/win_fix_snmp
  - 8995a9b8de Fix problem with __virtual__ in win_snmp

- **PR #46100**: (jfindlay) Handle IPv6 scope parameter in resolv.conf @ 2018-03-07 19:51:20 UTC
  - 93a572f229 Merge pull request #46100 from jfindlay/resolv_scope
  - d5561bedaf tests.unit.grains.core add scoped IPv6 nameserver
  - 4e2e62d508 salt.utils.dns parse scope param for ipv6 servers

- **PR #46420**: (bdrung) Fix SSH client exception if SSH is not found @ 2018-03-07 17:49:00 UTC
  - 5acc1d5c54 Merge pull request #46420 from bdrung/2017.7
  - e48c139e0 Fix SSH client exception if SSH is not found

- **PR #46379**: (angeloudy) TypeError: a bytes-like object is required, not 'str' @ 2018-03-07 15:00:47 UTC
  - ca6a7e6317 Merge pull request #46379 from angeloudy/2017.7
  - 3ac5b9c74c Merge branch '2017.7' into 2017.7
  - d971e0c08b Fix indent
  - 269514683f Update http.py
  - 908c040ac3 Update http.py
  - 51ba3c135b Update http.py
  - 14aba24111 fix bytes-object required error in python 3
• PR #46404: (gtmanfred) get 2017.7 ready to switch over to the new jenkins @ 2018-03-07 14:29:30 UTC
  - 73f9233557 Merge pull request #46404 from gtmanfred/kitchen
  - c56baa95a8 clone .git for the version tests
  - 362061b5b fix unhold package for debian
  - 5219f7d2ba fix minion log path

• ISSUE #46192: (asymetrix) salt-log-setup: AttributeError 'NoneType' object has no attribute 'flush' (refs: #46310)

• PR #46310: (twangboy) Update the Windows installer build scripts @ 2018-03-06 20:21:58 UTC
  - ca28cf4e4 Merge pull request #46310 from twangboy/win_update_installer_build
  - bcf8b19566 Update the installer build

• PR #46316: (twangboy) Fix issues with the DSC module @ 2018-03-06 20:16:18 UTC
  - decccebeca3 Merge pull request #46316 from twangboy/win_fix_dsc
  - 2042d35d9 Fix issues with the DSC module

• PR #46394: (Ch3LL) Add mac py2 and py3 packages to mac installation docs @ 2018-03-06 16:45:30 UTC
  - 95586678c3 Merge pull request #46394 from Ch3LL/mac_doc
  - 158add6661 change oxdownload to oxdownload-[python_version]
  - 21aa848e89 Add mac py2 and py3 packages to mac installation docs

• ISSUE #44831: (kivoli) cmd.wait deprecated but cannot replicate conditional execution with onchanges (refs: #46338)

• PR #46338: (rallytime) Remove cmd.wait deprecation reference in docs @ 2018-03-05 21:48:52 UTC
  - 07b5d09ac1 Merge pull request #46338 from rallytime/fix-44831
  - 90771da999 Remove cmd.wait deprecation reference in docs

• ISSUE #42438: (ajoaugustine) Failed to send message: hipchat-message (refs: #46333)

• PR #46333: (danlsgiga) Fixes color parameter mismatch and handles 204 responses correctly @ 2018-03-05 19:42:26 UTC
  - 3849e7a085 Merge pull request #46333 from danlsgiga/issue-42438
  - 3b13f37b44 Revert changes in the code and change docs instead
  - 38114a65d8 Fixes color parameter mismatch and handles 204 responses correctly

• ISSUE #44935: (grinapo) module.file.replace string seems to be mutated into arrays (refs: #46322)

• PR #46322: (terminalmage) yamlify_arg: don’t treat leading dashes as lists @ 2018-03-05 15:40:17 UTC
  - a8f2f1b063 Merge pull request #46322 from terminalmage/issue44935
  - 85a6a9893 yamlify_arg: don’t treat leading dashes as lists

• PR #46327: (samilaine) Modify the way a FQDN is handled in the vmware cloud provider. @ 2018-03-05 15:35:37 UTC
  - da5c282cb2 Merge pull request #46327 from samilaine/fix-vmware-cloud-fqdn
  - 4b8dfb326f Modify the way a FQDN is handled in the vmware cloud provider.

• PR #46318: (terminalmage) Skip type-checking for several gitfs/git_pillar/winrepo params @ 2018-03-05 15:04:27 UTC
- 78c45d3786 Merge pull request #46318 from terminalmage/squelch-warnings
- 5889b36646 Skip type-checking for several gitfs/git_pillar/winrepo params

**ISSUE #45535:** (whytwolve) module_dirs left out salt-ssh, leaving custom ext_pillars and modules out of salt-ssh (refs: #46312)

**PR #46312:** (gtmanfred) add module_dirs to salt ssh thin tarball @ 2018-03-05 15:00:48 UTC
- bb0d6fc263 Merge pull request #46312 from gtmanfred/2017.7
- 749ae580ed add module_dirs to salt ssh thin tarball

**ISSUE #46127:** (redbaron4) pip.installed does not pass env_vars when calling freeze to check if package is already installed (refs: #46242)

**PR #46242:** (redbaron4) Pass env_vars to pip.freeze @ 2018-03-05 14:53:13 UTC
- 88b5f7383d Merge pull request #46242 from redbaron4/fix-46127
- 06da51617 Make changes from review
- 727ebe1056 Merge branch '2017.7' into fix-46127
- 08d1ee8baf Fix Python3 test errors
- aa9d79015 Pass env_vars to pip.freeze

**PR #46265:** (Ch3LL) Add username/password to profitbricks conf for cloud tests @ 2018-03-02 21:40:22 UTC
- a0716643e4 Merge pull request #46265 from Ch3LL/profit_cloud
- d4893eab4c Add username/password to profitbricks conf for cloud tests

**PR #46306:** (rallytime) Back-port #46256 to 2017.7 @ 2018-03-02 21:37:26 UTC
- PR #46256: (rallytime) Don't install msgpack 0.5.5 (refs: #46306)
- ed7bfa7e0 Merge pull request #46306 from rallytime/bp-46256
- 6439bce4a8 Don't install msgpack 0.5.5

**PR #46208:** (terminalmage) Blacklist os.umask @ 2018-03-02 18:46:07 UTC
- 8c2c4e3316 Merge pull request #46208 from terminalmage/audit-umask-usage
- 9c92aadce8 Disable blacklisted-function check for legitimate uses
- 58a11aaa26 Disable pylint check in salt-ssh shim
- ecadf67659 Blacklist os.umask
- 31b1d98fcb Replace direct use of os.umask with use of existing context manager
- 82ce54e18 Prevent failed os.makedirs from leaving modified umask in place

**PR #46293:** (eliasp) Fix Python3 comparison TypeError in salt.modules.upstart @ 2018-03-02 16:36:10 UTC
- PR #44624: (eliasp) Fix Traceback when using the service.enabled state on non-booted systems (refs: #46293)
- 978e869490 Merge pull request #46293 from eliasp/2017.7-44624-py3-compat
- 2e08b0d9c8 Fix Python3 comparison TypeError in salt.modules.upstart

**ISSUE #46128:** (Boulet-) Mountpoint in git_pillar (refs: #46264)

**PR #46264:** (terminalmage) Fix incorrect merge conflict resolution @ 2018-03-02 14:21:13 UTC
- bee4a660d0c Merge pull request #46264 from terminalmage/issue46128
- 68000b7211 Fix incorrect merge conflict resolution

- **PR #46296**: (vutny) [DOC] Add missing params to pillar.get docstring @ 2018-03-02 14:19:41 UTC
  - 1e0b3aa348 Merge pull request #46296 from vutny/doc-pillar-get
  - 1fa8331e1 [DOC] Add missing params to pillar.get docstring

- **PR #45874**: (GwiYeong) fix for local client timeout bug @ 2018-03-01 19:39:35 UTC
  - c490a50452 Merge pull request #45874 from GwiYeong/2017.7-local-client-hotfix
  - 949ae6c82b Merge branch '2017.7' into 2017.7-local-client-hotfix
  - 45d665f435 fix for local client timeout bug

- **PR #46261**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2018-03-01 17:55:23 UTC
  - 8e8a3a2897 Merge pull request #46261 from rallytime/merge-2017.7
  - 8256ae5ee5 Merge branch '2016.11' into '2017.7'
    - 140ef4d6b9 Merge pull request #46253 from rallytime/doc-banners
      - 07ed8c7db3 Update docbanner for SaltConf18
    - 9fe86ee520 Merge pull request #46179 from wedge-jarrad/cifs-remount-fix
      - 9ca25c4313 Add credentials and secretfile to mount.mounted mount_invisible_keys

- **ISSUE #44046**: (t2b) docker_container.running states fail if the argument ulimits is set and a watch requisite is triggered (refs: #46276)

- **PR #46276**: (terminalmage) salt.utils.docker.translate_input: operate on deepcopy of kwargs @ 2018-03-01 15:37:44 UTC
  - 88a3166589 Merge pull request #46276 from terminalmage/issue44046
  - a14d4d88c salt.utils.docker.translate_input: operate on deepcopy of kwargs

- **ISSUE #46182**: (oeuftete) docker_container.running is sensitive to HostConfig Ulimits ordering (refs: #46183)

- **PR #46183**: (oeuftete) Fix docker_container.running HostConfig Ulimits comparison @ 2018-02-28 22:22:11 UTC
  - da60399b8f Merge pull request #46183 from oeuftete/fix-docker-container-running-host-config-ulimits
  - 5b981c8263 Sort lists from Ulimits before comparing
  - 0ba8f02226 Update old dockerng doc ref

- **ISSUE #46259**: (terminalmage) git_pillar_branch overrides branch defined in git_pillar configuration (refs: #46260)

- **ISSUE #46258**: (terminalmage) git_pillar_base doesn't work for values when PyYAML loads them as int/float (refs: #46260)

- **PR #46260**: (terminalmage) Normalize global git_pillar/winrepo config items @ 2018-02-28 22:05:26 UTC
  - 50942f08c Merge pull request #46260 from terminalmage/git_pillar
  - b1ce2501fd Normalize global git_pillar/winrepo config items

- **PR #46101**: (jfindlay) In OpenRC exec module, make sure to ignore retcode on status @ 2018-02-28 20:01:37 UTC
  - a97a3e6fb0 Merge pull request #46101 from jfindlay/openrc_ret
  - 2eef3c65a6 tests.unit.modules.gentoo_service add retcode arg

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30.2. Previous Releases

2341
- 81ec66fd8b modules.gentoo_service handle stopped retcode

- **PR #46254:** (rallytime) Update enterprise banner @ 2018-02-28 19:54:03 UTC
  - 1a17593c05 Merge pull request #46254 from rallytime/enterprise-banner
  - 5fae3def0 Update enterprise banner

- **PR #46250:** (terminalmage) Add documentation to the fileserver runner @ 2018-02-28 18:53:49 UTC
  - 8c50f32bd Merge pull request #46250 from terminalmage/runner-docs
  - 91b4895087 Add documentation to the fileserver runner

- **ISSUE #46215:** (racker-markh) salt-cloud will only intermittently build rackspace cloud instances with purely private networks (refs: #46243)

- **PR #46243:** (racker-markh) Don’t ignore 'private_ips' unnecessarily @ 2018-02-28 15:28:29 UTC
  - 53067cca43 Merge pull request #46243 from racker-markh/fix-openstack-private-network-issue
  - 50c1e140f0 Don’t check deny private_ips already in the original list of private_ips

- **ISSUE #46109:** (rombert) archive.extracted takes a long time (~ 4 minutes) even though directory exists (refs: #46239)

- **PR #46239:** (terminalmage) archive.extracted: don’t check source file when if_missing path exists @ 2018-02-28 15:01:36 UTC
  - 154058760 Merge pull request #46239 from terminalmage/issue46109
  - 586d8b0def archive.extracted: don’t check source file when if_missing path exists

- **PR #46221:** (terminalmage) Fix hanging tests in integration suite @ 2018-02-27 21:32:25 UTC
  - 63e1208e4 Merge pull request #46221 from terminalmage/salt-jenkins-854
  - 0eb012659c Fix hanging tests in integration suite

- **PR #46214:** (vutny) [DOC] Replace note rST block for GitHub @ 2018-02-27 17:42:37 UTC
  - 7917277345 Merge pull request #46214 from vutny/formulas-readme-formatting
  - d702846961 [DOC] Replace note rST block for GitHub

- **PR #46203:** (Ch3LL) Add 2017.7.5 Release Notes File @ 2018-02-26 21:17:48 UTC
  - a2e099b744 Merge pull request #46203 from Ch3LL/7.5_release
  - 6dd3246ce Add 2017.7.5 Release Notes File

- **PR #46201:** (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2018-02-26 18:56:47 UTC
  - 973b227818 Merge pull request #46201 from rallytime/merge-2017.7
  - 9ac2101baa Merge branch '2016.11' into '2017.7'
  - a4c5417d23 Merge pull request #46132 from rallytime/2016.11_update_version_doc
    * d2196bdf3 Update release versions for the 2016.11 branch

- **ISSUE #34423:** (bdrung) oscodename wrong on Debian 8 (Jessie) (refs: #46139)

- **PR #46139:** (bdrung) Add os grains test cases for Debian/Ubuntu and fix oscodename on Ubuntu @ 2018-02-26 16:44:04 UTC
  - 89cf2e5061 Merge pull request #46139 from bdrung/os-grains
  - 0b445f2a37 tests: Add unit tests for _parse_os_release()
Salt Documentation, Release 3002.5

- f606fb77cd Fix osfinger grain on Debian
- 8ddee55a761 tests: Add os_grains test cases for Debian
- ff02ab9937 tests: Add Ubuntu 17.10 (artful) os_grains test case
- 77d556aba Fix incorrect oscodename grain on Ubuntu
- 7e62dc9fd2 tests: Support reading os-release files from disk
- a92ec0db1b Make _parse_os_release() always callable
- eee1fe5b38 tests: Dissolve _run_ubuntu_os_grains_tests
- 1d6ef731fe tests: Deduplicate _run_os_grains_tests()

**PR #46133**: (rallytime) Update release versions for the 2017.7 branch @ 2018-02-26 16:42:43 UTC
- c8c71e75ca Merge pull request #46133 from rallytime/2017.7_update_version_doc
- 0ed338e643 Update release versions for the 2017.7 branch

**ISSUE #46124**: (moremo) GitFS saltenv ref won't pick up multiple of the same ref (refs: #46185)

**PR #46185**: (terminalmage) gitfs: Fix detection of base env when its ref is also mapped to a different env @ 2018-02-26 14:52:16 UTC
- 390d592aa6 Merge pull request #46185 from terminalmage/issue46124
- 3b58d00da0 gitfs: Fix detection of base env when its ref is also mapped to a different env

**PR #46148**: (rallytime) [2017.7] Merge forward from 2017.7.3 to 2017.7 @ 2018-02-23 19:21:38 UTC
- 705caaa08ca Merge pull request #46148 from rallytime/merge-2017.7
- 25deebf7a6 Merge branch '2017.7.3' into '2017.7'

**PR #46137**: (damon-atkins) [2017.7] update ec2 pillar arguments with better names @ 2018-02-23 13:32:04 UTC
- PR #45878: (damon-atkins) ec2_pillar update to fix finding instance-id (refs: #46137)
- 10a47dc0c4 Merge pull request #46137 from damon-atkins/2017.7_fix_ec2_pillar2
- 99ef7e7a7d3 update ec2 pillar arguments with better names

**ISSUE #46004**: (github-abcde) opts file_roots gets overwritten with pillar_roots in orchestration run (refs: #46145)

**PR #46145**: (terminalmage) 3 small fixes for runners/orchestration @ 2018-02-22 22:11:11 UTC
- d74cb14557 Merge pull request #46145 from terminalmage/issue46004
- 467f841cd pillarenv argument should default to None and not the value from opts
- 2a18585e9a Better solution for fixing the opts munging in pillar.show_pillar runner
- e2c4702e0c Update tests to reflect changes to the SaltCacheLoader
- f9301f34c4 Document behavior when orchestration runner invoked with non-orch states
- 9644579cd0 Instantiate the SaltCacheLoader's fileclient in the __init__
- f9a6c86e21 salt.runners.pillar.show_pillar: don't modify master opts
- e09409a9fcd Properly detect use of the state.orch alias and add orch jid to kwargs

**PR #46135**: (rallytime) Back-port #46088 to 2017.7 @ 2018-02-22 15:11:14 UTC
- PR #46088: (rongzeng54) fix kernel subpackages install bug (refs: #46135)
- 0395e0482 Merge pull request #46135 from rallytime/bp-46088
- 57a60f62a3 fix kernel subpackages install bug

- **ISSUE #45837**: (johje349) Salt Cloud does not recognise all Digitalocean sizes (refs: #46115)

- **PR #46136**: (rallytime) Back-port #46115 to 2017.7 @ 2018-02-21 19:17:23 UTC
  - PR #46115: (samodid) update digitalocean salt-cloud driver (refs: #46136)
  - 1fcbbd1e02 Merge pull request #46136 from rallytime/bp-46115
  - 0a481d707f update digitalocean salt-cloud driver

- **PR #45911**: (twangboy) LGPO Module: Convert reg values to unicode for debug @ 2018-02-21 19:02:17 UTC
  - 11e5e8eb86 Merge pull request #45911 from twangboy/win_fix_lgpo_unicode
  - bcede5cc625 Update log statement
  - e9fa53d3b7 Change the Invalid Data Message
  - c818d4b791 Convert reg values to unicode for debug

- **ISSUE #46085**: (zmedico) 2017.7.3 salt master with "open_mode: True" becomes unresponsive if minion submits empty public key (refs: #46123)

- **PR #46123**: (gtmanfred) If no pubkey is passed in openmode fail @ 2018-02-21 19:01:47 UTC
  - 524a6a72a0 Merge pull request #46123 from gtmanfred/2017.7
  - 8d36730ef7 If no pubkey is passed in openmode fail

- **PR #46131**: (vutny) [DOC] Fix code-blocks for reStructuredText @ 2018-02-21 15:47:05 UTC
  - e48fa58012 Merge pull request #46131 from vutny/doc-formula-formatting
  - d8fb051e44 [DOC] Fix code-blocks for reStructuredText

- **ISSUE #42763**: (xuhcc) acme.cert state falsely reports about renewed certificate (refs: #44603)

- **ISSUE #40208**: (bewing) Inconsistent state return when test=True (refs: #44603)

- **PR #46118**: (rallytime) Back-port #44603 to 2017.7 @ 2018-02-21 15:21:42 UTC
  - PR #44603: (oarmstrong) Fix acme state to correctly return on test (refs: #46118)
  - 6ce4aae95 Merge pull request #46118 from rallytime/bp-44603
  - 2a2c23c66b Fix acme state to correctly return on test

- **PR #46121**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2018-02-21 10:07:18 UTC
  - 16c382b55b Merge pull request #46121 from rallytime/merge-2017.7
  - 4c2f504a85 Merge branch '2016.11' into '2017.7'
    - e197a0fbc5 Merge pull request #46076 from rallytime/bp-46066
      - b94d73c53e Pin tornado version in requirements file
    - c72c1bdfe5f Merge pull request #46093 from wedge-jarrad/contributing-doc-typo
      - 5a0fe104f7 Fix contributing doc typo
    - 3cb83ea87e Merge pull request #45992 from bgridley/fix-routes-present-state
      - 679787699c Add vpc_peering_connection_id to describe_route_tables route_keys
    - 8a60635da0 Merge pull request #46000 from terminalmage/issue45910
      - 8cf13325ee salt.states.reg.present: Prevent traceback when reg data is binary
- 1f44e285dc Merge pull request #46011 from terminalmage/fix-solaris-runas
  - 8ee0a3a28b Move Solaris USER workaround up a bit
  - 13db52690 cmdmod.py: runas workaround for platforms that don't set a USER env var
- 30f8b7be0 Merge pull request #45467 from twangboy/win_exclude_hidden
  - ea41215646 Make the regex pattern less greedy
  - 6d223c8fa7 Add tip about passing bogus saltenv
  - 1282ae3a93 Skip hidden first
  - 437a457911 Skip hidden dirs in genrepo
  - 87dc554dc3 Add final updates to docs
  - 3646d5c897 Fix some docs formatting, add some warnings
  - 35c81fa5a Log the source_dir when caching the files
  - 91c3da8dfd Improve docs for pkg.refresh_db
  - 4803d92707 Add some documentation
  - 08b82e0875 Fix lint error, use raw
  - 2f712691cf Exclude hidden directories in pkg.refresh_db

• ISSUE #46106: (amendlik) yumpkg.refresh_db hangs (refs: #46107)
• PR #46107: (amendlik) Add --assumeyes on YUM/DNF commands @ 2018-02-20 22:52:06 UTC
  - b92346645b Merge pull request #46107 from amendlik/yumpkg-assumeyes
  - 8d9a432fb2 Add --assumeyes to yum/dnf commands in yumpkg.refresh_db
• PR #46094: (kstreee) Fix memory leak @ 2018-02-20 21:36:02 UTC
  - 14fe423e0c Merge pull request #46094 from kstreee/fix-memory-leak
  - 48080a1bae Fixes memory leak, saltclients should be cleaned after used.
  - aba0085fd4 Adds set_close_callback function to removes stream instance after closed from a set streams.

• ISSUE #13: (thatch45) Expand the stats module (refs: #46097)
• PR #46097: (vutny) [DOC] Put https link to the formulas doc page @ 2018-02-20 17:07:39 UTC
  - 320c2037e1 Merge pull request #46097 from vutny/fix-https-link
  - 2062fd0e5c [DOC] Put https link to the formulas doc page
• PR #46103: (bdrung) Fix skipping Kubernetes tests if client is not installed @ 2018-02-20 16:33:42 UTC
  - 0eb137fbc4 Merge pull request #46103 from bdrung/2017.7
  - 6d33f065fc Fix skipping Kubernetes tests if client is not installed
• PR #46070: (Ch3LL) add required arg to dns_check jinja doc example @ 2018-02-16 20:00:44 UTC
  - c3a938e994 Merge pull request #46070 from Ch3LL/fix-doc-dns
  - 2a5d8559d755 add required arg to dns_check jinja doc example
• PR #46067: (rallytime) Back-port #45994 to 2017.7 @ 2018-02-16 19:55:27 UTC
  - PR #45994: (nullify005) Fix hosted zone Comment updates & quote TXT entries correctly (refs: #46067)
  - 01042e0875 Merge pull request #46067 from rallytime/bp-45994

30.2. Previous Releases
- a07bb48726 Correct formatting for lint
- e8678f633d Fix Comment being None not " and inject quotes into the TXT ChangeRecords

**ISSUE #42932:** (bobrik) cmd.run with bg: true doesn’t fail properly (refs: #45932)

**PR #45932:** (The-Loeki) Fix cmd run_all bg error @ 2018-02-16 14:53:15 UTC
- PR #39980: (vutny) [2016.3] Allow to use bg kwarg for cmd.run state function (refs: #45932)
- 5e0e2a30e2 Merge pull request #45932 from The-Loeki/fix_cmd_run_all_bg
- f83da27ca5 Merge branch '2017.7' into fix_cmd_run_all_bg
- 771758bca Merge branch '2017.7' into fix_cmd_run_all_bg
- c54fcf7a2d cmd: move separate DRY logging blocks into _run, prevent logging on bg=True, don’t use_vt
  on bg
- ebb1f18a9b cmd run: when running in bg, force ignore_retcode=True

**PR #46062:** (vutny) Fix typo in postgres_user.present state function @ 2018-02-16 14:44:29 UTC
- 45ace39961 Merge pull request #46062 from vutny/pg-user-state-fix-typo
- a5fbe4e95e Fix typo in postgres_user.present state function

**PR #45763:** (twangboy) Fix rehash function in win_path.py @ 2018-02-15 20:05:16 UTC
- edcb64de76 Merge pull request #45763 from twangboy/win_fix_path_rehash
- b9a2bc7b29 Fix hyperlinks
- 29912adc15 Move the test_rehash test to test_win_functions
- adc594c183 Remove duplicate link
- e84628c1eb Add some comments to the code
- d50d5f582f Add additional info to docs for broadcast_setting_change
- 3a54e09cd9 Rename setting to message
- a39e99be0 Change to a generic function to broadcast change
- 79299361c3 Create refresh_environment salt util
- 967b83940c Fix rehash function

**PR #46042:** (jfindlay) Revise file_tree pillar module documentation @ 2018-02-15 19:29:52 UTC
- PR #46027: (jfindlay) Revise file_tree pillar module documentation (refs: #46042)
- a46bc546c Merge pull request #46042 from jfindlay/file_tree_doc
- 0ba4954a4b salt.pillar.file_tree revise module documentation
- 3c6a5bf9e7 salt.pillar.file_tree provide better debug info
- bb1cdec51e salt.pillar.file_tree no stack trace when nodegroups undefined

**PR #46013:** (rallytime) Back-port #45598 to 2017.7 @ 2018-02-15 16:11:05 UTC
- PR #45598: (nullify005) Patch around ResourceRecords needing to be present for AliasTarget (refs: #46013)
- de86126dd8 Merge pull request #46013 from rallytime/bp-45598
- 2ea3f6543 No lazy logging
- f427b0f68c Change formatting style of logging lines per review
- ebb244396b Patch around ResourceRecords needing to be present for AliasTarget entries to work

* ISSUE #45825: (philpep) selinux.fcontext_policy_present doesn't work on Centos 6 with filetype = all files (refs: #45826)

* PR #46016: (rallytime) Back-port #45826 to 2017.7 @ 2018-02-14 18:16:24 UTC
  - PR #45826: (philpep) Fix selinux.fcontext_policy_present for Centos 6 (refs: #46016)
  - 07e5735471 Merge pull request #46016 from rallytime/bp-45826
  - 1916e5c4a4 Fix selinux.fcontext_policy_present for Centos 6

* ISSUE #45784: (oarmstrong) SELinux module fcontext_get_policy fails with long regex (refs: #45785)

* PR #46015: (rallytime) Back-port #45785 to 2017.7 @ 2018-02-14 18:16:09 UTC
  - PR #45785: (oarmstrong) m/selinux.fcontext_get_policy allow long filespecs (refs: #46015)
  - a1f4092811 Merge pull request #46015 from rallytime/bp-45785
  - ef6ff6b1492 Resolve linting errors
  - 804766c46 Remove unused import
  - 8f7c45935a Add tests for salt.modules.selinux.fcontext_get_policy
  - bab7b4e6e Ensure parsed fields are stripped
  - a830a6e819 m/selinux.fcontext_get_policy allow long filespecs

* PR #46012: (rallytime) Back-port #45462 to 2017.7 @ 2018-02-14 18:14:56 UTC
  - PR #45462: (aphor) emit port cli version, variants as separate args (refs: #46012)
  - 96097c037e Merge pull request #46012 from rallytime/bp-45462
  - 9f76836a6c emit port cli version, variants as separate args

* PR #45991: (terminalmage) yumpkg: Fix a couple issues with _get_extra_opts @ 2018-02-14 16:48:28 UTC
  - 1279924f5f Merge pull request #45991 from terminalmage/fix-duplicate-extra-opts
  - 916766f651 yumpkg: Fix a couple issues with _get_extra_opts

* PR #46017: (rallytime) [2017.7] Merge forward from 2017.7.3 to 2017.7 @ 2018-02-13 21:43:15 UTC
  - 8b9adc258e Merge pull request #46017 from rallytime/merge-2017.7
  - a06645ce71 Merge branch '2017.7.3' into '2017.7'

* ISSUE #45796: (L4rS6) aliases module doesn't follow symlinks (refs: #45797)

* PR #45988: (rallytime) Back-port #45797 to 2017.7 @ 2018-02-13 17:49:02 UTC
  - PR #45797: (L4rS6) follow symlinks in aliases module (close #45796) (refs: #45988)
  - d20ff89214 Merge pull request #45988 from rallytime/bp-45797
  - 953a400d79 follow symlinks

* PR #45711: (bdrung) Fix Unicode tests when run with LC_ALL=POSIX @ 2018-02-13 17:42:07 UTC
  - b1808ace0e Merge pull request #45711 from bdrung/fix-unicode-tests
  - b6181b5ed6 Fix Unicode tests when run with LC_ALL=POSIX

* PR #45878: (damon-atkins) ec2_pillar update to fix finding instance-id (refs: #46137) @ 2018-02-13 17:34:14 UTC
  - 5271fb1d40 Merge pull request #45878 from damon-atkins/2017.7_fix_ec2_pillar
- 0e74025714 Merge branch '2017.7' into 2017.7_fix_ec2_pillar  
- b4d0b23891 py3 fix  
- 75d9e20d8a Add ignoring 'terminated', 'stopped' instances, to improve changes of a single match  
- 0093472a37 added tag_key_list and tag_key_sep to create ec2_tags_list  
- afb3968aa7 ec2_pillar could not find instance-id, resolved. add support to use any tag to compare minion id against.

- **PR #45942:** (terminalmage) Fix incorrect translation of docker port_bindings -> ports (2017.7 branch) @ 2018-02-13 16:10:03 UTC
  - cf367dbd04 Merge pull request #45942 from terminalmage/issue45679-2017.7
  - 89cbd72a0d Don't try to sort ports when translating docker input
  - 9cd47b39dd Fix incorrect translation of docker port_bindings -> ports

- **PR #45959:** (rallytime) A couple of grammar updates for the state compiler docs @ 2018-02-12 22:17:49 UTC
  - dae41de7a8 Merge pull request #45959 from rallytime/state-doc-update
  - 6f781cb95d A couple of grammar updates for the state compiler docs

- **ISSUE saltstack/salt#45884:** (tintoy) "TypeError: can’t serialize <Nodelmage” when calling salt-cloud with the dimensiondata driver (refs: #45908)

- **ISSUE #45884:** (tintoy) "TypeError: can’t serialize <Nodelmage” when calling salt-cloud with the dimension-data driver (refs: #45908)

- **PR #45908:** (tintoy) Fix for #45884 ("TypeError: can’t serialize <Nodelmage” when calling salt-cloud with the dimensiondata driver) @ 2018-02-12 22:05:29 UTC
  - 007214f7bf Merge pull request #45908 from DimensionDataResearch/fix/issue/45884
  - 1a75786b5a Fix linter warnings.
  - 82ec0b589c Revert to using salt.utils.cloud.is_public_ip.
  - 9b6b01873b Fix violations reported by flake8.
  - a2bc155c73 Use __utils__['cloud.'] instead of salt.cloud.utils.
  - 98907a32cb Ensure 'auth' parameter is correctly passed to dimensiondata driver.
  - de2b03e2c2 Fix copy/paste bug in dimensiondata provider integration test.
  - 6b1b6be427 Add integration tests for dimensiondata cloud provider.
  - f6ea9fed7d Ensure that event data provided by the dimensiondata driver is serialisable.

- **PR #45985:** (garethgreenaway) [2017.7] Backport #45894 - Missing format in the call to write. @ 2018-02-12 20:22:31 UTC
  - PR #45894: (while0pass) Fix inconsistencies in param description (refs: #45985)
  - ecfbfa868c Merge pull request #45895 from garethgreenaway/2017_7_fixing_mac_tests_again
  - 7b8dc14333 Missing format in the call to write.

- **PR #45958:** (garethgreenaway) Backporting #45935 to 2017.7 @ 2018-02-12 16:25:07 UTC
  - PR #45936: (garethgreenaway) [oxygen] Fix to log/handlers/__init__.py (refs: #45958)
  - PR #45935: (rallytime) Back-port #45742 to 2017.7.3 (refs: #45958)
  - PR #45742: (marccardinal) list.copy() is not compatible with python 2.7 (refs: #45935)
b03abd07c Merge pull request #45958 from garethgreenaway/backport-fixing_mactests_queue_full
25dfaae91 Backporting #45935

- **PR #45949: (rallytime)** [2017.7] Merge forward from 2016.11 to 2017.7 @ 2018-02-09 22:32:09 UTC
  - bab365d6c6 Merge pull request #45949 from rallytime/merge-2017.7
  - f51687e903 Merge branch '2016.11' into '2017.7'
  - 7779fe7ba Merge pull request #45940 from dmurphy18/fix_aix_cmdmod
    - *dd2788419b Fix use of 'su' for AIX to use '-'

- **PR #45928: (garethgreenaway)** [2017.7] Fixing vault when used with pillar over salt-ssh @ 2018-02-09 16:32:35 UTC
  - 7fd00ec752 Merge pull request #45928 from garethgreenaway/45915_fixing_vault_pillar_for_salt_ssh
  - 259e60e5d4 Fixing vault when used with pillar over salt-ssh

- **PR #45925: (terminalmage)** Fix spelling error in docstring @ 2018-02-08 21:52:35 UTC
  - 9d14ad9cc6 Merge pull request #45925 from terminalmage/fixed-spelling
  - 7a143f6e54 Fix spelling error in docstring

- **PR #45920: (rallytime)** [2017.7] Merge forward from 2016.11 to 2017.7 @ 2018-02-08 15:43:49 UTC
  - 0cbe93cd69 Merge pull request #45920 from rallytime/merge-2017.7
  - e4e74218 Merge branch '2016.11' into '2017.7'
  - 27ff82f996 Merge pull request #45864 from rallytime/release-note-fix
    - *104a24f244 Remove extraneous ] in release notes for 2016.11.9
  - 5fa010de2b Merge pull request #45787 from rallytime/2016.11.9_docs
    - *a384d444fa [2016.11] Bump latest and previous versions

- **ISSUE #45805: (bgridley)** Execution module victorops throws an error "RuntimeError: dictionary changed size during iteration" (refs: #45814)

- **PR #45814: (gtmanfred)** fix cookies dict size changing in http.query @ 2018-02-08 15:35:30 UTC
  - 643a8a5278 Merge pull request #45814 from gtmanfred/2017.7
  - d8ee9aa97 Fix cookies dict size changing in http.query

- **PR #45877: (rallytime)** Add release notes file for 2017.7.4 release @ 2018-02-08 14:07:43 UTC
  - 3a3f87c16d Merge pull request #45877 from rallytime/new-release-notes
  - f937e8ba81 Add release notes file for 2017.7.4 release

- **PR #45904: (rallytime)** Back-port #41017 to 2017.7 @ 2018-02-08 13:57:45 UTC
  - **PR #41017: (cebe)** Fixed typo in pkg state documentation (refs: #45904)
    - 1c3cc00e74 Merge pull request #45904 from rallytime/bp-41017
    - 80c56cdcea Fixed typo in pkg state documentation

- **PR #45907: (terminalmage)** Fix backport of grains fix @ 2018-02-08 13:57:26 UTC
  - 317d35bd15 Merge pull request #45907 from terminalmage/fixed-grains-backport

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**30.2. Previous Releases**

2349
- 6cf7e50cc4 Fix backport of grains fix

- **PR #45906**: (rallytime) Back-port #45548 to 2017.7 @ 2018-02-08 13:57:07 UTC
  - **PR #45548**: (viktorodaniel) Update x509.py - documentation fix (refs: #45906)
  - dade5f0cab Merge pull request #45906 from rallytime/bp-45548
  - 1befa7386c Update x509.py

- **ISSUE #45893**: (CrackerJackMack) archive.extracted ValueError "No path specified" in 2017.7.3 (refs: #45902)
  - **PR #45902**: (terminalmage) Check the effective saltenv for cached archive @ 2018-02-08 13:42:00 UTC
    - 82c473a1fe Merge pull request #45902 from terminalmage/issue45893
    - 9d200efc26 Add regression test for issue 45893
    - 1468f1d0ff Remove duplicated section in docstring and fix example
    - 6cc5ed9b8a Check the effective saltenv for cached archive

- **PR #45862**: (rallytime) Back-port #45830 to 2017.7 @ 2018-02-08 13:22:26 UTC
  - **PR #45830**: (garethgreenaway) [oxygen] Catch exception when logging queue is full (refs: #45862)
  - fdedde3cfb Merge pull request #45862 from rallytime/bp-45830
  - 1024856f9a Wrapping the put_nowait in a try...except and catching the exception when the multiprocessing queue is full. This situation is happening when running the full testing suite on MacOS where the queue limit is 32767 vs on Linux where the queue limit is unlimited.

- **PR #45779**: (The-Loeki) SSH shell shim: Don’t use $() for optimal support @ 2018-02-05 18:35:21 UTC
  - 43a45b42c3 Merge pull request #45779 from The-Loeki/patch-3
  - 8575ae3d52 Merge branch '2017.7' into patch-3
  - 47cf00d88e SSH shell shim: Don’t use $() for optimal support

- **PR #45788**: (rallytime) [2017.7] Bump latest and previous versions @ 2018-02-05 15:30:46 UTC
  - cca997d0da Merge pull request #45788 from rallytime/2017.7.3_docs
  - 359265869f Adding a couple tests to ensure that duration is included in state run results even when states do not run.

- **PR #45517**: (kstreee) Fixes base dir making logic to ensure not raising the exception when base directory already exists. @ 2018-02-05 14:56:23 UTC
  - 80a2d009b4 Merge pull request #45517 from kstreee/fix-mkdir
- 24d41f2451 Fixes base dir making logic to ensure not raising the exception when base directory already exists.

- PR #45835: (kstreee) Adds a missing return statement. @ 2018-02-02 22:51:41 UTC
  - 7a4b1b2e77 Merge pull request #45835 from kstreee/fix-missing-return-statement
  - 68c7f3dcba Adds a missing return statement.

- PR #45840: (rallytime) Back-port #45603 to 2017.7 @ 2018-02-02 20:17:32 UTC
  - PR #45603: (andreaspe) Fix for duplicate entries with pkrepo.managed (refs: #45840)
  - 0a04f118c2 Merge pull request #45840 from rallytime/bp-45603
  - 9653363131 Fix for duplicate entries with pkrepo.managed

- ISSUE #44315: (whytewolf) cmd.* cwd does not escape spaces. 2017.7.2 (refs: #45134)

- PR #45716: (ciiqr) fixed quoting of script path in cmd.script @ 2018-02-02 14:36:49 UTC
  - PR #45134: (garethgreenaway) [2017.7] fix to cmd.script for cwd with space (refs: #45716)
  - bd2178cd5f Merge pull request #45716 from ciiqr/fix_cmd_script_quoting
  - 217791079b some code cleanup (lint errors and escape_argument as _cmd_quote)
  - 1c29bc5a3d fixed quoting of script path in cmd.script

- ISSUE #45684: (bdrung) salt documentation fails to build with Python 3 version of sphinx (refs: #45719)

- PR #45719: (bdrung) Fix python3 sphinx build @ 2018-02-02 14:20:37 UTC
  - 272f912c7c Merge pull request #45719 from bdrung/fix-python3-sphinx-build
  - 179e8fbc73 doc: Do not mock non-existing __qualname__ attribute
  - 971e59ebe2 Drop enforcing new-style object for SaltYamlSafeLoader

- PR #45764: (mchugh19) support amazon linux 2 for service module @ 2018-02-02 14:12:07 UTC
  - PR #45758: (mchugh19) support amazon linux 2 for service module (refs: #45764)
  - fc04336c3b Merge pull request #45764 from mchugh19/2017.7
  - 0a7f1a4d75 English better
  - 37e067c7b5 support amazon linux 2 for service module

- PR #45756: (roaldnefs) Fix Grafana4 states documentation @ 2018-01-31 19:01:33 UTC
  - f234b52f4 Merge pull request #45756 from roaldnefs/fix-grafana4-documentation
  - 92979c0b57 Fix grafana4 states documentation

- PR #45801: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2018-01-31 18:55:52 UTC
  - 685b683d5 Merge pull request #45801 from rallytime/merge-2017.7
  - 26e99e011 Merge branch '2016.11' into '2017.7'
    * 746386d04c Merge pull request #45794 from futny/doc-file-state-examples
      - ddf0e64a29 [DOC] Fix code-block rST directive in file state module
    * abc9e2214 Merge pull request #45780 from futny/doc-pkgrepo-zypper
      - f80c7d8d69 [DOC] Add missing gpgautoimport for pkgrepo.managed

- PR #45802: (rallytime) [2017.7] Merge forward from 2017.7.3 to 2017.7 @ 2018-01-31 18:55:35 UTC
• **ISSUE #45738**: (UtahCampusD) minion cache overwritten for scheduled jobs (refs: #45761)
  • **PR #45761**: (gtmanfred) generate a jid for cache_jobs on the minion @ 2018-01-31 18:01:53 UTC
    - 96e9232cc2 Merge pull request #45761 from gtmanfred/2017.7
    - 280767ed57 generate a jid for cache_jobs on the minion

• **ISSUE #45301**: (twangboy) Ctl+C causes stack trace on Windows (refs: #45707)
  • **PR #45707**: (skizunov) Fix exception when shutting down logging listener @ 2018-01-30 13:28:10 UTC
    - 38ed46a61a Merge pull request #45707 from skizunov/develop2
    - e84801a381 Ensure we have at least one logging root handler
    - 3da9b8dd3 Fix exception when shutting down logging listener

• **PR #45773**: (terminalmage) Fix misspellings @ 2018-01-30 13:24:52 UTC
  - 53088fec7 Merge pull request #45773 from terminalmage/fix-misspelling
  - 0a45f998fe Fix misspellings

• **ISSUE #45489**: (ipmb) cache.grains runner returns all minions when match is not found (refs: #45588)
  • **PR #45588**: (samodid) update MasterPillarUtil get_minion_grains method (refs: #45751)
    - 454ed25f62 Merge pull request #45588 from rallytime/bp-45588
    - aa149a0e7a fix typo
    - 3e794a043d fix copy-paste error in get_minion_grains method doc string
    - 1fb9a08e0 update MasterPillarUtil

• **PR #45753**: (rallytime) Back-port #45588 to 2017.7 @ 2018-01-29 17:12:25 UTC
  - **PR #45588**: (samodid) update MasterPillarUtil get_minion_grains method (refs: #45751)
    - 860e21955c Merge pull request #45753 from rallytime/merge-2017.7
    - cb50cece81 Merge branch '2016.11' into '2017.7'
    - d7e0e26a9 Merge pull request #45749 from vutny/fx-typo
      - e80bf20c6 The zypper.mod_repo: fix typo in the docstring
    - cb6ce378ea Merge pull request #45459 from vutny/salt-cloud-fix-loading-utf-cache
      - b370796e9 Salt Cloud: write/read cached data in UTF-8 explicitly
      - cd999201be [2016.11] Salt Cloud: fix loading UTF-8 cached data

• **ISSUE #40173**: (gtmanfred) Document the Open File limit issue better (refs: #45688)
  • **PR #45688**: (bdrung) Raise LimitNOFILE to default max open files @ 2018-01-29 14:26:57 UTC
    - 96b4d4a528 Merge pull request #45688 from bdrung/raise-max-open-files
    - bbedee756 Raise LimitNOFILE to default max open files

• **PR #45686**: (bdrung) Use dbus-run-session instead of dbus-launch @ 2018-01-29 14:24:11 UTC
  - 79da49ec8b Merge pull request #45686 from bdrung/2017.7
  - f49d0a0ee Use dbus-run-session instead of dbus-launch
• **PR #45740**: (terminalmage) Fix incorrect attempt at version comparison. @ 2018-01-29 14:12:05 UTC
  - 7fb666bcd2 Merge pull request #45740 from terminalmage/fi x-incorrect-version-comparison
  - 1eb83bdc5a Fix incorrect attempt at version comparison.

• **PR #45747**: (SteffenKockel) Fix typos @ 2018-01-29 13:53:27 UTC
  - fe636f53f8 Merge pull request #45747 from SteffenKockel/2017.7
  - 319b513183 Fix typos

• **PR #45734**: (terminalmage) Fix traceback in CLI output when value is trimmed @ 2018-01-28 13:35:56 UTC
  - eb91ae8b6e Merge pull request #45734 from terminalmage/fix-trimmed-output
  - 966ad07452 Fix traceback in CLI output when value is trimmed

• **PR #45712**: (bdrung) Decode git call output in Python 3 @ 2018-01-26 22:45:43 UTC
  - 7516bfbff0 Merge pull request #45712 from bdrung/fi x-version-decode
  - 217183405a Decode git call output in Python 3

• **ISSUE #44449**: (brianthelion) salt-ssh + salt-cloud: cloud roster not working and/or `update_cachedir` is broken (refs: #45720)

• **PR #45720**: (dwoz) Salt cloud adds newly created instances to cache @ 2018-01-26 22:45:43 UTC
  - 91b848debb Merge pull request #45720 from dwoz/issue-44449-prod-fix
  - 444bd119ed Salt cloud adds newly created instances to cache

• **PR #45724**: (eliasp) Typo (Hellium → Helium) @ 2018-01-26 22:37:44 UTC
  - 83169f066 Merge pull request #45724 from eliasp/2017.7-typo-from-hell
  - bec7827f63 Replace left-over mistyped codename reference (Hellium → 2014.7.0)

• **PR #45722**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2018-01-26 22:15:40 UTC
  - cdb21a0186 Merge pull request #45722 from rallytime/merge-2017.7
  - 8e3a2e25fe Merge branch '2016.11' into '2017.7'
  - e4047a1234 Merge pull request #45511 from twangboy/win_fix_git
    - 160dd7c6ce Pull the first item in the list
    - 52d6d78150 Only keep ssh.py in the Windows installer
    - 54eb0db2c4 Keep ssh state and execution modules in the installer
    - 0fa801a329 Add additional path to find ssh.exe
  - a550e8d25d Merge pull request #45694 from twangboy/win_reg_add_keys
    - 8f53cd2d68 Add new keys to subkey_slash_check
    - 62050c711c Add support for additional reg keys
  - 7ceebf62f0 Merge pull request #45577 from zer0def/git-detached-31363
    - a924b971ef Applied PR #40524 to `git.detached` state module function. (refs #31363)

• **PR #45718**: (rallytime) [2017.7] Merge forward from 2017.7.3 to 2017.7 @ 2018-01-26 16:49:44 UTC
  - 3a413e96c5 Merge pull request #45718 from rallytime/merge-2017.7
  - f10c7ee92d Merge branch '2017.7.3' into '2017.7'
• PR #45690: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2018-01-26 14:41:44 UTC
  - d0955519cf Merge pull request #45690 from rallytime/merge-2017.7
  - d4dac9f7cc Merge branch '2016.11' into '2017.7'
    * 3a6837e232 Merge pull request #45675 from Ch3LL/rn_2016.11.9
    * 7b5bed36d9 Add new commits to 2016.11.9 release notes
    * 915e259bad Merge pull request #45663 from rallytime/bp-45452-2016.11
      * ae94fb61d9 opkg.py: make owner function return value, instead of iterator
    * ecd75c137f Merge pull request #45651 from rallytime/merge-2016.11
      * 1583e1edbe Merge branch '2016.11.9' into '2016.11'
      * 1081296f0 Merge pull request #45638 from twangboy/win_fix_shell_info
      * 872da3ffba Only convert text types in the list_values function
      * 0e41535cdb Fix reg.py to only convert text types to unicode
      * 3579534ea5 Fix issue with detecting powershell
      * 2d1dd1186e Merge pull request #45564 from Ch3LL/r-notes-2016
      * 28e4398150 Merge pull request #45563 from Ch3LL/man_2016
    * 22bcd3d110 Merge pull request #45600 from vutny/doc-fix-references
      * 35675fe6b3 [DOC] Fix references on Salt Formulas page
    * 0d622f92a9 Merge pull request #45542 from UtahDave/docMixed_transports
      * b5b5054ec2 capitalize masters and minions
      * f542df566 Add warning about using mixed transports
    * c70b9dc20b Merge pull request #45565 from Ch3LL/r-notes-2016
      * 325f4c6bcda Add PR changes to 2016.11.9 Release Notes
    * d8526062c1 Merge pull request #45562 from Ch3LL/man_2016
      * 529bc0c680 update release number for salt-call man page 2016.11.9
      * 11b7222148 Update man pages for 2016.11.9
  • PR #45710: (michelsen) Added source argument to function call @ 2018-01-26 14:30:48 UTC
    * 9c92e93834 Merge pull request #45710 from michelsen/fx-chocolatey-state-bug
    * 8acc00ce5c Added source argument to function call
  • PR #45667: (gtmanfred) default to upgrading when refreshing on archlinux @ 2018-01-25 14:05:24 UTC
    * 693f72d5a7 Merge pull request #45667 from gtmanfred/syu
    * 44c601102a we should default to upgrading when refreshing on archlinux
  • PR #45674: (rallytime) [2017.7] Merge forward from 2017.7.3 to 2017.7 @ 2018-01-24 22:46:31 UTC
    * bec946b080 Merge pull request #45674 from rallytime/merge-2017.7
    * 9f78e53d4b Merge branch '2017.7.3' into '2017.7'
  • ISSUE #45590: (viq) webhook engine does not work with tornado 4.5.2 (refs: #45589)
  • PR #45589: (gtmanfred) change webhook headers to dict @ 2018-01-24 22:32:37 UTC
- 50de847191 Merge pull request #45589 from gtmanfred/2017.7
- 395d665c91 change webhook headers to dict

**ISSUE #45072:** (vernondcole) cannot build documentation on Ubuntu 17.10 (refs: #45662)

**PR #45662:** (bdrung) Fix documentation generation @ 2018-01-24 17:14:22 UTC
- e21088c1a4 Merge pull request #45662 from bdrung/2017.7
- 71076abcc doc: Define fake version for msgpack and psutil
- b6a5754b1 doc: Mock keyring module import

**PR #45650:** (rallytime) Back-port #45555 to 2017.7 @ 2018-01-24 14:47:54 UTC
- PR #45555: (ddob94) update winrepo_source_dir document (refs: #45650)
- da82f190d2 Merge pull request #45650 from rallytime/bp-45555
- e7d4b0416b update winrepo_source_dir document

**PR #45611:** (terminalmage) Fix unnecessary/incorrect usage of six.binary_type @ 2018-01-23 22:53:20 UTC
- 79ee2d0c7 Merge pull request #45611 from terminalmage/tests-log-level
- 6a865c6f54 Fix unnecessary/incorrect usage of six.binary_type

**PR #45652:** (rallytime) [2017.7] Merge forward from 2017.7.3 to 2017.7 @ 2018-01-23 22:45:22 UTC
- 634d8b0c0 Merge pull request #45652 from rallytime/merge-2017.7
- 4e907d84b Merge branch '2017.7.3' into '2017.7'

**ISSUE #45627:** (bdrung) Failing unit tests in Debian package build (refs: #45630)

**PR #45630:** (bdrung) Fix tests @ 2018-01-23 21:56:46 UTC
- dbdef8230e Merge pull request #45630 from bdrung/2017.7
- 76d44e9490 Fix skipping test when boto is not installed
- 6a865c6f54 Fix unnecessary/incorrect usage of six.binary_type

**PR #45619:** (garethgreenaway) [2017.7] Fixing test_mac_user_enable_auto_login @ 2018-01-23 21:56:03 UTC
- 8e59cd91e8 Merge pull request #45619 from garethgreenaway/2017_7_test_mac_user_enable_auto_login
- 5f03e1e6c Fixing integration.modules.test_mac_user.MacUserModuleTest.test_mac_user_disable_auto_login

**PR #45644:** (twangboy) Add missing space to deprecation warning @ 2018-01-23 21:55:11 UTC
- 8a9f424c27 Merge pull request #45644 from twangboy/win_fix_dep.warn
- 9e9bc384c Add missing space to deprecation warning

**PR #45634:** (Ch3LL) Add different service name for Mac 10.13 test @ 2018-01-23 21:51:56 UTC
- c290b6320b Merge pull request #45634 from Ch3LL/mac-service
- 31b712e27d Add different service name for Mac 10.13 test

**PR #45606:** (terminalmage) Fix bug affecting salt-ssh when root_dir differs from the default @ 2018-01-23 20:03:49 UTC
- c28151f5f7 Merge pull request #45606 from terminalmage/salt-ssh-root-dir-fix
- 3f9309521b Fix bug affecting salt-ssh when root_dir differs from the default

**PR #45636:** (Ch3LL) Fix mac service and pkg tests for 10.13 @ 2018-01-23 18:44:56 UTC
- 0931b6417d Merge pull request #45636 from Ch3LL/mac-tests

- **PR #45609**: (rallytime) [2017.7] Merge forward from 2017.7.3 to 2017.7 @ 2018-01-22 20:24:36 UTC
  - 63a294f498 Merge pull request #45609 from rallytime/merge-2017.7
  - a5fc3b3363 Merge branch '2017.7.3' into '2017.7'

- **ISSUE #45431**: (zer0def) boto3_route53.hosted_zone_present state can fail due to related execution module function's typo (refs: #45576)

- **PR #45576**: (zer0def) Fixed boto3_route53 execution module function signature `disassociate_vpc_from_hosted_zone` typo. (refs #45431) @ 2018-01-22 19:37:13 UTC
  - 59329957ca Merge pull request #45576 from zer0def/boto3-route53-typo
  - 21e1e9e226 Fixed boto3_route53 execution module function signature `disassociate_vpc_from_hosted_zone` typo. (refs #45431)

- **PR #45552**: (rallytime) [2017.7] Merge forward from 2017.7.3 to 2017.7 @ 2018-01-19 19:12:49 UTC
  - 42b0d27f71 Merge pull request #45552 from rallytime/merge-2017.7-from-.3
  - dba7410b80 Merge branch '2017.7.3' into '2017.7'

- **PR #45551**: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2018-01-19 18:21:27 UTC
  - 879cfcb889 Merge pull request #45551 from rallytime/merge-2017.7
  - e0fa32b49 Merge branch '2016.11' into '2017.7'
  - 18e81a47bb Merge pull request #45540 from rallytime/merge-2016.11
    - 441f819b7b Merge branch '2016.11.9' into '2016.11'
    - 654df0f526 Merge pull request #45532 from gtmanfred/2016.11.9
      - 6c26025664 fix mock for opensuse
  - 4f3b9b57fa Merge pull request #45522 from rallytime/merge-2016.11
    - 36c038c92a Merge branch '2016.11.9' into '2016.11'
    - 571c33aa39 Merge pull request #45518 from gtmanfred/2016.11.9
      - 5455d2dee6 fix centos 6 pip test
      - 36025194b0 fix fedora pkg test
  - 0638638fb9 Merge pull request #45504 from rallytime/merge-2016.11
    - d72fc74e8c Merge branch '2016.11.9' into '2016.11'
      - 4e0a0ecf1 Merge pull request #45443 from rallytime/bp-45399-2016.11.9
      - 919e92c911 Fix git.latest failure when rev is not the default branch
      - ebd4db66b8 Merge pull request #45493 from damon-atkins/2016.11_fix_sls_definition_wrong_type
      - af108440df win_pkg lint space after ,
      - c6e922a236 win_pkg lint issues
      - f4627d7a80 fix quote i.e. change ` to '
      - 6938ac099 pkg.refresh_db report an issue if a sls pkg definition id not a dict instead of aborting.
  - 5a2a31bfff Merge pull request #45495 from vutny/doc-rhel-pygit2-compat
ISSUE #42626: (UtahDave) new args and kwargs options for publisher_acl are not documented at all and very little for external_auth (refs: #45389)

PR #45389: (DmitryKuzmenko) Docs update for function args limit in pub acl. @ 2018-01-18 22:56:10 UTC
- 28554aca935 Merge pull request #45389 from DSRCorporation/bugs/42626_pub_acl_doc
- f33ebcada0 Doc note about user names regex matching in pub acl and eauth.
- e29c0ff19e Docs update for function args limit in pub acl.

PR #45483: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2018-01-18 22:54:12 UTC
- b3dc758ab0 Merge pull request #45483 from rallytime/merge-2017.7
- de6d85959a Lint fix
- 9f547a31f0 Merge branch '2016.11' into '2017.7'
  - b75670415 Merge pull request #45482 from rallytime/merge-2016.11
    - 3b38c77159 Merge branch '2016.11.9' into '2016.11'
    - 7322efba92 Merge pull request #45446 from rallytime/bp-45390
  - 96ae237d37 Merge pull request #45448 from rallytime/merge-2016.11.9
    - 646379d981 Merge branch '2016.11' into '2016.11.9'
  - 1ed323a3ee Merge pull request #45437 from terminalmage/docstring
    - c11b16dc29 Fix incorrect wording in jboss7 docstrings
  - 600fa3939f Merge pull request #45390 from damon-atkins/2016.11_win_pkg_remove_final_fixes
    - 6f045ea24 lint too-many-blank-lines
    - 10a7501ede Update release notes
    - 6f2affe01c fix pkg.remove, pkg.list_pkgs
  - 057df44a4a Merge pull request #45399 from terminalmage/fx-git.latest-depth
  - 0cbce676bf Fix git.latest failure when rev is not the default branch
  - b0e96f4d4 Merge pull request #45424 from twangboy/win_reg
  - 30f06205f7 Fix some issues with reg.py

PR #45529: (Ch3LL) Fix UnboundLocalError for pacman pkg installs @ 2018-01-18 19:01:49 UTC
- 5e26282843 Merge pull request #45529 from Ch3LL/pacman-sources
- e619d49ef3 Fix UnboundLocalError for pacman pkg installs

PR #45508: (frogunder) fix test_archive test for mac on 2017.7 branch @ 2018-01-18 16:04:36 UTC
- 8409c97417d Merge pull request #45508 from frogunder/fx_mac_archive_tests_2017.7_branch
- ccf062d62e fix test_archive test for mac on 2017.7 branch

PR #45444: (rallytime) Back-port #45343 to 2017.7 @ 2018-01-17 17:17:59 UTC
- PR #45343: (rrroo) Support expr_form for manage.up, manage.down (refs: #45444)
- e1403b6813 Merge pull request #45444 from rallytime/bp-45343
- c7d2081390 Support expr_form for manage.up, manage.down

- **PR #45465**: (terminalmage) Backport #45095 to 2017.7 branch @ 2018-01-17 15:13:05 UTC
  - **PR #45095**: (terminalmage) PY3: Make loader ignore .pyc files not in __pycache__ (refs: #45465)
  - 4b2c88e2e6 Merge pull request #45465 from terminalmage/bp-45095
  - 2f63a6dbf4 Optimization: don’t allocate a new list to concatenate
  - 5074741130 EAFP
  - 85dbdc6a39 PY3: Make loader ignore .pyc files not in __pycache__

- **PR #45365**: (meaksh) Return an error when "gid_from_name" is set but group does not exist @ 2018-01-16 18:31:50 UTC
  - 5f58a87e84 Merge pull request #45365 from meaksh/2017.7-issue-45345
  - da23067f80 Refactor to prevent logical bug when gid is 0
  - 9fd3a0d5e9 Update documentation for 'gid_from_name' parameter
  - 52f9c06908 Fix integration tests for 'user.present' state.
  - 2c32d6dc6dc Make pylint happy
  - 18d8e0c11 Return error when gid_from_name and group does not exist.
  - ce71f14ba9f Ensure empty string gid is set to None

- **ISSUE #43535**: (Ch3LL) Add pkg.latest_version Test to Auto Test Suite (refs: #44822)

- **PR #44822**: (frogunder) add pkg_latest_version test @ 2018-01-16 14:16:54 UTC
  - de080983e8 Merge pull request #44822 from frogunder/pkg_latestversion
  - 08644e02a0 skip if mac
  - dfb68f302d fix if statements and string
  - 3504083849 add pkg_latest_version test

- **ISSUE saltstack/salt-jenkins#603**: (rallytime) [oxygen] CentOS 7 is failing several boto tests with module import failures (refs: #45401)

- **PR #45435**: (rallytime) Back-port #45401 to 2017.7 @ 2018-01-14 12:43:48 UTC
  - **PR #45401**: (gtmanfred) fix boto import failures (refs: #45435)
  - cb3e0c0fbb3 Merge pull request #45435 from rallytime/bp-45401
  - b9761971c2 fix moto version
  - 0cd95d1cc6 fix test boto imports

- **PR #45380**: (twangboy) Backport changes from #45308 @ 2018-01-11 19:45:21 UTC
  - **PR #45308**: (twangboy) Fix integration.modules.test_state for Windows (refs: #45380)
  - 2340f0b487 Merge pull request #45380 from twangboy/backport_45308
  - 419be8a9b5 Backport changes from #45308
30.2.47 Salt 2017.7.6 Release Notes

Version 2017.7.6 is a bugfix release for 2017.7.0.

Statistics

- Total Merges: 182
- Total Issue References: 60
- Total PR References: 217
- Contributors: 47 (Ch3LL, DmitryKuzmenko, GwiYeong, Quarky9, RichardW42, amaclean199, arif-ali, baniobloom, bdrung, benediktwerner, bmiguel-teixeira, cachedout, dafenko, damon-atkins, dwoz, ezh, folti, fpicot, frogunder, garethgreenaway, gtmanfred, isbm, jeroennijhof, jfindlay, jfooboss, kstreee, lomeroe, mapp-, meaksh, mirceaulinic, my initialsarepm, nages13, paclat, pcjeff, prui, psyer, rallytime, s0undt3ch, skizunov, smitty42, terminalmage, twangboy, vutny, yagnik, yannj-fr)

Tornado 5.0 Support for Python 2 Only

Tornado 5.0 moves to using asyncio for all python3 versions. Because of this and changes in asyncio between python 3.4 and 3.5 to only be able to use one ioloop, which requires some rearchitecting, support for tornado 5.0 and python3 versions of salt has been delayed to a later release.

For now, to use tornado 5.0, the python 2 version of salt must be used.

Option to Return to Previous Pillar Include Behavior

Prior to version 2017.7.3, keys from pillar includes would be merged on top of the pillar SLS. Since 2017.7.3, the includes are merged together and then the pillar SLS is merged on top of that.

The pillar_includes_override_sls option has been added allow users to switch back to the pre-2017.7.3 behavior.

Changelog for v2017.7.5..v2017.7.6

Generated at: 2018-05-29 14:05:53 UTC

- PR #47775: (gtmanfred) catch UnsupportedOperation with AssertionError @ 2018-05-22 19:04:13 UTC
  - ed94e915e Merge pull request #47775 from gtmanfred/2017.7.6
  - 548f6d056 catch UnsupportedOperation with AssertionError

- PR #47769: (gtmanfred) skip test that breaks test suite @ 2018-05-22 15:12:54 UTC
  - 8c38ecd75f Merge pull request #47769 from gtmanfred/2017.7.6
3fdfc0fa82 skip test that breaks test suite

- **PR #47747**: (Ch3LL) Add changelog to 2017.7.6 release notes @ 2018-05-21 14:25:00 UTC
  - 0d5b473ce2 Merge pull request #47747 from Ch3LL/rm_2017.7.6
  - d4aa83b92d Add changelog to 2017.7.6 release notes

- **ISSUE #47484**: (whytwolf) Windows: pkg.latest state not updating packages. (refs: #47702)

- **PR #47702**: (damon-atkins) State pkg.latest called win pkg.install with list of pkgs and the required versions @ 2018-05-19 11:21:23 UTC
  - 8a5b34f7d9 Merge pull request #47702 from damon-atkins/2017.7.6_fix_pkg.latest_state
  - adcc094e08 Merge branch '2017.7.6' into 2017.7.6_fix_pkg.latest_state

- **PR #47700**: (yannj-fr) fix roots modification time check @ 2018-05-18 18:42:17 UTC
  - 961cfe61e fix roots modification time check
  - 2a73e905df Merge branch '2017.7.6' into 2017.7.6

- **PR #47632**: (gtmanfred) handle new _create_stream in tornado 5.0 @ 2018-05-18 14:25:17 UTC
  - 266749420f Merge pull request #47632 from gtmanfred/2017.7.6
  - 2c50c0df5 fix pylint
  - 4a2905b16 Fix last test for tornado
  - 550ef2e272 allow using tornado 5.0
  - 62e468448b handle new _create_stream in tornado 5.0

- **PR #47720**: (rallytime) Back-port #47692 to 2017.7.6 @ 2018-05-18 13:23:03 UTC
  - **PR #47692**: (dwoz) Default windows to m1.small for ec2-classic (refs: #47720)
  - 2643c356af Merge pull request #47720 from rallytime/bp-47692-2017.7.6
  - 6e9cb36839 Default windows to m1.small for ec2-classic
  - 20d9785244 fix roots modification time check
  - aef37dd1ce fix roots modification time check
  - d51662053 Ensure targeted_pkgs always contains value for non-windows.
  - 8384224cf8 Adjusted based on feed back.
  - 12f983c9f whitespace lint issues
  - 075d33c49 pkg.install execution module on windows ensures the software package is installed when no version is specified, it does not upgrade the software to the latest. This is per the design. pkg.latest must provide the versions to install to pkg.install

- **PR #47667**: (Ch3LL) Update test_mac_user_enable_auto_login to test both py2 and py3 @ 2018-05-16 15:54:49 UTC
  - 16c2153385 Merge pull request #47667 from Ch3LL/mac_user_enable
  - ba40d3da1 Update test_mac_user_enable_auto_login to test both py2 and py3

- **PR #47645**: (Ch3LL) query the pip path for test test_issue_2087_missing_pip @ 2018-05-15 17:16:10 UTC
  - a4921e86c9 Merge pull request #47645 from Ch3LL/py3_rm_pip
- PR #47646: (rallytime) Back-port #47601 and #47643 to 2017.7.6 @ 2018-05-15 14:04:45 UTC
  - PR #47643: (dwoz) Remove unwanted file (refs: #47646)
  - PR #47601: (dwoz) Skip tests when we can not use runas (refs: #47646)
  - e441733ac1 Merge pull request #47646 from rallytime/bp-47601-and-47643
  - 9e1d1a5ef8 Fix typo
  - 4e94609136 Remove unwanted file
  - 0109249c78 use ignore-undefined-variable
  - 37caeb7f4 Ignore pylint WindowsError
  - c1135d90c7 Better doc string
  - e53d6b9ed9 Skip tests when we can not use runas

- PR #47570: (gtmanfred) Update dependency to msgpack @ 2018-05-10 13:23:09 UTC
  - 6f178ca908 Merge pull request #47570 from gtmanfred/2017.7.6
  - 84aa034e03 Update dependency to msgpack

- PR #47523: (rallytime) [2017.7.6] Update man pages @ 2018-05-08 13:31:19 UTC
  - 98bd598701 Merge pull request #47523 from rallytime/man-pages
  - 48ecb78dec [2017.7.6] Update man pages

- ISSUE #47443: (skylerberg) Input validation does not raise SaltInvocationError in win_dsc.py (refs: #47505)

- PR #47517: (rallytime) Back-port #47505 to 2017.7.6 @ 2018-05-07 19:42:37 UTC
  - PR #47505: (dwoz) Raise proper invocation errors (refs: #47517)
  - e608ea9617 Merge pull request #47523 from rallytime/man-pages
  - 0734578533 Raise proper invocation errors

- PR #47476: (gtmanfred) Specify the cache directory for newer virtualenv modules @ 2018-05-04 19:20:45 UTC
  - 611ca1fc03 Merge pull request #47476 from gtmanfred/2017.7
  - 1f91a85587 specify cache dir for pip install
  - 99e150e09c check for kitchen-vagrant gem before loading windows tests

- PR #47412: (twangboy) Fix issue where the cwd was being removed @ 2018-05-04 17:28:11 UTC
  - 7c3f2c56da Merge pull request #47412 from twangboy/fix_47125
  - c9bab0b8e3 Merge branch '2017.7' into fix_47125
  - 2600e404d5 Fix overly long line
  - 5c8db05769 Fix issue where the cwd was being removed

- PR #47467: (twangboy) Remove unused settings, update NSIS @ 2018-05-04 17:11:37 UTC
  - 4846e957c4 Merge pull request #47467 from twangboy/cleanup_settings
  - 9d498293b1 Remove unused settings, update NSIS

- PR #47196: (twangboy) Fix issues with pip @ 2018-05-04 14:23:04 UTC
  - da9871d36b Merge pull request #47196 from twangboy/fix_47024
- 14ee5537b9 Add @with_tempdir helper
- 6c3b5fa6fa Fix typo
- f031710af2 Merge branch '2017.7' into fix_47024
- 7c46d9d0d4 Fix integration.modules.test_pip
- 22ac81df63 Fix integration.modules.test_pip
- 57d98224d4 Merge pull request #9 from terminalmage/twangboy/fix_47024
  * 37a13d8004 Update pip unit tests to reflect changes
  * 7f86779be0 Lint fix
- c48d8f4f61 DRY and other fixes in pip module
- b1117896a0 Change from global variable to __context__
- 3e6e524eca Fix some tests
- c94f0f20e4 Fix lint error
- fd47b21530 Fix merge conflict
- PR #47455: (Ch3LL) Add In Progress Warning for 2017.7.6 Release Notes @ 2018-05-04 13:44:54 UTC
  - e8c4524bae Merge pull request #47455 from Ch3LL/unreleased_rn
  - bd60b20467 Add In Progress Warning for 2017.7.6 Release Notes
- PR #47459: (gtmanfred) update ubuntu-rolling to 18.04 @ 2018-05-03 20:39:20 UTC
  - 2c7a4b6179 Merge pull request #47459 from gtmanfred/2017.7
  - d2287e2477 update ubuntu-rolling to 18.04
- PR #47462: (terminalmage) Fix docs build on Sphinx 1.7+ @ 2018-05-03 20:06:57 UTC
  - 64a64c0ed7 Merge pull request #47462 from terminalmage/docs
  - 6d7803ece0 Fix docs build on Sphinx 1.7+
- ISSUE #47436: (lomeroe) Some Administrative Template policies are not properly set by lgpo (refs: #47438)
- ISSUE #44516: (doesitblend) Windows PY3 Minion Returns UTF16 UnicodeError (refs: #44944)
- PR #47438: (lomeroe) lgpo fix for issue #47436 @ 2018-05-03 14:40:27 UTC
  - PR #44944: (lomeroe) win_lgpo registry.pol encoding updates (refs: #46913, #47438)
  - 6cd0d31c03 Merge pull request #47438 from lomeroe.double_admx_test
  - 4902f1e2ba check if a policy has either an enabled value or enabled list entry or a disabled value or disabled list entry when determining the state of the policy
- ISSUE #45790: (bdarnell) Test with Tornado 5.0b1 (refs: #47106, #47433)
- PR #47433: (s0undt3ch) Add missing requirements files not commited in #47106 @ 2018-05-02 20:57:14 UTC
  - PR #47106: (DmitryKuzmenko) Tornado50 compatibility fixes (refs: #47433)
  - ed69821d19 Merge pull request #47433 from s0undt3ch/2017.7
  - 5abaf25d6 Add missing requirements files not commited in #47106
- ISSUE #47424: (bcharron) "salt-cloud -m" fails with nova driver: ”There was a query error: u'state'" (refs: #47429)
- PR #47429: (gtmanfred) server_list_min should use state, not status @ 2018-05-02 16:27:56 UTC
- 7ae3497b0c Merge pull request #47429 from gtmanfred/2017.7
- 8ae32033cc server_list_min should use state, not status

- **PR #47399**: (isbm) zeromq 17 deprecation warning backport from 2018.3 + tornado 5 fixes @ 2018-05-02 15:11:16 UTC
  - 2f5fc4ecc5 Merge pull request #47399 from isbm/isbm-zeromq17-deprecationwarning-2017.7.2-v2
  - a36e49fd27 fix pylint
  - 98b5629b36 Fix imports
  - d94c0f0152 Remove unnecessary variable
  - 8e377b5653 Lintfix: E0203 and attribute access
  - 2aab70b1b8 Install ZMQ handler if <15 version
  - 296c589f4b Use ZMQ switch utility in the integration tests
  - ab5fa34d7c Use ZMQ_VERSION_INFO constant everywhere
  - 43b5558b82 Add trace logging on ZMQ sockets communication
  - 164204a9fe Remove duplicate code for ZMQ monitor handling
  - 834b1e4ff0 Remove obsolete ZMQIOLoop direct instance
  - 1c90c0b3c Remove an empty line
  - ef2e0acd66 Add logging on ZMQ socket exception
  - 38ceed371d Lintfix: indent
  - 1ece6a5f52 Lintfix: line too long
  - 4e650c0b44 Remove code duplicate by reusing utilities functions
  - 57da54b676 Fix imports
  - 948368e9a1 Add libzmq version info builder
  - 0b4a17b859 Update log exception message
  - 116e1809fc Put a message alongside the exception to the logs
  - 4bc43124b7 Remove unnecessary ZMQ import and check for its presence
  - 05f4d40269 Use utility for ZMQ import handling in SSH client
  - 457ef7d9a5 Use utility for ZMQ import handling in flo/zero
  - 08de6f5bd Use utility for ZMQ import handling
  - e2a353cf0 Remove unnecessary ZMQ extra-check for cache utils
  - cd2cc271d Remove unnecessary ZMQ extra-check for master utils
  - 3940667bb9 Remove old ZMQ import handling
  - f34a53e029 Use ZMQ utility for version check
  - cbb26dcb28 Use ZMQ installer for master
  - 453e83210a Add ZMQ version build
  - af9601e21d Use ZMQ importer utility in async
  - d50b2b2023 Incorporate tornado-5 fixes
- 1fd9af0655 Add ZMQ backward-compatibility tornado installer for older versions
- ad4b40415c Add one place for handling various ZMQ versions and IOLoop classes

**PR #47343**: (Ch3LL) Add additional service module integration tests and enable for windows @ 2018-05-02 13:39:46 UTC
  - b14e974b5f Merge pull request #47343 from Ch3LL/win_srv_test
  - 2173b6f549 ensure we are enabling/disabling before test
  - d58be06751 Add additional service module integration tests and enable for windows

**PR #47375**: (terminalmage) Warn on use of virtual packages in pkg.installed state @ 2018-05-01 21:12:18 UTC
  - b0f3fb577f Merge pull request #47375 from terminalmage/issue47310
  - fa2be52bb Remove extra blank line to appease linter
  - f8ab2be81c Add debug logging if we fail to detect virtual packages
  - 67c4fe56ac Warn on use of virtual packages in pkg.installed state

**PR #47415**: (kstreee) Fixes a bug of rest_tornado's 'local' client, complement fix of #46326 @ 2018-05-01 21:11:25 UTC
  - PR #47200: (kstreee) Resolve a conflict with syndic timeout and bug fixes of the local client in rest_tornado (refs: #47110)
  - PR #47123: (rallytime) [develop] Merge forward from 2018.3 to develop (refs: #47200)
  - PR #47110: (kstreee) Fixes misusing of the timeout option. (refs: #47200)
  - PR #46692: (mattp-) saltnado bugfixes for ldap & syndics (refs: #47123, #47200)
  - PR #46326: (kstreee) Fixes a timing bug of saltnado's client local. (refs: #47110, #47123, #47200, #47141)
  - PR #45874: (GwiYeong) fix for local client timeout bug (refs: #46326)
  - 56235032f4 Merge pull request #47415 from kstreee/fix-local-client-tgt-bug
  - b8d37e0a1c To add a test case for the syndic environment, copies the test case which was written by @mattp- that was already merged into develop branch, related pr is #46692.
  - 4627bad1fd Realizes 'tgt' field into actual minions using ckminions to subscribe results of the minions before publishing a payload.

**PR #47286**: (baniobloom) fixed vpc_peering_connection_name option @ 2018-05-01 19:02:10 UTC
  - d65ceae03 Merge pull request #47286 from baniobloom/vpc_peering_connection_name_fix
  - a968965087 Merge branch '2017.7' into vpc_peering_connection_name_fix

**PR #47270**: (meaksh) Fix minion scheduler to return 'retcode' from executed functions @ 2018-04-30 18:21:55 UTC
  - 8a5d4437bb Merge pull request #47270 from meaksh/2017.7-fix-rcode-on-schedule-utils
  - d299cf3385 Merge branch '2017.7' into 2017.7-fix-rcode-on-schedule-utils
  - 6bda600ff Initialize __context__ retcode for functions handled via schedule util module

**ISSUE #47264**: (jf) doc: https://docs.saltstack.com/en/latest/ref/modules/all/salt.modules.grains.html#salt.modules.grains.delval s/of pass/or pass/ (refs: #47371)

**PR #47371**: (rallytime) Fix "of pass" typo in grains.delval docs: change to "or pass" @ 2018-04-30 18:18:46 UTC
  - 5b51075384 Merge pull request #47371 from rallytime/fix-47264
- a43485b49c Fix "of pass" typo in grains.delval docs: change to "or pass"

- **PR #47389**: (dwoz) Older GitPython versions will not have close @ 2018-04-29 16:42:06 UTC
  - a86e53be66 Merge pull request #47389 from dwoz/moregittestfix
  - 67745c1362 Older GitPython versions will not have close

- **PR #47388**: (dwoz) Fix missing import @ 2018-04-28 18:33:14 UTC
  - a5367aef63 Merge pull request #47388 from dwoz/test_pip_fix
  - eb26321e8b Fix missing import

- **PR #47380**: (gtmanfred) add io_loop handling to runtests engine @ 2018-04-28 17:25:28 UTC
  - 9b59b991c2 Merge pull request #47380 from gtmanfred/2017.7
  - 93d1445ec1 add io_loop handling to runtests engine

- **PR #47384**: (dwoz) Fix py2 version of pip test @ 2018-04-28 15:13:28 UTC
  - 37822c0cbb Merge pull request #47384 from dwoz/test_pip_fix
  - a37a9da1fb Fix py2 version of pip test

- **PR #47382**: (dwoz) Close the repo and fix multiple tests @ 2018-04-28 15:09:17 UTC
  - eefd96732e Merge pull request #47382 from dwoz/gitfs_tests
  - 1570708fac Close the repo and fix multiple tests

- **PR #47369**: (terminalmage) Return an empty dict if no search_order in ldap ext_pillar config file @ 2018-04-27 20:58:52 UTC
  - 57c75ff660 Merge pull request #47369 from terminalmage/ldap_pillar
  - 085883ae2d Return an empty dict if no search_order in ldap ext_pillar config file

- **PR #47363**: (DmitryKuzmenko) Tornado5.0: Future.exc_info is dropped @ 2018-04-27 18:30:18 UTC
  - bcc66dd9bf Merge pull request #47363 from DSRCorporation/bugs/replace_exc_info_with_exception
  - 3f7b93a23c Tornado5.0: Future.exc_info is dropped

- **PR #47334**: (terminalmage) pillarldap: Fix cryptic errors when config file fails to load @ 2018-04-27 17:53:51 UTC
  - bce34f7e1 Merge pull request #47334 from terminalmage/ldap_pillar
  - 0175a8687c pillarldap: Fix cryptic errors when config file fails to load
  - 65c3ba7ff1 Remove useless documentation
  - 5d67cb27de Remove unnecessary commented line

- **PR #47347**: (dwoz) Proper fix for mysql tests @ 2018-04-27 17:27:53 UTC
  - 31db8ca7ad Merge pull request #47347 from dwoz/test_mysql_fix_again
  - add78fb618 Fix linter warnings
  - 2644cc7553 Fix linter nits
  - 799c601184 Proper fix for mysql tests

- **PR #47359**: (gtmanfred) add mention of the formulas channel to the formulas docs @ 2018-04-27 16:56:13 UTC
  - e573236848 Merge pull request #47359 from gtmanfred/2017.7
  - 6214ed8133 add mention of the formulas channel to the formulas docs
• PR #47317: (dwoz) Do not join a thread that is stopped @ 2018-04-27 13:15:09 UTC
  – PR #47279: (dwoz) Gracefully shutdown worker threads (refs: #47317)
  – 629503b2a8 Merge pull request #47317 from dwoz/threadshutdown
  – 6db2a0e4d3 Log exceptions at exception level
  – d4ae787595 Do not join a thread that is stopped
• PR #47304: (cachedout) Pass timeout to salt CLI for tests @ 2018-04-27 13:11:58 UTC
  – aacd5cefe3 Merge pull request #47304 from cachedout/test_cli_timeout_arg
  – 85025af83c Pass timeout to salt CLI for tests
• PR #47311: (Ch3LL) Add firewall execution modules tests for windows @ 2018-04-27 13:10:54 UTC
  – 55534f659 Merge pull request #47311 from Ch3LL/firewall_windows
  – 4e16c18c16 Add firewall module windows tests to whitelist
  – 4b2fe4ec66 Add windows firewall execution modules integration tests
• PR #47348: (dwoz) Ignore gitfs tests when symlinks not enabled @ 2018-04-27 13:08:27 UTC
  – 1667375a80 Merge pull request #47348 from dwoz/no_symlinks
  – 94a70e847a Ignore gitfs tests when symlinks not enabled
• PR #47342: (dwoz) Fix mysql test cases @ 2018-04-27 00:50:53 UTC
  – dac04261b5 Merge pull request #47342 from dwoz/test_mysql_fix
  – 74966c58a8 Fix mysql test cases
• PR #47341: (dwoz) Fix python 3 support for inet_pton function @ 2018-04-26 23:35:45 UTC
  – 34e78e56a4 Merge pull request #47341 from dwoz/inet_pton_fix
  – 854514f8d4 Fix python 3 support for inet_pton function
• PR #47339: (dwoz) Use salt.utils.fopen for line ending consistancy @ 2018-04-26 22:39:56 UTC
  – e4779f3246 Merge pull request #47339 from dwoz/ssh_key_test_fix
  – e37a93a1ca Remove redundant close call
  – b2ae5889b7 Close the temporary file handle
  – 9f7f83975 Use salt.utils.fopen for line ending consistancy
• PR #47335: (dwoz) Remove un-needed string-escape @ 2018-04-26 21:49:27 UTC
  – b221860151 Merge pull request #47335 from dwoz/pip_test_fix
  – dc6b4a2c00 Remove un-needed string-escape
• PR #47331: (dwoz) Do not encode usernames @ 2018-04-26 19:57:28 UTC
  – 1c527b6d3a Merge pull request #47331 from dwoz/py3_wingroup_fix
  – cc154ef857 Do not encode usernames
• PR #47329: (cachedout) Credit Frank Spierings @ 2018-04-26 16:37:59 UTC
  – 70807f15b2 Merge pull request #47329 from cachedout/frank_credit
  – 3cc0644ac4 Credit Frank Spierings
• PR #47281: (Ch3LL) Add win_system integration module tests @ 2018-04-26 16:07:41 UTC
- a545e55543 Merge pull request #47281 from Ch3LL/system_test
- c9181a75a6 Add destructivetest decorator on tests
- 0d0c8987fc Add win_system integration module tests

**PR #47283:** (Ch3LL) Add windows ntp integration module tests @ 2018-04-26 16:04:44 UTC
- b64d930df0 Merge pull request #47283 from Ch3LL/ntp_test
- ced7f86546 Add windows ntp integration module tests

**PR #47314:** (Ch3LL) Skip netstat test on macosx as its not supported @ 2018-04-26 16:00:37 UTC
- 910aff910f Merge pull request #47314 from Ch3LL/net_mac_test
- 67beb1451c Skip netstat test on macosx as its not supported

**PR #47307:** (rallytime) Back-port #47257 to 2017.7 @ 2018-04-26 15:16:23 UTC
- PR #47257: (jeroennijhof) Role is not a list but a dictionary (refs: #47307)
- 0549ef7c16 Merge pull request #47307 from rallytime/bp-47257
- 6c5b9f292c Role is not a list but a dictionary

**PR #47312:** (rallytime) Update bootstrap script to latest release: 2018.04.25 @ 2018-04-26 15:15:13 UTC
- d6f46896 Merge pull request #47312 from rallytime/update-bootstrap-release
- 765ce06a2 Update bootstrap script to latest release: 2018.04.25

**PR #47279:** (dwoz) Gracefully shutdown worker threads (refs: #47317) @ 2018-04-25 21:15:43 UTC
- e076f5719 Merge pull request #47279 from dwoz/py3_build_fix
- 21dc1bab91 Pep-8 line endings
- 717abedaf7 Fix comman wart
- 4100cd64c Close might get called more than once
- dbe671f943 Stop socket before queue on delete
- 95875c69e Silence pylint import-error for six.moves
- 4b0c7d5b34 Fix typo
- 05ad7c2b1 Use six.moves for queue import
- fe340778fa Gracefully shutdown worker threads

**PR #47113:** (jfindlay) Support proto for IPSec policy extension in iptables state @ 2018-04-25 18:01:19 UTC
- 44f19b2f94 Merge pull request #47113 from jfindlay/iptables_state
- 8bd08012ee modules,states.iptables support proto for policy ext

**PR #47302:** (Ch3LL) Remove unnecessary code from core grains and add test @ 2018-04-25 17:58:48 UTC
- b7a6206330 Merge pull request #47302 from Ch3LL/dead_code
- daa68b4877 Add virtual grains test for core grains
- a59dd2785d Remove dead code in core grains file for virt-what

**PR #47303:** (baniobloom) Added clarity on oldest supported main release branch @ 2018-04-25 17:52:39 UTC
- e29362acf Merge pull request #47303 from baniobloom/bug_fix_doc
- b97c9df5f3 added clarity on how to figure out what is the oldest supported main release branch
• ISSUE #45790: (bdarnell) Test with Tornado 5.0b1 (refs: #47106, #47433)

• PR #47106: (DmitryKuzmenko) Tornado50 compatibility fixes (refs: #47433) @ 2018-04-25 15:32:37 UTC
  - 0d9d55e013 Merge pull request #47106 from DSRCorporation/bugs/tornado50
  - 39e403b18d Merge branch '2017.7' into bugs/tornado50
  - 6706b3a2d1 Run off of a temporary config
  - d6873800d5 Allow running pytest>=3.5.0
  - 2da983740 Tornado 5.0 compatibility fixes

• ISSUE #47258: (drewmat) service state no longer working after kernel upgrade (refs: #47271)

• PR #47271: (gtmanfred) load rh_service for amazon linux not booted with systemd @ 2018-04-25 14:47:06 UTC
  - 2e01df4746 Merge pull request #47271 from gtmanfred/amazon
  - 8a53908908 Do not load rh_service module when booted with systemd
  - e4d1d5bf11 Revert "support amazon linux 2 for service module"

• ISSUE #44847: (malbertus) netconfig.managed state.apply unexpected behaviour of test & debug variables (refs: #47246)

• PR #47246: (mirceaulinic) Attempting to fix #44847: allow a different way to get the test and debug flags into the netconfig state @ 2018-04-25 14:44:02 UTC
  - 599b0ed1e9 Merge pull request #47246 from cloudflare/fixed-44847-2017.7
  - ad8028104 This way, we can pass flags such as debug into the state, but also test.

• PR #47220: (benediktwerner) Fix pip.installed when no changes occurred with pip >= 1.0.0 @ 2018-04-25 14:23:50 UTC
  - PR #47207: (benediktwerner) Fix pip_state with pip3 if no changes occurred (refs: #47220)
  - PR #47102: (gtmanfred) dont allow using no_use_wheel for pip 10.0.0 or newer (refs: #47220)
  - 4e2e1f0719 Merge pull request #47220 from benediktwerner/fixed-pip-2017.7
  - 0197c3e973 Fix pip test
  - 34b66e09f Fix pip.installed with pip>=10.0.0

• PR #47272: (rallytime) Add windows tests and reg module/state to CODEOWNERS file for team-windows @ 2018-04-25 13:25:29 UTC
  - 92e606251f Merge pull request #47272 from rallytime/sect-windounes-codeowners
  - 9445af0185 Add windows tests and reg module/state to CODEOWNERS file for team-windows
  - 8de3d41adb fixed vpc_peering_connection_name option

• PR #47252: (rallytime) Fix the matching patterns in the CODEOWNERS file to use fnmatch patterns @ 2018-04-24 14:10:42 UTC
  - 9dca5c0221 Merge pull request #47252 from rallytime/codeowners-fixes
  - 204b6af92b Fix the matching patterns in the CODEOWNERS file to use fnmatch patterns

• ISSUE #47173: (fpicot) pkg.installed ignores normalize parameter (refs: #47177)

• PR #47177: (fpicot) fix normalize parameter in pkg.installed @ 2018-04-24 13:37:54 UTC
  - 3de1bb49c8 Merge pull request #47177 from fpicot/fixed_47173_pkg_normalize
  - 149f846f34 fix normalize parameter in pkg.installed
• **PR #47251**: (Ch3LL) Update Docs to remove unnecessary + sign @ 2018-04-23 19:37:04 UTC
  - 10e30515dc Merge pull request #47251 from Ch3LL/pub_fix_rn
  - fad4c2e6575 Update Docs to remove unnecessary + sign

• **PR #47249**: (Ch3LL) Add CVE number to 2016.3.6 Release @ 2018-04-23 19:05:42 UTC
  - bb7850a431 Merge pull request #47249 from Ch3LL/pub_fix_rn
  - 24dea2b7e Add CVE number to 2016.3.6 Release

• **ISSUE #47225**: (pruiz) zfs.filesystem_present takes forever on a dataset with lots (10k+) of snapshots (refs: #47226, #47227)

• **PR #47227**: (pruiz) Fix issue #47225: avoid zfs.filesystem_present slowdown when dataset has lots of snapshots (2017.7 branch) @ 2018-04-23 14:05:58 UTC
  - PR #47226: (pruiz) Fix issue #47225: avoid zfs.filesystem_present slowdown when dataset has lots of snapshots (refs: #47227)
  - 56933eb0b2 Merge pull request #47227 from pruiz/pruiz/zfs-dataset-present-slow-2017.7
  - fde61f19b Fix issue #47225: avoid zfs.filesystem_present slowdown when dataset has lots of snapshots

• **PR #47167**: (smitty42) Adding updates for python3 compatibility and new virtualbox SDK versi... @ 2018-04-23 13:20:42 UTC
  - 9825065048 Merge pull request #47167 from smitty42/vbox-skd-fix
  - 5de53139cd Merge branch '2017.7' into vbox-skd-fix

• **PR #47213**: (dwoz) Fix coverage on py3 windows builds @ 2018-04-20 22:09:57 UTC
  - 976f031170 Merge pull request #47213 from dwoz/py3win
  - ad9c7f63f0 Fix coverage on py3 windows builds
  - 91252bac95 Adding updates for python3 compatibility and new virtualbox SDK version support.

• **PR #47197**: (dwoz) Move process target to top level module namespace @ 2018-04-20 15:41:06 UTC
  - cebcd6d069 Merge pull request #47197 from dwoz/testfix
  - 25803c9176 Move process target to top level module namespace

• **PR #47193**: (Ch3LL) Add network module integration tests @ 2018-04-20 13:37:19 UTC
  - d4269c2b70 Merge pull request #47193 from Ch3LL/network_test
  - bbf9987c19 Add network module integration tests

• **PR #47189**: (Ch3LL) Add autoruns.list integration test for Windows @ 2018-04-19 21:16:34 UTC
  - c777248a78 Merge pull request #47189 from Ch3LL/autoruns
  - 6a88bedb7a Add autoruns to windows whitelist
  - e9e4d4af70 Add autoruns.list integration test for Windows

• **PR #47184**: (Ch3LL) Add status module integration modules tests for Windows @ 2018-04-19 19:38:56 UTC
  - 65f344e371 Merge pull request #47184 from Ch3LL/status_test
  - 25a84428b8 Add status module integration modules tests for Windows

• **PR #47163**: (rallytime) Updage jenkins module autodocs to use jenkinsmod name instead @ 2018-04-19 19:35:00 UTC
  - PR #46801: (yagnik) rename jenkins to jenkinsmod (refs: #46900, #47163)
- 96560aad6c Merge pull request #47163 from rallytime/jenkins-autodoc
- 0039395017 Update jenkins module autodocs to use jenkinsmod name instead

- PR #47185: (twangboy) Add additional integration tests to whitelist @ 2018-04-19 18:20:25 UTC
  - 0a43dde5fc Merge pull request #47185 from twangboy/add_tests
  - 345da0a423 Add additional integration tests to whitelist

- PR #47172: (dwoz) Allow non admin name based runs on windows @ 2018-04-19 17:26:42 UTC
  - 1a60bb9a4 Merge pull request #47172 from dwoz/cover_without_admin
  - cadd759727 Use warnings to warn user
  - 144c68e214 Allow non admin name based runs on windows

- PR #47110: (kstreee) Fixes misusing of the timeout option. (refs: #47200) @ 2018-04-18 17:16:20 UTC
  - PR #46326: (kstreee) Fixes a timing bug of saltnado’s client local. (refs: #47110, #47123, #47200, #47415)
  - PR #45874: (GwiYeong) fix for local client timeout bug (refs: #46326)
  - d5997d2301 Merge pull request #47110 from kstreee/fix-misusing-of-timeout
  - 0624aee0ed Fixes misusing of the timeout option.

- ISSUE #40948: (ScoreUnder) salt-call falsely reports a master as down if it does not have PKI directories created
  (refs: #40961)

- PR #40961: (terminalmage) Make error more explicit when PKI dir not present for salt-call @ 2018-04-18 16:08:17 UTC
  - 87ca2b4003 Merge pull request #40961 from terminalmage/issue40948
  - 6ba66cca41 Fix incorrect logic in exception check
  - fed5041c5f Make error more specific to aid in troubleshooting
  - 8c67ab53b4 Fix path in log message
  - 3198ca8b19 Make error more explicit when PKI dir not present for salt-call

- PR #47134: (Ch3LL) Add user integration tests for windows OS @ 2018-04-18 14:29:40 UTC
  - 5e635844d4 Merge pull request #47134 from Ch3LL/user_win_test
  - e7e9bc4038 Add user integration tests for windows OS

- PR #47131: (gtmanfred) add __cli opts variable for master processes @ 2018-04-17 21:33:57 UTC
  - da26a3fac Merge pull request #47131 from gtmanfred/cli
  - 1b1c29b62 add __cli for master processes

- ISSUE #47116: (pcjeff) pip 10.0.0 can not import pip.req (refs: #47121)

- PR #47129: (rallytime) Back-port #47121 to 2017.7 @ 2018-04-17 20:45:11 UTC
  - PR #47121: (pcjeff) fix pip import error in pip 10.0.0 (refs: #47129)
  - 9b8e6fb8c Merge pull request #47129 from rallytime/bp-47121
  - 11da526b21 add ImportError
  - bd0c23396c fix pip.req import error in pip 10.0.0

- PR #47102: (gtmanfred) dont allow using no_use_wheel for pip 10.0.0 or newer (refs: #47220) @ 2018-04-17 20:44:38 UTC
- eb5ac51a48 Merge pull request #47102 from gtmanfred/2017.7
- 3dc93b310b fix tests
- 8497e08f8e fix pip module for 10.0.0
- 4e07a3d1e9 fix other tests
- b71e3d8a04 dont allow using no_use_wheel for pip 10.0.0 or newer

- **PR #47037:** (twangboy) Fix build_env scripts @ 2018-04-17 18:54:17 UTC
  - c1d42e67e Merge pull request #47037 from twangboy/fx_dev_scripts
  - 990a24d7ed Fix build_env scripts

- **PR #47108:** (dwoz) Fix unit.utils.test_event.TestAsyncEventPublisher.test_event_subscription @ 2018-04-17 00:25:07 UTC
  - 64ac6b8a1a Merge pull request #47108 from dwoz/async_test_fix
  - 3d85e90ec5 AsyncTestCase is required for AsyncEventPublisher

- **PR #47068:** (cachedout) Catch an operation on a closed socket in a test @ 2018-04-16 19:56:03 UTC
  - 03892efa08 Merge pull request #47068 from cachedout/catch_value_error_socket_test
  - 7db562632 Catch an operation on a closed socket in a test

- **PR #47065:** (dwoz) Jinja test fix @ 2018-04-16 16:16:42 UTC
  - 1ea2885ec2 Merge pull request #47065 from dwoz/jinja_test_fix
  - 673cd31c65 Merge branch ’2017.7’ into jinja_test_fix

- **PR #47047:** (dwoz) Fix failing state test by normalizing line endings @ 2018-04-15 15:48:39 UTC
  - 5293b5b5ca Merge pull request #47047 from dwoz/test_state_fix
  - 444da3f893 Fix py3 wart (chr vs bytesstring)
  - e8acc01c2 Fix failing state test by normalizing line endings

- **ISSUE #46538:** (HenriWahl) salt-cloud gives "FutureWarning: The behavior of this method will change in future versions." (refs: #47067)

- **PR #47067:** (gtmanfred) use the recommended opennebula lookup method @ 2018-04-15 15:48:15 UTC
  - ca967de5da Merge pull request #47067 from gtmanfred/2017.7
  - f913a785f9c use the recommended opennebula lookup method

- **PR #47064:** (dwoz) Fix fileserver roots tests @ 2018-04-14 21:30:23 UTC
  - 7fdada6c9d Merge pull request #47064 from dwoz/roots_tests_fix
  - 25fd7c0694 fix py3 wart, encode os.linesep
  - d79f1a1961 Fix fileserver roots tests

- **PR #47069:** (cachedout) Pass the timeout variable to the CLI when calling salt in tests @ 2018-04-15 15:20:25 UTC
  - 977c6939c4 Merge pull request #47069 from cachedout/match_timeout_arg
  - b8990f5258 Pass the timeout variable to the CLI when calling salt in tests

- **PR #47074:** (dwoz) Kitchn should ignore artifacts directory @ 2018-04-14 13:06:19 UTC
  - 2c4c19c622 Merge pull request #47074 from dwoz/ignore_artifacts

30.2. Previous Releases
- c3941efad0 Kitchn should ignore artifacts directory

- ISSUE #47000: (invintila) Client API: full_return parameter missing from cmd_subset function (refs: #47055)
- PR #47055: (mattp-) #47000 - add proper handling of full_return in cmd_subset @ 2018-04-13 20:17:10 UTC
  - c484c0bd71 Merge pull request #47055 from bloomberg/gh-47000
  - 8af3f5b874 GH-47000: add proper handling of full_return in cmd_subset

- PR #47039: (twangboy) Fix winrm powershell script @ 2018-04-13 18:09:56 UTC
  - f3496030cc Merge pull request #47039 from twangboy/win_fix_winrm_script
  - 6635b9003f Fix winrm powershell script
    - 46fa2c04de Fix py3 os.linesep wart
    - 3c56d7e54 Use salt.utils.fopen
    - aa965310f1 Clean up cruft
    - efc9866580 Jinja test fixes

- PR #46326: (kstreee) Fixes a timing bug of saltndo's client local. (refs: #47110, #47200, #47415) @ 2018-04-13 13:59:28 UTC
  - PR #45874: (GwiYeong) fix for local client timeout bug (refs: #46326)
  - 1700a10ebe Merge pull request #46326 from kstreee/client-local
  - 0f358a9c9e Fixes a timing bug of saltndo's client local.

- ISSUE #46877: (trudesea) Unable to apply GPO (Windows 2016) (refs: #46913)

- ISSUE #44516: (doesitblend) Windows PY3 Minion Returns UTF16 UnicodeError (refs: #44944)

- PR #46913: (lomeroe) 2017.7 Fix #46877 -- win_lgpo start/shutdown script reading @ 2018-04-12 15:10:50 UTC
  - PR #44944: (lomeroe) win_lgpo registry.pol encoding updates (refs: #46913, #47438)
  - c3c00316f5 Merge pull request #46913 from lomeroe/2017_7-fix46877
  - 369af645ed move exception for clarity
  - 112f9bfa Add use configparser serializer object to read psscript.ini and script.ini startup/shutdown script files.

- PR #47025: (terminalmage) Fix server_id grain in PY3 on Windows @ 2018-04-12 15:08:00 UTC
  - 9e37769d6 Merge pull request #47025 from terminalmage/server_id-windows
  - c3c00316f5 Fix server_id grain in PY3 on Windows

- PR #47027: (rallytime) Back-port #44508 to 2017.7 @ 2018-04-12 15:05:51 UTC
  - PR #44508: (mzbroch) Capirca integration (refs: #47027)
  - 2e193c9b45 Merge pull request #47027 from rallytime/bp-44508
  - 8e72f362f4 Add priority field to support the latest capirca.
  - 112f9bfaab Add priority field to support the latest capirca.

- PR #47020: (rallytime) Back-port #46970 to 2017.7 @ 2018-04-11 21:48:25 UTC
  - PR #46970: (garethgreenaway) [2017.7] fix to pkgrepo comments test (refs: #47020)
  - 385fe2bc1e Merge pull request #47020 from rallytime/bp-46970
  - 9373df526b Update test_pkgrepo.py
- 13cf9eb5b1 Removing debugging.
- a61a8593e5 Removing suse from pkgrepo comments tests. the pkgrepo functions in SUSE pkg module do not support comments.

- ISSUE #46504: (jfoboss) ntp.managed fails on non-english systems (refs: #46539)
- PR #46539: (jfoboss) #46504 Fix @ 2018-04-11 14:13:24 UTC
  - 8f994e7cf9 Merge pull request #46539 from jfoboss/patch-1
  - 6890122e41 Merge pull request #1 from twangboy/pull_46539
    - 19c3fadbe5 Fix unit test for win_ntp
  - 826a8d3099 Fixing #46504

- PR #46999: (gtmanfred) switch pip test package @ 2018-04-10 21:18:33 UTC
  - 74d70e95a5 Merge pull request #46999 from gtmanfred/2017.7
  - 791af86ce switch pip test package

- PR #46023: (mattp-) add parallel support for orchestrations @ 2018-04-10 19:26:04 UTC
  - 8ada7f526 Merge pull request #46023 from bloomberg/parallel-orch
  - 0ac0b3ca29 Merge branch '2017.7' into parallel-orch

- ISSUE #46581: (qcpeter) puppet.fact tries to parse output to stderr (refs: #46613)
- PR #46613: (myinitialsarepm) Fix puppet.fact and puppet.facts to use stdout. @ 2018-04-10 15:18:07 UTC
  - 39d65a39cf Merge pull request #46613 from myinitialsarepm/fix_puppet.fact_and_puppet.facts
  - 44ecd13abc Update tests to use cmd.run_all
  - 7d7d40f541 Merge branch '2017.7' into fix_puppet.fact_and_puppet.facts
  - 0ce1520bd0 Merge branch '2017.7' into fix_puppet.fact_and_puppet.facts
  - 69e1f6f681 Fix puppet.fact and puppet.facts to use stdout.

- PR #46991: (gtmanfred) use saltstack salt-jenkins @ 2018-04-10 14:19:00 UTC
  - ba5421d988 Merge pull request #46991 from gtmanfred/windows
  - 98588c1dc5 use saltstack salt-jenkins

- PR #46975: (gtmanfred) Make windows work for test runs in jenkinsci @ 2018-04-10 13:41:18 UTC
  - 00c4067585 Merge pull request #46975 from gtmanfred/windows
  - 1f69c0d7f8 make sure windows outputs xml junit files
  - 4a2ec1bb3 support new versions of winrm-fs
  - b9efec8526 remove libnacl on windows
  - 2edd5eaf9e fix path
  - b03e272e44 windows work

- PR #46945: (vutny) [DOC] Fix Jinja block in FAQ page @ 2018-04-09 13:05:28 UTC
  - 3cf2353e41 Merge pull request #46945 from vutny/doc-faq-fix-jinja
  - bfd54e61d [DOC] Fix Jinja block in FAQ page

- PR #46925: (terminalmage) Remove reference to directory support in file.patch state @ 2018-04-06 13:54:47 UTC
- fc2f728665 Merge pull request #46925 from terminalmage/fix-file.patch-docstring
- 97695657f0 Remove reference to directory support in file.patch state

**PR #46900**: (rallytime) Back-port #46801 to 2017.7 @ 2018-04-06 13:47:44 UTC
- PR #46801: (yagnik) rename jenkins to jenkinsmod (refs: #46900, #47163)
- e6f6c518e1 Merge pull request #46900 from rallytime/bp-46801
- 6a41e8b457 rename jenkins to jenkinsmod

**PR #46899**: (rallytime) Back-port #45116 to 2017.7 @ 2018-04-06 13:47:17 UTC
- PR #45116: (arif-ali) fix adding parameters to http.query from sdb yaml (refs: #46899)
- 71839b0303 Merge pull request #46899 from rallytime/bp-45116
- b92df08ad4 fix adding parameters to http.query from sdb yaml
  - 3d5e69600b address lint issues raised by @isbm
  - a9866c7a03 fix parallel mode py3 compatibility
  - 6d7730864a removing prereq from test orch
  - 6c8a25778f add integration test to runners/test_state to exercise parallel
  - 2c86f16b39 cherry-pick cdata KeyError prevention from #39832
  - 4a96e8933 record start/stop duration for parallel processes separately
  - e4844bdf2b revisit previous join() behavior in check_requisites
  - f00a359cdf join() parallel process instead of a recursive sleep
  - 6e7007a4dc add parallel support for orchestrations

**ISSUE #43529**: (Ch3LL) Add publisher_acl Test to Auto Test Suite (refs: #44926)

**PR #44926**: (frogunder) whitelist_acl_test @ 2018-04-05 15:09:26 UTC
- d0f5b43753 Merge pull request #44926 from frogunder/whitelisted_acl
- 18e4606c30 Merge branch '2017.7' into whitelisted_acl
- 1ad4d7d988 fix assert errors
- e6a56016df update test
- 19a2244cb7 whitelist_acl_test

**ISSUE #46456**: (vitaliyf) "ValueError" when running orch with "subset" (refs: #46464)

**PR #46464**: (gtmanfred) fix salt subset in orchestrator @ 2018-04-05 14:52:01 UTC
- 7d822f9cee Merge pull request #46464 from gtmanfred/orchestration
- 637c6c6b7b fix pylint
- 0151013ddb document cli option for cmd_subset
- 4a3ed6607d add test for subset in orchestration
- 3112359dd6 fix salt subset in orchestrator

**ISSUE #46523**: (dwoz) Add a test to the cloud suite for Windows minion on EC2 (refs: #46879)

**PR #46879**: (dwoz) Fix multiple typos causing tests to fail @ 2018-04-05 13:59:28 UTC
- 805ed1c964 Merge pull request #46879 from dwoz/cloudtestfix
- dc54fc53c3 Fix multiple typos causing tests to fail
  - PR #46647: (twangboy) Fix the tear down function in integration.modules.test_grains @ 2018-04-04 21:14:06 UTC
    - f70f6de282 Merge pull request #46647 from twangboy/win_fix_test_grains
    - c179388b0e Fix the tear down function in integration.modules.test_grains.GrainsAppendTestCase
- ISSUE #46754: (nages13) grain item virtual_subtype shows 'Xen PV DomU' on Docker containers (refs: #46756)
- ISSUE #43405: (kfix) LXD-created LXC container is detected as a Xen domU (refs: #46756)
- PR #46756: (nages13) fix grains['virtual_subtype'] to show Docker on xen kernels @ 2018-04-04 20:53:49 UTC
  - 91c078ce12 Merge pull request #46756 from nages13/bugfix-grain-virtual_subtype
  - 781f5030a4 Merge branch 'bugfix-grain-virtual_subtype' of https://github.com/nages13/salt into bugfix-grain-virtual_subtype
    * cd1ac4b7f9 Merge branch '2017.7' into bugfix-grain-virtual_subtype
    * 0ace76c0e7 Merge branch '2017.7' into bugfix-grain-virtual_subtype
    * 9eb6f5c0d0 Merge branch '2017.7' into bugfix-grain-virtual_subtype
    * 73d6d9d365 Merge branch '2017.7' into bugfix-grain-virtual_subtype
    * a4a17ebab6 Merge branch '2017.7' into bugfix-grain-virtual_subtype
    * bf5034dbdb Merge branch '2017.7' into bugfix-grain-virtual_subtype
    * 8d12770951 Merge branch '2017.7' into bugfix-grain-virtual_subtype
  - 7e704c0e81 Moved down container check code below hypervisors to validate containers type running in virtual environment. Fixes #46754 & #43405
  - 710f74c4a6 fix grains['virtual_subtype'] to show Docker on xen kernels
- ISSUE #46762: (ScoreUnder) prereq stack overflow (refs: #46788, #46799)
- PR #46799: (garethgreenaway) [2017.7] Adding test for PR #46788 @ 2018-04-04 20:41:23 UTC
  - PR #46788: (garethgreenaway) [2017.7] Ensure failed tags are added to self.pre (refs: #46799)
    - 058bbed221 Merge pull request #46799 from garethgreenaway/46762_prereq_shenanigans_tests
    - 13875e78cf Fixing documentation string for test.
    - 3d288c44d4 Fixing test documentation
    - 6cfa02ef6a Adding tests for #46788
- PR #46867: (terminalmage) Backport string arg normalization to 2017.7 branch @ 2018-04-04 18:06:57 UTC
  - d9770bf3f8 Merge pull request #46867 from terminalmage/unicode-logging-normalization
  - 7652688e83 Backport string arg normalization to 2017.7 branch
- PR #46770: (twangboy) Change the order of SID Lookup @ 2018-04-04 17:33:10 UTC
  - 9eb9b1f6e Merge pull request #46770 from twangboy/fix_46433
  - 89a0a6222 Merge branch '2017.7' into fix_46433
  - 67b4697578 Remove unused import (ling)
  - 9302fa5ab0 Clean up code comments
  - b383b9330 Change the order of SID Lookup
ISSUE #46826: (robgott) grain modules using tuples affect targeting (refs: #46839)

PR #46839: (gtmanfred) match tuple for targets as well @ 2018-04-04 14:07:12 UTC
- 9c77cffe8b Merge pull request #46839 from gtmanfred/tupletarget
- 3b7208c8eb7 match tuple for targets as well

ISSUE #40245: (czhong111) salt-api automatically restart caused by "opening too many files" (refs: #46817)

ISSUE #36374: (szjur) Descriptor leaks in multithreaded environment (refs: #46817)

ISSUE #20639: (GrizzlyV) salt.client.LocalClient leaks connections to local salt master (refs: #46817)

PR #46845: (rallytime) Back-port #46817 to 2017.7 @ 2018-04-03 19:52:29 UTC
- PR #46817: (mattp-) address filehandle/event leak in async run_job invocations (refs: #46845)
- PR #32145: (paclat) fixes 29817 (refs: #46817)
- 7db251dc1f Merge pull request #46845 from rallytime/bp-46817
- 36a0f6d8ca address filehandle/event leak in async run_job invocations

PR #46847: (dwoz) strdup from libc is not available on windows @ 2018-04-03 19:51:33 UTC
- e3d17ab7be Merge pull request #46847 from dwoz/missing-strdup
- 5584f4846e strdup from libc is not available on windows

ISSUE #46765: (roskens) pkg.mod_repo fails with a python error when removing a dictionary key (refs: #46776)

PR #46776: (gtmanfred) fix shrinking list in for loop bug @ 2018-04-03 17:32:16 UTC
- f2dd79f9c4 Merge pull request #46776 from gtmanfred/2017.7
- edc1059ee0 fix shrinking list in for loop bug

PR #46838: (gtmanfred) use http registry for npm @ 2018-04-03 17:02:32 UTC
- 1941426218 Merge pull request #46838 from gtmanfred/npm
- bff61dd29f use http registry for npm

ISSUE #42312: (frogunder) salt-call --local sys.doc none gives error/traceback in raspberry pi (refs: #46823)

PR #46823: (rallytime) Improve _virtual__ checks in sensehat module @ 2018-04-03 16:56:08 UTC
- e54254c7b Merge pull request #46823 from rallytime/fix-42312
- dafa80f93 Improve __virtual__ checks in sensehat module

PR #46641: (skizunov) Make LazyLoader thread safe @ 2018-04-03 16:09:17 UTC
- 37f6d2de35 Merge pull request #46641 from skizunov/develop3
- c624a4827 Make LazyLoader thread safe

PR #46837: (rallytime) [2017.7] Merge forward from 2016.11 to 2017.7 @ 2018-04-03 14:54:10 UTC
- 989508b100 Merge pull request #46837 from rallytime/merge-2017.7
- 8522c1d634 Merge branch '2016.11' into '2017.7'
- 3e844ed1df Merge pull request #46739 from rallytime/2016.11_update_version_doc
- 4df65cc0f Update release versions for the 2016.11 branch

PR #46740: (rallytime) Update release versions for the 2017.7 branch @ 2018-04-03 14:36:07 UTC
- 307e7f35f9 Merge pull request #46740 from rallytime/2017.7_update_version_doc
- 7edf98d224 Update 2018.3.0 information and move branch from "latest" to "previous"
- 5336e866ac Update release versions for the 2017.7 branch

• PR #46783: (twangboy) Fix network.managed test=True on Windows @ 2018-04-03 12:54:56 UTC
  - ebf5dd276f Merge pull request #46783 from twangboy/fix_46680
  - da5ce25e37 Fix unit tests on Linux
  - b7f4f377cd Add space I removed
  - f1c68a09b5 Fix network.managed test=True on Windows

• PR #46821: (rallytime) Fix the new test failures from the mantest changes @ 2018-04-03 12:40:51 UTC
  - PR #46778: (terminalmage) Replace flaky SPM man test (refs: #46821)
  - f652f258c1 Merge pull request #46821 from rallytime/fixed-mantest-failures
  - 209a8029c3 Fix the new test failures from the mantest changes

• ISSUE #46627: (vangourd) Win_LGPO fails on writing Administrative Template for Remote Assistance (refs: #46800)

• PR #46800: (lomeroe) fix win_lgpo to correctly create valuenames of list item types @ 2018-04-03 12:38:45 UTC
  - c460f62081 Merge pull request #46800 from lomeroe/2017_7-46627
  - 2bee383e9d correct create list item value names if the valuePrefix attribute does not exist on the list item, the value is the value name, other wise, the valuename a number with the valuePrefix prepended to it

• ISSUE #46347: (twangboy) Buid 449: unit.modules.test_inspect_collector (refs: #46675)

• PR #46675: (dwoz) Skip test when git symlinks are not configured @ 2018-04-03 12:19:19 UTC
  - df26f264e1 Merge pull request #46675 from dwoz/inspectlib-tests
  - d39f485d88 Handle non-zero status exception
  - 83c005802b Handle cases where git can not be found
  - 628b87d5c4 Skip test when git symlinks are not configured

• ISSUE #46808: (ezh) Sharedsecret authentication is broken (refs: #46809)

• PR #46815: (terminalmage) Backport #46809 to 2017.7 @ 2018-04-02 20:05:15 UTC
  - PR #46809: (ezh) Fix sharedsecret authentication (refs: #46815)
  - 4083c76460 Merge pull request #46815 from terminalmage/bp-46809
  - 71d5601507 Fix sharedsecret authentication

• PR #46769: (dwoz) Adding windows minion tests for salt cloud @ 2018-04-02 18:51:49 UTC
  - 3bac9717f4 Merge pull request #46769 from dwoz/wincloudtest
  - eabc23a5e5d Fix config override name
  - 5c22a0f88d Use aboslute imports
  - 810042710d Set default cloud test timeout back to 500 seconds
  - 5ac89ada307 Use winrm_verify_ssl option causing tests to pass
  - 71858a709c allow not verifying ssl winrm saltcloud
  - ba5f11476c Adding windows minion tests for salt cloud

• PR #46786: (twangboy) Return int(-1) when pidfile contains invalid data @ 2018-04-02 18:42:12 UTC

30.2. Previous Releases
- f1be939763 Merge pull request #46786 from twangboy/fix_46757
- b0053250ff Remove int(), just return -1
- 7d56126d74 Fixes some lint
- 49b3e937da Return int(-1) when pidfile contains invalid data

- **PR #46814**: (terminalmage) Backport #46772 to 2017.7 @ 2018-04-02 18:39:37 UTC
  - PR #46772: (bmiguel-teixeira) fix container removal if auto_remove was enabled (refs: #46814)
  - 89bf24b15c Merge pull request #46814 from terminalmage/bp-46772
  - a9f26f2ab8 avoid breaking if AutoRemove is not found
  - 7d56126d74 Fixes some lint

- **PR #46813**: (terminalmage) Get rid of confusing debug logging @ 2018-04-02 18:19:27 UTC
  - 5ea4fbbf6 Merge pull request #46813 from terminalmage/event-debug-log
  - 5d6da3aeb Get rid of confusing debug logging

- **PR #46766**: (twangboy) Change the way we're cleaning up after some tests @ 2018-03-30 18:01:03 UTC
  - e533b7182d Merge pull request #46766 from twangboy/win_fix_test_git
  - 5afc66452c Remove unused/redundant imports
  - 88fd725c2e Use with_tempfile decorator where possible

- **PR #46778**: (terminalmage) Replace flaky SPM man test (refs: #46821) @ 2018-03-30 17:55:14 UTC
  - 69d450db84 Merge pull request #46778 from terminalmage/salt-jenkins-906
  - bbf3d5d3ea Replace flaky SPM man test

- **ISSUE #46762**: (ScoreUnder) prereq stack overflow (refs: #46788, #46799)

- **PR #46788**: (garethgreenaway) [2017.7] Ensure failed tags are added to self.pre (refs: #46799) @ 2018-03-30 17:11:38 UTC
  - c935fb740 Merge pull request #46788 from garethgreenaway/46762_prereq_shenanigans
  - fa7ed6424 Ensure failed tags are added to self.pre.

- **ISSUE #46354**: (twangboy) Build 449: unit.test_state (refs: #46655)

- **ISSUE #46350**: (twangboy) Build 449: unit.test_pyobjects.RendererTests (refs: #46655)

- **ISSUE #46349**: (twangboy) Build 449: unit.test_pydsl (refs: #46655)


- **PR #46655**: (dwoz) Fixing cleanUp method to restore environment @ 2018-03-29 18:31:48 UTC
  - 395b7f8fcd Merge pull request #46655 from dwoz/pyobjects-46350
  - 5aab442f2 Fix up import and docstring syntax
  - 62d64c9230 Fix missing import
  - 18b1730320 Skip test that requires pywin32 on *nix platforms
  - 45dce1a485 Add reg module to globals
  - 0f9f322a81 Fix pep8 wart
  - 73d06f644b Fix linter error
- 009a8f56ea Fix up environ state tests for Windows
- b4be10b8fc Fixing cleanUp method to restore environment
- **ISSUE #36802** (rmarcinik) using clean=True parameter in file.recurse causes python process to spin out of control (refs: #46632)

- **PR #46632:** (dwoz) Fix file.recurse w/ clean=True #36802 @ 2018-03-29 18:30:42 UTC
  - af45c49c42 Merge pull request #46632 from dwoz/file-recurse-36802
  - 44db77ae79 Fix lint errors and typo
  - cb5619537f Only change what is essential for test fix
  - eb82f5a12 Fix file.recurse w/ clean=True #36802

- **ISSUE #46660** (mruepp) top file merging same does produce conflicting ids with gitfs (refs: #46751)

- **PR #46751:** (folti) top file merging strategy 'same' works again @ 2018-03-28 21:12:27 UTC
  - 6e9f504ed1 Merge pull request #46751 from folti/2017.7
  - 7058f03801 same top merging strategy works again

- **PR #46691:** (Ch3LL) Add groupadd module integration tests for Windows @ 2018-03-28 18:01:46 UTC
  - cdf623e0815 Merge pull request #46691 from Ch3LL/win_group_test
  - 7cda825e90 Add groupadd module integration tests for Windows

- **ISSUE #46352** (twangboy) Build 449: unit.test_client (refs: #46696)
  - 14ab50d3f4 Merge pull request #46696 from dwoz/win_test_client
  - ec4634fc06 Better explanation in doc strings
  - d9ae2abb34 Fix spilling in docstring
  - b40efc5db8 Windows test client fixes

- **ISSUE #45956** (frogunder) CTRL-C gives traceback on py3 setup (refs: #46032)

- **PR #46732:** (rallytime) Back-port #46032 to 2017.7 @ 2018-03-28 13:43:17 UTC
  - PR #46032: (DmitryKuzmenko) Workaroung python bug in traceback.format_exc() (refs: #46732)
  - 1222bdbe00 Merge pull request #46732 from rallytime/bp-46032
  - b0b962cd0 Workaroung python bug in traceback.format_exc()

- **ISSUE #28142:** (zmalone) Deprecate or update the copr repo (refs: #46749)

- **PR #46749:** (vutny) [DOC] Remove mentions of COPR repo from RHEL installation page @ 2018-03-28 13:20:50 UTC
  - 50fe1e4980 Merge pull request #46749 from vutny/doc-deprecate-copr
  - a1cc5da3d [DOC] Remove mentions of COPR repo from RHEL installation page

- **PR #46734:** (terminalmage) Make busybox image builder work with newer busybox releases @ 2018-03-27 21:14:28 UTC
  - bd1e8b8c7d Merge pull request #46734 from terminalmage/busybox
  - 6502b6b4ff Make busybox image builder work with newer busybox releases
Salt Documentation, Release 3002.5

- **ISSUE saltstack/salt-jenkins#902**: (rallytime) [2017.7/.5] Test failures for NPM on CentOS 6/7, Ubuntu 14, and OpenSUSE (refs: #46742)
- **PR #46742**: (gtmanfred) only use npm test work around on newer versions @ 2018-03-27 21:13:28 UTC
  - c09c6819c Merge pull request #46742 from gtmanfred/2017.7
  - fd06e49d1e only use npm test work around on newer versions
- **PR #46743**: (Ch3LL) Workaround getpwnam in auth test for MacOSX @ 2018-03-27 21:10:47 UTC
  - 3b6d5eca88 Merge pull request #46743 from Ch3LL/mac_auth
  - 4f1c42c0e3 Workaround getpwnam in auth test for MacOSX
- **ISSUE #26920**: (david-fairbanks42) MySQL grant with underscore and wildcard (refs: #46171)
- **PR #46171**: (amaclean199) Fix mysql grant comparisons @ 2018-03-27 17:54:48 UTC
  - b548a3e742 Merge pull request #46171 from amaclean199/fix_mysql_grants_comparison
  - 97db3d9766 Merge branch '2017.7' into fix_mysql_grants_comparison
  - 0565b3980e Merge branch '2017.7' into fix_mysql_grants_comparison
  - 8af407173d Merge branch '2017.7' into fix_mysql_grants_comparison
  - 00d13f05c4 Fix mysql grant comparisons by stripping both of escape characters and quotes. Fixes #26920
- **ISSUE #5721**: (ozgurakan) salt-minion can't restart itself (refs: #46709)
- **PR #46709**: (vutny) [DOC] Update FAQ about Salt self-restarting @ 2018-03-27 14:34:58 UTC
  - 554400e667 Merge pull request #46709 from vutny/doc-faq-minion-master-restart
  - d0929280fc [DOC] Update FAQ about Salt self-restarting
- **PR #46503**: (psyer) Fixes stdout user environment corruption @ 2018-03-27 14:20:15 UTC
  - 3f21e9cc65 Merge pull request #46503 from psyer/fix-cmd-run-env-corrupt
  - e8582e80f2 Python 3-compatibility fix to unit test
  - 27f651906d Merge pull request #1 from terminalmage/fix-cmd-run-env-corrupt
    * 172d3b2e04 Allow cases where no marker was found to proceed without raising exception
    * 35ad828ab8 Simplify the marker parsing logic
  - a09f20ab45 fix repr for the linter
  - 4ee723ac0f Rework how errors are output
  - dc283940e0 Merge branch '2017.7' into fix-cmd-run-env-corrupt
  - a91926561f Fix linting problems
  - e8d3d017f9 fix bytes or str in find command
  - 0877cfc38f Merge branch '2017.7' into fix-cmd-run-env-corrupt
  - 86176d1252 Merge branch '2017.7' into fix-cmd-run-env-corrupt
  - 3a7cc44ade Add python3 support for byte encoded markers
  - 09048139c7 Do not show whole env in error
  - ed94700255 fix missing raise statement
  - 15868bc88c Fixes stdout user environment corruption
• **PR #46432**: (twangboy) Default to UTF-8 for templated files @ 2018-03-26 19:02:14 UTC
  - ac2a6616a7 Merge pull request #46432 from twangboy/win_locales_utf8
  - affa35c30d Revert passing encoding
  - a0ab27ef15 Merge remote-tracking branch 'dw/win_locales_utf8' into win_locales_utf8
    * 9f95c50061 Use default SLS encoding, fall back to system encoding
    * 6548d550d0 Use salt.utils.to_unicode
    * 8c0164fb63 Add ability to specify encoding in sdecode
    * 2e7985a81c Default to utf-8 on Windows
  - 8017860dcc Use salt.utils.to_unicode
  - c10ed26eab Add ability to specify encoding in sdecode
  - 8d7e2d0058 Default to utf-8 on Windows

• **PR #46669**: (terminalmage) Add option to return to pre-2017.7.3 pillar include merge order @ 2018-03-26 19:00:28 UTC
  - fdac5e4ba4 Merge pull request #46669 from terminalmage/pillar-merge-order
  - b4a1d34b47 Add option to return to pre-2017.7.3 pillar include merge order

• **PR #46711**: (terminalmage) Add performance reminder for wildcard versions @ 2018-03-26 18:07:31 UTC
  - b90fd1364 Merge pull request #46711 from terminalmage/wildcard-versions-info
  - fc7d16f1af Add performance reminder for wildcard versions

• **ISSUE #46353**: (twangboy) Build 449: unit.returners.test_smtp_return (refs: #46693)

• **PR #46693**: (dwoz) File and Pillar roots are dictionaries @ 2018-03-26 15:15:38 UTC
  - 6c80d90bb6 Merge pull request #46693 from dwoz/test_smtp_return
  - 5bf850c67f File and Pillar roots are dictionaries

• **ISSUE #36153**: (krcroft) Pillarenv doesn’t allow using separate pillar environments (refs: #46543)

• **PR #46543**: (dafenko) Fix missing saltenv and pillarenv in pillar.item @ 2018-03-26 15:05:13 UTC
  - 9a6bc1418c Merge pull request #46543 from dafenko/fix-add-saltenv-pillarenv-to-pillar-item
  - 6d5b2068aa Merge branch '2017.7' into fix-add-saltenv-pillarenv-to-pillar-item
  - 5219377313 Merge branch '2017.7' into fix-add-saltenv-pillarenv-to-pillar-item
  - b7d39ca86 Merge branch '2017.7' into fix-add-saltenv-pillarenv-to-pillar-item
  - 25f1074a85 Add docstring for added parameters
  - 973be13955 Merge branch '2017.7' into fix-add-saltenv-pillarenv-to-pillar-item
  - 164314a859 Merge branch '2017.7' into fix-add-saltenv-pillarenv-to-pillar-item
  - 267ae9f633 Fix missing saltenv and pillarenv in pillar.item

• **PR #46679**: (vutny) [DOC] Correct examples in pkg state module @ 2018-03-26 14:40:07 UTC
  - f776040e25 Merge pull request #46679 from vutny/doc-state-pkg
  - 4a730383bf [DOC] Correct examples in pkg state module

• **PR #46646**: (twangboy) Fix unit.returners.test_local_cache for Windows @ 2018-03-26 14:16:23 UTC
- 47409ea6e Merge pull request #46646 from twangboy/win_fix_test_local_cache
- 8d93156604 Fix unit.returners.test_local_cache for Windows

- **ISSUE #46595**: (aboe76) saltstack server_id changes with each run on python3 (refs: #46649)
- **PR #46649**: (terminalmage) Make server_id consistent on Python 3 @ 2018-03-26 13:58:59 UTC
  - 0c2dce0416 Merge pull request #46649 from terminalmage/issue46595
  - e82a1aa1ec Make server_id consistent on Python 3

- **PR #46588**: (UtahDave) Don't crash when saltwinshell is missing @ 2018-03-21 20:26:31 UTC
  - 4e7466a21c Merge pull request #46588 from UtahDave/no_crash_winshell
  - b7842a1777 Update error message.
  - 95dfdb91ca Don't stacktrace when salt-ssh w/o saltwinshell

- **ISSUE #22063**: (jeanpralo) Wildcard inside top.sls file for pillar (refs: #41423)
- **ISSUE #20581**: (notpeter) Many environments: one pillar_root (all your envs are belong to base) (refs: #46309)
- **PR #46631**: (rallytime) Fix pillar unit test failures: file_roots and pillar_roots environments should be lists @ 2018-03-21 19:22:49 UTC
  - **PR #46629**: (terminalmage) Fix symlink loop when file_roots/pillar_roots is a string instead of a list (refs: #46631)
  - **PR #46569**: (rallytime) [2018.3] Merge forward from 2017.7 to 2018.3 (refs: #46631)
  - **PR #46509**: (bdrung) Support dynamic pillar_root environment (refs: #46631)
  - **PR #41423**: (RichardW42) pillar: target's state list support wildcard in top.sls (refs: #46631)
  - 33af3cfe7c Merge pull request #46631 from rallytime/update-pillar-unit-tests
  - 0f728186aa Fix pillar unit test failures: file_roots and pillar_roots environments should be lists

- **ISSUE #26450**: (typeshige) file.copy: source file is not present. (refs: #46640)
- **PR #46640**: (terminalmage) Clarify the docs for the file.copy state @ 2018-03-21 19:14:50 UTC
  - d329e7af78 Merge pull request #46640 from terminalmage/file.copy-docs
  - 480c5f8faa Clarify the docs for the file.copy state

- **PR #46642**: (vutny) [DOC] Unify cloud modules index header @ 2018-03-21 19:13:28 UTC
  - ff40590c06 Merge pull request #46642 from vutny/doc-cloud-index
  - 51e6aa54a1 [DOC] Unify cloud modules index header

- **PR #46619**: (rallytime) [2017.7] Merge forward from 2017.7.5 to 2017.7 @ 2018-03-20 19:03:30 UTC
  - 83ed40c6a Merge pull request #46619 from rallytime/merge-2017.7
  - bcbbdf5d07 Merge branch '2017.7.5' into '2017.7'

- **PR #46584**: (twangboy) Fix issue LGPO issue @ 2018-03-20 17:48:33 UTC
  - df12135439 Merge pull request #46584 from twangboy/lgpo-46568
  - 66101704b Detect disabled reg_multi_sz elements properly

- **PR #46624**: (twangboy) Fix a few inconsistencies in the installer script @ 2018-03-20 17:47:44 UTC
  - 2fd3a4a487c Merge pull request #46624 from twangboy/win_fix_installer
  - fa0b0ef46 Fix some installer script inconsistencies
- ISSUE #46552: (JeffLee123) State with require requisite executes despite onfail requisite on another state. (refs: #46571)

- PR #46571: (garethgreenaway) [2017.7] fixes to state.py @ 2018-03-20 13:40:04 UTC
  - f038e3c452 Merge pull request #46571 from garethgreenaway/46552_onfail_and_require
  - 152c43e843 Accounting for a case when multiple onfails are used along with requires. Previously if you have multiple states using 'onfail' and two of those states using a 'require' against the first one state, the last two will run even if the 'onfail' isn't met because the 'require' is met because the first state returns true even though it didn't execute. This change adds an additional hidden variable that is used when checking requisities to determine if the state actually ran.

- ISSUE #46512: (blarghmatey) git pull failing when run from the salt scheduler (refs: #46520)

- PR #46520: (gtmanfred) pass utils to the scheduler for reloading in modules @ 2018-03-20 13:35:49 UTC
  - 2677330e19 Merge pull request #46520 from gtmanfred/2017.7
  - caefedc095 make sure utils is empty for pickling for windows
  - 28835486e6 pass utils to the scheduler for reloading in modules

- ISSUE #44299: (nhavens) 2017.7.2 breaks pkgrepo.managed yum repo comments (refs: #46531)

- PR #46531: (terminalmage) Fix regression in yumpkg._parse_repo_file() @ 2018-03-20 13:34:59 UTC
  - 7bc3c2e588 Merge pull request #46531 from terminalmage/issue44299
  - b70c3389da Fix case where no comments specified
  - ce391c53f4 Add regression test for #44299
  - c3e36ac94 Fix regression in yumpkg._parse_repo_file()
  - f0c79e3da3 Slight modification to salt.utils.pkg.rpm.combine_comments()

- ISSUE #46521: (dwoz) --name argument not honored for cloud test suite (refs: #46567)

- PR #46567: (dwoz) Honor named tests when running integration suites @ 2018-03-20 13:24:42 UTC
  - b80edb5d26 Merge pull request #46567 from dwoz/runtest-n-wart
  - 3b6901e19d Honor named tests when running integration suites

- PR #46580: (twangboy) Clarify some issues with msu files in win_dism.py @ 2018-03-16 18:57:55 UTC
  - 1dcd22e767 Merge pull request #46580 from twangboy/win_update_docs_dism
  - d52b99d7a3 Clarify some issues with msu files in win_dism.py

- ISSUE #46073: (layer3switch) salt 2017.7.3 grains metadata collection in AWS EC2 cause failure and nested iteration (refs: #46541)

- PR #46541: (gtmanfred) handle user-data for metadata grains @ 2018-03-15 17:21:31 UTC
  - 0a68c22332 Merge pull request #46541 from gtmanfred/metadata
  - 005d19db5 handle user-data for metadata grains

- ISSUE #46427: (wasabi222) cumulus linux should use systemd as a default service pkg instead of debian_service (refs: #46547)

- PR #46547: (garethgreenaway) [2017.7] Disable service module for Cumulus @ 2018-03-15 16:15:00 UTC
  - 048b2ba36f Merge pull request #46547 from garethgreenaway/46427_service_module_cumulus
  - edd0b11447 Merge branch '2017.7' into 46427_service_module_cumulus
– ea3c16080e Disable the service module on Cumulus since it is using systemd.

- **PR #46548**: (Ch3LL) profitbrick test: check for foo, bar username, password set in profitbrick config @ 2018-03-15 14:25:27 UTC
  - 98e3260b9a Merge pull request #46548 from Ch3LL/profit_test
  - db96c472e check for foo, bar username, password set in profitbrick config

- **PR #46549**: (Ch3LL) Fix dimensionsdata test random_name call @ 2018-03-15 14:23:41 UTC
  - 79f2a76609 Merge pull request #46549 from Ch3LL/dimension_test
  - bb338c46c4 Fix dimensionsdata test random_name call

- **PR #46529**: (gtmanfred) retry if there is a segfault @ 2018-03-13 22:41:54 UTC
  - 083846fe0e Merge pull request #46529 from gtmanfred/kitchen
  - 50d6e2c7be retry if there is a segfault

- **PR #46511**: (rallytime) Back-port #45769 to 2017.7 @ 2018-03-13 17:08:52 UTC
  - **PR #45769**: (Quarky9) Surpress boto WARNING during SQS msg decode in sqs_engine (refs: #46511)
  - 5cc11129f1 Merge pull request #46511 from rallytime/bp-45769
  - a8ffceda53 Surpress boto WARNING during decode, reference: [https://github.com/boto/boto/issues/2965](https://github.com/boto/boto/issues/2965)

### 30.2.48 Salt 2017.7.7 Release Notes

Version 2017.7.7 is a bugfix release for 2017.7.0.

The 2017.7.7 release contains only a small number of fixes, which are detailed below.

This release fixes two critical issues.

The first is Issue #48038, which is a critical bug that occurs in a multi-syndic setup where the same job is run multiple times on a minion.

The second issue is #48130. This bug appears in certain setups where the Master reports a Minion time-out, even though the job is still running on the Minion.

Both of these issues have been fixed with this release.

### Statistics

- Total Merges: 5
- Total Issue References: 2
- Total PR References: 6
- Contributors: 3 (garethgreenaway, gtmanfred, rallytime)
Changelog for v2017.7.6..v2017.7.7

Generated at: 2018-06-17 19:26:52 UTC

- ISSUE #48130: (rmarchei) Minion timeouts with 2018.3.1 (refs: #48157)
- PR #48157: (gtmanfred) always listen when gathering job info @ 2018-06-17 19:04:09 UTC
  - 8af4f52134 Merge pull request #48157 from gtmanfred/2017.7.7
  - d8209e8a40 always listen when gathering job info
- PR #48140: (rallytime) Update man pages for 2017.7.7 @ 2018-06-14 21:22:43 UTC
  - b98c52ee51 Merge pull request #48140 from rallytime/man-pages-2017.7.7
  - 8af4f52134 always listen when gathering job info
- PR #48136: (gtmanfred) [2017.7.7] bootstrap kitchen branch tests with 2017.7.6 @ 2018-06-14 21:20:16 UTC
  - baa0363336 Merge pull request #48136 from gtmanfred/2017.7.7
  - fce1c31146 bootstrap kitchen branch tests with 2017.7.6
- PR #48134: (rallytime) Add release notes file for 2017.7.7 @ 2018-06-14 16:31:34 UTC
  - b0ba08f4d9 Merge pull request #48134 from rallytime/release-notes-2017.7.7
  - 217005b8f1 Add missing v for tag reference
  - d53569d1e3 Add release notes file for 2017.7.7
- ISSUE #48038: (austinpapp) jobs are not dedup'ing minion side (refs: #48075)
- PR #48098: (rallytime) Back-port #48075 to 2017.7.7 @ 2018-06-14 12:53:42 UTC
  - PR #48075: (garethgreenaway) [2017.7] Ensure that the shared list of jids is passed (refs: #48098)
  - 084de927fe Merge pull request #48098 from rallytime/bp-48075-2017.7.7
  - e4e62e8b3a Ensure that the shared list of jids is passed when creating the Minion. Fixes an issue when minions are pointed at multiple syndics.

30.2.49 Salt 2017.7.8 Release Notes

Version 2017.7.8 is a security and bugfix release for 2017.7.0.

Statistics

- Total Merges: 237
- Total Issue References: 48
- Total PR References: 279
- Contributors: 52 (AVeenstra, Ch3LL, Circuitsoft, DmitryKuzmenko, KaiSforza, Martin819, OrlandoAr- capix, UtahDave, Vaelatern, abednarik, asnell, b1naryth1ef, baniobloom, basepi, bdrung, beornf, bmcorser, bowmanjd-lms, damon-atkins, darkpixel, discogestalt, doesitblend, dqminh, dubb-b, dwoz, frankiexyz, frogu-nder, fzipi, garethgreenaway, grokrecursion, gtmanfred, jacksontj, jagguli, lejambon, lomeroe, lordcirth, lusche, mbunkus, meashk, mirceaulinic, nbraud, pritambaral, ralex, rallytime, rmcintosh, slaws, terminalmage, twangboy, twellspring, wyardley, xetix, zer0def)
Security Fix

CVE-2018-15751 Remote command execution and incorrect access control when using salt-api.

CVE-2018-15750 Directory traversal vulnerability when using salt-api. Allows an attacker to determine what files exist on a server when querying /run or /events.

Credit and thanks for discovery and responsible disclosure: nullbr4in, xcuter, koredge, loupos, blackcon, Naver Business Platform

New win_snmp behavior

- win_snmp.get_community_names now returns the SNMP settings actually in effect on the box. If settings are managed via GroupPolicy, those settings will be returned. Otherwise, normal settings are returned.
- win_snmp.set_community_names now raises an error when SNMP settings are being managed by GroupPolicy.

Option Added to Disable Docker Mine Updates

When a docker container is added, removed, started, stopped, etc., the results of a docker.ps verbose=True all=True host=True are sent to the mine, to be used by mine.get_docker.

A new config option (docker.update_mine) has been added. When set to False, Salt will not send this information to the mine. This is useful in cases where sensitive information is stored in the container’s environment.

Changelog for v2017.7.7..v2017.7.8

Generated at: 2018-09-04 21:09:41 UTC

- PR #49498: (rallytime) Pin CherryPy version to < 18.0.0 in requirements files for PY2 @ 2018-09-04 17:55:02 UTC
  - 0d7b173b24 Merge pull request #49498 from rallytime/pin-cherrypy-2017.7.8
  - 81a6155b6b Pin CherryPy version to < 18.0.0 in requirements files for PY2
- ISSUE #47087: (darkpixel) How do I stop the prompt "Permission denied for host <hostname>, do you want to deploy the salt-ssh key? (password required)?"? (refs: #47100, #saltstack/salt#47100)
  - PR saltstack/salt#47100: (gtmanfred) Allow for not being prompted to supply a password to deploy keys to a... (refs: #49461)
- PR #49466: (rallytime) Back-port #49461 to 2017.7.8 @ 2018-08-31 15:44:11 UTC
  - PR #49461: (gtmanfred) Revert "Allow for not being prompted to supply a password to deploy keys to a..." (refs: #49466)
  - 52ab2c0574 Merge pull request #49466 from rallytime/bp-49461
  - 58428003b1 Revert "Allow for not being prompted to supply a password to deploy keys to a..."
- PR #49284: (twangboy) Fix path to libsodium tarball @ 2018-08-23 17:19:24 UTC
  - 1b8e7d5f64 Merge pull request #49284 from twangboy/fix_installer_osx
  - a112eaa597 Fix path to libsodium tarball
- PR #49272: (twangboy) Add 64 bit binaries for KB2999226 to the x86 installer @ 2018-08-23 14:27:09 UTC
  - e0e8779985 Merge pull request #49272 from twangboy/fix_installer_more
a8f054b2d2 Add 64bit binaries for KB2999226 to the x86 installer

- **PR #49218**: (twangboy) Fix Windows and OSX installers @ 2018-08-21 01:10:30 UTC
  - 0eb6ddf0e8 Merge pull request #49218 from twangboy/fix_installer
  - e8a1d2f772 Add more descriptive error when KB not found
  - 71737ea687 Suppress all ui on vcredist installation
  - 7dae9bb2a1 Fix Windows and OSX installers

- **PR #49116**: (twangboy) Fix windows installer script @ 2018-08-14 17:09:35 UTC
  - e48f261ee Merge pull request #49116 from twangboy/fix_installer
  - 1227095c5d Add nonfatal switch to VCRedist

- **PR #49051**: (rallytime) Back-port #49046 to 2017.7.8 @ 2018-08-10 17:19:18 UTC
  - PR #49046: (garethgreenaway) [2017.7] Another fix to tests/integration/modules/test_service.py (refs: #49051)
    - 01cf2c71ff Merge pull request #49051 from rallytime/bp-49046
    - fc0817cb35 The osfullname grain differs when using Python2 vs Python3, swapping this out for the "OS" grain which is consistent.

- **PR #49044**: (Ch3LL) increase timeout on vultr cloud integration test @ 2018-08-10 01:28:17 UTC
  - 189e28691f Merge pull request #49044 from Ch3LL/vultr_test
  - 0dedfae4d1 increase timeout on vultr cloud integration test

- **PR #49042**: (rallytime) Mark a jinja template test as flaky @ 2018-08-09 21:05:54 UTC
  - c606a32cf2 Merge pull request #49042 from rallytime/flaky-jinja-test
  - a43db4ba6 Mark a jinja template test as flaky

- **PR #49030**: (rallytime) Update netapi client tests @ 2018-08-09 17:11:14 UTC
  - 1db036406b Merge pull request #49030 from rallytime/update-client-tests
  - f08ee66ca8e Update netapi client tests

- **PR #49024**: (rallytime) Make grains integration test more robust @ 2018-08-08 20:59:18 UTC
  - 6b6d68c615 Merge pull request #49020 from rallytime/fx-grains-test

30.2. Previous Releases
- f72a3ac6be Make grains integration test more robust

- PR #49002: (rallytime) Skip test_jinja_deep_error on Debian 8 (refs: #49024) @ 2018-08-08 19:18:39 UTC
  - 92d6c25c7f Merge pull request #49002 from rallytime/skip-jinja-deep-error-test
  - 23b66e88b Skip test_jinja_deep_error on Debian 8

- PR #48999: (rallytime) Update expected return value in boto test @ 2018-08-08 14:42:15 UTC
  - 41df11e5b3 Merge pull request #48999 from rallytime/fix-boto-test
  - d0136b1e5 Update expected return value in boto test

- PR #48976: (rallytime) Skip unreliable tornado tests @ 2018-08-07 18:55:25 UTC
  - a1e54634de Merge pull request #48976 from rallytime/tornado
  - 0bd838ab6c Skip unreliable tornado tests

- PR #48979: (rallytime) Back-port #48959 to 2017.7.8 @ 2018-08-07 18:11:53 UTC
  - PR #48959: (rallytime) Mark some more tests as flaky (refs: #48979)
  - 22713be9c1 Merge pull request #48979 from rallytime/bp-48959
  - aaf986d728 Mark one grains test as flaky & convert to pytest notation
  - e7e5abcf48 Mark 2 matcher tests as flaky

- PR #48970: (Ch3LL) [2017.7.8] Backport #48962 @ 2018-08-07 15:01:57 UTC
  - PR #48962: (garethgreenaway) [2017.7] Fixing tests/integration/modules/test_service.py (refs: #48970)
  - 03aae4b90 Merge pull request #48970 from Ch3LL/back_48962
  - 3ce1b8ac9 Update the elif block to only be true for versions below Debian 9.

- PR #48968: (rallytime) Update man pages for 2017.7.8 release @ 2018-08-07 14:29:08 UTC
  - e6cea5e3c7 Merge pull request #48968 from rallytime/man-pages
  - 64fe38ab6c Update man pages for 2017.7.8 release

- PR #48950: (KaiSforza) Added a quote to kitchen Jenkinsfiles @ 2018-08-06 14:29:08 UTC
  - 848d583438 Merge pull request #48950 from KaiSforza/kitchenfix-2017.7
  - 5242cb143a Added a quote to kitchen Jenkinsfiles

- PR #48943: (rallytime) Mark some shell and runner integration tests as flaky @ 2018-08-06 13:08:14 UTC
  - 92d688d65 Merge pull request #48943 from rallytime/flaky-tests
  - 668da57ab9 Mark some shell and runner integration tests as flaky

- PR #48940: (rallytime) Back-port #48852 to 2017.7 @ 2018-08-05 21:32:26 UTC
  - PR #48852: (KaiSforza) Record all the artifacts from the build (refs: #48940)
  - cd42510d3a Merge pull request #48940 from rallytime/bp-48852
  - fa4e92e79 Record all the artifacts from the build

- PR #48935: (garethgreenaway) [2017.7] Fix to test_pkg.test_pkg_015_installed_held @ 2018-08-05 19:47:39 UTC
  - 43649a68be Merge pull request #48935 from garethgreenaway/1045_test_pkg_015_installed_held_centos
  - 0bb10107b6 Merge branch '2017.7' into 1045_test_pkg_015_installed_held_centos
  - 24d56e22f Fixing the test_pkg_015_installed_held test to be able to successfully run on CentOS
• ISSUE #47087: (darkpixel) How do I stop the prompt "Permission denied for host <hostname>, do you want to deploy the salt-ssh key? (password required)? (refs: #47100)

• PR #47100: (gtmanfred) Allow for not being prompted to supply a password to deploy keys to a... @ 2018-08-05 19:12:58 UTC
  - 2421e2a570 Merge pull request #47100 from gtmanfred/ssh
  - 5b443af7ae add key-deploy test
  - a131c9beeb Allow for not being prompted to supply a password to deploy keys to a minion with salt-ssh

• ISSUE #48865: (mts-avco) Windows packages are hidden in pkg.list_pkgs if they have no DisplayVersion (refs: #48891)

• PR #48891: (damon-atkins) win_pkg: Fix issue introduced in Jan 2018 DisplayVersion missing should result... @ 2018-08-05 18:53:47 UTC
  - d541bd6446 Merge pull request #48891 from damon-atkins/2017.7_win_pkg.list_pkgs_not_found
  - a4af1dbf1 Fix win_pkg issues introduced Jan 2018. If DisplayVersion does not exist it should return version as "Not Found"

• ISSUE #27056: (oogali) pkgng provider on FreeBSD does not do BATCH=yes (refs: #48730, #29909)

• PR #48896: (rallytime) Back-port #48730 to 2017.7 @ 2018-08-05 18:20:40 UTC
  - PR #48730: (fzipi) Fix batch install on FreeBSD using pkgng (refs: #48896)
  - PR #29909: (abednarik) FreeBSD pkgng fix for non-interactive install. (refs: #48730)
  - PR #29907: (bmcorser) Presumably what was meant (refs: #48730)
  - 56a565fd0 Merge pull request #48896 from rallytime/bp-48730
  - 57aa204c9d Merge branch '2017.7' into bp-48730
  - 4995922584 Forgot variable in signature
  - 0503bc18b6 Fix batch install using pkgng

• PR #48933: (garethgreenaway) [2017.7] Fix to test_service_disable_dosnot_exist @ 2018-08-05 14:29:43 UTC
  - 0c64ba865 Merge pull request #48933 from garethgreenaway/1022_debian_8_failing_service-test
  - 280d1d2ad2 Fixing failing test, integration.modules.test_service.ServiceModuleTest.test_service_disable_dosnot_exist, on Debian 8 and higher.

• PR #48922: (rallytime) Update backticks on job_cache docs @ 2018-08-03 21:05:46 UTC
  - 0c3d2c6a09 Merge pull request #48922 from rallytime/cache-doc-error
  - 8ca89df7e8 Update backticks on job_cache docs

• PR #48866: (Ch3LL) Add cmd module integration tests for windows and fix space in path issue @ 2018-08-03 21:03:33 UTC
  - 8d1fe4f8e5 Merge pull request #48866 from Ch3LL/cmd_win_tests
  - 905da13653 Merge branch '2017.7' into cmd_win_tests

• PR #48920: (rallytime) Back-port #48904 to 2017.7 @ 2018-08-03 15:17:07 UTC
  - PR #48904: (Kaisforza) No rehashing in parallel (refs: #48920)
  - 57d587c541 Merge pull request #48920 from rallytime/bp-48904-2017.7
  - a55f92954a No rehashing in parallel
• PR #48876: (Vaelatern) Make IP_LEARNING optional @ 2018-08-02 19:30:24 UTC
  - e79cc635b1 Merge pull request #48876 from Vaelatern/make-network-learning-optional
  - a905b0e5d Make IP_LEARNING optional
• PR #48890: (Ch3LL) add sleep in test_cmd integration test @ 2018-08-02 19:15:08 UTC
  - f8bfabad9f Merge pull request #48890 from Ch3LL/cmd_test
  - acda4ed9ab add sleep in test_cmd integration test
• PR #48885: (rallytime) Mark shadow module integration test as flaky @ 2018-08-02 19:04:35 UTC
  - 527226f6b1 Merge pull request #48885 from rallytime/flaky-tests-shadow
  - da871a2d57 Mark shadow module integration test as flaky
• PR #48884: (rallytime) Separate compound matcher tests into individual tests @ 2018-08-02 19:04:03 UTC
  - b0895656e Merge pull request #48884 from rallytime/flaky-tests-matchers
  - 38d9eae537 Merge branch '2017.7' into flaky-tests-matchers
• PR #48868: (terminalmage) Fix race when SIGTERM/SIGINT received while lazyloading a module @ 2018-08-02 17:13:34 UTC
  - a567666938 Merge pull request #48868 from terminalmage/fix-loader-race
  - 5f1169a2a2 Fix race when SIGTERM/SIGINT received while lazyloading a module
• PR #48883: (terminalmage) Fix failing git worktree tests @ 2018-08-02 16:51:40 UTC
  - 0ca0b62f2f Merge pull request #48883 from terminalmage/salt-jenkins-1023
  - c6175cb50 Fix failing git worktree tests
    * 3660dff13c Separate compound matcher tests into individual tests
• PR #48869: (Ch3LL) Catch socket.error exception in testprogram @ 2018-08-02 14:19:22 UTC
  - 84f5155a1 Merge pull request #48869 from Ch3LL/mac_shell_tests
  - 3734b1ec89 Catch socket.error exception in testprogram
• PR #48867: (rallytime) Skip unreliable tornado test. @ 2018-08-01 21:07:07 UTC
  - 7f56b8bf44 Merge pull request #48867 from rallytime/skip-tornado-test
  - 7320aa9104 Skip unreliable tornado test.
    * 3be1e6f6e Add docs for new escape kwarg
    * 391bb8a411 use a specific path for just the cmd._run call
    * 62c66ba489 make sure we lower the check on shell
    * 3912a993a5 Add cmd module integration tests for windows and fix space in path issue
• PR #48853: (rallytime) Back-port #48850 to 2017.7 @ 2018-07-31 20:21:49 UTC
  - PR #48850: (rallytime) Skip tests in integration.shell.test_master (refs: #48853)
    - 05f2d6d3e Merge pull request #48853 from rallytime/bp-48850
    - 3c33e554a Skip tests in integration.shell.test_master
• ISSUE #46689: (mxork) pkg.installed: hold: True not applied to a package which is already installed. (refs: #48426)
• PR #48426: (garethgreenaway) [2017.7] fixes to states/pkg.py @ 2018-07-31 20:18:05 UTC

2390 Chapter 30. Release Notes
- 8a1285239a Merge pull request #48426 from garethgreenaway/46689_fixing_pkg_held_when_package_is_installed
- 9b0f5dd212 Fixing indentation, removing some unnecessary conditionals.
- 727964ab55 One last cleanup.
- 11c8b6e6eb General cleanup in pkg state, reducing duplicate code. Fixing the requires_salt_modules decorator, sys.doc was returning too much information for the event to handle. This change specifically calls sys.doc with the module name.
- 16fb6ae635 Make sure pkg.hold and pkg.unhold are available before running the test.
- 998651102d Fixing a situation when a package is already installed via salt or manually and a state attempts to set that package to be held. Previously the holding/unholding logic was only being run against packages that were being installed. This change moves the holding logic outside and runs it against all desired packages. Adding a new test to test holding logic.

- **ISSUE #47689:** (OrlandoArcapix) Poor performance of pip.installed when given a list of packages (refs: #47734)
- **PR #47734:** (OrlandoArcapix) #47689 improve run-speed of pip package state @ 2018-07-31 19:15:35 UTC
  - c8e6943ff Merge pull request #47734 from OrlandoArcapix/Issue47689-pip-state-performance
  - 662bd1f780 Merge branch '2017.7' into Issue47689-pip-state-performance
  - 66936bf4f1 Changed string comparison in pip test to match new confirmation string - ref PR #47734.
  - bb5939d6ef Merge branch '2017.7' into Issue47689-pip-state-performance
  - d6a49ae41c Merge branch '2017.7' into Issue47689-pip-state-performance
  - d408fc9dd1 Merge branch 'issue47689-pip-state-performance' of github.com:OrlandoArcapix/salt into Issue47689-pip-state-performance
    - 779b5fa785 Merge branch '2017.7' into Issue47689-pip-state-performance
  - f3653349ab Removed whitespaces at end of added comments lines
  - db11f2f4b Merge branch '2017.7' into Issue47689-pip-state-performance
  - eac0178de2 Ref: #47689 - document additional kwarg passed to pip._check_if_installed function
  - 0d19803106 Merge branch '2017.7' into Issue47689-pip-state-performance
  - d3678bf2f3 #47689 fix lint errors
  - 4fec8f6bce #47698 improve run-speed of pip package state checks by only loading the current package list once when checking multiple packages
- **PR #48844:** (AVeenstra) Fixed Python 3 incompatibility in methods in nilrt_ip and debian_ip. @ 2018-07-31 17:20:27 UTC
  - 83a5b3ec47 Merge pull request #48844 from AVeenstra/fix-python3-incompatibility
  - f238779a62 Merge branch '2017.7' into fix-python3-incompatibility
  - 6b1805afcc Fixed Python 3 incompatibility in methods in nilrt_ip and debian_ip.
- **ISSUE #48637:** (slaws) state.file.retention_schedule does not ignore relative directory when using getmtime() (refs: #48662)
- **PR #48662:** (slaws) Excluding relative dirs in state.file.retention_schedule @ 2018-07-31 16:15:09 UTC
  - 136f6735a Merge pull request #48662 from slaws/fix-retention-schedule-48637
  - 3c85f5b3d pylint fix
  - 5539eff39e Excluding relative dirs in state.file.retention_schedule
• ISSUE #48818: (guettli) Broken Link in Docs (refs: #48840)

• PR #48840: (gtmanfred) fix links in pkg doc. @ 2018-07-31 16:13:00 UTC
  - 1fc04f281b Merge pull request #48840 from gtmanfred/docs
  - 8d2d268c4a fix links in pkg doc.

• PR #48834: (gtmanfred) read output of stringio if it is readable @ 2018-07-31 13:40:48 UTC
  - 0a19f845ea Merge pull request #48834 from gtmanfred/sslutil
  - f9441d2bef read output of stringio if it is readable

• PR #48788: (Ch3LL) Add timezone windows integration tests and fix get_zone @ 2018-07-27 20:14:30 UTC
  - 2e00939a6e Merge pull request #48788 from Ch3LL/timezone_windows
  - de95a6a215 add unused import to timezone test file
  - 22e424859e add unused import to import
  - 0840fc3117 disable pylint import error
  - f09d12a276 Add timezone windows integration tests and fix get_zone

• PR #48742: (frogunder) add windows integration tests for states.file @ 2018-07-27 13:57:27 UTC
  - 8e61f3dce0 Merge pull request #48742 from frogunder/45014
  - f08058b043 Merge branch '45014' of https://github.com/frogunder/salt into 45014
    - 757fde70c6 Merge branch '2017.7' into 45014
  - 33c20c1ec0 fix tests
  - a7a914060d add windows integration tests for states.file

• ISSUE #48417: (samilaine) Contribution Documentation Refers to Incorrect Pylintrc (refs: #48795)

• PR #48795: (rallytime) Update linting docs to contain .testing.pylintrc use @ 2018-07-27 13:34:13 UTC
  - d74f7b340 Merge pull request #48795 from rallytime/fix-48417
  - 5123b7f7fd Update linting docs to contain .testing.pylintrc use

• PR #48789: (rallytime) Back-port #48783 to 2017.7 @ 2018-07-26 21:47:49 UTC
  - PR #48783: (KaiSforza) Only run lint checks against changed files (refs: #48789)
  - PR #48610: (gtmanfred) only run pylint on files that change (refs: #48783)
  - bbea9ae936 Merge pull request #48789 from rallytime/bp-48783
  - 682a0be3be Threshold was wrong
  - d4ca0e3a97 test: except for OSError only
  - 4547231909 Only run lint checks against changed files

• PR #48731: (zer0def) Fixed enable_vnc runner arg being passed into seed_cmd module arg in virt.init. @ 2018-07-26 21:13:59 UTC
  - 41464d4b39 Merge pull request #48731 from zer0def/virt-runner-init-args
  - a1fa081ad0 Documentation to missing parameters in virt.init runner.
  - 365efb5f39 Fixed enable_vnc runner arg being passed into seed_cmd module arg in virt.init.

• PR #48749: (Ch3LL) Update Saltstack Logo banner on docs.saltstack.com @ 2018-07-25 13:05:04 UTC
• PR #48743: (rallytime) Update DOCBANNER with new SaltConf18 image @ 2018-07-24 16:46:19 UTC
  - 781c6a6c36 Merge pull request #48743 from rallytime/saltconf-ad-2017.7
  - 6d8fd8652 Update DOCBANNER with new SaltConf18 image

• PR #48720: (Ch3LL) Fix test managed_source_hash_indifferent_case on macosx to correct tmp path @ 2018-07-23 22:32:56 UTC
  - ce4e22224 Merge pull request #48720 from Ch3LL/mac_file_path
  - 01d25fae19 Fix test managed_source_hash_indifferent_case on macosx to correct tmp path

• PR #48719: (Ch3LL) Enable service if disabled before running state service tests @ 2018-07-23 21:01:14 UTC
  - 4b9f037d43 Merge pull request #48719 from Ch3LL/service_mac_state
  - f44a2fc349 Enable service if disabled before running state service tests

• PR #48715: (rallytime) [2017.7] Mark some tornado tests as flaky @ 2018-07-23 17:27:13 UTC
  - b2431eb10 Merge pull request #48715 from rallytime/flaky-tests
  - 7332ce567 [2017.7] Mark some tornado tests as flaky

• PR #48672: (frogunder) add service enabled test @ 2018-07-23 15:38:49 UTC
  - 801ea3b8d Merge pull request #48672 from frogunder/45012
  - 0747f2e58a add service enabled test

• PR #48691: (Ch3LL) Add windows pkg module integration tests @ 2018-07-22 20:01:30 UTC
  - 689c231d2b Merge pull request #48691 from Ch3LL/win_repo_pkg_test
  - 4b7d6d80c5 Remove unnecessary jinja in curl.sls file
  - 2bedadfadb Add windows pkg module integration tests

• ISSUE #48627: (nbraud) acme module's group parameter is non-functional (refs: #48635)
• ISSUE #48626: (nbraud) acme module fails to set file permissions if the certificate is already present (refs: #48635)

• PR #48635: (nbraud) Bug fixes in the acme module & state @ 2018-07-22 19:53:49 UTC
  - 83e4bba916 Merge pull request #48635 from nbraud/acme
  - 3673bae9de modules/acme: explicitly ignore the perms return value
  - 1800a231e8 Fixup some schema expectations
  - 8c718cb417 acme: Make the private key mode configurable
  - 917dea6761 modules/acme: Use file.check_perms ret-morphing powers
  - d2241ceb2d module/acme: Do not exit early when the certificate already exists
  - 98af0db826 modules/acme: Set the private key filemode to 0640

• PR #48345: (twangboy) Fix behavior of powercfg module and state @ 2018-07-20 17:37:13 UTC
  - 85991680c8 Merge pull request #48345 from twangboy/fix_48169
  - ead19725b6 Merge branch '2017.7' into fix_48169
  - 653fbc383 Fix some docs errata
- 8898e5ff11 Add warn_until Fluorine
- 707906ac15 Fix unit.state.test_powercfg
- 32c5014eb6 Fix unit tests
- 0d9c56e540 Add some more logging
- b20453de9f Use minutes to set
- 7dc7eb11c2 Fix documentation to denote seconds when setting

- **PR #48656**: (Ch3LL) Add windows ip module integration tests @ 2018-07-20 14:57:45 UTC
  - 96447ce541 Merge pull request #48656 from Ch3LL/windows_ip_mod
  - 903f568b1 Add windows ip module integration tests

- **PR #48638**: (twangboy) Remove vcredist 2015 from Py3 installer @ 2018-07-20 14:56:40 UTC
  - 0c5ff3dc8 Merge pull request #48638 from twangboy/fix_vcredist
  - e30d17099d Use goto instead of if statement
  - e104f2a084 Remove vcredist for Py3

- **PR #48664**: (Ch3LL) [2017.7] Fix service.disabled test for macosx @ 2018-07-20 14:32:56 UTC
  - 1ebd96d909 Merge pull request #48664 from Ch3LL/srv_disable_mac
  - f1fbfad387 move the disable call up in try block
  - f6021bda4 reverse assertion order for service disable test
  - 3727d1b3b switch try/except to match 2018.3
  - fb953c2369 [2017.7] Fix service.disabled test for macosx

- **PR #48625**: (Ch3LL) Follow up to PR #48555 @ 2018-07-20 14:27:55 UTC
  - **PR #48555**: (Ch3LL) Fix state.sls_id not running on ssh minion (refs: #48625)
  - 3da3cf2f3f Merge pull request #48625 from Ch3LL/ssh_state
  - f590eb2b02 Update state.py
  - 9790ee3d0d Follow up to PR #48555

- **PR #48673**: (Ch3LL) Use different pub and ret ports for testprogram integration tests @ 2018-07-20 14:11:51 UTC
  - 33812f78f1 Merge pull request #48673 from Ch3LL/mac_port
  - 87dd85a220 Use different pub and ret ports for testprogram integration tests

- **PR #48675**: (Ch3LL) Fix mac service.disable tests @ 2018-07-20 14:09:41 UTC
  - 5f6a7c4d89 Merge pull request #48675 from Ch3LL/mac_disable
  - c78efab28 Fix mac service.disable tests

- **ISSUE #43138**: (F30) npm.installed mistakenly throws error for packages which are "installed via remote" (refs: #48492, #48658)

- **PR #48658**: (wyardley) Improve handling of json output (#43138) @ 2018-07-20 14:08:34 UTC
  - **PR #48492**: (wyardley) Improve identifying json out in npm module (#43138) (refs: #48658)
  - 932f51d2b Merge pull request #48658 from wyardley/wyardley-npm-json-output-2017
  - 7ff3c9c5ff Improve handling of npm json output (#43138)
• **ISSUE #48677**: (OrlandoArcapix) npm.bootstrap does not return True (clean) with test=true and no changes (refs: #48678)

• **PR #48678**: (OrlandoArcapix) Fix for issue #48677 - return clean npm.bootstrap on no changes @ 2018-07-20 14:07:22 UTC
  - 3e293b0513 Merge pull request #48678 from OrlandoArcapix/fix-npm-dryrun-test
  - 851a4046b0 Fix for issue #48677 - return True when no changes are to be made with npm.bootstrap with test=true

• **ISSUE #46884**: (alexandergraul) salt.utils.rsax931._init_libcrypto() fails to initialize libopenssl1_1-1.1.0h (refs: #48580)

• **PR #48580**: (rallytime) Don’t error on retcode 0 in libcrypto.OPENSSL_init_crypto call @ 2018-07-19 19:21:13 UTC
  - PR #37772: (bdrung) Support initializing OpenSSL 1.1 (refs: #48580)
  - 07a1f6520f Merge pull request #48580 from rallytime/fixed-46884
  - 736b389e91 Don’t error on retcode 0 in libcrypto.OPENSSL_init_crypto call

• **PR #48628**: (terminalmage) Fix NameError in testinfra module @ 2018-07-18 21:34:03 UTC
  - 9874429741 Merge pull request #48628 from terminalmage/testinfra
  - 5ace9f016c Fix NameError in testinfra module

• **PR #48651**: (gtmanfred) [2017.7] handle pyzmq for python3.4 @ 2018-07-18 17:34:41 UTC
  - 0d4c80205f Merge pull request #48651 from gtmanfred/pdent-2017.7
  - b6ee52f859 handle pyzmq for python3.4

• **PR #48647**: (gtmanfred) [2017.7] disable checks on pylint @ 2018-07-18 16:21:22 UTC
  - 160ae29cf2 Merge pull request #48647 from gtmanfred/pdent-2017.7
  - ff818c4ca2 disable checks on pylint

• **ISSUE #46924**: (chschmitt) Stale custom roster from __pycache__ executed instead of changed .py file (refs: #48593)

• **PR #48593**: (pritambaral) Fix importlib pyc loading order @ 2018-07-17 21:06:28 UTC
  - 47b1032f6a Merge pull request #48593 from pritambaral/fixed/2017.7-importlib-pyc-loading-order
  - add7894dee loader: Fix suffix order when importlib is used

• **PR #48630**: (dubb-b) Adding options to Jenkins pipeline builds @ 2018-07-17 20:16:23 UTC
  - 9da7b2ec8d Merge pull request #48630 from dubb-b/pipeline-updates
  - 8594a8dd05 Adding PY_COLOR=1 as PY_COLOR=1 instead
  - 314b0e3599 Adding PY_COLOR=1 for python programs to use ANSI Colors
  - b705e8f7a5 Adding correct spacing to options section
  - 9da7b2ec8d Adding options to Jenkins pipeline builds
  - PR saltstack/salt#48610: (gtmanfred) only run pylint on files that change (refs: #48633)

• **PR #48633**: (gtmanfred) Revert "only run pylint on files that change" @ 2018-07-17 18:44:03 UTC
  - a8a2ad6f64 Merge pull request #48633 from saltstack/revert-48610-2017.7
  - bab4a769d4 Revert "only run pylint on files that change"

2395
• **PR #48614**: (rallytime) Back-port #48562 to 2017.7 @ 2018-07-17 15:04:04 UTC
  - **PR #48622**: (basepi) Add timeouts to all s3 queries (refs: #48614)
  - 6e32bb7f74 Merge pull request #48614 from rallytime/bp-48562
  - cb65abf2c Add timeouts to all s3 queries
• **ISSUE #48415**: (doesitblend) Event.send short-circuiting in multi-master mode (refs: #48588)
• **PR #48588**: (garethgreenaway) [2017.7] event send multi master @ 2018-07-17 10:31:20 UTC
  - 1b6e6388f8 Merge pull request #48588 from garethgreenaway/48415_event_send_multi_master
  - fab25af1a9 Adding some quick documentation about why we are setting ret=True following the channel.send.
  - bf78f4b188 If the channel send is successful and does not raise an exception, we set ret to True, in case a previous exception from a previous channel send to another master has sent it to False.
  - 8d1551c5f8 When using Salt multi-master, if we encounter a salt master that has not accepted the minion key yet we should not exit right away, rather continue on and try the next salt master available in the list.
• **PR #48610**: (gtmanfred) only run pylint on files that change (refs: #48783) @ 2018-07-17 01:36:50 UTC
  - 24ffda49ba Merge pull request #48610 from gtmanfred/2017.7
  - 779d1a3dcb only run pylint on files that change
• **PR #48584**: (Ch3LL) Fix grp import for mac in test_user integration test @ 2018-07-16 19:28:13 UTC
  - 5391dd0a8d Merge pull request #48584 from Ch3LL/mac_user_grp
  - 585e9db90 Fix grp import for mac in test_user integration test
• **PR #48555**: (Ch3LL) Fix state.sls_id not running on ssh minion (refs: #48625) @ 2018-07-16 13:24:41 UTC
  - 61572b6780 Merge pull request #48555 from Ch3LL/ssh_id
  - f69932f506 fix pylint
  - 70e36764ee Add more tests for salt-ssh state.sls_id
  - dab80e805c Fix state.sls_id to run on ssh minion and not master
• **PR #48534**: (Ch3LL) Add flaky decorator to mac_system and mac_timezone tests @ 2018-07-13 19:56:40 UTC
  - aa6dfc39e8 Merge pull request #48534 from Ch3LL/mac_flaky_tests
  - 4ba2299a87 import flaky decorator on mac tests
  - 811220b41e Add flaky decorator to mac_system and mac_timezone tests
• **PR #48534**: (xetix) Fix behaviour of function latest_version in zypper module when multip... @ 2018-07-13 19:56:05 UTC
  - 6973152057 Merge pull request #48534 from xetix/fix-zypper-latest_version
  - 9985f0b4c1 Lint: remove extra blank line
  - 5fbead8a36 Merge branch '2017.7' into fix-zypper-latest_version
  - 56ac49271c Merge branch 'fix-zypper-latest_version' of https://github.com/xetix/salt into fix-zypper-latest_version
  - 4e87f5a0f Adding testcase for this fix.
b354c6863c  Fix behaviour of function latest_version in zypper module when multiple packages are passed to function. Function now properly return dict with empty string as version if latest packages is already installed, and multiple packages are passed to function

- db35d0c1e1  Adding testcase for this fix.
- d2513757ed  Fix behaviour of function latest_version in zypper module when multiple packages are passed to function. Function now properly return dict with empty string as version if latest packages is already installed, and multiple packages are passed to function

- **PR #48582:** (dwoz)  Finally fix prepend for real @ 2018-07-13 18:45:35 UTC
  - 10124034cb  Merge pull request #48582 from dwoz/test-prepend_fix
  - 872f4375d9  Merge branch '2017.7' into test-prepend_fix

- **PR #48564:** (dwoz)  Fix failing prepend test @ 2018-07-13 14:12:47 UTC
  - 66b25e65bf  Fix failing prepend test
  - 13f67335f3  Merge pull request #48564 from dwoz/test-prepend_fix
    - 136dd5f54  Finally fix prepend for real
  - 66b25e65bf  Fix failing prepend test

- **PR #48558:** (dwoz)  Remove which mock to get the test passing @ 2018-07-12 19:04:12 UTC
  - b8ce27729f  Merge pull request #48558 from dwoz/test-file_fix
  - c85bf477f  Remove which mock to get the test passing

- **PR #48552:** (KaiSforza)  Set up junit in jenkins @ 2018-07-12 16:23:33 UTC
  - a15c65202d  Merge pull request #48552 from KaiSforza/jenkins-junit-2017
  - 72b1830974  Set up junit in jenkins

- **PR #48550:** (gtmanfred)  add posargs to tox pylint @ 2018-07-12 14:34:25 UTC
  - f73108026e  Merge pull request #48550 from gtmanfred/2017.7
  - d5e03d9b6  add posargs to tox pylint

- **PR #48535:** (asnell)  Update manage_file helptext @ 2018-07-12 13:34:47 UTC
  - 113b0426f8  Merge pull request #48535 from asnell/asnell-patch-2
  - d328f6e43d  Update manage_file helptext
  - PR saltstack/salt#48525: (gtmanfred)  add kazoo for testing zookeeper. (refs: #48527)

- **PR #48527:** (gtmanfred)  Revert "add kazoo for testing zookeeper." @ 2018-07-11 17:29:16 UTC
  - 0c0c05c2bc  Merge pull request #48527 from saltstack/revert-48525-2017.7
  - 18d06c1a93  Revert "add kazoo for testing zookeeper."

- **PR #48526:** (twangboy)  Rollback python-certifi-win32 @ 2018-07-11 17:26:56 UTC
  - 05bad3e71c  Merge pull request #48526 from twangboy/rollback_certifi-win32
  - 361b3dce2f  Rollback python-certifi-win32

- **PR #48521:** (Martin819)  Back-port #48222 to 2017.7 @ 2018-07-11 16:42:51 UTC
  - PR #48222: (Martin819)  Fix GlusterFS module for version 4.0 and above (refs: #48521)
  - db066e6f4e  Merge pull request #48521 from Martin819/2017.7
  - d5d01f6698  Fix for GlusterFS 4.0 and above
PR #48525: (gtmanfred) add kazoo for testing zookeeper. @ 2018-07-11 16:09:40 UTC
  - ed0bd2bbec Merge pull request #48525 from gtmanfred/2017.7
  - d7a6bf2b2 add kazoo for testing zookeeper.

ISSUE #48277: (dvenckus) init.sls with included states fails with more than one, 'Template was specified incorrectly: False' (refs: #48388)

ISSUE #46986: (github-abcde) opts file_roots gets overwritten with pillar_roots in orchestration run (refs: #48388)

PR #48388: (garethgreenaway) [2017.7] reset file_roots for renderers after compile_pillar @ 2018-07-11 13:13:45 UTC
  - ad5a959ab9 Merge pull request #48388 from garethgreenaway/48277_2017_7_file_roots_wrong
  - 6f11da35a7 Fixing a few things in the new test.
  - cf747b14ec Fixing lint issue
  - 16d36c79c8 When pillar items are compiled a new render is instantiated but the file_roots is the pillar_roots. This change forces the __opts__['file_roots'] to be set to what is set in actual_file_roots for all renderers once compile_pillar has finished. Adding a test when this situation is run via a orchestration runner.

PR #48512: (gtmanfred) pin pm and grunt packages for npm tests @ 2018-07-11 13:06:06 UTC
  - 38df812257 Merge pull request #48512 from gtmanfred/npm
  - 9ba0f6b3a0 pin pm and grunt packages for npm tests

PR #48513: (rallytime) [2017.7] Merge forward from 2017.7.7 to 2017.7 @ 2018-07-11 13:04:01 UTC
  - 04ba31147f Merge pull request #48513 from rallytime/merge-2017.7
  - a466a4880f Merge branch '2017.7.7' into '2017.7'

PR #48514: (gtmanfred) upgrade dependencies for pytest tests @ 2018-07-10 20:53:55 UTC
  - f0352ea95a Merge pull request #48514 from gtmanfred/2017.7
  - 739bf92599 upgrade dependencies for pytest tests

PR #48491: (grokrecursion) Group gid fixed as integer @ 2018-07-10 19:31:40 UTC
  - 5372b60137 Merge pull request #48491 from grokrecursion/group-fix-v2
  - 1556b37221 fixed pylint errors
  - f6d9177dab fixed indentation for pep8
  - b9556bf923 v2 try of gid converted to integer

PR #48375: (Ch3LL) Add user and group to makedirs cmd in file.copy @ 2018-07-10 12:35:10 UTC
  - 16d3daab3c Merge pull request #48375 from Ch3LL/file_copy
  - d16a790775 Add mode to _makedirs call in file.copy
  - 2c9bc4fd26 Add user and group to makedirs cmd in file.copy

PR #48490: (KaiSforza) Cifixes @ 2018-07-09 15:20:46 UTC
  - d38951b1b3 Merge pull request #48490 from KaiSforza/cifixes
  - 9f67199a5 Mark failed if anything is found
  - 6749a6bf19 Stop archiving the docs
• **PR #48472**: (gtmanfred) use tox to run pylint @ 2018-07-07 02:46:46 UTC
  - 22cd4206c4 Merge pull request #48472 from gtmanfred/2017.7
  - c7a3a7d8bd update jenkins tests to use tox for lint
  - 44aa1c1d33 use tox to run pylint

• **PR #48476**: (twangboy) Fix dependencies @ 2018-07-06 23:43:26 UTC
  - 27ea8f35ea Merge pull request #48476 from twangboy/fix_dependencies
  - b0087d425c Add license info
  - 935f9b560c Fix dependencies

• **ISSUE #48336**: (JuanManuelVizcainoAbad) file.directory (refs: #48399)

• **PR #48399**: (garethgreenaway) [2017.7] fixes to module/file.py @ 2018-07-06 18:02:29 UTC
  - acf42864aa Merge pull request #48399 from garethgreenaway/48336_2017_7_ensure_chmod_setuid_with_chown
  - 8e9d33320f Normalize the mode before we compare it.
  - f98f0ee8c8 Setting the mode with setuid or setgid bits in addition to setting the owner and group will force the setuid & setgid bits to reset. This change ensures that we set the mode after setting the owner & group.

• **PR #48471**: (gtmanfred) Add some configurations to tox @ 2018-07-06 17:45:55 UTC
  - 6166ff0b78 Merge pull request #48471 from gtmanfred/2017.7
  - 392ab4e51f Add some configurations to tox

• **PR #48433**: (discogestalt) Fix issue with redismod.hmset method @ 2018-07-06 15:55:44 UTC
  - 623ad9b15d Merge pull request #48433 from discogestalt/fix-redismod.hmset
  - 65817ac74d Use clean_kwargsl method instead
  - f7fa7576c6 Found another issue with redismod.hmset
  - 5624865f86 Fix issue with redismod.hmset method

• **PR #48428**: (terminalmage) Fix outputter detection in jobs.lookup_jid runner @ 2018-07-06 14:37:37 UTC
  - aace0fe2c Merge pull request #48428 from terminalmage/fix-jobs.lookup_jid
  - 6509aa9089 Fix outputter detection in jobs.lookup_jid runner

• **PR #48429**: (rallytime) Back-port #46824 to 2017.7 @ 2018-07-03 21:45:36 UTC
  - PR #46824: (beorni) Regression to ignore retcodes on crontab calls (refs: #48429)
  - a7e52f0de2 Merge pull request #48429 from rallytime/bp-46824
  - 8a4486248d Added ignore_retcode to mock unit tests
  - f8beab71dd Regression to ignore retcodes on crontab calls

• **PR #48432**: (dwoz) Prepend test needs file.touch method @ 2018-07-03 21:32:48 UTC
  - 4576ef20bc Merge pull request #48432 from dwoz/file-prepend-again
  - 349a2b279e Prepend test needs file.touch method

• **ISSUE #48230**: (whytewolf) file.managed source_hash case-sensitive for test=true (refs: #48422)

• **ISSUE #38914**: (hgfischer) Uppercase checksums are not accepted by archive.extracted (refs: #40754, #48422)
• **PR #48422**: (rallytime) Allow file.managed to work with uppercase source_hash in test=true mode @ 2018-07-03 16:40:59 UTC
  - **PR #40754**: (lordcirth) file.manage_file: uppercase checksums now work (refs: #48422)
  - 422441505d Merge pull request #48422 from rallytime/fix-48230
  - a6abf85621 Allow file.managed to work with uppercase source_hash in test=true mode
  - 4c691ac57a Add regression test for Issue #48230
• **PR #48410**: (dwoz) Fix service dead test on windows @ 2018-07-03 14:17:29 UTC
  - 83e387c951 Merge pull request #48410 from dwoz/service_dead_test_fix
  - 5c092348d6 Fix service dead test on windows
• **PR #48413**: (twangboy) Fix archive.extracted to handle UNC paths @ 2018-07-03 14:14:46 UTC
  - d3ba345da5 Merge pull request #48413 from twangboy/fixed_granulemanager
  - c5aad0414d handle unc paths
• **PR #48416**: (dwoz) Fix service integration test (py3) @ 2018-07-02 23:21:08 UTC
  - 8ac867c168 Merge pull request #48416 from dwoz/service_integration_fix
  - 8ac867c168 Fix service integration test (py3)
• **PR #48385**: (Ch3LL) Update release versions for the 2017.7 branch @ 2018-07-03 13:39:29 UTC
  - 10fcd7dc3b Merge pull request #48385 from Ch3LL/update_version_doc_2017.7
  - 3f3350b94c Update release versions for the 2017.7 branch
• **PR #48405**: (Ch3LL) [2017.7] Remove In Progress Warning on 2017.7.7 @ 2018-07-03 13:32:10 UTC
  - f89a037e6e Merge pull request #48405 from Ch3LL/rm_inprog_2017.7
  - 03ed5167fa [2017.7] Remove In Progress Warning on 2017.7.7
• **PR #48409**: (dwoz) Fix file state prepend test @ 2018-07-02 23:21:08 UTC
  - 9c0785b70f Merge pull request #48409 from dwoz/test_prepend_fix
  - 9c0785b70f Fix file state prepend test
• **PR #48396**: (dwoz) Fix file.symlink state test for windows @ 2018-07-02 18:10:32 UTC
  - 4d039b7f8f Merge pull request #48396 from dwoz/symlink_test_fix
  - 4d039b7f8f Fix file.symlink state test for windows
• **PR #48362**: (twangboy) Fix stacktrace when registry entries are missing @ 2018-06-30 13:20:01 UTC
  - 7e2f26837f Merge pull request #48362 from twangboy/fix_48276
  - 7e2f26837f Fix module unit tests
  - b5ca560b73 Fix lint error
  - 210e280def Use explicit parameter names
  - 7e2f26837f Handle missing registry entries
• **PR #48383**: (rallytime) Back-port #48379 to 2017.7 @ 2018-06-29 19:48:38 UTC
  - **PR #48379**: (KaiSforza) Clean up the workspaces at the end for every job (refs: #48383)
  - 80222b6b7c Merge pull request #48383 from rallytime/bp-48379
- 9fc7815594 Clean up the workspaces at the end for every job

- **PR #48382**: (rallytime) Back-port #48346 to 2017.7 @ 2018-06-29 19:45:12 UTC
  - PR #48346: (KaiSforza) Use the right ssh key to destroy kitchen (refs: #48382)
  - aa68a774a Merge pull request #48382 from rallytime/bp-48346
  - 6a70ba222e Use the right ssh key to destroy kitchen

- **PR #48381**: (rallytime) Back-port #48330 to 2017.7 @ 2018-06-29 19:43:46 UTC
  - PR #48330: (KaiSforza) Add warnings plugin to replace violations (refs: #48381)
  - 9519f640e7 Merge pull request #48381 from rallytime/bp-48330
  - 6857bedcc2 Add warnings plugin to replace violations

- **PR #48363**: (dubb-b) Changing debug to info for logging @ 2018-06-28 20:45:17 UTC
  - 14db0aa35d Merge pull request #48363 from dubb-b/2017.7
  - c0b962e28d Changing debug to info for logging

- **PR #48352**: (Ch3LL) Add missing key to accept_dict function in wheel docs @ 2018-06-28 13:54:37 UTC
  - 5b29cd326f Merge pull request #48352 from Ch3LL/wheel_doc
  - 89ada68165 Add missing key to accept_dict function in wheel docs

- **PR #48329**: (rallytime) Trigger review requests for team-ssh for roster files @ 2018-06-28 13:53:42 UTC
  - 02cf19ee3b Merge pull request #48329 from rallytime/codeowners-roster-files
  - 5e56615e00 Trigger review requests for team-ssh for roster files

- **ISSUE #48316**: (ralex) Wrong init system used in virtual module "service" on Manjaro (refs: #48349)

- **PR #48349**: (ralex) Disable the "service" module on Manjaro since it is using systemd @ 2018-06-28 13:32:37 UTC
  - 53cf1794be Merge pull request #48349 from ralex/fix-manjaro-service-behaviour
  - 6cafe547e Disable the service module on Manjaro since it is using systemd

- **PR #48332**: (Ch3LL) Update release versions for the 2017.7 branch @ 2018-06-27 13:44:22 UTC
  - 89d9cf3a4e Merge pull request #48324 from Ch3LL/update_version_doc_2017.7
  - 47845ba810 Update release versions for the 2017.7 branch

- **PR #48331**: (rallytime) Back-port #48215 to 2017.7 @ 2018-06-27 13:12:35 UTC
  - ece4c30aae Merge pull request #48331 from rallytime/bp-48215
  - 9d6ba3c247 Set jobs to pending when they come in
  - 727d2b4ffe Use proper creds with githubNotify
  - d355861c5c Test using different credentials

- **PR #48332**: (rallytime) Back-port #48321 to 2017.7 @ 2018-06-27 13:12:15 UTC
  - PR #48321: (KaiSforza) Jenkins needs the / to get the directory (refs: #48332)
  - ab05e00d8c Merge pull request #48332 from rallytime/bp-48321
  - d72af6ab4e Jenkins needs the / to get the directory
• ISSUE #42659: (szin2012) rest_tornado is not able to return normal result (refs: #48193, #48295)

• PR #48295: (rallytime) Back-port #48193 to 2017.7 @ 2018-06-26 23:42:18 UTC
  - PR #48193: (jacksontj) Properly wait on returns in salttnado (refs: #48295)
  - 21ed5b97ce Merge pull request #48295 from rallytime/bp-48193
  - 352fe33fd6 Separate set_result() to a new line apart from Future() call
  - c0180ff33d Properly configure syndic in test case
  - d0a98534a9 Properly wait on returns in salttnado

• PR #48117: (twangboy) service.disabled on Windows @ 2018-06-26 23:35:59 UTC
  - 9aa4687ab9 Merge pull request #48117 from twangboy/fix_48026
  - dd37f8fc2 Disable services that are set to manual

• ISSUE #48122: (pasmon) Salt minion 2017.7.6 disregards “bin_env” in pip state (refs: #48189)

• PR #48207: (rallytime) Back-port #48189 to 2017.7 @ 2018-06-25 19:26:56 UTC
  - PR #48189: (gtmanfred) If pip binary is passed to bin_env, use that pip binary (refs: #48207)
  - caf630487c Merge pull request #48207 from rallytime/bp-48189
  - e9d90e0375 Use old is_windows utils path on 2017.7
  - b965d6c9b3 If pip binary is passed to bin_env, use that pip binary

• ISSUE #45383: (jodok) RabbitMQ commands fail due to wrong locale (refs: #47453)

• PR #48293: (rallytime) Back-port #47453 to 2017.7 @ 2018-06-25 19:06:42 UTC
  - PR #47453: (dqminh) dont reset system locale when running rabbitmqctl commands (refs: #48293)
  - 06a927b2aa Merge pull request #48293 from rallytime/bp-47453
  - e96a6778e dont reset system locale when running rabbitmqctl commands

• PR #48219: (zer0def) Fix: LXC legacy configuration key warnings falsely report errors during state change @ 2018-06-25 13:46:07 UTC
  - 95ef006e00 Merge pull request #48219 from zer0def/lxc-bootstrap-fixes
  - c77058560b Merge branch '2017.7' into lxc-bootstrap-fixes
  - d63cf3f072 Fixes another case of legacy configuration key usage warning getting in the way of changing container’s state.

• ISSUE #46507: (nkv16786) Failed to return clean data (refs: #48234)

• PR #48234: (dwoz) Fix py2 thin dir issues @ 2018-06-25 13:33:02 UTC
  - 3327181507 Merge pull request #48234 from dwoz/thin_dir
  - 70c603451b Fix py2 thin dir issues

• ISSUE #47984: (jeduardo) x509 module/state writing wrong certificate serial number to CRL (refs: #48080)

• PR #48080: (lusche) Bugfix #47984 messed up cert serial @ 2018-06-22 18:00:14 UTC
  - 83d7d286c4 Merge pull request #48080 from lusche/2017.7
  - 917de985fc #47984 remove the line completly
  - ba12ee947b Merge branch '2017.7' of https://github.com/saltstack/salt into 2017.7
  - dfb13d5051 Bugfix #47984 messed up cert serial
• **PR #48232**: (gtmanfred) do not expand kwargs for cloud.action @ 2018-06-22 15:49:21 UTC
  - bccb4dc46 Merge pull request #48232 from gtmanfred/cloud
  - d108112e1a do not expand kwargs for cloud.action

• **PR #48238**: (mirceaulinic) SDB cache module: AttributeError: 'Cache' object has no attribute 'set' @ 2018-06-22 15:37:22 UTC
  - 056f43f663 Merge pull request #48238 from mirceaulinic/fix-sdb-cache
  - 51e5bf6a1d SDB cache module: AttributeError: 'Cache' object has no attribute 'set'

• **ISSUE #48025**: (onmeac) Autoloading Utility Modules? (refs: #48037)

• **PR #48037**: (terminalmage) Add "sync_mods" argument to state.apply/state.sls @ 2018-06-21 19:57:03 UTC
  - 731ec0a11a Merge pull request #48037 from terminalmage/fix-custom-types-sync-docs
  - 052ae83c4b Update versionchanged
  - 8b1bd0eda2 Update test to reflect changed argument name
  - 5e75936198 Change 2018.3.2 to 2018.3.3
  - c53ad603fc Rename sync -> sync_mods per review suggestion
  - e4d67c5fd8 Update docs to include references to new "sync" argument
  - cb86e9fb8 Remove redundant mocking
  - bc3ad795e9 Add test for sync argument to state.sls
  - f81cdd1fdd Add sync option to state.apply/state.sls
  - 8289b07e24 Fix documentation on when custom types are synced

• **PR #48249**: (rallytime) Update release notes for 2017.7.7 @ 2018-06-21 18:30:39 UTC
  - 0bae927048 Merge pull request #48249 from rallytime/2017.7.7-release-notes-update
  - 36032c8ee7 Update release notes for 2017.7.7

• **PR #48242**: (asnell) Add sample list data via command line pillar @ 2018-06-21 18:27:41 UTC
  - 8e06471817 Merge pull request #48242 from asnell/asnell-patch-1
  - f66bf60073 Add sample list data via command line pillar

• **PR #48226**: (terminalmage) 2 fixes for when Salt is installed using -OO @ 2018-06-20 20:12:34 UTC
  - 1a72fde84 Merge pull request #48226 from terminalmage/fix-alias-docstring
  - fb237272f5 Don't display "None" in SaltInvocationError when Salt installed using -OO
  - 9c90f5d5c Fix docstring construction in alias_function when Salt installed using -OO

• **PR #48227**: (Ch3LL) Skip new sha256 files on repo.saltstack.com/windows @ 2018-06-20 20:12:09 UTC
  - c6a0207cae Merge pull request #48227 from Ch3LL/fix_win_tests
  - 236773e3e9 Skip new sha256 files on repo.saltstack.com/windows

• **ISSUE #48128**: (bowmanjd-lms) apk.py Python 3 compatibility (refs: #48131)

• **PR #48131**: (bowmanjd-lms) Fix py3-incompatible dict.keys()[x] call in apk.py @ 2018-06-19 18:19:02 UTC
  - 6929423528 Merge pull request #48131 from bowmanjd-lms/fix-apk-python3
  - f5d2835299 Merge branch '2017.7' into fix-apk-python3
- 02f9cba50 Fix py3-incompatible dict.keys()[x] call in apk.py

- **ISSUE #47901**: (frogunder) 2017.7.6 - Exiting command with CTRL-C gives Error/Traceback (refs: #48185)
- **PR #48185**: (DmitryKuzmenko) Don't call .exception() on future unless it's done. @ 2018-06-19 18:16:27 UTC
  - 868c17377f Merge pull request #48185 from DSRCorporation/bugs/47901_future_done_exception
  - 5f63316311 Merge branch '2017.7' into bugs/47901_future_done_exception
  - 9f2d2f94cb Don't call .exception() on future unless it's done.

- **PR #48192**: (twangboy) Use the --disable-pip-version-check option (2017.7) @ 2018-06-19 18:13:12 UTC
  - 80a3e37c2e Merge pull request #48192 from twangboy/fix_pip_version_2017.7
  - 59ae2cc5fc Use --disable-pip-version-check for build_env_.ps1

- **PR #48201**: (zer0def) Fixes to LXC bootstrap when alternate lxcpath is provided. @ 2018-06-19 12:56:40 UTC
  - 12e2b882a Merge pull request #48201 from zer0def/lxc-bootstrap-fixes
  - 6f6d3d40d4 Take lxcpath into account when bootstrapping new containers. Version comparison fixes.

- **PR #48190**: (terminalmage) Fix mount.vfstab unit test @ 2018-06-18 21:47:54 UTC
  - e079fce38d Merge pull request #48190 from terminalmage/fix-vfstab-test
  - 8d70d14362 Fix mount.vfstab unit test

- **PR #48115**: (KaiSforza) Add jenkinsfiles to define tests in 2017 @ 2018-06-18 21:27:40 UTC
  - c8b9ec986 Merge pull request #48115 from KaiSforza/pr-lint-2017
  - 494727ab39 Add docs, kitchen tests
  - 317023bb20 Move .jenkins to .ci for future
  - dedc313d3d Make it parallel so we don't fail right away
  - cd1342726 Add a .jenkins file to run pylint

- **PR #48174**: (terminalmage) Add docker.update_mine config option @ 2018-06-18 19:04:54 UTC
  - fc1752b721 Merge pull request #48174 from terminalmage/docker-update-mine
  - 9af09e0127 Mock config.get due to changes in _refresh_mine_cache
  - 5802ad465 Fix the version number in versionadded
  - d403ae58d7 Add unit test for docker.update_mine
  - 44c275698a Actually it's more than just add/remove that updates the mine
  - 0cb6996b07 Add release notes mention of docker.update_mine config option
  - de05097b20 Add docs for new config option
  - 04c55a9178 Add note in mine.get_docker docstring about new config item
  - 4e456255c0 Allow mine update to be disabled using new config option

- **ISSUE #47031**: (lejambon) Cannot set hwclock on UTC on CentOS 7 (refs: #47049, #48061)
- **PR #48061**: (garethgreenaway) [2017.7] Porting #47049 to 2017.7. @ 2018-06-15 17:15:50 UTC
  - **PR #47049**: (lejambon) Centos set utc hwclock (refs: #48061)
  - df2a156338 Merge pull request #48061 from garethgreenaway/port_47049_2017_7
  - 7c472fed51 Fixing failing test_set_hwclock_aix test.
- ccb0acc958 Porting #47049 to 2017.7.

- **PR #48143:** (Ch3LL) Add timeout argument to run_salt for ShellCase @ 2018-06-15 17:04:57 UTC
  - 5ec3cf2dd4 Merge pull request #48143 from Ch3LL/fix_long_job
  - 48b5d2e9d3 Add timeout argument to run_salt for ShellCase

- **PR #48135:** (rallytime) Update the 2017.7.7 and 2017.7.8 release notes @ 2018-06-14 21:22:06 UTC
  - **PR #48134:** (rallytime) Add release notes file for 2017.7.7 (refs: #48135)
  - e1e566d1f8 Merge pull request #48135 from rallytime/release-notes-2017.7
  - 7a97f157b3 Add missing v for tag reference
  - 2fb2b9ed37 Add "in progress" notation to 2017.7.7 release notes
  - 06a1151a63 Add release notes file for 2017.7.7
  - 885b2862ce Move 2017.7.7 release notes to 2017.7.8

- **PR #48105:** (rallytime) [2017.7] Merge forward from 2017.7.6 to 2017.7 @ 2018-06-14 17:00:09 UTC
  - ac9dabbfaa Merge pull request #48105 from rallytime/merge-2017.7
  - cdb45874de Merge branch '2017.7.6' into '2017.7'

- **PR #48101:** (rallytime) [2017.7] Update 2017.7.7 reference to 2017.7.8 @ 2018-06-14 13:14:09 UTC
  - 2da56a9d99 Merge pull request #48101 from rallytime/update-doc-refs-2017.7
  - 7ba6f5fb36 Update 2017.7.7 reference to 2017.7.8

- **PR #48091:** (terminalmage) Reverse monkeypatching after test_symlink_list finishes @ 2018-06-13 18:02:53 UTC
  - 5a0e3d467 Merge pull request #48091 from terminalmage/fix-file_roots-monkeypatching
  - 6fc711ad76 Reverse monkeypatching after test_symlink_list finishes

- **PR #48088:** (rallytime) Update release versions for the 2017.7 branch @ 2018-06-13 14:03:03 UTC
  - 053b019a8f Merge pull request #48088 from rallytime/update_version_doc_2017.7
  - 1bd8d1c936b Remove "in progress" info for 2017.7.6 release notes
  - 9a0f4d190a Update release versions for the 2017.7 branch

- **ISSUE #48038:** (austinpapp) jobs are not dedup'ing minion side (refs: #48075)

- **PR #48075:** (garethgreenaway) [2017.7] Ensure that the shared list of jids is passed @ 2018-06-13 13:25:35 UTC
  - d6d2c5ee18 Merge pull request #48075 from garethgreenaway/48038_jobs_are_not_deduping_minion_side
  - c537b3275b Ensure that the shared list of jids is passed when creating the Minion. Fixes an issue when minions are pointed at multiple syndics.

- **PR #48071:** (terminalmage) Fix inaccurate gitfs_saltenv example in GitFS Walkthrough @ 2018-06-12 20:34:13 UTC
  - aa33cc0b0c Merge pull request #48071 from terminalmage/gitfs-docs
  - 24545204b3 Fix inaccurate gitfs_saltenv example in GitFS Walkthrough

- **ISSUE #48039:** (twellspring) github.repo_present returns stacktrace, got multiple values for keyword argument profile (refs: #48040)

- **PR #48053:** (rallytime) Back-port #48040 to 2017.7 @ 2018-06-12 14:46:12 UTC

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### 30.2. Previous Releases

2405
- **PR #48040**: (twellspring) states/github.py fix for incorrect positional argument (refs: #48053)
  - fb4ceacb88 Merge pull request #48053 from rallytime/bp-48040
  - 265b22b194 states/github.py fix for incorrect positional argument

- **PR #48024**: (gtmanfred) add pytest coverage and xml junits @ 2018-06-12 14:03:26 UTC
  - f37dcac6d Merge pull request #48024 from gtmanfred/2017.7
  - 56b074ab27 allow specifying a different state to run on converge
  - cc9c4b4d5a add pytest coverage and xml junits

- **PR #48044**: (twangboy) Add fail code for WinHTTP send/receive error @ 2018-06-11 13:49:29 UTC
  - ffee3576ec Merge pull request #48044 from twangboy/wua_add_fail_code
  - d41d0c25eb Add fail code for WinHTTP send/receive error

- **PR #48009**: (dwoz) minionswarm runs on windows @ 2018-06-08 13:52:36 UTC
  - 871a910fcb Merge pull request #48009 from dwoz/winswarmfix
  - 5027c7b884 minionswarm runs on windows

- **PR #47968**: (gtmanfred) Clean up tox + pytest @ 2018-06-06 21:23:52 UTC
  - 0dcaead36d Merge pull request #47968 from gtmanfred/2017.7
  - a1b0d288bb pass LANG and HOME into tox commands
  - 8d15b93d00 remove tox virtualenvs from doc tests
  - e187e2036 simplify tox.ini
  - 81bd01f5af add tests.txt for running tests with tox requirements
  - 556a2067fc fix masterapi test to use testing directory for configs
  - 5a41f484ef add EXPENSIVE_TESTS
  - 055cd5a6ba set DESTRUCTIVE_TESTS environment variable for pytest

- **PR #47978**: (twangboy) Add try/finally, fix typo in 7zip def file @ 2018-06-06 19:06:04 UTC
  - 42dd6b83eb Merge pull request #47978 from twangboy/fix_test_pkg
  - 88b36b3a4b Add try/finally, fix typo in 7zip def file

- **PR #47959**: (twangboy) Fix failing test when service doesn’t exist @ 2018-06-06 19:05:43 UTC
  - a67b21ef3d Merge pull request #47959 from twangboy/fix_test_service
  - 0c4d7aa81e Remove unused import
  - d4b42540e3 Fix failing test when service doesn’t exist

- **ISSUE #30567**: (paulfanelli) salt-run orchestration via state.sls always successful; it is ignoring state return value (refs: #47843)

- **PR #47983**: (garethgreenaway) [2017.7] Backporting #47843 @ 2018-06-06 19:03:15 UTC
  - PR #47843: (garethgreenaway) [2018.3] orchestration results False when function is False (refs: #47983)
  - b81d482067 Merge pull request #47983 from garethgreenaway/backport_47843_2017_7
  - 7b7bf15d5 Adding missing test sls file.
  - 54e51bc627 Backporting #47843 to 2017.7, updating test for 2017.7.
• **PR #47533**: (twangboy) Fix issues with functions that use makedirs on Windows @ 2018-06-06 17:20:51 UTC
  
  - d56ddad22c Merge pull request #47533 from twangboy/fix_47178
  
  - 24717cbc21 Change version added to 2017.7.7
  
  - 0592f1bac2 Fix issues with functions that user makedirs on Windows

• **PR #47827**: (twangboy) Fix issue when archive is on mapped drive @ 2018-06-06 17:18:00 UTC
  
  - 5c56b8c755 Merge pull request #47827 from twangboy/fix_47791
  
  - fbbd91f09e Add more descriptive debug message
  
  - 365f81651b Fix deprecated exception handling
  
  - 8dd6710b93 Use local instead of network
  
  - 980d99d74b Fix issue when archive is on mapped drive

• **ISSUE #47888**: (mbunkus) postfix.set_main overwrites wrong keys (refs: #47966)

• **PR #47966**: (mbunkus) Fix postfix.set_main's assumption of prefix-free key names @ 2018-06-06 15:43:24 UTC
  
  - 998a1c13d5 Merge pull request #47966 from mbunkus/fix-postfix-prefix-free-key-names-assumption
  
  - 0ae402d1b5 Fix postfix.set_main's assumption of prefix-free key names

• **PR #47824**: (twangboy) Fix issues with setup.py in Windows @ 2018-06-05 17:39:53 UTC
  
  - df50ce7b1b Merge pull request #47824 from twangboy/fix_setup.py
  
  - 4538b3abb3 Remove 'len-as-condition' disablement
  
  - d4efcc3e8b Skip lint errors
  
  - 1b3977f8d4 Remove m2crypto download for Windows

• **PR #47922**: (damon-atkins) win_pkg: pkg.refresh_db verbose=True PY3 compatibility fix @ 2018-06-05 13:31:49 UTC
  
  - 391a31134 Merge pull request #47922 from damon-atkins/2017.7_win_pkg_keys_fix
  
  - 7129203b1b Merge branch '2017.7' into 2017.7_win_pkg_keys_fix

• **PR #47933**: (terminalmage) Clarify pillar.get docs @ 2018-06-04 14:07:58 UTC
  
  - 8008fca2f6 Merge pull request #47933 from terminalmage/add-pillar.get-docs
  
  - 4eb02b675 Clarify pillar.get docs

• **PR #47944**: (terminalmage) Replace use of deprecated argument name in git.detached docstring @ 2018-06-04 13:53:34 UTC
  
  - ab565bfaa3 Merge pull request #47944 from terminalmage/fix-git.detached-docs
  
  - 1d082b4389 Replace use of deprecated argument name in git.detached docstring
  
  - 6253793cb6 Merge branch '2017.7' into 2017.7_win_pkg_keys_fix

• **PR #47860**: (terminalmage) Clean up doc build warnings, add best practices for writing states @ 2018-06-01 14:42:55 UTC
  
  - a2b588299b Merge pull request #47860 from terminalmage/state-writing-docs
  
  - 8cb33d3dec Quiet the linter
  
  - af51e16f23 Use more elegant RST syntax
  
  - 91cd57d1e0 Update mocking to reflect changes in service module

30.2. Previous Releases

2407
- b9ace5a859 Fix crappy mocking
- bc9e3acef3 Lint fixes
- d3f7e4f04 Add 2017.7.6 release notes
- 9dddeeefab Improve documentation on syncing states
- f465fa3ca7 Add best practices docs for writing states
- 93ee5ee2b0 Fix all Sphinx warnings
- 64b9b4d0b8 Clarify that name would override the id declaration

- [PR #47877](https://github.com/saltstack/salt/pull/47877) (dwoz) Revert job chunk wait time change @ 2018-06-01 14:11:46 UTC
  - d2f3377b5b Merge pull request #47877 from dwoz/sleep_audit
  - ebc7cde9c8 Revert job chunk wait time change
  - 4ce0fe6546 win_pkg under py3 keys returns a view instead of a list, wrap keys in list()

- [PR #47917](https://github.com/saltstack/salt/pull/47917) (dwoz) Fix windows tests suite breakage @ 2018-06-01 11:42:15 UTC
  - PR #47500: (dwoz) Get the current username on windows (refs: #47917)
  - 735e92093e Merge pull request #47917 from dwoz/winsuite
  - 118601ebd6 Fix windows tests suite breakage

- [PR #47822](https://github.com/saltstack/salt/pull/47822) (Ch3LL) Add user state integration tests to windows @ 2018-05-30 21:13:07 UTC
  - 63efb76d51 Merge pull request #47822 from Ch3LL/win_user_test
  - 3a691b405f add user_home path for both windows and linux
  - 788abf771e Add user state integration tests to windows

- [PR #47876](https://github.com/saltstack/salt/pull/47876) (doesitblend) Add file read windows @ 2018-05-30 14:03:55 UTC
  - b9da4f1221 Merge pull request #47876 from doesitblend/add-file-read-windows
  - 3f7e7ec327 Add file.read function to Windows module

- [PR #47882](https://github.com/saltstack/salt/pull/47882) (frogunder) add whoami test @ 2018-05-30 13:47:13 UTC
  - cbe2ecf6ae8 Merge pull request #47882 from frogunder/45013
  - 38d114a2d2 add whoami test

- [PR #47853](https://github.com/saltstack/salt/pull/47853) (dwoz) Fix for py3 ec2 cloud tests @ 2018-05-28 23:08:09 UTC
  - 4b28e510f1 Merge pull request #47853 from dwoz/py3-cloud-test
  - c2f8ae7c5c Fix for py3 ec2 cloud tests

- [ISSUE #47833](https://github.com/saltstack/salt/issues/47833) (blefeuvr) reactor.add | list | delete -> python exception (refs: #47847)

- [PR #47847](https://github.com/saltstack/salt/pull/47847) (garethgreenaway) [2017.7] reactor runner documentation @ 2018-05-25 23:23:31 UTC
  - 215efa6b73 Merge pull request #47847 from garethgreenaway/47833_reactor_runner_documentation
  - 03676712de Adding some addition documentation to the reactor runner indicating that the reactor system must be active prior to using it.

- [PR #47846](https://github.com/saltstack/salt/pull/47846) (Ch3LL) Fix flaky refresh pillar integration test @ 2018-05-25 20:50:48 UTC
  - 0b9651b470 Merge pull request #47846 from Ch3LL/p_refresh_test
  - 019edad8e4 Fix flaky refresh pillar integration test
• **PR #47552**: (twangboy) Show GPO settings, raise error if trying to set gpo managed settings @ 2018-05-25 20:41:22 UTC
  - 799fcee979d Merge pull request #47552 from twangboy/fix_46981
  - cfcc9b7806 Merge branch '2017.7' into fix_46981
  - 81308a4aa44 Add release notes for 2017.7
  - 008a0ac6b Fix unit tests
  - 87097eeb6 Add comments about how get is returning data
  - f1f1bc5c1 Show GPO settings, raise error if trying to set gpo managed settings

• **ISSUE #47690**: (lomeroe) productname grain missing on Solaris (refs: #47691)

• **PR #47691**: (lomeroe) Update regexes for Solaris 'product' grain and copy to 'productname' grain @ 2018-05-25 20:38:18 UTC
  - ffc2ebc373 Merge pull request #47691 from lomeroe/solaris_product_grains
  - 6889bfc6b Merge branch '2017.7' into solaris_product_grains
  - 49053bc106 lint fix
  - 6f185c9179 another lint fix
  - dbffba6876 fix tons of errors in my tests
  - 8c9355d34c Lint fix
  - b29ec75da7 Update regexes in core grains for detecting the 'product' grain on Solaris Sparc systems. Additionally, copy the 'product' grain to 'productname' to be consistent with other OSes.

• **PR #47778**: (Ch3LL) Add test_pkg integration state tests to windows @ 2018-05-25 20:36:47 UTC
  - 96b7c0cc76 Merge pull request #47778 from Ch3LL/win_state_pkg
  - e1786de6b0 Merge branch '2017.7' into win_state_pkg
  - f8c467d3e6 Fix text editor error
  - 872e162137 Add test_pkg integration state tests to windows

• **PR #47823**: (Ch3LL) Add win_dns module integration tests for windows @ 2018-05-25 20:34:03 UTC
  - 6f934c2259 Merge pull request #47823 from Ch3LL/win_dns_test
  - 784811d6a Add win_dns module integration tests for windows

• **PR #47838**: (rallytime) Back-port #47810 to 2017.7 @ 2018-05-25 20:33:44 UTC
  - **PR #47810**: (rmcintosh) Fix Linode plan selection (refs: #47838)
  - e63e04602d Merge pull request #47838 from rallytime/bp-47810
  - bd2b2fa66 better debug message
  - 83565c55df Address PR feedback
  - 50bce3a2f3 make decode_linode_plan_label a private function
  - 2ba4fc4cea fix raising when a 'GB' format invalid plan is supplied
  - 3af505d5a2 slight cleanup
  - 319fbd3406 match quotation mark types properly
  - 95e0202223 more consistent use of parens in logged warning
- ...log a warning when the user supplied a label we could decode but was not in the proper format
- 121303d827 reduce complexity of get_plan_id by moving decoding of the user-supplied label to its own function
- cf534c7314 Fix Linode plan selection

**PR #47805**: (twangboy) Add sign.bat script for signing packages @ 2018-05-25 13:53:58 UTC
- 9ef6e60617 Merge pull request #47805 from twangboy/add_sign.bat
- 66d8b0331a Add sign.bat script for signing packages

**PR #47500**: (dwoz) Get the current username on windows (refs: #47917) @ 2018-05-24 19:14:07 UTC
- 9342095d3 Merge pull request #47500 from dwoz/winuser
- 0ca52266bf Merge branch '2017.7' into winuser
- e59f905eaf Use salt utils method for this_user
- a056a293f1 Centralize test username lookup
- 6a6ab69722 Get the current username on windows

**ISSUE #35960**: (basepi) Beacons cannot be reloaded/refreshed without minion restart (refs: #40892)

**PR #47802**: (rallytime) Back-port #40892 to 2017.7 @ 2018-05-24 16:34:35 UTC
- PR #40892: (jagguli) add minion function to reload beacon #35960 (refs: #47802)
- 552526f390 Merge pull request #47802 from rallytime/bp-40892
- bb357da084 add minion function to reload beacon #35960

**PR #47816**: (Ch3LL) Add windows to service disable ERROR check in tests @ 2018-05-24 15:31:36 UTC
- c9ccf53b9 Merge pull request #47816 from Ch3LL/disable_windows
- 2509d36888 Add windows to service disable ERROR check in tests

**PR #47773**: (frogunder) add win_servermanager.list_available test @ 2018-05-23 19:44:14 UTC
- 2cb6b6c63b Merge pull request #47773 from frogunder/45011
- 7c9b0bb3a8 add win_servermanager.list_available test

**PR #47807**: (dwoz) Try an even bigger timeout @ 2018-05-23 19:38:21 UTC
- e65dece202 Merge pull request #47807 from dwoz/winrmtests
- 1f1cc1357a Increase instance size for cloud tests
- be8dcd21f1 Try an even bigger timeout

**PR #47765**: (meaksh) Prevent zypper from parsing repo configuration from not .repo files @ 2018-05-23 14:45:04 UTC
- 46618d2ce7 Merge pull request #47765 from meaksh/2017.7-fix-zypper-error-reading-repo
- 4475ba1988 Prevent zypper from parsing repo configuration from not .repo files

**PR #47781**: (rallytime) Update cloud test profile and docs to use new Linode size lables @ 2018-05-23 13:09:13 UTC
- 0e87559e3 Merge pull request #47781 from rallytime/update-linode-sizes
- a90c1b760e Update cloud test profile and docs to use new Linode size lables
• PR #47748: (rallytime) [2017.7] Merge forward from 2017.7.6 to 2017.7 @ 2018-05-22 20:53:02 UTC
  – 3ddec56cb9b Merge pull request #47748 from rallytime/merge-2017.7
  – b75f5ae38e Merge branch '2017.7.6' into '2017.7'
  – 17596f3025 Merge branch '2017.7.6' into '2017.7'
  – e458f4a031 Merge branch '2017.7.6' into '2017.7'
• PR #47779: (dwoz) Increase ec2 cloud timeouts to 1000 @ 2018-05-22 20:35:45 UTC
  – 0ddc864f90 Merge pull request #47779 from dwoz/winrmtests
  – d5eafe9d53 Use common timeout variable
  – 7e948eb540 Increase ec2 cloud timeouts to 1000
• PR #47430: (baniobloom) Add catch for VPCAssociationNotFound @ 2018-05-22 14:54:01 UTC
  – 17c4c8443c Merge pull request #47430 from baniobloom/vpc_association_not_found
  – 0fd1007f91 added catch for VPCAssociationNotFound
• PR #47525: (baniobloom) Trying to add a duplicate sec group rule true @ 2018-05-22 14:51:09 UTC
  – 9c5dde1449 Merge pull request #47525 from baniobloom/duplicate_sec_group_rule
  – dcc35df489 if we are trying to add the same rule then we are already in the desired state, return true
• PR #47772: (gtmanfred) lock down dependencies for kitchen-salt @ 2018-05-22 14:21:49 UTC
  – 536ce2fa42 Merge pull request #47772 from gtmanfred/2017.7
  – 67756a50fd lock down dependencies for kitchen-salt
• ISSUE #47717: (server-monitoring) Invalid output of pkg.list_upgrades on Fedora 27 Server (refs: #47749)
• PR #47749: (terminalmage) Fix "dnf list upgrades" parsing @ 2018-05-22 12:51:29 UTC
  – 12b330f049 Merge pull request #47749 from terminalmage/issue47717
  – cd484bef69 Fix "dnf list upgrades" parsing
• PR #47755: (dwoz) Be explicit about winrm setting @ 2018-05-21 22:39:24 UTC
  – 5cd18b9e70 Merge pull request #47755 from dwoz/winrmtests
  – 57dd89e6c3 Default to ec2 classic compatible images
  – f89668920a Be explicit about winrm setting
• PR #47668: (Ch3LL) Add pkg.latest_version windows test @ 2018-05-21 20:26:45 UTC
  – f45a96ba1d Merge pull request #47668 from Ch3LL/win_pkg_test
  – a8981024de Add pkg.latest_version windows test
• PR #47750: (dwoz) Allow ssh_interface to default to public_ips @ 2018-05-21 17:14:11 UTC
  – 7b12444d6a Merge pull request #47750 from dwoz/cloudtest
  – 63b722ba21 Allow ssh_interface to default to public_ips
• PR #47737: (dwoz) Cloud test fixup @ 2018-05-21 14:19:49 UTC
  – 27fbb42210 Merge pull request #47737 from dwoz/win_timeout
  – e88833a07d Cloud test fixup
• PR #47729: (UtahDave) fix cli example to match function name @ 2018-05-19 11:31:21 UTC
• ISSUE #47182: (MartinEmrich) state.highstate error with require_in: sls: (refs: #47682)
• PR #47682: (terminalmage) Fix traceback when excludes are present in an included SLS file @ 2018-05-18 16:47:47 UTC
  - 00a13761c7 Merge pull request #47682 from terminalmage/issue47182
  - d0243e8f23 Suppress spurious lint failure
  - 3b449f11fc Add regression test for excludes issue
  - 28a7d2b81c Skip __exclude__ in find_sls_ids
• ISSUE #47696: (darkpixel) 2017.7.5 zpool.present does not check for properties=None before attempting to enumerate properties (refs: #47708)
• PR #47708: (darkpixel) Wrap properties loop with a check for None. Closes GH-47696 @ 2018-05-18 15:25:44 UTC
  - 518f7bcc62 Merge pull request #47708 from darkpixel/47696-do-not-enumerate-none
  - 54e9bf9ec9 Merge branch '2017.7' into 47696-do-not-enumerate-none
• PR #47681: (rallytime) [2017.7] Merge forward from 2017.7.6 to 2017.7 @ 2018-05-17 21:30:02 UTC
  - cad062eaa7 Merge pull request #47681 from rallytime/merge-2017.7
  - 6c06cb3ae3 Merge branch '2017.7.6' into '2017.7'
• PR #47683: (Ch3LL) Remove unnecessary setUp in states.test_user test for mac @ 2018-05-17 21:28:26 UTC
  - fd2d45d9c2 Merge pull request #47683 from Ch3LL/mac_user_test
  - 5a1b25b9c7 Remove unnecessary setUp in states.test_user test for mac
• PR #47692: (dwoz) Default windows to m1.small for ec2-classic @ 2018-05-17 14:44:10 UTC
  - f323799c42 Merge pull request #47692 from dwoz/win_instance_type
  - 20b6070d54 Default windows to m1.small for ec2-classic
• ISSUE #45125: (wes-novack) salt-cloud no longer picking up master setting from provider file (refs: #47665)
• PR #47665: (gtmanfred) use dictupdate to update the providers dictionary and merge lists @ 2018-05-16 15:59:17 UTC
  - 990ece5cd5 Merge pull request #47665 from gtmanfred/cloud
  - fd8a02deb use dictupdate to update the providers dictionary and merge lists
• PR #47151: (zer0def) Allow interaction with default section in ConfigParser serializer @ 2018-05-16 13:53:44 UTC
  - a2ed8cb7f Merge pull request #47151 from zer0def/configparser-defaultsect
  - a8f2ad977e Merge branch '2017.7' into configparser-defaultsect
  - cca2a806c9 Made interaction with [DEFAULT] section in ConfigParser as sane as upstream permits.
• ISSUE #40846: (ghost) file.managed fails for long URLs (refs: #45808)
• PR #45808: (terminalmage) Backport #45808 to 2017.7 @ 2018-05-16 13:52:06 UTC
  - PR #45808: (b1naryth1ef) [bugfix] Fix for oversized filenames in fileclient (refs: #47673)
  - e6fb8342e Merge pull request #47673 from terminalmage/bp-45808
- 454291ad62 Fix errors when attempting to cache files with long names or URLs

- **PR #47670**: (gtmanfred) add a pytest.ini and update a dependency for kitchen @ 2018-05-16 01:56:17 UTC
  - b0446aab07 Merge pull request #47670 from gtmanfred/2017.7
  - dfd5a8715f add a pytest.ini and update a dependency for kitchen

- **PR #47626**: (gtmanfred) Implement Pipfile and remove extra requirements.txt files @ 2018-05-16 00:03:12 UTC
  - 0d06da6944 Merge pull request #47626 from gtmanfred/2017.7
  - 418364a533 make dev_python27.txt have the same message as dev_python34.txt
  - d53b44d10f remove lock file
  - 493ed7f93d use the toml dict format
  - e0f7cc1447 add proxy tests decorator to pytest conftest
  - 0a621dd0ec add Pipfile for managing dependencies in salt
  - f78b81db94 simplify dev and base.txt to single files

- **PR #47578**: (Ch3LL) Ensure mac_service.disabled is correctly querying services @ 2018-05-15 18:26:37 UTC
  - a07a8906a0 Merge pull request #47578 from Ch3LL/mac_service_disabled
  - 6032a01f55 change disable check for upstart service on ubuntu14
  - 33b4cfbc5b Change service assertion check for systemd platforms
  - 14896f9743 change codeauthor and class name
  - 502c5bdff5 Ensure mac_service.disabled is correctly querying services

- **PR #47639**: (rallytime) [2017.7] Merge forward from 2017.7.6 to 2017.7 @ 2018-05-14 17:58:25 UTC
  - f63d801858 Merge pull request #47639 from rallytime/merge-2017.7
  - 1503f1020f Merge branch '2017.7.6' into '2017.7'

- **PR #47643**: (dwoz) Remove unwanted file @ 2018-05-14 17:53:57 UTC
  - db0ee3e8b Merge pull request #47643 from dwoz/runas_detect
  - 8c5e54b8b3 Fix typo
  - 69bc88f1c6 Remove unwanted file

- **PR #47601**: (dwoz) Skip tests when we can not use runas @ 2018-05-14 15:26:36 UTC
  - 6dd3ab9f06 Merge pull request #47601 from dwoz/runas_detect
  - 3235ac08cb use ignore-undefined-variable
  - 58911d510a Ignore pylint WindowsError
  - 17987d3c5a Better doc string
  - a48ac26573 Skip tests when we can not use runas

- **PR #47611**: (Ch3LL) Update debian install docs to reflect new latest debian releases @ 2018-05-11 16:32:53 UTC
  - f61ccae627 Merge pull request #47611 from Ch3LL/deb_doc
  - 6d2ddd050f One more grammar fixup
  - 2d5ff01261 Grammar fix
  - 138847c9c4 Update debian install docs to reflect new latest debian releases

30.2. Previous Releases 2413
• **PR #47598**: (rallytime) Back-port #47568 to 2017.7 @ 2018-05-10 22:06:20 UTC
  
  - **PR #47568**: (terminalmage) salt.serializers.yaml/yamlex: remove invalid multi_constructor (refs: #47598)
  
  - 9e2fe284e4 Merge pull request #47598 from rallytime/bp-47568-2017.7
  
  - 09458c65cf Add exception logging on serialize/deserialize exceptions
  
  - c62c855f9c salt.serializers.yaml/yamlex: remove invalid multi_constructor

• **PR #47548**: (Ch3LL) Catch Sysloghandler errors when log file does not exist @ 2018-05-10 20:23:25 UTC
  
  - 8a7913ccc3 Merge pull request #47548 from Ch3LL/syslog
  
  - 31f13a4197 sysloghandler: check for 3.5.4 python version
  
  - a020352a03 Catch Sysloghandler errors when log file does not exist

• **ISSUE #47491**: (doc987) mysql_query.run_file Doesn't Work when query_file = salt://... (refs: #47508)

• **PR #47508**: (gtmanfred) allow pulling the mysql_query.run_file to pull from the fileserver @ 2018-05-10 18:12:28 UTC
  
  - 82fb6ba366 Merge pull request #47508 from gtmanfred/2017.7
  
  - 1a87e745f4 allow pulling the mysql_query.run_file to pull from the fileserver

• **ISSUE #47203**: (aesposito91) NAPALM grains not updating (refs: #47513)

• **ISSUE #46546**: (ppalmieri) salt-minion installed on vEOS does not give vendor grain (refs: #47513)

• **PR #47562**: (rallytime) Back-port #47513 to 2017.7 @ 2018-05-10 15:19:04 UTC
  
  - **PR #47513**: (frankiexyz) Fix #46546 eos napalm's grains issue (refs: #47562)
  
  - be29b58a09 Merge pull request #47562 from rallytime/bp-47513
  
  - 357bc084b3 fix #46546

• **PR #47471**: (meaksh) Fix inconsistency with "jid" on minion scheduled jobs and the returners output @ 2018-05-09 18:20:00 UTC
  
  - d3121fcfa4 Merge pull request #47471 from meaksh/2017.7-fix-inconsistent-scheduled-jid-with-returners
  
  - f079939500 Do not override jid on returners, only sending back to master

• **PR #47313**: (Circuitsoft) Add Poky/Yocto support @ 2018-05-09 17:31:59 UTC
  
  - 662f6086db Merge pull request #47313 from Circuitsoft/2017.7
  
  - 237560b745 Merge branch '2017.7' into 2017.7

• **PR #47540**: (terminalmage) Fix corner case where runas user's HOME env value is incorrect @ 2018-05-08 20:31:40 UTC
  
  - 291d3d3bd8 Merge pull request #47540 from terminalmage/cmdmod-home-fix
  
  - e4b277f82e Fix corner case where runas user's HOME env value is incorrect

• **ISSUE #24148**: (abng88) Update gitfs docs to include tutorial on how to configure gitfs for salt-call (masterless) (refs: #47547)

• **PR #47547**: (terminalmage) Add masterless mode docs to gitfs tutorial @ 2018-05-08 20:24:29 UTC
  
  - 49af577b3e Merge pull request #47547 from terminalmage/gitfs-tutorial
  
  - 806fb298a Add masterless mode docs to gitfs tutorial
• PR #47538: (terminalmage) Fix/clarify some of the pip module documentation @ 2018-05-08 15:24:18 UTC
  - 476ba053d1 Merge pull request #47538 from terminalmage/pip-docs
  - 98e8fefa4 Fix/clarify some of the pip module documentation
• PR #47524: (dwoz) Gracefully handle blank lines in whitelist.txt @ 2018-05-08 15:04:23 UTC
  - 7cc8d9d30a Merge pull request #47524 from dwoz/whitelistlines
  - 2605f8712 Gracefully handle blank lines in whitelist.txt
• PR #47527: (dwoz) Test file name @ 2018-05-07 22:02:04 UTC
  - f1a5b13072 Merge pull request #47527 from dwoz/test_file_name
  - 4aea7ca571 Update doc string
  - b3289e5a1c Fix test file name
• PR #47408: (Ch3LL) Skip status.diskusage integration tests on macosx @ 2018-05-07 19:06:57 UTC
  - e9c1723175 Merge pull request #47408 from Ch3LL/skip_diskusage
  - 068da8ad7d Merge branch '2017.7' into skip_diskusage
  - 1a7ffbe40d return error if diskusage not available
  - 10bd63a976 Skip status.diskusage integration tests on macosx
• PR #47480: (baniobloom) added handling for the aws error ConflictingDomainExists @ 2018-05-07 19:05:28 UTC
  - 2f50ff7bc8 Merge pull request #47480 from baniobloom/ConflictingDomainExists
  - d22ed7dfaf added handling for the aws error ConflictingDomainExists
• PR #47444: (terminalmage) Skip trying to render a template for a nonexistant SLS file @ 2018-05-07 13:48:24 UTC
  - 7f53be6e92 Merge pull request #47444 from terminalmage/render_state-spurious-error
  - a1e9fe00fd Skip trying to render a template for a nonexistant SLS file
• PR #47478: (terminalmage) Rename pip state test modules to match naming convention @ 2018-05-07 13:13:13 UTC
  - 50b9c4d79d Merge pull request #47478 from terminalmage/rename-pip-state-test
  - 9f7a9ebebd Rename pip state test modules to match naming convention
• ISSUE #47443: (skylerberg) Input validation does not raise SaltInvocationError in win_dsc.py (refs: #47505)
• PR #47505: (dwoz) Raise proper invocation errors @ 2018-05-07 13:05:22 UTC
  - e78ac0f9b7 Merge pull request #47505 from dwoz/win_dsc_fixes
  - d1fcb4d1c Raise proper invocation errors
• PR #47499: (dwoz) Move kill process tree and re-use it @ 2018-05-06 20:54:22 UTC
  - 0d4d5047d8 Merge pull request #47499 from dwoz/win_run_timeout_again
  - c6697b9f16 Move kill process tree and re-use it
• PR #47493: (dwoz) Add support for windows timeout to run_salt @ 2018-05-06 05:34:31 UTC
  - 6a4d308b1 Merge pull request #47493 from dwoz/win_run_timeout
  - fec1233dc4 Add support for windows timeout to run_salt
- cb674fb1cb Enable opkg as pkgrepo handler on Poky
- 7a58fd157e Enable opkg on non-NILinuxRT systems
- 139360c55f Add Poky to OS Information Grains
- d74057224d Un-normalize os_family in pkgrepo state
- 95d4488f01 Merge branch '2017.7.6' into 47696-do-not-enumerate-none
- 041e4c6ddb Wrap properties loop with a check for None. Closes GH-47696

30.2.50 In Progress: Salt 2017.7.9 Release Notes

Version 2017.7.9 is an unreleased bugfix release for 2017.7.0. This release is still in progress and has not been released yet.

Salt Cloud Features

GCE Driver

The GCE salt cloud driver can now be used with GCE instance credentials by setting the configuration paramaters service_account_private_key and service_account_private_email to an empty string.

30.2.51 Salt 2016.11.0 Release Notes - Codename Carbon

New Features

Docker Introspection and Configuration

Major additions have been made to the Docker support in 2016.11.0. The new addition allows Salt to be executed within a Docker container without a minion running or installed in the container. This allows states to be run inside a container, but also all of Salt's remote execution commands to be run inside docker containers as well. This makes container introspection simple and powerful. See the tutorial on using this new feature here:

See Salt in Docker Containers.

Advanced Ceph Control

Our friends over at SUSE have delivered a powerful new tool to make the deployment of Ceph storage systems using Salt very easy. These new Ceph tools allow for a storage system to be easily defined using the new ceph.quorum state.
Thorium Additions and Improvements

The Thorium advanced reactor has undergone extensive testing and updates. These updates include many more Thorium states, a system for automating key management, the ability to use Thorium to easily replace old reactors and a great deal of stability and bug fixes.

State Rollback Using Snapper

Rollback has been one of the most prevalent requests for Salt. We have researched it extensively and concluded that the only way to accomplish truly reliable rollback would be to execute it at the filesystem layer. To accomplish this we have introduced Snapper integration into Salt States.

Snapper is a tool which allows for simple and reliable snapshots of the filesystem to be made. With the new `snapper_states` option set to `True` in the minion config a snapshot will be made before and after every Salt State run.

These snapshots can be viewed, managed and rolled back to via the `snapper` execution module.

Preserve File Perms in File States

This feature has been requested for years, the ability to set a flag and use the same file permissions for files deployed to a minion as the permissions set to the file on the master. Just set the `keep_mode` option on any file management state to `True`.

Ponies!

We all agreed that cowsay was just not good enough, install the `ponysay` command and the new `pony` outputter will work. Fun for the whole family!

Additional Features

- Minions can run in stand-alone mode to use beacons and engines without having to connect to a master. (Thanks @adelcast!)
- Added a `salt` runner to allow running salt modules via `salt-run`.

```
salt-run salt.cmd test.ping
  # call functions with arguments and keyword arguments
salt-run salt.cmd test.arg 1 2 3 a=1
```

- Added SSL support to Cassandra CQL returner. SSL can be enabled by setting `ssl_options` for the returner. Also added support for specifying `protocol_version` when establishing cluster connection.
- The `mode` parameter in the `file.managed` state, and the `file_mode` parameter in the `file.recurse` state, can both now be set to `keep` and the minion will keep the mode of the file from the Salt fileserver. This works only with files coming from sources prefixed with `salt://`, or files local to the minion (i.e. those which are absolute paths, or are prefixed with `file://`). For example:

```
/etc/myapp/myapp.conf:
  file.managed:
    - source: salt://conf/myapp/myapp.conf
    - mode: keep
```

(continues on next page)
The `junos` state module is now available. It has all the functions that are present in the `junos` execution module.

The `junos` state module is now available. It has all the functions that are present in the `junos` execution module.

The minion data cache is a pluggable data store now. It's configurable with `cache` option. Default is `localfs`.

User names in `client_acl` support glob matching now.

### New Top File Merging Strategy for States

A new strategy called `merge_all` has been added to provide a new way of merging top file matches when executing a `highstate`. See the `top_file_merging_strategy` documentation for further information.

In addition, the `same` merging strategy was not functioning as documented. This has now been corrected. While this is technically a bugfix, we decided to hold a change in top file merging until a feature release to minimize user impact.

### Improved Archive Extraction Support

The `archive.extracted` state has been overhauled. Notable changes include the following:

- When enforcing ownership (with the `user` and/or `group` arguments), the `if_missing` argument no longer has any connection to which path(s) have ownership enforced. Instead, the paths are determined using the either the newly-added `archive.list` function, or the newly-added `enforce_ownership_on` argument.

- `if_missing` also is no longer required to skip extraction, as Salt is now able to tell which paths would be present if the archive were extracted. It should, in most cases, only be necessary in cases where a semaphore file is used to conditionally skip extraction of the archive.

- Password-protected ZIP archives are now detected before extraction, and the state fails without attempting to extract the archive if no password was specified.

- By default, a single top-level directory is enforced, to guard against 'tar-bombs'. This enforcement can be disabled by setting `enforce_toplevel` to `False`.

- The `tar_options` and `zip_options` arguments have been deprecated in favor of a single `options` argument.

- The `archive_format` argument is now optional. The ending of the `source` argument is used to guess whether it is a tar, zip or rar file. If the `archive_format` cannot be guessed, then it will need to be specified, but in many cases it can now be omitted.

- Ownership enforcement is now performed irrespective of whether or not the archive needed to be extracted. This means that the state can be re-run after the archive has been fully extracted to repair changes to ownership.

A number of new arguments were also added. See the docs `docs for the archive.extracted state <salt.states.archive.extracted>` for more information.
Additionally, the following changes have been made to the archive execution module:

- A new function (archive.list) has been added. This function lists the files/directories in an archive file, and supports a verbose argument that gives a more detailed breakdown of which paths are files, which are directories, and which paths are at the top level of the archive.

- A new function (archive.is_encrypted) has been added. This function will return True if the archive is a password-protected ZIP file, False if not. If the archive is not a ZIP file, an error will be raised.

-archive.cmd unzip now supports passing a password, bringing it to feature parity with archive.unzip. Note that this is still not considered to be secure, and archive.unzip is recommended for dealing with password-protected ZIP archives.

- The default value for the extract_perms argument to archive.unzip has been changed to True.

**Improved Checksum Handling in file.managed, archive.extracted States**

When the source_hash argument for these states refers to a file containing checksums, Salt now looks for checksums matching the name of the source URI, as well as the file being managed. Prior releases only looked for checksums matching the filename being managed. Additionally, a new argument (source_hash_name) has been added, which allows the user to disambiguate ambiguous matches when more than one matching checksum is found in the source_hash file.

A more detailed explanation of this functionality can be found in the file.managed documentation, in the section for the new source_hash_name argument.

Note: This improved functionality is also available in the 2016.3 (Boron) release cycle, starting with the 2016.3.5 release.

**Config Changes**

The following default config values were changed:

- gitfs_ssl_verify: Changed from False to True
- git_pillar_ssl_verify: Changed from False to True
- winrepo_ssl_verify: Changed from False to True

**Grains Changes**

- All core grains containing VMWare have been changed to VMware, which is the official capitalization. Additionally, all references to VMWare in the documentation have been changed to VMware issue #30807. Environments using versions of Salt before and after Salt 2016.11.0 should employ case-insensitive grain matching on these grains.

```python
{% set on_vmware = grains['virtual'].lower() == 'vmware' %}
```

- On Windows the cpu_model grain has been changed to provide the actual cpu model name and not the cpu family.

Old behavior:
root@master:~# salt 'testwin200' grains.item cpu_model
testwin200:
    -----------
    cpu_model:
      Intel64 Family 6 Model 58 Stepping 9, GenuineIntel

New behavior:

root@master:~# salt 'testwin200' grains.item cpu_model
testwin200:
    -----------
    cpu_model:
      Intel(R) Core(TM) i7-3520M CPU @ 2.90GHz

Beacons Changes

- The `loadavg` beacon now outputs averages as integers instead of strings. (Via issue #31124.)

Runner Changes

- Runners can now call out to `utility modules` via `__utils__`.
- ref:`Utility modules <writing-utility-modules>` (placed in `salt://_utils/`) are now able to be synced to the master, making it easier to use them in custom runners. A `saltutil.sync_utils` function has been added to the `saltutil` runner to facilitate the syncing of utility modules to the master.

Pillar Changes

- Thanks to the new `saltutil.sync_utils` runner, it is now easier to get `ref:utility modules <writing-utility-modules>` synced to the correct location on the Master so that they are available in execution modules called from Pillar SLS files.

Junos Module Changes

- The following new functionalities were added to the junos module
  - `facts` - Displays the facts gathered during the connection.
  - `shutdown` - Shut down or reboot a device running Junos OS.
  - `install_config` - Modify the configuration of a Junos device.
  - `install_os` - Install Junos OS software package.
  - `zeroize` - Remove all configuration information on the Routing Engines and reset all key values on a device.
  - `file_copy` - Copy file from proxy to the Junos device.
Network Automation: NAPALM

Beginning with 2016.11.0, network automation is included by default in the core of Salt. It is based on the NAPALM library and provides facilities to manage the configuration and retrieve data from network devices running widely used operating systems such as JunOS, IOS-XR, eOS, IOS, NX-OS etc.

- see the complete list of supported devices.

The connection is established via the NAPALM proxy.

In the current release, the following modules were included:

- NAPALM grains - Select network devices based on their characteristics
- NET execution module - Networking basic features
- NTP execution module
- BGP execution module
- Routes execution module
- SNMP execution module
- Users execution module
- Probes execution module
- NTP peers management state
- SNMP configuration management state
- Users management state

Cisco NXOS Proxy Minion

Beginning with 2016.11.0, there is a proxy minion that can be used to configure nxos cisco devices over ssh.

- Proxy Minion
- Execution Module
- State Module

Cisco Network Services Orchestrator Proxy Minion

Beginning with 2016.11.0, there is a proxy minion to use the Cisco Network Services Orchestrator as a proxy minion.

- Proxy Minion
- Execution Module
- State Module
Junos Module Changes

- The following new functionalities were added to the junos module
  - facts - Displays the facts gathered during the connection.
  - shutdown - Shut down or reboot a device running Junos OS.
  - install_config - Modify the configuration of a Junos device.
  - install_os - Install Junos OS software package.
  - zeroize - Remove all configuration information on the Routing Engines and reset all key values on a device.
  - file_copy - Copy file from proxy to the Junos device.

Returner Changes

- Any returner which implements a save_load function is now required to accept a minions keyword argument.
  All returners which ship with Salt have been modified to do so.

Renderer Changes

Added the ability to restrict allowed renderers. Two new config parameters, renderer_whitelist and renderer_blacklist are introduced for this purpose.

eAuth Changes

- External auth modules’ auth method can return an ACL list for the given username instead of True. This list should be in the same format as described in the eAuth documentation. It will be used for the user instead of one set in master config.

  Example of the auth method return that allows a user to execute functions in the test and network modules on the minions that match the web* target and allow access to wheel and runner modules:

  ```
  [{"web*": ["test.*", "network.*"]}, "@wheel", "@runner"]
  ```

- External auth is supported by salt-run and salt-key now. Note that master must be started to use them with eAuth.

External Module Packaging

Modules may now be packaged via entry-points in setuptools. See external module packaging tutorial for more information.
Functionality Changes

- The `onfail` requisite now uses OR logic instead of AND logic. issue #22370
- The consul external pillar now strips leading and trailing whitespace. issue #31165
- The `win_system.py` state is now case sensitive for computer names. Previously computer names set with a state were converted to all caps. If you have a state setting computer names with lower case letters in the name that has been applied, the computer name will be changed again to apply the case sensitive name.
- The `mac_user.list_groups` function in the `mac_user` execution module now lists all groups for the specified user, including groups beginning with an underscore. In previous releases, groups beginning with an underscore were excluded from the list of groups.
- The `junos.call_rpc` function in the `junos` execution module can now be used to call any valid rpc. Earlier it used to call only "get_software_information".
- A new option for minions called `master_tries` has been added. This specifies the number of times a minion should attempt to contact a master to attempt a connection. This allows better handling of occasional master downtime in a multi-master topology.
- The default `hash_type` is now sha256 instead of md5. You will need to make sure both your master and minion share the same `hash_type`.
- Nodegroups consisting of a simple list of minion IDs can now also be declared as a yaml list. The below two examples are equivalent:

```
# Traditional way
nodegroups:
  - group1: L@host1,host2,host3

# New way (optional)
nodegroups:
  - group1:
    - host1
    - host2
    - host3
```

New Azure ARM Cloud Driver

A new cloud driver has been added for Azure ARM, aka, the Azure Resource Manager. The older Azure driver is still required to work with the older Azure API. This new driver works with the newer ARM API, which is managed via the newer Azure Portal website.

New Modules

Beacons

- `salt.beacons.avahi_announce`
- `salt.beacons.bonjour_announce`
- `salt.beacons.haproxy`
- `salt.beacons.status`
Clouds

- salt.cloud.clouds.azurearm

Engines

- salt.engines.hipchat
- salt.engines.http_logstash

Modules

- salt.modules.boto_cloudwatch_event
- salt_modules.celery
- salt_modules.ceph
- salt_modules.influx08
- salt_modules.inspectlib.entities
- salt_modules.inspectlib.fsdb
- salt_modules.inspectlib.kiwiproc
- salt_modules.inspector
- salt_modules.libcloud_dns
- salt_modules.openstack_mng
- salt_modules.servicenow
- salt_modules.testinframod
- salt_modules.win_lgpo
- salt_modules.win_pki
- salt_modules.win_psget
- salt_modules.win_snmp
- salt_modules.xbpspkg

Outputters

- salt.output.pony
Pillar

- salt.pillar.csvpillar
- salt.pillar.http_json
- salt.pillar.makostack

Returners

- salt.returners.zabbix_return

Runners

- salt.runners.auth
- salt.runners.event
- salt.runners.smartos_vmadm
- salt.runners.vistara

SDB

- salt.sdb.env

States

- salt.states.boto_cloudwatch_event
- salt.states.csf
- salt.states.ethtool
- salt.states.influxdb08_database
- salt.states.influxdb08_user
- salt.states.libcloud_dns
- salt.states.snapper
- salt.states.testinframod
- salt.states.win_lgpo
- salt.states.win_pki
- salt.states.win_snmp
Thorium

- salt.thorium.calc
- salt.thorium.key
- salt.thorium.runner
- salt.thorium.status
- salt.thorium.wheel

Deprecations

General Deprecations

- `env` to `saltenv`

  All occurrences of `env` and some occurrences of `__env__` marked for deprecation in Salt 2016.11.0 have been removed. The new way to use the salt environment setting is with a variable called `saltenv`:

  ```python
  def fcn(msg="", env="base", refresh=True, saltenv="base", **kwargs):
    ...
  ```

  has been changed to

  ```python
  def fcn(msg="", refresh=True, saltenv="base", **kwargs):
    ...
  ```

  - If `env` (or `__env__`) is supplied as a keyword argument to a function that also accepts arbitrary keyword arguments, then a new warning informs the user that `env` is no longer used if it is found. This new warning will be removed in Salt 2017.7.0.

    ```python
    def fcn(msg="", refresh=True, saltenv="base", **kwargs):
      ...
    # will result in a warning log message
    fcn(msg="add more salt", env="prod", refresh=False)
    ```

  - If `env` (or `__env__`) is supplied as a keyword argument to a function that does not accept arbitrary keyword arguments, then python will issue an error.

    ```python
    def fcn(msg="", refresh=True, saltenv="base"):
      ...
    # will result in a python TypeError
    fcn(msg="add more salt", env="prod", refresh=False)
    ```

  - If `env` (or `__env__`) is supplied as a positional argument to a function, then undefined behavior will occur, as the removal of `env` and `__env__` from the function's argument list changes the function's signature.

    ```python
    def fcn(msg="", refresh=True, saltenv="base"):
      ...
    ```
# will result in refresh evaluating to True and saltenv likely not being a string at all
fcn("add more salt", "prod", False)

- Deprecations in minion.py:
  - The salt.minion.parse_args_and_kwArgs function has been removed. Please use the salt.minion.load_args_and_kwArgs function instead.

Cloud Deprecations

- The vsphere cloud driver has been removed. Please use the vmware cloud driver instead.
- The private_ip option in the linode cloud driver is deprecated and has been removed. Use the assign_private_ip option instead.
- The create_dns_record and delete_dns_record functions are deprecated and have been removed from the digital_ocean driver. Use the post_dns_record function instead.

Execution Module Deprecations

- The blockdev execution module had four functions removed:
  - dump
  - tune
  - resize2fs
  - wipe
  The disk module should be used instead with the same function names.
- The boto_vpc execution module had two functions removed, boto_vpc.associate_new_dhcp_options_to_vpc and boto_vpc.associate_new_network_acl_to_subnet in favor of more concise function names, boto_vpc.create_dhcp_options and boto_vpc.create_network_acl, respectively.
- The data execution module had getval and getvals functions removed in favor of one function, get, which combines the functionality of the removed functions.
- File module deprecations:
  - The contains_regex multiline function was removed. Use file.search instead.
  - Additional command line options for file.grep should be passed one at a time. Please do not pass more than one in a single argument.
- The lxc execution module has the following changes:
  - The run_cmd function was removed. Use lxc.run instead.
  - The nic argument was removed from the lxc.init function. Use network_profile instead.
  - The clone argument was removed from the lxc.init function. Use clone_from instead.
  - passwords passed to the lxc.init function will be assumed to be hashed, unless password_encrypted=False.
  - The restart argument for lxc.start was removed. Use lxc.restart instead.
The old style of defining lxc containers has been removed. Please use keys under which LXC profiles should be configured such as `lxc.container_profile.profile_name`.

- The `env` and `activate` keyword arguments have been removed from the `install` function in the `pip` execution module. The use of `bin_env` replaces both of these options.

- **reg** execution module

  Functions in the `reg` execution module had misleading and confusing names for dealing with the Windows registry. They failed to clearly differentiate between hives, keys, and name/value pairs. Keys were treated like value names. There was no way to delete a key.

  New functions were added in 2015.5 to properly work with the registry. They also made it possible to edit key default values as well as delete an entire key tree recursively. With the new functions in place, the following functions have been deprecated:

  - `read_key`
  - `set_key`
  - `create_key`
  - `delete_key`

  Use the following functions instead:

  - for `read_key` use `read_value`
  - for `set_key` use `set_value`
  - for `create_key` use `set_value` with no `vname` and no `vdata`
  - for `delete_key` use `delete_key_recursive`. To delete a value, use `delete_value`.

- The `hash_hostname` option was removed from the `salt.modules.ssh` execution module. The `hash_known_hosts` option should be used instead.

- The `human_readable` option was removed from the `uptime` function in the `status` execution module. The function was also updated in 2015.8.9 to return a more complete offering of uptime information, formatted as an easy-to-read dictionary. This updated function replaces the need for the `human_readable` option.

- The `persist` kwarg was removed from the `win_useradd` execution module. This option is no longer supported for Windows. `persist` is only supported as part of user management in UNIX/Linux.

- The `zpool_list` function in the `zpool` execution module was removed. Use `list` instead.

**Outputter Module Deprecations**

- The `compact` outputter has been removed. Set `state_verbose` to `False` instead.

**Runner Module Deprecations**

- The `grains.cache` runner no longer accepts `outputter` or `minion` as keyword arguments. Users will need to specify an outputter using the `--out` option. `tgt` is replacing the `minion` kwarg.

- The `fileserver` runner no longer accepts the `outputter` keyword argument. Users will need to specify an outputter using the `--out` option.

- The `jobs` runner no longer accepts the `outputter` keyword argument. Users will need to specify an outputter using the `--out` option.

- `virt` runner module:
The hyper kwarg was removed from the init, list, and query functions. Use the host option instead.

The next_hyper function was removed. Use the next_host function instead.

The hyper_info function was removed. Use the host_info function instead.

**State Module Deprecations**

- The env and activate keyword arguments were removed from the installed function in the pip state module. The use of bin_env replaces both of these options.

- reg state module

The reg state module was modified to work with the new functions in the execution module. Some logic was left in the reg.present and the reg.absent functions to handle existing state files that used the final key in the name as the value name. That logic has been removed so you now must specify value name (vname) and, if needed, value data (vdata).

For example, a state file that adds the version value/data pair to the Software\Salt key in the HKEY_LOCAL_MACHINE hive used to look like this:

```
HKEY_LOCAL_MACHINE\Software\Salt\version:
  reg.present:
    - value: 2016.3.1
```

Now it should look like this:

```
HKEY_LOCAL_MACHINE\Software\Salt
  reg.present:
    - vname: version
    - vdata: 2016.3.1
```

A state file for removing the same value added above would have looked like this:

```
HKEY_LOCAL_MACHINE\Software\Salt\version:
  reg.absent:
```

Now it should look like this:

```
HKEY_LOCAL_MACHINE\Software\Salt
  reg.absent:
    - vname: version
```

This new structure is important as it allows salt to deal with key default values which was not possible before. If vname is not passed, salt will work with the default value for that hivekey.

Additionally, since you could only delete a value from a the state module, a new function (key_absent) has been added to allow you to delete a registry key and all subkeys and name/value pairs recursively. It uses the new delete_key_recursive function.

For additional information see the documentation for the reg execution and state modules.

- lxc state module: The following functions were removed from the \lxc state module:
  - created: replaced by the present state.
  - started: replaced by the running state.
- cloned: replaced by the present state. Use the clone_from argument to set the name of the clone source.

  - The hash_hostname option was removed from the salt.states.ssh_known_hosts state. The hash_known_hosts option should be used instead.
  - The always kwarg used in the built function of the pkgbuild state module was removed. Use force instead.

**Utils Module Deprecations**

  - The use of jid_dir and jid_load were removed from the salt.utils.jid.jid_dir functionality for job_cache management was moved to the local_cache returner. jid_load data is now retrieved from the master_job_cache.
  - ip_in_subnet function in salt.utils.network.py has been removed. Use the in_subnet function instead.
  - The iam utils module had two functions removed: salt.utils.iam.get_iam_region and salt.utils.iam.get_iam_metadata in favor of the aws utils functions salt.utils.aws.get_region_from_metadata and salt.utils.aws.creds, respectively.

### 30.2.52 Salt 2016.11.1 Release Notes

Version 2016.11.1 is a bugfix release for 2016.11.0.

**Statistics**

- Total Merges: 89
- Total Issue References: 29
- Total PR References: 83
- Contributors: 30 (Ch3LL, Da-Juan, DmitryKuzmenko, MTecknology, adelcast, attiasr, bbinet, cachedout, cro, dmurphy18, gtmanford, isbm, jeanpralo, kraney, kstreee, lorengordon, mateiw, mirceaulinic, morsik, mschneider82, rallytime, rbjorklin, scott-w, sjorge, skizunov, techhat, terminalmage, thatch45, ticosax, whiteinge)

#### Changelog for v2016.10.0..v2016.11.1

* Generated at: 2018-05-27 14:25:03 UTC

- PR #38186: (Ch3LL) add 2016.11.1 changelog to release notes
- PR #38182: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2016-12-09 21:25:47 UTC
  - 23c039347e Merge pull request #38182 from rallytime/merge-2016.11
  - 627242ab5d Merge branch '2016.3' into '2016.11'
    - 65b2ad7b14 Merge pull request #38163 from Ch3LL/enabled_ec2_cloud
      - be74c45463 enabled ec2 cloud tests
    - b63f74e034 Merge pull request #38177 from vutny/fix-cp-get-file-str
      - a449880672 Correct cp.get_file_str docstring and add integration tests
    - 7596313be0 Merge pull request #38153 from vutny/master-includes-error-tolerance
- cd0154ee93 Master config includes may contain errors and be safely skipped

- **ISSUE #38094**: (bfilipek) TypeError: object of type 'float' has no len() in grains.filter_by (refs: #38158)

- **PR #38158**: (cachedout) Fix type problem in grains.filter_by @ 2016-12-09 21:24:40 UTC
  - 8355adc535 Merge pull request #38158 from cachedout/issue_38094
  - e8196e23c2 Lint, remove set literal
  - 94eb3c18 Fix type problem in grains.filter_by

- **ISSUE #38090**: (jf) pkg.installed does not seem to refresh the repo database, no matter what (refs: #38113, #38156)

- **PR #38156**: (terminalmage) Remove rtag when windows minion refreshes early in state @ 2016-12-09 21:15:01 UTC
  - 31a157d902 Merge pull request #38156 from terminalmage/fix-windows-refresh
  - 258bd4c2aa Remove rtag when windows minion refreshes early in state

- **ISSUE #37981**: (tazaki) Salt-cloud ec2 vpc securitygroupid always returning default (refs: #38183)

- **PR #38183**: (cro) Fix bad set operations when setting up securitygroups in AWS. @ 2016-12-09 21:12:10 UTC
  - c638952684 Merge pull request #38183 from cro/fixed
  - 0527d625e Fix bad set operations when setting up securitygroups in AWS. Fixes #37891.
  - **PR #38181**: (rallytime) Reset socket default timeout to None (fixes daemons_tests failures)

- **PR #38148**: (whiteinge) Remove ssh_async from NetapiClient clients; it is not implemented @ 2016-12-09 18:49:42 UTC
  - 7ccbedd2cc Merge pull request #38148 from whiteinge/no-ssh-async-client
  - cb58cd4795 Remove ssh_async from NetapiClient clients; it is not implemented

- **PR #38160**: (terminalmage) Update information about xz-utils in archive state/module docs @ 2016-12-09 18:34:03 UTC
  - 8d4e194400 Merge pull request #38160 from terminalmage/update-archive-docs
  - 8e4ad3cfcf Update information about xz-utils in archive state/module docs

- **ISSUE #38024**: (Ch3LL) 2016.11.0 release notes missing azure arm reference (refs: #38164)

- **PR #38164**: (techhat) Add Azure ARM docs for 2016.11.0 @ 2016-12-09 18:00:22 UTC
  - 05136f0d8c Merge pull request #38164 from techhat/azuredocs
  - 71b787e250 Add Azure ARM docs for 2016.11.0

- **PR #38173**: (rallytime) Bump some win* module deprecations from Nitrogen to Oxygen @ 2016-12-09 16:57:29 UTC
  - e3c858cc28 Merge pull request #38173 from rallytime/update-win-deprecation-versions
  - 09a50b25e7 Bump some win* module deprecations from Nitrogen to Oxygen

- **PR #38036**: (terminalmage) archive.extracted: fix problems with overwrite arg @ 2016-12-08 19:08:41 UTC
  - PR #37889: (isbm) Allow overwrite archives extraction (refs: #38036)
  - 827bf59999 Merge pull request #38036 from terminalmage/archive-extracted-overwrite
  - a1c70c7b95 archive.extracted: fix problems with overwrite arg

- **PR #38133**: (terminalmage) Fix edge case in creation of trans tar for salt-thin @ 2016-12-08 17:47:26 UTC
- 50773a5f96 Merge pull request #38133 from terminalmage/zd1067
- 71e0bd023f Fix edge case in creation of trans tar for salt-thin

**PR #38138:** (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2016-12-07 20:15:56 UTC
- 6026cb23b2 Merge pull request #38138 from rallytime/merge-2016.11
- 28b56ea3b4 Merge branch '2016.3' into '2016.11'
- 86091db647 Skip daemon unit tests when running on Python 2.6 (#38134)

**PR #38130:** (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2016-12-07 20:11:19 UTC
- 90478ef25e Merge pull request #38130 from rallytime/merge-2016.11
- 4d7d9abb41 Merge branch '2016.3' into '2016.11'
  - d3d98fd4eb Merge pull request #38102 from rallytime/fix-38091
    - 4f79d5a0d1 Add False + msg tuple return if requests is missing for zenoss module
  - 8c8cbc2734 Merge pull request #38104 from rallytime/bp-36794
    - c906c8a0d5 Pylint fixes
    - da3ebf83e6 FreeBSD sysctl module now handels config_file parameter in show method

**ISSUE #38042:** (MTecknology) [2016.11.0] Invalid interfaces file produced by debian_ip module (refs: #38043)

**PR #38043:** (MTecknology) Debian networking fix @ 2016-12-07 17:32:18 UTC
- fd06bab673 Merge pull request #38043 from MTecknology/2016.11
- 6d5e132e44 Removing trailing whitespace from previous commit
- f882674acf Adding some options that are valid for inet6 blocks.
- 81c688d4c Better check for dual stack.
- 525c746274 May Cthulhu take mercy on my soul for this commit.
- 300ca6047e I guess this makes the previous commit a bit redundant, but I'm not sure if I want to remove it.
- 6e7fc39c68 This now seems absurdly obvious, but I'm not ruling out that I'll break everything.
- 82d2b99e0c Rolling back unit test.
- b3edbcfd05 Adding larger and more complete debian_ip unit test.
- 3afd7b6cf4 Adding the valid/documentated 'slaves' option.
- b6b1adc091 Typo: missing closing parenthesis
- 756e41caf2 Fixing a typo; line should not be commented
- 32a1374748 Corrects expected return value
- 88f9df22c Mostly whitespace & comment changes
- 41fb8d805 Removing redundat line
- 3a8168667b Ensure iface_dict not being populated will not produce a stacktrace
- 4de2cb2805 Corrects regression in debian_ip/debian_eth.jinja
• **PR #38107**: (cachedout) Status beacon should raise proper exception @ 2016-12-07 17:21:49 UTC
  - **PR #38088**: (dmurphy18) Updated to match formulas and allow for missing functions (refs: #38107)
  - 4b9a7f2295 Merge pull request #38107 from cachedout/supercede_38088
  - 73d724845d Change to log.debug per Tom
  - da135b1b59 Fix docs
  - 792b422dc2 Pylint fix
  - 88e03bb6ad Fix typo
  - a8ce153252 Status beacon should raise proper exception

• **PR #38101**: (lorengordon) Clarifies file.replace behavior on symlinks @ 2016-12-07 13:27:11 UTC
  - da8f5ac06c Merge pull request #38101 from lorengordon/file-replace-note
  - 345990f2b0 Clarifies file.replace behavior on symlinks

• **ISSUE #38090**: (jf) pkg.installed does not seem to refresh the repo database, no matter what (refs: #38113, #38156)

• **PR #38113**: (terminalmage) Revert changes to refresh tag for pkg states @ 2016-12-07 13:11:14 UTC
  - d4f761f349 Merge pull request #38113 from terminalmage/issue38090
  - 9f347d0112 Revert changes to refresh tag for pkg states

• **ISSUE #37976**: (t0nyhays) Error when status beacon fires (2016.11.0) (refs: #38120)

• **PR #38120**: (Da-Juan) Fix status beacon config default values @ 2016-12-07 13:08:33 UTC
  - d4c34e0a58 Merge pull request #38120 from Da-Juan/2016.11
  - 7e4a35e8ad Fix status beacon config default values

• **PR #38114**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2016-12-07 12:45:04 UTC
  - 6868089a87 Merge pull request #38114 from rallytime/merge-2016.11
  - fe6dec23a Merge branch '2016.3' into '2016.11'
    - fbc87769b9 Merge pull request #38083 from twangboy/fix_refresh_db
      - 978af6d83c Remove only .sls files from the cached winrepo-ng
    - 9d4c6f6b Merge pull request #38059 from rallytime/daemons-test-fix
      - eb3722718 Add missing "not" statement: The last syndic test should assertFalse()
      - 4e108e018 Call exec_test for the Syndic daemon in tests.unit.daemons_test.py
    - 9c4d29b83f Merge pull request #38039 from rallytime/fix-37939
      - 1d47ac2e Update unit tests to account for additional file.search call
      - 8a685b12b0 Check to see if a line is already commented before moving on
      - f2c045520d Write an integration test demonstrating the issue
    - a34a763984 Merge pull request #38045 from terminalmage/issue38037
      - 652b89503d9 Simplify logic for matching desired pkg arch with actual pkg arch
      - 3babda94 yumpkg.py: don't include non-upgrade versions found by "yum list available"

• **PR #38109**: (gtmanfred) mode needs to be an integer @ 2016-12-07 11:58:24 UTC
• PR #38103: (rallytime) Back-port #37283 to 2016.11 @ 2016-12-06 23:12:59 UTC
  
  • PR #37283: (jeanpralo) Handle docker-compose up to version 1.9.0 (refs: #38103)
  
  • PR #37215: (mschneider82) removed version check (refs: #37283)
  
  • fd77dcbdf0 Merge pull request #38103 from rallytime/bp-37283
    
  • 7d444f69b handle up to version 1.9.0

• PR #38057: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 (refs: #38059) @ 2016-12-06 23:11:41 UTC

  • 5d9d6b9280 Merge pull request #38057 from rallytime/merge-2016.11
  
  • 342884018b Fix SaltKeyOptionParserTestCase test failures
  
  • 186e2d0d03 Don't allow libcloud mock module injection in unit/states/libcloud_dns_test.py either
  
  • d513a60189 Do not allow libcloud to be injected as a mock value in the libcloud_dns_test
  
  • 74a417e527 Update the mocked cloud configs to also include master configs
  
  • f2c8cb13d0 Better merge conflict resolution from the initial merge
  
  • 8fd53a4808 Merge branch '2016.3' into '2016.11'

  • 6724fe871 Modify daemons test to use multiprocessing (#38034)
  
  • 6942df59c Merge pull request #37995 from rallytime/merge-2016.3
  
  • b44e19721c Merge branch '2015.8' into '2016.3'
  
  • 7a7e36728f Merge pull request #37978 from terminalmage/ext_pillar_first-docs
  
  • 61ed9a8657 Add clarifying language to ext_pillar_first docs
  
  • cd66c179c1 fix broken yaml code block (#38002)
  
  • 3dd45abed0 Merge pull request #37912 from attiasr/fixed_aws_encoding
  
  • ba4ec4e7f1 use Requests result encoding to encode the text
  
  • abe4eb3b98 fix encoding problem aws responses
  
  • 69a74a4d2d Merge pull request #37950 from gutmanfred/2016.11
  
  • 7d9bc9abce syndic_master: correct default value, documentation and example config
  
  • 92a7c7ed1b Set default Salt Master address for a Syndic (like for a Minion)
  
  • 71f269bc7f9 Add clarification on expr_form usage and future deprecation (#37964)
  
  • 33021c8d8b Handle empty tokens safely (#37961)
  
  • ea46639ce7 Merge pull request #37272 from gutmanfred/fix-getting-default-logging-opts
  
  • e5ce52388a Fix description in the Salt Syndic usage info
  
  • 518a3dd7ee Add unit tests for Salt parsers processing logging options
  
  • 83d6a42454 Add ssh_log_file option to master config and documentation
  
  • c8a0915460 Fix configuration example and documentation for syndic_log_file option


- e64dd3ed6b Correct default attributes for various parser classes
- 82a2e216b3 Fix default usage string for Salt command line programs
- 45dffa292f Fix reading and updating logfile and pidfile config options for Salt API
- f47253e21b Fix reading and applying Salt Cloud default configuration
- fad5bec936 Work with a copy of default opts dictionaries
- b7c24811e5 Fix `log_level_logfile` config value type
- 1bd76a1d96 Fix setting temporary log level if CLI option omitted
- 121848cc77 Fix obtaining `log_granular_levels` config setting
- 44cf07f3ec2 Make CLI options take precedence for setting up logfile_logger
- 61afaf1792 Fix setting option attributes when processing `log_level` and `log_file`
- 3c60e2388e Fix processing of `log_level_logfile` config setting
- 55a0af5b6b Use attribute functions for getting/setting options and config values
- c252d091e Fix getting Salt API default logfile option
- f2422373c1 Remove processing of unused and undocumented `cli_*_log_*` config options
- 2065e8311c Get default logging level and file from default opts dict

* f2f957da6c Merge pull request #37925 from kontrolld/add-ipv6-centos-network
  - ac2b477412 Adding IPv6 functionality for CentOS /etc/sysconfig/network
* c07ad1279 Merge pull request #37899 from DSRCorporation/bugs/37059_schedule_task_hang
  - 9497748546 Clear functions context in schedule tasks for ZeroMQ.
* a5519db40 Merge pull request #37928 from techhat/issue37737
  - a096a0e89b Don't modify self.opts directly
* 9d17f1ce90 Merge pull request #37929 from gtmanfred/2016.3
  - c7d273503 add list_nodes_min to nova driver
* 3bb743b59f Merge pull request #37926 from kontrolld/fix-ipv6-centos-network
  - 3ed42e5b44 updated
  - 3b3b4f239 Fixes no IPv6 functionality in /etc/sysconfig/network
* b7f0f3a241 Merge pull request #37921 from rallytime/merge-2016.3
  - 523a67c422 Merge branch '2015.8' into '2016.3'
  - 4d96cf5ec Update earlier release channels' docs with Carbon release notes (#37914)
  - d31491a7fe [2015.8] Update version numbers in doc config for 2016.11.0 release (#37918)
* 6cd6429ac0 Merge pull request #37924 from cachedout/fixed_gem_states
  - 894ca3427 Update test for new gem ver

- PR #38112: (rallytime) Account for case where vim install already exists and is at an older version

- ISSUE #19502: (kt97679) salt-ssh fails to run state.highstate with custom master_tops (refs: #38021)
- PR #38021: (mateiw) Add master_tops support in salt-ssh @ 2016-12-06 14:26:22 UTC
  - f8c67a9598 Merge pull request #38021 from mateiw/salt-ssh_master_tops

30.2. Previous Releases 2435
- 65a0f102fd Add/remove newlines
  - 7037fa116d Add master_tops support in salt-ssh
  - PR #38084: (rallytime) Start release notes file for 2016.11.1 release

- **PR #37878:** (kstreee) Makes threads avoid blocking waiting while communicating using Zeromq. @ 2016-12-05 19:50:46 UTC
  - 78295516e7 Merge pull request #37878 from kstreee/2016.11
  - 9103878c4f Fixes blocking waiting through implementing a socket pool class.

- **PR #37987:** (rbjorklin) consul_pillar support for limiting pillar exposure via minion targeting @ 2016-12-05 19:48:20 UTC
  - PR #37985: (rbjorklin) consul_pillar support for limiting pillar exposure via minion targeting (refs: #37987)
  - 0809ccd429 Merge pull request #37987 from rbjorklin/consul-pillar-target
  - 5d0454a7ca Ignore W1401 (anomalous-backslash-in-string)
  - 2e929a5ec Linting fixes
  - 171cab1726 Fixed possible incorrect behavior if target wasn’t on start/end of str
  - 7440582ce8 consul_pillar support for limiting pillar exposure via minion targeting

- **ISSUE #38062:** (UtahDave) archive execution module not loading on Windows in 2016.11.0 (refs: #38067)

- **PR #38067:** (terminalmage) Remove virtual funcs for archive state/module @ 2016-12-05 16:37:23 UTC
  - 83dcfe81ea Merge pull request #38067 from terminalmage/archive
  - 2e0f6a084 Remove virtual funcs for archive state/module

- **ISSUE #38001:** (tomlaredo) Regression on postgres_group.present (postgres_group' __virtual__ returned False) (refs: #38023)

- **ISSUE #37986:** (marek-obuchowicz) Module postgres - wrong docs, doesn't work with debian 8.5 (refs: #38023)

- **ISSUE #37935:** (ipmb) Postgres module regression on 2016.11 (refs: #37946, #37993, #38023, #38058)

- **PR #38058:** (rallytime) Remove initdb dependency in postgres module @ 2016-12-04 04:19:02 UTC
  - PR #38023: (gtmanfred) Expand error message for postgres states (refs: #38058)
  - PR #37993: (ticosax) Remove initdb dependency to consume postgres module. (refs: #38058)
  - c9933670f9 Merge pull request #38058 from rallytime/remove-init-db-dep
  - c1ceca3d3 Remove initdb dependency in postgres module

- **ISSUE #37969:** (lordcirth) Archive.extracted fails if -user: root is specified (refs: #38004)

- **PR #38004:** (terminalmage) Fix regression in user/group mgmt for archive.extracted @ 2016-12-02 18:28:49 UTC
  - 1ac53e5196 Merge pull request #38004 from terminalmage/archive
  - 23bb90a7ce Add integration test for archive.extracted with user/group set to root
  - e5ee721696 Don't use simple boolean check on uid/gid

- **ISSUE #37941:** (L4rS6) Outdated documentation for 2016.11.x (refs: #38051)

- **PR #38051:** (Ch3LL) add docs for hash_type change to sha256 @ 2016-12-02 18:11:36 UTC
  - e90cbbef08 Merge pull request #38051 from Ch3LL/fix_hash_docs
- e95f88f8e3 add docs for hash_type change to sha256

- **ISSUE #38000**: (morganwillcock) 2016.11.0: saltutil.runner returns a different dict structure and breaks template rendering (refs: #38028)

- **PR #38028**: (terminalmage) Pass full_return to saltutil.runner @ 2016-12-02 09:49:31 UTC
  - 1b52289508 Merge pull request #38028 from terminalmage/issue38000
  - 9bf13d55b4 Pass full_return to saltutil.runner

- **ISSUE #37980**: (tveeastman) Having 'git' in fileserver_backends and no gitfs_remotes defined causes a crash (refs: #38044)

- **PR #38044**: (terminalmage) Remove debugging code @ 2016-12-02 09:43:44 UTC
  - 41c44f684 Merge pull request #38044 from terminalmage/issue37980
  - f70a409b3 Remove debugging code

- **PR #38035**: (dmurphy18) Updated to return status from make_repo similar to rpmbuild.py @ 2016-12-01 22:30:53 UTC
  - 9661258f22 Merge pull request #38035 from dmurphy18/fix_debbuild
  - 3bca96e7f2 Updated to return status from make_repo similar to rpmbuild.py

- **ISSUE #38001**: (tomlaredo) Regression on postgres_group.present ('postgres_group' __virtual__ returned False) (refs: #38023)

- **ISSUE #37986**: (mariek-obuchowicz) Module postgres - wrong docs, doesn't work with debian 8.5 (refs: #38023)

- **ISSUE #37935**: (ipmb) Postgres module regression on 2016.11 (refs: #37946, #37993, #38023, #38058)

- **PR #38023**: (gtmanfred) Expand error message for postgres states (refs: #38058) @ 2016-12-01 22:05:06 UTC
  - 141b5c5656 Merge pull request #38023 from gtmanfred/2016.11
  - a1a43e8a80 Expand error message for postgres states
  - ac72ee600e Revert "Updated the bins_dir to default to pg_bin #37935"

- **PR #38026**: (rallytime) Back-port #38015 to 2016.11 @ 2016-12-01 19:16:15 UTC
  - **PR #38015**: (morsik) Typo fix (refs: #38026)
    - 79486421f5 Merge pull request #38026 from rallytime/bp-38015
    - 11bece6e8b Typo fix
  - **PR #38021**: (DmitryKuzmenko) Added Carbon release notes. Fixed sphinx errors in the file.
    - **PR #38011**: (rallytime) Adjust code examples to use the actual bootstrap-salt.sh file name

- **ISSUE #37940**: (alex-zel) dockerng.sls_build fails on some distributions (refs: #37954)

- **PR #37954**: (gtmanfred) use sleep from path for docker.sls_build @ 2016-11-30 18:08:45 UTC
  - 0a041277ea Merge pull request #37954 from gtmanfred/2016.11
  - 9ca0f406d use sleep from path for docker.sls_build

- **ISSUE #37935**: (ipmb) Postgres module regression on 2016.11 (refs: #37946, #37993, #38023, #38058)

- **PR #37993**: (ticosax) Remove initdb dependency to consume postgres module. (refs: #38058) @ 2016-11-30 18:08:13 UTC
  - 4ef5c98845 Merge pull request #37993 from ticosax/remove-initdb-requirement
  - c5c7a53d72 Remove initdb dependency to consume postgres module.
• PR #37997: (cachedout) Update gem test for 2016.11 @ 2016-11-30 17:13:45 UTC
  - 2e5565685c Merge pull request #37997 from cachedout/gem_test_carbon
  - 1d221aa91c Update gem test for 2016.11

• ISSUE #36723: (white-hat) ext_pillar_first option is broken in 2016.3 (refs: #36807)

• ISSUE #24501: (astehlik) Order in top.sls file is not respected for pillar data in local mode (refs: #31316)

• ISSUE #19332: (QuinnyPig) Nondeterminism in Pillar (refs: #31316)

• PR #37979: (terminalmage) Revert addition of pillar_roots_override_ext_pillar @ 2016-11-30 14:34:24 UTC
  - PR #36807: (terminalmage) Fix pillar merging when ext_pillar_first is enabled (refs: #37979)
  - PR #31316: (kraney) Let ext_pillar_first determine the override order (refs: #37979)
  - ca3a9488f1 Merge pull request #37979 from terminalmage/revert-pillar-change
  - 6135dfa4dd Revert addition of pillar_roots_override_ext_pillar
  - PR #37970: (rallytime) Back-port #37958 to 2016.11
  - PR #37958: (mirceaulinic) Fix RST link format in Carbon release notes (refs: #37970)
  - PR #37971: (rallytime) Lint 2016.11 sooner rather than later
  - PR #37955: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 (refs: #37971)

• ISSUE #37935: (ipmb) Postgres module regression on 2016.11 (refs: #37946, #37993, #38023, #38058)

• PR #37946: (scott-w) Updated the bins_dir to default to pg_bin @ 2016-11-29 16:48:27 UTC
  - 36f91408c5 Merge pull request #37946 from scott-w/37935-fix-bin-dir
  - d3d403969 Restored missing initdb #37935
  - a041b9f8e8 Use Salt deprecation warning #37935
  - a9678935f3 Updated the bins_dir to default to pg_bin #37935

• PR #37889: (isbm) Allow overwrite archives extraction (refs: #38036) @ 2016-11-29 16:18:57 UTC
  - d8650c5474 Merge pull request #37889 from isbm/isbm-states-archive-fix
  - e67706bd29 Document the behaviour.
  - 1970814111 Prevent crash during externally changed archive permissions
  - 91b42578b2 Add overwrite option so the extraction of the archive can be always performed.
  - e6958f7f15 Remove nonsense comment and react on generally absent path name

• PR #37869: (isbm) Input sanitation (16.11) @ 2016-11-29 16:17:16 UTC
  - e2b9e58d30 Merge pull request #37869 from isbm/isbm-input-sanitation-16.11
  - f9ec5d68af Use six instead of builtins
  - 203dfcb238 Use American spelling instead
  - 91ed307af9 Sanitise input for the keys and IDs
  - 86623f913d Add a stub for ID sanitiser (at the moment same as hostname)
  - 637144c841 Rename "general.py" to "sanitisers.py"
  - f2571fc8bf Add hostname sanitiser
  - 3ae086aff4 Add filename sanitiser
- 816b1d1977 Add general sanitisers

- **PR #37884**: (isbm) Do not include "gpg-pubkey" packages, filtering by their name @ 2016-11-28 21:11:37 UTC
  - e539a94a56 Merge pull request #37884 from isbm/isbm-zypper-gpgkey-pkg-filter
  - 038374a586 Do not include "gpg-pubkey" packages, filtering by their name

- **PR #37882**: (attiasr) multiple issues in boto_rds state and module @ 2016-11-28 21:09:11 UTC
  - eb3d81a1de Merge pull request #37882 from attiasr/fix_missing_tags
  - 73b3c5fa1a Add newline
  - 166c42bc51 fix boto_rds.describe
  - ddd88ba047 fix boto_rds.describe parameters and subnetgroup_present
  - bfe7f92cb4 fix missing tags in call to boto_rds.exists
  - **PR #37931**: (rallytime) Remove release candidate doc ref from 2016.11.0 release notes

- **PR #37930**: (cachedout) Remove dictionary comprehension in netusers @ 2016-11-28 20:27:06 UTC
  - 3d2dabc7b7 Merge pull request #37930 from cachedout/fix_comp
  - 670e83200b Remove dictionary comprehension in netusers

- **PR #37923**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2016-11-28 19:55:03 UTC
  - 0f8b187d15 Merge pull request #37923 from rallytime/merge-2016.11
  - da7f518ebb Don't let 2016.3 doc config changes overwrite the 2016.11 changes
  - dfedd1185a Merge branch '2016.3' into '2016.11'
    - c35ba1f390 Merge pull request #37916 from rallytime/doc-update-2016.3
      - bd40592289 [2016.3] Update version numbers in doc config for 2016.11.0 release
    - e13a2488ec8 Merge pull request #37785 from Cloudtek/ddns-respect-trailing-dot
      - 262e3b3697 respect trailing dot in ddns name parameter
    - c03b389422 Merge pull request #37895 from fj40crawler/fix-augeas-return-for-test
      - ddc238df36 Fixed augeas_test.py to match True v.s. None for test_change_in_test_mode
      - e75c459c0 Merge branch '2016.3' of github.com:saltstack/salt into fix-augeas-return-for-test
      - b0fe0cd256 Change return value for salt/states/augeas.py to be True instead of None for cases where salt is run with test=True. Fixes #37870
    - fdbe31e8d8 Merge pull request #37907 from Talkless/patch-2
      - 072a319490 Fix server trust in test run of svn.latest
    - f39df443f Merge pull request #37896 from toanju/2016.3
      - c95304188e rh networking: add missing values
    - ea935c5a91 Merge pull request #37886 from bdruang/fix-typos
      - 9a51ba5c5b Fix various spelling mistakes
    - 371b0a86d9 Merge pull request #37736 from dhaines/issue-37732
      - 7ef590a505 Update selinux.py
      - 516a67e6a3 fix indexing error

30.2. Previous Releases
- 4e49c1e991 fix typo
- b16f2d8400 handle semodule version >=2.4 (#37732) and fix typo
  ∗ 87aeb66bf Merge pull request #37797 from clan/extfs
      ∗ acf0f960ef check count of columns after split
  ∗ f7c7109152 Merge pull request #37762 from twangboy/fixed_chocolatey_state
      ∗ 9696b6d9a5 Use keyword args instead of relying on ordering
      ∗ 398ea0744d Add pre_versions to the available arguments
  ∗ 56ba92d55 Merge pull request #37866 from meaksh/bp-37149-36938-36784
      ∗ 9d8d578109 Fix pkg.latest_version when latest already installed
      ∗ fca0d491c - acl.delfacl: fix position of -X option to setfacl
      ∗ 3dfed6b841 Adjust linux_acl unit test argument ordering
      ∗ f185ecdde1 core.py: quote style fixed
      ∗ 8404d13424 Setting up OS grains for SLES Expanded Support (SUSE's Red Hat compatible platform)
  ∗ d0cc70d56 Merge pull request #37863 from rallytime/bp-36893
      ∗ 4c70534991 Add versionadd to reauth option in dockerng module
      ∗ 5ca2c388c2 added documentation for the new reauth option in docker registry configuration
      ∗ 5b0c11ab47 add option to force a reauth for a docker registry
      ∗ b17a118e72 add multiline encryption documentation to nacl (#37847)
        - PR #37927: (thatch45) Add a release notes reference to the docker-sls tutorial
        - PR #37917: (rallytime) [2016.11] Update version numbers in doc config for 2016.11.0 release
  • PR #37890: (bbinet) Fix support for extra_mods='six' to add six module to a thin.tgz tarball @ 2016-11-28 13:53:06 UTC
      - ee00592995 Merge pull request #37890 from bbinet/fixed-genthin-six
      - 7ificeaa3476 Fix support for extra_mods='six' to add six module to a thin.tgz tarball
  • ISSUE #37713: (aboe76) masterless minion can’t call pillar.item from pillar stack (development branch) (refs: #37843)
      - PR #37843: (terminalmage) Don’t skip pillar compilation when master_type=’disable’
      - PR #32521: (adelcast) Fix salt-call on standalone minion case (refs: #37843)
  • ISSUE #37449: (thatch45) Allow TLS connections in the Tornado TCP transport (refs: #37776, #37859)
      - PR #37849: (skizunov) Eliminate warning when 'ssl' not set
      - PR #37776: (DmitryKuzmenko) Full TLS/SSL options support as provided by Tornado TCPServer. (refs: #37849)
  • ISSUE #37449: (thatch45) Allow TLS connections in the Tornado TCP transport (refs: #37776, #37859)
      - PR #37859: (DmitryKuzmenko) TLS example config
      - PR #37841: (terminalmage) Clarify the master_type docs
      - PR #37831: (skizunov) PY3: Fix exception when handling connect exception in TCP transport
• PR #37829: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2016-11-22 15:26:00 UTC
  - d081d2fa67 Merge pull request #37829 from rallytime/merge-2016.11
  - 36d32edc5 Merge branch '2016.3' into '2016.11'
  - aa74bad284 Update branch refs to more relevant branch (#37826)
  - 6a9b49c782 Add "names" option to file state docs: point users to highstate doc examples (#37823)
  - aa587de63 Clarify keystone.user_present password state docs with default behavior (#37821)
  - c300863159 Add some dependency documentation to libvirt docs (#37820)
  - 485270f74e Merge pull request #37772 from bdrung/openssl1.1
    - 819c9658ed Support initializing OpenSSL 1.1
  - 4910912ffa Update orchestrate runner file.copy doc example (#37817)
  - c5d3d8b66a Merge pull request #37816 from rallytime/bp-32157
    - d9c297119e Add quotes to cron doc
  - 97e6b6aabe Merge pull request #37812 from rallytime/bp-37790
    - ca3b6e784e Update proxmox.rst with more options and LXC
  - 27703c54b4 Merge pull request #37811 from rallytime/bp-37789
    - ba316e48e1 fix comment
    - a021f76a9b issue: 37751 Add documentation for option privileged
  - adac9d7e0c Merge pull request #37810 from rallytime/bp-37775
    - 2bed91437b Document python argument in salt.states.virtualenv_mod
  - PR #37794: (sjorge) network.routes should not raise exception if no interface
• PR #37815: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2016-11-21 20:22:49 UTC
  - 628c4a3d27 Merge pull request #37815 from rallytime/merge-2016.11
  - c6b5fd3715 Merge branch '2016.3' into '2016.11'
    - 7de74411d Add nodegroup check to ckminions (#37763)
    - d674394e9c Fix ip/port issue with salt-call (#37766)
• ISSUE #37449: (thatch45) Allow TLS connections in the Tornado TCP transport (refs: #37776, #3859)
• PR #37776: (DmitryKuzmenko) Full TLS/SSL options support as provided by Tornado TCPServer. (refs: #37849) @ 2016-11-21 20:11:52 UTC
  - 0b3b93dbb Merge pull request #37776 from DSRCorporation/features/37449_tls
  - 6857bb9bb Documented new TLS/SSL settings.
  - e42898f2e3 Full TLS/SSL options support as provided by Tornado TCPServer.
• PR #37773: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2016-11-18 19:18:42 UTC
  - 3835b9d99 Merge pull request #37773 from rallytime/merge-2016.11
  - c85969e1c Merge branch '2016.3' into '2016.11'
  - c62ff6b023 Add thorium path to syspaths (#37767)
Salt Documentation, Release 3002.5

- bff949f4e9 Merge pull request #37760 from hu-dabao/fix_cb_returner
  - de372f277e 1. returner no need to check whether the jid exists for external job cache setup
    2. add full_ret to return doc so that the document will be informative
    3. make ttl as a config attribute because salt-minion does not have keep_jobs attribute
    4. add password into config attribute
    5. update the documents accordingly
- 1f976ac212 Merge pull request #37738 from terminalmage/issue36629
  - da46678c51 Allow pillar.get to retrieve fresh pillar data when saltenv passed
- 7ae87fc63c Switch default filter tag for ONE resources from user only to all resources (#37745)

  • PR #37764: (mirceaulinic) Doc fixes and replace feature @ 2016-11-18 03:15:31 UTC
    - 6f0f70c9a3 Merge pull request #37764 from cloudflare/NET-UPDATE
    - c3f0202fdd Replace feature and doc fixes

30.2.53 Salt 2016.11.10 Release Notes

Version 2016.11.10 is a security release for 2016.11.0.

Changes for v2016.11.9..v2016.11.10

Security Fix

CVE-2018-15751 Remote command execution and incorrect access control when using salt-api.

CVE-2018-15750 Directory traversal vulnerability when using salt-api. Allows an attacker to determine what files exist on a server when querying /run or /events.

Credit and thanks for discovery and responsible disclosure: nullbr4in, xcuter, koredge, loupos, blackcon, Naver Business Platform

30.2.54 Salt 2016.11.2 Release Notes

Version 2016.11.2 is a bugfix release for 2016.11.0.

Statistics

- Total Merges: 157
- Total Issue References: 34
- Total PR References: 116
- Contributors: 45 (Ch3LL, Cybolic, DmitryKuzmenko, UtahDave, Vaelatern, alex-zel, alxwr, amendlik, anlutro, aosagie, badusee, bbinet, benediktwerner, cachedout, clinta, cro, dereckson, disaster123, ewapptus, ezh, folti, gmacon, gogunhed, gtmanfred, koppel, lorengordon, martintamare, mcalmer, meaksh, mirceaulinic, mostafahussein, mvdwalle, rallytime, rbjorklin, scthi, sjorge, techhat, terminalmage, tsaridas, twangboy, vutny, wolfpackmars2, yhekma, yopito, yue9944882)
Security Fixes

CVE-2017-5192 local_batch client external authentication not respected

The LocalClient.cmd_batch() method client does not accept external_auth credentials and so access to it from salt-api has been removed for now. This vulnerability allows code execution for already-authenticated users and is only in effect when running salt-api as the root user.

CVE-2017-5200 Salt-api allows arbitrary command execution on a salt-master via Salt's ssh_client

Users of Salt-API and salt-ssh could execute a command on the salt master via a hole when both systems were enabled.

We recommend everyone upgrade to 2016.11.2 as soon as possible.

Changelog for v2016.11.1..v2016.11.2


- PR #38859: (alxwr) fix parsing of sockstat -4 @ 2017-01-23 16:47:22 UTC
  - ec59ae67c8 Merge pull request #38859 from alxwr/2016.11
  - 30fe5641c7 fix parsing of sockstat -4
- PR #38850: (techhat) Strip .p from cache file names @ 2017-01-23 16:28:46 UTC
  - 5fe6db6201 Merge pull request #38850 from techhat/stripcache
  - 109cb62e76 Remove .p from test
  - 534aa3f527 Strip .p from cache file names
  - PR #38848: (Ch3LL) add 2016.11.2 changelog to release notes
- PR #38819: (twangboy) Remove Users from c:salt [DO NOT MERGE FORWARD] @ 2017-01-20 20:17:35 UTC
  - 4913cf90c Merge pull request #38819 from twangboy/salt_perms_2016.11
  - eb04ed7eef Remove User from c:salt
- PR #38815: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-01-20 18:53:01 UTC
  - a275b9714e Merge pull request #38815 from rallytime/merge-2016.11
  - ce6d1b103d Make sure we're using the opts dict mocking in parsers_test
  - 315b2c8712 Merge branch '2016.3' into '2016.11'
    - d14f0c64eb Merge pull request #38812 from rallytime/pyobjects-test
      - f3e84c1ab7 Update pyobjects test to be a list
    - 50f03f8057 Merge pull request #38813 from gtmanfred/2016.3
      - ce3472ce2c catch SIGPIPE in vmware connection
    - 23b8b47258 Merge pull request #38809 from twangboy/fix_hostname_2016.3
      - d57a51f9f9 Fix tests for get_hostname
      - 7ca3fd7484 Fix get_hostname to handle longer computer names
    - 1033bbdde8 Merge pull request #38808 from vutny/fix-38388
      - 9bd203ffcc Fix #38388
    - f3ae3cd5c8 Merge pull request #38668 from terminalmage/issue38604
- 0ea97cad9 Merge pull request #10 from cachedout/pr-38668
- db81af035 Munge retcode into return data for batching
- a642a995dc Return the ret data from batch execution instead of raw data
  - c6a19a9e5a Merge pull request #38789 from rallytime/fix-38622
  - af41fe0c6e Update some saltenv refs to environment in salt.modules.state docs
  - e0bf700020 Merge pull request #38790 from cachedout/fix_pyobjects_test_typo
  - a66ab50f0f Fix typo in pyobjects test
  - 6e9785edea Merge pull request #38792 from rallytime/fix-38629
  - 1e125e2844 Update pillar tutorial lanuage regarding pillar_opts settings
- PR #38832: (terminalmage) archive.extracted: Identify symlinks when checking for incorrect types @ 2017-01-20 18:36:15 UTC
  - efe1bf10e8 Merge pull request #38832 from terminalmage/issue38711
  - d10c068e25 Update archive state unit tests to reflect symlinks in archive.list
  - d6adfb6d12 Identify symlinks when looking for incorrect types
  - 09b9e95f7c archive.list: organize symlinks separately from files in verbose mode
  - e6483f096d Support removing symlinks in salt.utils.rm_rf
- PR #38726: (twangboy) Add VC Redist 2008 SP1 MFC to installer @ 2017-01-19 19:13:42 UTC
  - 10a3db88dd Merge pull request #38726 from twangboy/vcredist
  - f0a65355d change extensions .ext to .exe
  - 98c40e278c Add VC Redist 2008 SP1 MFC to installer
- PR #38810: (UtahDave) Fix beacon doc @ 2017-01-18 21:37:21 UTC
  - d5f2d92a4e Merge pull request #38810 from UtahDave/fix_beacon_doc_zd1035
  - db9f9b06 fix reactor example.
- PR #38811: (techhat) Show a lot less data when requesting a VM @ 2017-01-18 21:08:03 UTC
  - 88fa08a7f Merge pull request #38811 from techhat/sanvm
  - 47c19325cf Show a lot less data when requesting a VM
  - PR #38807: (Ch3LL) refine the os detection in archive test
- PR #38799: (aosagie) Parse ansible dynamic inventory output correctly @ 2017-01-18 15:32:47 UTC
  - e3ca6881c8 Merge pull request #38799 from aosagie/fix-ansible-dynamic-roster
  - 26d66f99a7 Parse ansible dynamic inventory output correctly
- PR #38787: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-01-18 08:39:08 UTC
  - 76df6a43f3 Merge pull request #38787 from rallytime/merge-2016.11
  - 2aad54c49f Merge branch '2016.3' into '2016.11'
    - 3417ad617 Merge pull request #38796 from saltstack/revert-38707-root_dir_fix-gh
    - cb080f3b6e Revert "Fixed prepending of root_dir override to the other paths"
  - 64d866f7ab Merge branch '2016.3' into '2016.11'
- bab3479a3c Merge pull request #38585 from rallytime/follow-up-38527
  - 05587201b6 Pylint fix: add line at end of file
  - fa01367599 Keep a copy of the DEFAULT_API_OPTS and restore them after the test run
  - 2ad07634d9 Test clean up
  - fd2ee7db30 Add some simple unit tests for salt.config.api_config function
  - 3d2fe83b Make sure the pidfile and log_file values are overridden by api opts
  - 1f6b54e646 Make sure the pidfile and log_file values are overridden by api opts
  - 04d307f917 salt-api no longer forces the default timeout
- 0fb6bb77 Merge pull request #38707 from alexbleotu/root_dir_fix-gh
  - 0bac8c8be3 Fixed prepending of root_dir override to the other paths
- 96c9dc10f7 Merge pull request #38714 from vutny/dev-test-docs
  - 4620dc4afa DOCS: add C++ compiler installation on RHEL required for bundled 0mq
  - aedbb7a43 Merge pull request #38749 from vutny/pkg-build-better-exception-msg
  - 53f2be5b21 pkg build modules throw better exception message if keyid wasn’t found

- PR #38660: (techhat) Don’t force salt.cache to use cachedir from opts @ 2017-01-17 18:38:35 UTC
  - 4e6146f65f Merge pull request #38660 from techhat/cachedir
  - be55b7af One last fix
  - fc24b24998 Add correct function name
  - 9bbecf7960 Typo fix
  - 436ba28f08 Change getlist back to list (using _list)
  - ff734fe93b Default to CACHE_DIR in syspaths
  - 380abd3744 Add cachedir args to tests
  - deb08c0587 Not every module will need cachedir
  - 449f7c9ac0 Don’t force salt.cache to use cachedir from opts

- ISSUE #37948: (djacobs2016) ssh_known_hosts.present is failing when checking key/host (refs: #37982)
- ISSUE #33932: (folti) ssh_known_hosts.present: hashing global known hosts file makes it readable by root only (refs: #33933)
- PR #38667: (rallytime) Back-port #37982 to 2016.11 @ 2017-01-17 15:42:13 UTC
  - PR #37982: (wolfpackmars2) Update ssh.py (refs: #38667)
  - PR #33933: (folti) ssh: keep original permissions, when hashing known_hosts (refs: #38667)
  - 89dc86e2bc Merge pull request #38667 from rallytime/bp-37982
  - be91e46a93 Update ssh.py

- PR #38759: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-01-17 15:22:01 UTC
  - 751e14c52a Merge pull request #38759 from rallytime/merge-2016.11
  - 30e8a66fb0 Merge branch '2016.3' into '2016.11'
  - 8466b3248a Merge pull request #38743 from rallytime/merge-2016.3
- d24776f5e9 Merge branch '2015.8' into '2016.3'
- 6869621ed1 Merge pull request #38731 from rallytime/merge-2015.8
- 9eb191b6ac Pylint fix
- b910499dbe Various follow up fixes
- e8309a6bbf Add release notes for 2015.8.13
- f881f366b7 Merge pull request #20 from rallytime/2015.8.12_follow_up-batch-tests
- 34282322c0 Clean up tests and docs for batch execution
- c80b20b957 Merge pull request #19 from whiteinge/batchclient
- 3d8f318f6 Remove batch execution from NetapiClient and SaltNado
- 97b0fe4923 Lintfix
- d1516664f7 Add explanation comment
- 62f2c87080 Add docstring
- 9b0a786aeb Explain what it is about and how to configure that
- 5ea3579e10 Pick up a specified roster file from the configured locations
- 3a8614ce5df Disable custom rosters in API
- c0e5a1171d Add roster disable flag
- e9c59e9b8f Merge pull request #38602 from terminalmage/fix-boto-test
- 3424a108ac Fix failing unit.states.boto_vpc_test.BotoVpcRouteTableTestCase.test_present_with_routes
  * a642def79 Merge pull request #38723 from rallytime/fix-38674
    * 706c885f55 Remove "event_publisher_pub_hwm" and "salt_event_pub_hwm" from config/__init__.py
  * fc545af10b Merge pull request #38669 from rallytime/update-bootstrap-script
    * 78ba76e34c Update bootstrap script version to latest release
  * 50d417f267 Merge pull request #38693 from twangboy/update_jinja
    * e0c7e5549b Update jinja2 to 2.9.4
  * 4f233bb18d Merge pull request #38739 from vutny/fix-runitests-doc
    * b872bb636f DOCS: correct examples of running test suite
  * 51d4707071 DOCS: add links to File State Backups page where necessary (#38735)
  * 6d3717b9ee Proofread jinja_to_execution_module tutorial (#38720)
- **ISSUE #38775:** (charburns) Error using napalm netusers (refs: #38778)
- **PR #38778:** (mirceaulinic) Fix "Error using napalm netusers" @ 2017-01-17 15:20:27 UTC
  - bb6291d93a Merge pull request #38778 from cloudflare/fix-38775
  - b3388f7162 Fix #38775
- **ISSUE #38528:** (MorphBonehunter) x509 make permissions configurable (refs: #38664)
- **ISSUE #38081:** (haraldrudell) x509 state or module cannot generate password protected private keys (refs: #38664)
- **PR #38664**: (clinta) X509 Improvements. Expose setting permissions, encrypted private keys, and combined key and cert management in one state @ 2017-01-17 02:20:18 UTC
  - 6663107021 Merge pull request #38664 from clinta/x509-passphrase2
  - 77c78723fe pep8
  - a2b20ee518 No mutable default args, remove unneeded import
  - b48b85cc70 bug fixes
  - f62393b864 pep8
  - c8613243a1 change documentation
  - 9a0abde9ac expose passphrase functionality to state
  - e47a93d496 add passphrase to execution module
  - a4d6598f1e preserve detailed change reports
  - d0ad251778 combine private key and cert management
  - 3d1474d911 cross call file.managed to get permissions options
- **PR #38682**: (mirceaulinic) [2016.11.2/napalm] Better error message when NotImplementedError raised @ 2017-01-15 18:34:25 UTC
  - bf6d74c98e Merge pull request #38682 from cloudflare/NotImplementedError-MSG
  - f847639dee Better error message when NotImplementedError raised
- **ISSUE #37996**: (stefan-as) influxdb_user.present does not pass client_args (refs: #38695)
- **PR #38695**: (rallytime) Pass in client_args when calling influxdb execution module funcs @ 2017-01-15 18:33:48 UTC
  - df12e49d80 Merge pull request #38695 from rallytime/fx-37996
  - 05b0975888 Pass in client_args when calling influxdb execution module funcs
- **ISSUE #38521**: (vladvasiliu) State cloud.present on AWS: TypeError: 'NoneType' object is not iterable (refs: #38651)
- **ISSUE #37981**: (tazaki) Salt-cloud ec2 vpc securitygroupid always returning default (refs: #38183)
- **PR #38651**: (rallytime) Don’t lose the set reference for ec2 securitygroup ids @ 2017-01-15 18:06:25 UTC
  - PR #38183: (cro) Fix bad set operations when setting up securitygroups in AWS. (refs: #38651)
  - 834e5469fc Merge pull request #38651 from rallytime/fx-38521
  - 830c03ece6 Don’t lose the set reference for ec2 securitygroup ids
- **ISSUE #38216**: (pgrishin) salt-run: can’t get cache.grains (refs: #38659)
- **PR #38659**: (techhat) Turn None into an empty string (for minion matching) @ 2017-01-15 18:02:03 UTC
  - 8b38cfeae8d Merge pull request #38659 from techhat/issue38216
  - 4073c91584 Turn None into an empty string (for minion matching)
- **PR #38703**: (yhekma) The test option is only valid for the minion, not the master @ 2017-01-15 17:56:22 UTC
  - 0ad5d22ad4 Merge pull request #38703 from yhekma/docfix
  - 57df3b148 The test option is only valid for the minion, not the master
- **PR #38718**: (terminalmage) Fix for dynamic git_pillar when pillarenv is used @ 2017-01-15 14:37:30 UTC
- 8c122e7db Merge pull request #38718 from terminalmage/zd909
- 12bbee5a24 Fix for dynamic git_pillar when pillarenv is used

- **ISSUE #38676**: (yhekma) consul cache backend broken (refs: #38676)
- **PR #38676**: (yhekma) Removed overloading of list() @ 2017-01-15 05:42:13 UTC
  - aae8b54860 Merge pull request #38676 from yhekma/2016.11
  - 32372d3e1c Localfs should also be changed of course
  - 9d9de7219 We do not want to overload the list() type because if we do, we turn this function into a recursive one, which results in an exception because set() cannot be concatenated with str(‘/’)

- **ISSUE #38684**: (rukender) 2016.11.1 :[ERROR][11182] Failed to import beacons avahi_announce (refs: #38713)
- **PR #38713**: (rallytime) Add NameError to exception in avahi_announce beacon @ 2017-01-15 05:33:04 UTC
  - c246ab41c5 Merge pull request #38713 from rallytime/fix-38684
  - db60bed24c Add NameError to exception in avahi_announce beacon

- **PR #38729**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-01-13 23:15:33 UTC
  - 6c14774c04 Merge pull request #38729 from rallytime/merge-2016.11
  - 4e1e45d640 Merge branch '2016.3' into '2016.11'
  - 7b850d472d Merge pull request #38647 from gtmanfred/nova
    - 5be9b60851 add documentation about using keystonauth for v3
    - 7b657ca4ae add the ability to use keystone v2 and v3
    - 564ae1b34 add ability to use keystonauth to authenitcate in nova driver
  - 383768d838 Merge pull request #38650 from rallytime/remove-ubuntu-ppa-docs
    - 30429b2e44 Remove the installation instructions for out-of-date community ppa
  - 7d9f56e3b5 Merge pull request #38657 from DSRCorporation/bugs/38087_syndic_event_format_fix
    - 594c33f396 Publish the 'data' field content for Syndic events
  - 83987511fd Merge pull request #38649 from Ch3LL/test_apply_template
    - 47f8b68e0b fix unit.modules.file_test

- **ISSUE #38631**: (doitian) In Orchestration, kwargs are not passed to state.sls in masterless mode (refs: #38635)
- **PR #38635**: (lorenogordon) Sends pass-through params to state module @ 2017-01-10 20:01:59 UTC
  - cfd82d1631 Merge pull request #38635 from lorenogordon/issue-38631
  - 14666138b9 Sends pass-through params to state module

- **PR #38640**: (mircceaulinic) Import napalm_base instead of napalm @ 2017-01-10 19:58:01 UTC
  - 017094a207 Merge pull request #38640 from cloudflare/NAPALM-IMPORTS
  - 8f13f63880 Import napalm_base instead of napalm

- **PR #38661**: (techhat) Add sane cache defaults for minion and cloud @ 2017-01-10 19:55:15 UTC
  - 79663132dd Merge pull request #38661 from techhat/sanedefault
  - aee40648ec Add a sane cache default for cloud
  - c9e01a36e7 Add a sane cache default for minions
• PR #38645: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-01-10 19:54:06 UTC
  - b0ed91ee2d Merge pull request #38645 from rallytime/merge-2016.11
  - 7a668e9749 Merge branch '2016.3' into '2016.11'
  - 74dce71be3 Merge pull request #38626 from saltstack/revert-37358-2016.3.3_issue37355
    * e912ac99c2 Revert "Fix/workaround for issue #37355"
  - 5e58b32934 Merge pull request #37358 from Firewire2002/2016.3.3_issue37355
    * 910da18b9d fixed typo
    * 4bc5ddd06 fixed wrong renamed variable and spaces
    * 92366e646c issue #37355
    * 7dc87ab7b8 issue #37355
    * 2878180405 issue #37355
  - 6cfe615aa Merge pull request #35390 from alexandr-orlov/2016.3
    * cd5ae17e8d fixd missed proper grains dictionary
  - 2579cfa42d Merge pull request #38618 from rallytime/bp-38579
    * 2052ecee2c Add copy import
    * 2c8845aa0 add test for pillar.get() + default value
    * c2f98d2f04 ticket 38558: add unit test, deepcopy() only if necessary
    * 30ae0a1958 added deepcopy of default if merge=True
• PR #38627: (cachedout) Pr 38476 @ 2017-01-06 22:05:45 UTC
  - PR #38476: (amendlik) Key fingerprints (refs: #38627)
    - d67f6937d7 Merge pull request #38627 from cachedout/pr-38476
    - 2a423ffedd Add changes to raetkey
    - 55ad93d66c Add hash_type argument to MultiKeyCLI.finger_all function
    - c8681269a4 Add hash_type argument to key module fingerprint functions
    - df04c300b7 Add hash_type argument to wheel fingerprint functions
    - 558ddcb18 Add finger_master function to wheel.key module
• ISSUE #38595: (yue9944882) Redis ext job cache occurred error (refs: #38610)
• PR #38610: (yue9944882) Fix #38595 - Unexpected error log from redis retuner in master's log @ 2017-01-06 21:47:21 UTC
  - b13cd1370f Merge pull request #38610 from yue9944882/2016.11
  - 54325cf293 Fix #38595 - Unexpected error log from redis retuner in master's log
• ISSUE #36148: (alex-zel) Eauth error with openLDAP groups (refs: #38406)
• PR #38406: (alex-zel) Fix eauth error with openLDAP/389 directory server groups @ 2017-01-06 21:40:30 UTC
  - 179d835003 Merge pull request #38406 from alex-zel/fixed-eauth-groups-permissions
  - 6b9e9d8f89 Fix eauth error with openLDAP/389 directory server groups
• PR #38619: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-01-06 17:51:19 UTC
- 82e9b3d1a1 Merge pull request #38619 from rallytime/merge-2016.11
- 0efb2d844e Merge branch '2016.3' into '2016.11'
  * da676cebd6 Merge pull request #38601 from terminalmage/pillar-get
    - 8613d7254d pillar.get: Raise exception when merge=True and default is not a dict
  * 224fc7712a Merge pull request #38600 from terminalmage/issue38459-2016.3
    - 8a45b13e76 Avoid errors when sudo_user is set
  * a376970f88 Merge pull request #38589 from tobithiel/fix_rvm_rbenv_warning
    - 9ec470b4a5 State Gem: fix incorrect warning about missing rvm/rbenv
  * 02e6a78254 Merge pull request #38567 from pass-by-value/pgjsonb_queue_changes_2016.3
    - 67879eb65 Create queue if one doesn't exist
  * 0889c0db31 Merge pull request #38587 from rallytime/fix-37498
    - 2a5880966f Change daemontools __virtualname__ from service to daemontools

• PR #38612: (sjorge) network.ifacestartswith throws exception on Solaris-like platforms @ 2017-01-06 17:20:32 UTC
  - f64e003a69 Merge pull request #38612 from sjorge/2016.11-solaris-ifacestartswith
  - 26fae54f5b network.ifacestartswith throws exception on Solaris-like platforms

• ISSUE #37027: (sjorge) Solaris FQDN/UQDN and documentation/consistency (refs: #38615)

• PR #38615: (sjorge) add note related to issue #37027 @ 2017-01-06 16:38:34 UTC
  - 5820c0e616 Merge pull request #38615 from sjorge/2016.11-solariisdocs
  - fbdd32f46b add note related to issue #37027

• PR #38598: (terminalmage) Avoid errors when sudo_user is set (refs: #38600, #38599) @ 2017-01-05 23:16:22 UTC
  - a27fdbe6a7 Merge pull request #38598 from terminalmage/issue38459
  - b37f7fa38 Avoid errors when sudo_user is set

• PR #38599: (terminalmage) archive.extracted: Prevent traceback when state.single cannot be run @ 2017-01-05 23:16:11 UTC
  - PR #38598: (terminalmage) Avoid errors when sudo_user is set (refs: #38600, #38599)
  - d6b7019df6 Merge pull request #38599 from terminalmage/archive-results-handling
  - 9aceb8186d archive.extracted: Prevent traceback when state.single cannot be run

• ISSUE #38517: (basdusee) Slack.py engine 100% CPU load due to missing time.sleep(1) (refs: #38520)

• PR #38520: (basdusee) Fix issue #38517, added time.sleep(1) at line 227 in slack.py @ 2017-01-05 20:35:08 UTC
  - d486b42ce6 Merge pull request #38520 from basdusee/fix-issue-38517
  - e3a883e915 Small fix on the fix regarding indentation
  - 8adeae6f81 Fix issue #38517, added time.sleep(1) at line 227 in slack.py engine.

• ISSUE #38485: (wasabi222) bgp.config not working (refs: #38499)

• PR #38499: (mirceaulinic) Fix function headers as per #38499 @ 2017-01-05 18:41:33 UTC
  - PR #38499: (mirceaulinic) Fix #38485 (refs: #38577)
0706cde626 Merge pull request #38577 from cloudflare/REP-2016.11.2
62bee3c793 Fix function headers as per #38499

• PR #38578: (mirceaulinic) [2016.11] Port 5123f11 from develop into 2016.11.2 @ 2017-01-05 18:11:12 UTC
  - 55d1747792 Merge pull request #38578 from cloudflare/PORT-5123f1
  - dea7866d57 Update net.load_template doc: 2016.11.2

• ISSUE #38462: (g-shockfx) Can’t add beacon memusage on Windows (refs: #38584)

• PR #38584: (rallytime) Allow memusage beacon to load on Windows @ 2017-01-05 18:08:30 UTC
  - be69baf6e Merge pull request #38584 from rallytime/fix-38462
  - 1fe945d5e Allow memusage beacon to load on Windows

• PR #38570: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 (refs: #38585) @ 2017-01-05 14:28:38 UTC
  - 14b643fd48 Merge pull request #38570 from rallytime/merge-2016.11
  - 30f14d15df Merge branch '2016.3' into '2016.11'
  - 7b74436d13 Merge pull request #38562 from rallytime/arch-install-docs
    * 8b1897ace9 Update arch installation docs with correct package name
  - 01860702cb Merge pull request #38560 from Ch3LL/flex_api_log
    * 1b45e9670b fix api log file
  - 0056620a53 Merge pull request #38531 from rallytime/bp-33601
    * c36cb39825 remove the unnecessary double trigger
    * 38414493bf fix spacing lint error
    * 8c1defc710 Remove uncessary type from alias commands. Deduplicate alias handling to autodetect function selection. Add error reporting to slack connectivity problems. Cleanup slack's unicode conversion
    * c2f23bc45e Fix slack engine to run on python2.6
  - 50242c7f17 Merge pull request #38541 from techhat/issue38187
    * eae3a435dd Strip user:pass from cached URLs
  - 325dc56e59 Merge pull request #38554 from multani/fix/30454
    * 2e7f743371 yaml: support unicode serialization/deserialization
    * df76113c5c jinja: test the "yaml" filter with ordered dicts
    * f7712d417f Revert "Add yaml_safe filter"
  - 4dadb2e0ca add note about pyVmomi locale workaround (#38536)
  - 1cf951d152 fix gce image bug (#38542)

• PR #38509: (mostafahussein) Stop request from being processed if bad ip @ 2017-01-04 20:05:44 UTC
  - 9a1550d336 Merge pull request #38509 from mostafahussein/2016.11
  - 8847289c3e remove commented code
  - 420817a963 Stop request from being processed if bad ip

• ISSUE #38518: (kkoppel) slack_notify.call_hook returns tracebacks (refs: #38522)
• PR #38522: (kkoppel) Fix usage of salt.utils.http.query in slack_notify.call_hook @ 2017-01-04 20:04:57 UTC
  – bc07d420e9 Merge pull request #38522 from kkoppel/fix-issue-38518
  – f1fe7f0c71 Fix usage of salt.utils.http.query in slack_notify.call_hook

• ISSUE #38524: (rbjorklin) salt-api seems to ignore rest_timeout since 2016.11.0 (refs: #38585, #38527)

• PR #38527: (rbjorklin) salt-api no longer forces the default timeout (refs: #38585) @ 2017-01-04 17:10:15 UTC
  – 42ef270ee Merge pull request #38527 from rbjorklin/api-timeout-fix
  – 020f68820 salt-api no longer forces the default timeout

• PR #38529: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-01-04 17:06:57 UTC
  – 1895eb7533 Merge pull request #38529 from rallytime/merge-2016.11
  – 85f470207c Merge branch '2016.3' into '2016.11'
    • ec60f9c721 Merge pull request #38487 from gtmanfred/2016.3
      – 048b9f6b9d add test
      – c480c11528 allow spaces in cron env
      – c529ec8c34 allow crons to have multiple spaces
    • c5ba11b5e0 Merge pull request #38491 from gtmanfred/timing
      – 79368c7528 Use UTC for timing in case timezone changes
    • 86f0aa0bb3 Merge pull request #38503 from jinm/issue_38472_jinm
      – 0cd9df299f Hash type fallback for file management
    • ed2ba4bd1b Merge pull request #38457 from bshelton229/git-latest-head-bug
      – 558e7a771a Stops git.latest checking for local changes in a bare repo
    • 36e21b22cb Merge pull request #38385 from dragon788/2016.3-double-dash
      – 86c4b56f47 Newline for lint compat
      – 9d9b686057 Address review comments, consistency of quotes
      – df9bd5e7f9 Use unambiguous long names with double dashes
    • 59f256d8b8 Merge pull request #38474 from cachedout/key_loop
      – de504538e1 Allow an existing ioloop to be passed to salt-key
    • 3d0c752acd Merge pull request #38467 from gtmanfred/2016.3
      – 7b7c6b3878 file.line fail with mode=delete
    • 940025d5c4 Merge pull request #38434 from slinn0/issue_38433 Fixes
      – 22af87a3fe Fixes for https://github.com/saltstack/salt/issues/38433
      – e5eb51255b Update deprecation notices to the correct version (#38421)
      – 9ce53318df file.managed: Fix failure when filename contains unicode chars (#38415)
    • 2cdb5d055 Merge pull request #38419 from Ch3LL/issue_38472
      – 234043b8bb fix scsci docs example

• PR #38539: (twangboy) Fix DSC LCM Config int checks @ 2017-01-04 16:56:27 UTC
  – ec4f118ca2 Merge pull request #38539 from twangboy/dsc_int_checks
- 5657fd1956 Add repr flag for str
- aea4219502 Fix DSC LCM Config int checks

- PR #38549: (meaksh) Adding multiple SUBVOLUME support and some fixes to the Snapper module @ 2017-01-04 15:32:30 UTC
  - 5349c89a45 Merge pull request #38549 from meaksh/2016.11-snapper-multiple-subvolumen-support
  - e26e93bb7 Some fixes and pylint
  - 1e6ba45db4 Fixes pre/post snapshot order to get the inverse status
  - 68d5475c1f Fixing Snapper unit tests for SUBVOLUME support
  - e9919a913f Removing possible double ‘/’ from the file paths
  - 8b4f72f226 Updating and fixing the documentation
  - edea45272a Raises "CommandExecutionError" if snapper command fails
  - 3841e1143b Only include diff in the state response if include_diff is True
  - 7803e7716c Adds multiple SUBVOLUME support to the Snapper module
- PR #38471: (twangboy) Fix Problem with win_service module @ 2017-01-01 20:30:21 UTC
  - 5e80104a70 Merge pull request #38471 from twangboy/fix_win_service
  - 81047b9cd Fix problem with some services getting access denied

- ISSUE #38485: (wasabi222) bgp.config not working (refs: #38499)

- PR #38499: (mirceaulinic) Fix #38485 (refs: #38577) @ 2017-01-01 17:42:15 UTC
  - 0a9094a2a2d Merge pull request #38499 from cloudflare/FIX-38485
  - 18018139f3 Fix #38485

- PR #38501: (mvdwalle) Do not assume every object is a server @ 2017-01-01 17:37:57 UTC
  - 13f0b809df Merge pull request #38501 from mvdwalle/fx-gogrid-list-password
  - bd7dee9a10 Do not assume every object is a server

- PR #38461: (anlutro) Improvements/fixes to kapacitor task change detection @ 2016-12-29 17:08:47 UTC
  - aa0c843553 Merge pull request #38461 from alprs/fix-kapacitor_changes
  - 52721e9d6 clean up and fix tests
  - 8648775c2a if task is not defined, it’s not up to date
  - c3ab95c6e improvements/fixes to kapacitor task change detection

- PR #38473: (twangboy) Change OSX/OS X to macOS where possible @ 2016-12-29 16:35:11 UTC
  - 2c51eb9d16 Merge pull request #38473 from twangboy/osx_to_macos
  - e96be8f8a2 Change OSX/OS X to macOS where possible

- PR #38412: (bbinet) Update PillarStack stack.py to latest upstream version @ 2016-12-28 19:28:40 UTC
  - 2497fb547e Merge pull request #38412 from bbinet/pillarstack-updates
  - b66b4bd060 Fix lint violations in stack.py
  - 6a30fe6aeb Update PillarStack stack.py to latest upstream version
• PR #38456: (twangboy) Gate Windows Specific Salt Utils @ 2016-12-28 18:44:33 UTC
  - 5395d3210a Merge pull request #38456 from twangboy/gate_win_utils
  - d34d110a84 Fix lint, fix boto module
  - c20111142f Gate Windows Utils
• PR #38428: (gqgunhed) fixed typo: lq command-line syntax @ 2016-12-27 15:42:02 UTC
  - 7c7799162b Merge pull request #38428 from gqgunhed/fix_lq_typo
  - d79d682e8b fixed typo: lq command-line syntax
• ISSUE #38443: (lorenngordon) 2016.11 breaks file.managed on Windows (refs: #38444)
• ISSUE #34101: (windoverwater) archive.extracted breakage due to 2016.3.0 upgrade from 2015.8.10 (refs: #37368)
• PR #38444: (lorenngordon) Adds new import required for extract_hash @ 2016-12-27 15:37:20 UTC
  - PR #37368: (terminalmage) Overhaul archive.extracted state (refs: #38444)
  - f5984d0f81 Merge pull request #38444 from lorengordon/issue-38443
  - b2925ad7b7 Adds new import required for extract_hash
• ISSUE #38071: (luochun-95) remote execute is very slow (refs: #38167)
• PR #38167: (cachedout) Kill pkg_resources for CLI tools [DO NOT MERGE] @ 2016-12-22 22:11:22 UTC
  - 4c4f07ca4c Merge pull request #38167 from cachedout/no_pkg_resources
  - ec6901720a Remove debugging
  - f28e33b9b6 Remove from all but salt cli
  - bb3af72317 Remove from salt-call
  - c67846066 Kill pkg_resources for CLI tools
• PR #38417: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2016-12-22 19:00:44 UTC
  - 2fc8c154af Merge pull request #38417 from rallytime/merge-2016.11
  - efb8a8df5 Merge branch ’2016.3’ into ’2016.11’
  - 27253522c8 Improve pillar documentation (#38407)
  - 423bf1d99f Merge pull request #38398 from terminalmage/issue38372
  * c80dbaa914 Fix call to file.get_managed in cron.file state
  - 5a33d1e697 Fix http.query when result has no text (#38382)
  - b74b5c7d38 Merge pull request #38390 from meaksh/2016.3-fix-try-restart-for-autorestarting-on-SUSE-systems
  * de6ec05ec0 add try-restart to fix autorestarting on SUSE systems
  - 2c3a39760a Merge pull request #38221 from UtahDave/fix_default_returner
  * 385640765b remove a blank line to satisfy linter
  * 9c248aa14c validate return opt, remove default.
  * 8bb37f9fe7 specify allowed types and default for ”returner”
  * 11863a4be8 add examples of default minion returners
  * e7c6012655 add support for default returners using return
• PR #38342: (scthi) Bugfix ext pillar nodegroups @ 2016-12-22 16:47:42 UTC
  - bbc149c67f Merge pull request #38342 from scthi/bugfix-ext-pillar-nodegroups
  - dba315c4b6 ext-pillar nodegroups works for all minions now.

• PR #38403: (terminalmage) git_pillar: Document the transition from env to saltenv in the jinja context @ 2016-12-22 16:34:48 UTC
  - 453476d982 Merge pull request #38403 from terminalmage/document-saltenv
  - 0a72e0f0be git_pillar: Document the transition from env to saltenv in the jinja context

• ISSUE #38253: (gmacon) There was no error installing package 'setuptools' although it does not show when calling 'pip.freeze'. (refs: #38354)

• PR #38354: (gmacon) Use --all when calling pip.py @ 2016-12-20 20:40:21 UTC
  - 12436efb54 Merge pull request #38354 from gmacon/pip-freeze-all
  - dca24b270e Use --all when calling pip.py

• PR #38348: (rallytime) Update autodoc topics for new modules added in 2016.11 @ 2016-12-20 20:36:20 UTC
  - 68430b1fa6 Merge pull request #38348 from rallytime/mod-docs-2016.11
  - b31c2412ca Add __iter__ and next options to doc/conf.py
  - b8c16094c4 Revert "Move import/error messaging logic for snapper module into __virtual__()"
  - 640db5b5ac Move import/error messaging logic for snapper module into __virtual__()
  - 366271f459 Add snapper to state index doc module list
  - 135d254c80 Remove netapi autodoc files: they should not be added as their doc structure is different
  - 0006139aca Update autodoc topics for new modules added in 2016.11

• PR #38377: (DmitryKuzmenko) Implementation and docs for Consul key-value store plugin for minion data cache. @ 2016-12-20 20:36:02 UTC
  - 6ee7b2bae7 Merge pull request #38377 from DSRCorporation/features/consul_cache
  - 6fb4430ae3 Configuration options and documentation for Consul data cache plugin.
  - dad748f57a Data cache plugin configuration documentation.
  - c7209cd90c Consul data cache plugin.

• PR #38373: (rallytime) Back-port #38212 to 2016.11 @ 2016-12-20 20:35:09 UTC
  - PR #38212: (disaster123) ZMQ: add an option for zmq.BACKLOG to salt master (zmq_backlog) (refs: #38373)
  - f6d1b559bc Merge pull request #38372 from rallytime/bp-38212
  - 52fc6dac0 ZMQ: add an option for zmq.BACKLOG to salt master (zmq_backlog)

• PR #38374: (mirceaulinic) NAPALM proxy module: Fix optional_args key issue @ 2016-12-20 20:34:59 UTC
  - 69c3f19fc1 Merge pull request #38374 from cloudflare/FIX-NAPALM-PROXY
  - 44169315d8 Fix optional_args key issue

• ISSUE #38048: (ezh) [2016.11.0] Salt-cloud throws TypeError exception (refs: #38073)

• PR #38073: (ezh) 2016.11 @ 2016-12-20 14:51:11 UTC
  - 530f495955 Merge pull request #38073 from doublescoring/2016.11
- 42d3d26f28 [38073] Fix test assertion
- 9b37ead913 Fix broken os.write without string.encode

- PR #38344: (bbinet) Fix influxdb_database.present state @ 2016-12-20 13:57:45 UTC
  - 67908d5aba Merge pull request #38344 from bbinet/fix-influx-createdb
  - c6b075d6f4 Fix influxdb_database.present state

- PR #38358: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2016-12-20 00:11:48 UTC
  - 04d6898958 Merge pull request #38358 from rallytime/merge-2016.11
  - c6e191ad0d Remove doc markup references from 2016.11 branch
  - 513058945c Merge branch '2016.3' into '2016.11'
  - 09d9c992 Merge pull request #38288 from terminalmage/archive-extracted-local-source-2016.3
    - 845e3d075 Update tests to reflect change in cache behavior
    - 5a08c7c0a archive.extracted: don’t try to cache local sources (2016.3 branch)
  - bf37667f8a Merge pull request #38312 from cro/proxy_config_in_cfg
    - 2006c4000e Typo
    - 689d95b10f Backport feature allowing proxy config to live in pillar OR /etc/salt/proxy.
  - c83db5a785 Merge pull request #38230 from rallytime/cleanup-doc-refs
    - 82978cb7a0 Don’t check the doc/conf.py file for doc markup refs
    - 770e732d76 Add a unit test to search for new doc markup refs
    - 5c42a361a0 Remove ".doc:" references from all doc/topics/installation/* files
    - 23bce1c929 Remove ".doc:" references from all doc/topics/releases/* files
    - 4aafa41d22 Remove ".doc:" references from a bunch of doc/* files
    - 02bf67912c Remove more ".doc:" references from doc/* files
    - 6e32267d0c Remove ".doc:" references in salt/* files
  - PR #38285: (terminalmage) archive.extracted: don’t try to cache local sources

- PR #37947: (vutny) Fix salt-minion initscript for RHEL5 (SysV) to pick up proper python version @ 2016-12-19 21:03:50 UTC
  - 13414949e3 Merge pull request #37947 from vutny/fix-rhel5-minion-init
  - c94e798b8a SysV init script for rpm: get and show unique PIDs only
  - 8ff68c4128 Fix initscript for RHEL5 (SysV) to pick up proper python version

- PR #38106: (techhat) "test" is not necessarily in opts, for thorium @ 2016-12-19 14:40:32 UTC
  - 4d072ca689 Merge pull request #38106 from techhat/stateget
  - 5edc16f606 "test" is not necessarily in opts, for thoriumget

- PR #38333: (amendlik) Suppress errors when checking if an alternative exists @ 2016-12-19 13:40:49 UTC
  - a01fade604 Merge pull request #38333 from amendlik/states-alternatives
  - 8bfc5b5cd5 Adjust alternatives test for updated error message
  - 09dee3c611 Suppress errors when checking if an alternative exists
• **PR #38340**: (ewapptus) Backport PR #38251: Fixed nested orchestrate not respecting failures @ 2016-12-19 13:31:16 UTC
  - **PR #38251**: (ewapptus) Fixed nested orchestrate not respecting failures (refs: #38340)
  - 15d3b476e9 Merge pull request #38340 from ewapptus/bp-38251
  - 266e0a465c Fixed nested orchestrate not respecting failures

• **PR #38229**: (mcalmer) provide kwargs of sls_build to dockerng.create @ 2016-12-18 13:13:10 UTC
  - 888eb412c9 Merge pull request #38229 from mcalmer/dockerng-sls_build-kwargs
  - e7292fabb7 make it explicit that we want to delete these keys
  - 4c710139b5 use default values for pop() to prevent KeyError raised
  - 455c18325c provide kwargs to dockerng.create to provide all features to sls_build as well

• **ISSUE #36204**: (stanvarlamov) Salt-Cloud: salt.runners.cloud.createexitswithTrueonPythonprocess(ec2.py) exception (refs: #37333)

• **PR #38309**: (ewapptus) Backport PR #37333: Fixed state.salt.runner() reporting success on exceptions @ 2016-12-18 12:39:53 UTC
  - **PR #37333**: (benediktwerner) Fixed state.salt.runner() reporting success on exceptions (refs: #38309)
  - d2ce9c3e71 Merge pull request #38309 from ewapptus/bp-37333
  - a2b1259671 Fixed display of errors
  - 14a39f914e Fixed state.salt.runner return value on exceptions

• **PR #38323**: (rallytime) Update the Cloud Provider Specifics links in cloud docs @ 2016-12-18 12:30:49 UTC
  - ebb9f6cbbc Merge pull request #38323 from rallytime/update-cloud-provider-links
  - 022caf23e9 Update the Cloud Provider Specifics links in cloud docs

• **PR #38324**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2016-12-18 12:30:26 UTC
  - 5bd7471e30 Merge pull request #38324 from rallytime/merge-2016.11
  - 5940db3bf Merge branch '2016.3' into '2016.11'
    - 6367ca7d2a Add nick to args for create_multi (#38281)
    - 235682b1e6 Merge pull request #38313 from dragon788/2016.3-chocolatey-fix
      - 1f5fc17551 Use machine readable output for list
      - cdbd2fbe3c Added limit-output to eliminate false packages
    - 9e78dce80e Merge pull request #38279 from rallytime/fixed-38174
      - 4a62d01577 Add docs for syndic_wait setting

• **ISSUE #38246**: (martintamare) Windows Minion unable to start via nssm (refs: #38247)

• **PR #38325**: (rallytime) Back-port #38247 to 2016.11 @ 2016-12-18 12:28:41 UTC
  - **PR #38247**: (martintamare) fix(win_function): handle other language (refs: #38325)
  - 8352d2f73 Merge pull request #38247 from rallytime/bp-38247
  - 4b6c5438e3 fix(win_functions): syntax
  - e602f17e3d fix(win_function): handle other language

• **ISSUE #30195**: (Vaelatern) Add Void Linux support in Salt (refs: #31262, #38326)
• **PR #38326**: (yopito) fix runit init support (grain init) in 2016.11 @ 2016-12-18 12:07:25 UTC
  - **PR #31262**: (Vaelatern) Add support for Void Linux (refs: #38326)
  - 54a2bb95de Merge pull request #38326 from yopito/fix-runit-init-support
  - 25b91bb686 fix detection of runit as init system (grain init)
  - **PR #38322**: (rallytime) Add azurearm module to doc index

• **PR #38305**: (dereckson) Avoid normalization call for normalized mode value @ 2016-12-16 17:31:25 UTC
  - 1e4f299e7d Merge pull request #38305 from dereckson/fix-mode-extraneous-normalization
  - 573ac3565e Avoid normalization call for normalized mode value
  - **PR #38302**: (rallytime) Fix detection of runit as init system (grain init)

• **ISSUE #37966**: (Cybolic) salt-cloud EC2 instance can't be initiated (refs: #37967)

• **PR #38298**: (rallytime) Back-port #37967 to 2016.11 @ 2016-12-16 15:20:04 UTC
  - **PR #37967**: (Cybolic) Fixed faulty logic preventing instance initialisation. (refs: #38298)
  - 3cf0135d50 Merge pull request #38298 from rallytime/bp-37967
  - 42d367fb3d Fixed faulty logic preventing instance initialisation.

• **ISSUE #38070**: (ezh) [2016.11.0] Salt-cloud throws UnicodeDecodeError exception (refs: #38076)

• **PR #38076**: (ezh) Fix decoding of broken string from remote sources @ 2016-12-15 19:05:25 UTC
  - f4f0036f30 Merge pull request #38076 from doublescoring/fix-2016.11-38070
  - 70c8db5489 Fix decoding of broken string from remote sources

• **PR #38278**: (rallytime) Back-port #38207 to 2016.11 @ 2016-12-15 18:09:27 UTC
  - **PR #38207**: (tsaridas) remove empty strings from list but not ones with one empty space char (refs: #38278)
  - **PR #38188**: (tsaridas) fix for push_dir in different OS (refs: #38203, #38207)
  - 2ccab22c19 Merge pull request #38278 from rallytime/bp-38207
  - 5e8bf71d8 python3 compatibility and fix pylint
  - e0df047000 remove empty strings from list but not ones with one empty space char

• **PR #38277**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2016-12-15 18:09:10 UTC
  - a748e42a8 Merge pull request #38277 from rallytime/merge-2016.11
  - 49a3355915 Merge branch '2016.3' into '2016.11'
  - fc9e1def35 Merge pull request #38248 from meaksh/salt-api-successfully-close-child-processes
    - ee6eaeh855 Successfully exit of salt-api child processes when SIGTERM.
  - 3c718ed35e Merge pull request #38254 from terminalmage/check-pillarenv
    - fa9ad311c6 Also check if pillarenv is in opts
  - 6b906c38f [2016.3] Bump latest release version to 2016.11.1 (#38256)

• **ISSUE #38231**: (tjuup) Typo: salt-key deleteed (refs: #38232)

• **PR #38232**: (rallytime) Strip final ‘e’ in key cmd to correct ”deleteed” misspelling @ 2016-12-15 10:38:49 UTC
  - 0af343e71f Merge pull request #38232 from rallytime/fixed-38231
- 26e1ee3650 Strip final ‘e’ in key cmd to correct “deleteed” misspelling

- **ISSUE #38200**: (sebw) selinux.mode doesn’t return any output and doesn’t persist (refs: #38236)

- **PR #38236**: (gtmanfred) SELINUXTYPE should not be changed @ 2016-12-15 10:37:06 UTC
  - 6c1ca9dae7 Merge pull request #38236 from gtmanfred/2016.11
  - d1b070c894 clean up selinux unit test
  - 96eadb4939 SELINUXTYPE should not be changed

- **ISSUE #38228**: (vquiering) archive.extracted with options and user/group (refs: #38262)

- **PR #38262**: (terminalmage) Fix archive.extracted when --strip or --strip-components is in the options @ 2016-12-15 08:57:18 UTC
  - fd32dc3e9b Merge pull request #38262 from terminalmage/issue38228
  - 6442f8a7b5 Add tests for --strip/--strip-components
  - c502e68f12 Detect --strip/--strip-components in tar options and handle properly
  - e95770594d Add strip_components arg to archive.list

- **PR #38264**: (mirceaulinic) Port #37862 into 2016.11 @ 2016-12-15 08:51:20 UTC
  - **PR #37862**: (mirceaulinic) [2016.11.1] Docstring fixes and new features for napalm_network (refs: #38264)
  - b232bd8ce8 Merge pull request #38264 from cloudflare/PORT-37862
  - 28bba73151 Import from napalm_base instead of napalm
  - 0a675af4c0 Vice-versa docstring
  - 09c50176e2 More docfix
  - 215b8f38e2 Lint cleanup

- **PR #38260**: (rallytime) Add 2016.11.2 release notes

- **PR #38257**: (rallytime) [2016.11] Bump latest release version to 2016.11.1

- **PR #38233**: (terminalmage) Correct an inaccurate warning when top_file_merging_strategy == merge_all

- **PR #38234**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2016-12-13 18:28:02 UTC
  - ba62fcf2ec Merge pull request #38234 from rallytime/merge-2016.11
  - 6a327d1367 Merge branch '2016.3' into '2016.11'
  - 004e46afe7 Merge pull request #38198 from vutny/unit-tests-require-libcloud-boto3
    - a6098b1a Remove note about SaltTesting installation, now it is in the requirements
    - 004bf113e Add missing requirements for running unit tests: libcloud and boto3
  - 9d497bc74c Merge pull request #38213 from rallytime/skip-tls-test
    - bdb807fc7c Skip test_cert_info tls unit test on pyOpenSSL upstream errors
  - 203109dd17 Merge pull request #38224 from whiteinge/cors-options-unauthed
    - de4d3227ab Allow CORS OPTIONS requests to be unauthenticated
  - 721a5feccd Merge pull request #38223 from whiteinge/salt-api-root_dirs
    - bbf390c0e Add root_dir to salt-api file paths
**PR #38205**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2016-12-12 18:13:18 UTC
- 7ead1ed336 Merge pull request #38205 from rallytime/merge-2016.11
- e3f97cf71 Merge branch '2016.3' into '2016.11'
- 70f7d2ad6 Merge pull request #38191 from terminalmage/issue38162
  * 1ae543a98a Clarify the fact that git_pillar.update does not fast-forward
- 28171cbfc5 Merge pull request #38194 from vutny/integration-test-requirements-doc
  * e9f419ff64 Document the requirements for running ZeroMQ-based integration tests
- a4ef037ab1 Merge pull request #38185 from rallytime/bp-38181
- 609f81454 Merge pull request #38203 from rallytime/bp-38188
  - 669409d681 Merge pull request #38188 from rallytime/bp-38188
  - 50d3200b12 removing not needed join
  - 7af70e1e7 fix for push_dir in different OS

**PR #38203**: (rallytime) Back-port #38188 to 2016.11 @ 2016-12-12 17:48:51 UTC
- PR #38188: (tsaridas) fix for push_dir in different OS (refs: #38203, #38207)
- 669409d681 Merge pull request #38203 from rallytime/bp-38188
- 50d3200b12 removing not needed join
- 7af70e1e7 fix for push_dir in different OS

### 30.2.55 Salt 2016.11.3 Release Notes

Version 2016.11.3 is a bugfix release for 2016.11.0.

**Statistics**

- Total Merges: 137
- Total Issue References: 49
- Total PR References: 130
- Contributors: 47 (Ch3LL, DmitryKuzmenko, MTecknology, The-Loeki, UtahDave, anlutro, arthur, axmetishe, bailsman, bobrik, cachedout, clinta, corywright, cro, dmaziuk, dmitrievav, dmurphy18, eliasp, eradman, ezh, gtmanfred, hu-dabao, hujunya, isbn, jak3kaj, janhorstmann, joe-niland, kevinanderson1, kstreee, l2ol33rt, lomeroe, mcalmer, meaksh, mirceaulinic, morganwillcock, nasenbaer13, nicholasmhughes, rallytime, sakateka, sergeizv, sjorge, techhat, terminalmage, thatch45, toanju, twangboy, vutny)

**Changelog for v2016.11.2..v2016.11.3**

*Generated at: 2018-05-27 19:39:56 UTC*

- **PR #39536**: (twangboy) Namespace 'status' functions in 'win_status' @ 2017-02-21 23:45:31 UTC
  - PR #39005: (cro) Ungate the status.py module and raise unsupported errors in functions not executable on Windows. (refs: #39536)
  - 40f72db53e Merge pull request #39536 from twangboy/fix_win_status
  - d5453e2f9e Remove unused import (lint)
  - 837c32673 Remove list2cmdline
  - c258cb3f73 Streamline wmic command returns for easier parsing
- 6d2cf8171e Fix 'ping_master' function
- d946d10597 Namespace 'status' functions in 'win_status'

**PR #39534:** (rallytime) Fix breakage in aptpkg and dpkg execution modules @ 2017-02-21 20:31:15 UTC
- PR #39418: (anlutro) Allow aptpkg.info_installed on package names that aren't installed (refs: #39534)
- dc8f578447 Merge pull request #39534 from rallytime/fix-pkg-function-specs
- d34a8fe9dc Fix breakage in aptpkg and dpkg execution modules

**ISSUE #34712:** (richardscollin) Salt Test Suite Error - develop (refs: #37366)
- PR #39521: (vutny) Upgrade SaltTesting to run test suite for 2016.11 and add SaltPyLint
- PR #37366: (eradman) dev_python*.txt: use current SaltTesting and SaltPyLint modules (refs: #39521)

**PR #39370:** (twangboy) Gate win_osinfo and winservice @ 2017-02-17 23:53:58 UTC
- e4c71683d9 Merge pull request #39370 from twangboy/gate_win_utils
- 167cdb3447 Gate windows specific imports, add __virtual__
- e67387deb7 Add option to return a Non instantiated class
- 315b0cc105 Clarify return value for win_osinfo
- 994314ed3d Fix more docs
- 2be3cbf49 Fix some docs
- 4103563ee1 Merge branch 'gate_win_utils' of https://github.com/twangboy/salt into gate_win_utils
  - 24c1bd079d Remove extra newlines
- 82a86ced55 Add helper function for winservice
- 0051b5a5e2 Put the win_osinfo classes in a helper function
- 4e08534877 Gate win_osinfo and winservice better

**PR #39486:** (twangboy) Remove orphaned function list_configurable_policies @ 2017-02-17 22:21:50 UTC
- a3e71b6cce Merge pull request #39486 from twangboy/win_remove_orphaned
- 1328055c4d Remove orphaned function list_configurable_policies

**PR #39418:** (anlutro) Allow aptpkg.info_installed on package names that aren't installed (refs: #39534) @ 2017-02-17 18:34:19 UTC
- 87b2699c80 Merge pull request #39418 from alprs/fix-aptpkg_info_nonexistent_pkg
- 246bf1e938 add failhard argument to various apt pkg functions

**PR #39438:** (mirceaulinic) file.get_managed: refetch source when file hashsum is changed @ 2017-02-17 17:58:29 UTC
- e816d6c23e Merge pull request #39438 from cloudflare/fix_39422
- 8453800639 file.get_managed: refetch cached file when hashsum chnaged

**ISSUE #39203:** (dmaziuk) salt.users gecos field (refs: #39432)

**PR #39432:** (dmaziuk) Quick and dirty fix for GECOS fields with more than 3 commas @ 2017-02-17 17:57:30 UTC
- a5fe8f0fa6 Merge pull request #39432 from dmaziuk/issue39203
- 41c046308c Remove #
- 4f877c6b6f Quick and dirty fix for GECOS fields with more than 3 commas

**PR #39484:** (corywright) The Reactor docs should use pillar='{}' instead of 'pillar={}' @ 2017-02-17 17:50:57 UTC

- 3665229a5a Merge pull request #39484 from corywright/fixed-reactor-docs-pillar-keyword-args
- cc90d0d53f The Reactor docs should use pillar='{}' instead of 'pillar={}'

**PR #39456:** (twangboy) Add salt icon to buildenv directory @ 2017-02-16 22:47:58 UTC

- 2e3a9c5e58 Merge pull request #39456 from twangboy/win_fix_icon
- 8dd915dae4 Add salt icon to buildenv directory

**PR #39462:** (twangboy) Use url_path instead of url_data.path @ 2017-02-16 22:44:18 UTC

- 63ade03484 Merge pull request #39462 from twangboy/win_fix_fileclient
- a96bc13133 Use url_path instead of url_data.path

**PR #39458:** (rallytime) Fix more warnings in doc build @ 2017-02-16 21:45:52 UTC

- e9b034f02f Merge pull request #39458 from rallytime/fixed-up-more-doc-build-warnings
- e698bc3508 Fix more warnings in doc build

**PR #39437:** (sakateka) Fixes about saltfile @ 2017-02-16 20:32:15 UTC

- e4f8c2bb00 Merge pull request #39437 from sakateka/fixed-about-saltfile
- ab6852d7a less pylint: salt/utils/parsers.py
- 9e7d9dce78 Revert "pylint: salt/utils/parsers.py"
- f3f129c8f1 document ~/.salt/Saltfile
- 33f361b1e pylint: salt/utils/parsers.py
- 0f36e10e7d expand config_dir and '~//.salt/Saltfile' as last resort
- **PR #39451:** (Ch3LL) add 2016.11.3 changelog to release notes

**ISSUE #38032:** (meggiebot) Add missing Carbon docs (refs: #39448)

**PR #39448:** (gtmanfred) Add release notes for cisco proxy minions added in Carbon @ 2017-02-16 17:29:48 UTC

- 8e2cbd2307 Merge pull request #39448 from gtmanfred/2016.11
- 3172e88700 Add release notes for cisco proxy minions added in Carbon

**PR #39428:** (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-02-16 00:01:15 UTC

- 07904b719 Merge pull request #39428 from rallytime/merge-2016.11
- 2ac1b88ac9 Change path value from a tuple to a list
- 6d78adbf08 Merge branch '2016.3' into '2016.11'
  * 4ff13ac8b8 salt.fileserver.roots: Fix regression in symlink_list (#39409)
  * 8b8ab8e8e8 Merge pull request #39362 from dincamihai/cp-push-test-2016.3
    * 91383c5a19 Add cp.push test
  * 4b726f955b Merge pull request #39380 from joe-niland/quote-numeric-usernames
    * c2edff4d4f Quote numeric user names so pwd.getpwnam handles them properly
  * 116d32df9 Merge pull request #39400 from meaksh/2016.3-fix-local-cache-issue
    * e7e559ef5c Prevents 'OSerror' exception in case path doesn't exist
• 6c854da1d4 Merge pull request #39300 from terminalmage/loader-optimization
  • d3e5d1525e Replace more usage of str.format in the loader
• 5286b5ff1b Merge pull request #39337 from terminalmage/issue34428
  • a7d2135dc2 Don't re-walk the roots fileserver in symlink_list()
• ce781deeb5 Merge pull request #39339 from cro/pillar_filetree_doc
  • 410810cea2 Clarification on external pillar usage.
• fa3014393c Document the upstream RedHat bug with their pygit2 package (#39316)

• ISSUE #39360: (bbinet) file.symlink should not try to set ownership to root:root (refs: #39364)
• PR #39429: (rallytime) Back-port #39364 to 2016.11 @ 2017-02-15 21:27:21 UTC
  • PR #39364: (gtmanfred) set default user variable to the user cmd runs as (refs: #39429)
  • 54a572e50c Merge pull request #39429 from rallytime/bp-39364
  • 157f4dcd9 set default user variable to the user cmd runs as
• PR #39424: (twangboy) Fix problem with too many connection attempts in Windows @ 2017-02-15 18:51:35 UTC
  • 881ebf2e93 Merge pull request #39424 from twangboy/win_fix_dos
  • d3f7dd7f50 Add sleep to eval_master
• ISSUE #30561: (jfindlay) salt-ssh fails with IPv6 address (refs: #39419, #38831)
• ISSUE #22984: (tomasfejfar) salt-ssh problem possibly related to ipv6 (refs: #39419, #38831)
• PR #39419: (The-Loeki) Backport Salt-SSH IPv6 fixes to 2016.11 @ 2017-02-15 17:33:13 UTC
  • PR #38877: (The-Loeki) Salt-SSH client: Don't overwrite self.host w/IPv6 brackets (refs: #39419)
  • PR #38831: (The-Loeki) Salt-SSH deal with raw IPv6 addresses (refs: #39419, #38877)
  • 47872355a8 Merge pull request #39419 from The-Loeki/bp-ssh-ipv6
  • 4fc5626f16 Don't overwrite self.host w/IPv6 brackets
  • dd123468b Salt-SSH deal with raw IPv6 addresses
• PR #39379: (terminalmage) win_pkg: remove all installed versions when no explicit version passed @ 2017-02-14 18:41:28 UTC
  • 878946d0f8 Merge pull request #39379 from terminalmage/issue34821
  • fd9ab8e4e3 Remove extra newline
  • 5871825b9e win_pkg: remove all installed versions when no explicit version passed
• PR #39392: (anlutro) Make sure OrderedDict order is preserved in nested output @ 2017-02-14 17:50:15 UTC
  • caffef8f8 Merge pull request #39392 from alprs/fix-nested_output_ordered_dict
  • 625a770a23 make sure OrderedDict order is preserved in output
• PR #39378: (dmurphy18) Update make_repo in debbuild.py execution module to utilize timeout @ 2017-02-14 17:10:15 UTC
  • f2459e3ce8 Merge pull request #39378 from dmurphy18/deb_pkg_fix
  • 4bd47c18a Updated all make_repo loops to use timeout value for retries
• ISSUE #39358: (Kimamisa) Backport the RDS fix in Carbon (refs: #39369)
• PR #39369: (rallytime) Back-port #37338 to 2016.11 @ 2017-02-13 21:41:19 UTC
  - PR #37338: (bailsman) Fix wait_status in boto_rds.create() (refs: #39369)
  - 99554d9d72 Merge pull request #39369 from rallytime/bp-37338
  - 2e7fe8e37 Fix wait_status in boto_rds.create()
• PR #39303: (kstreee) Removes a redundant test case after removed 'batch' in 'netapi'. @ 2017-02-13 19:55:46 UTC
  - 03a8b81b5a Merge pull request #39303 from kstreee/testcase-rm-batch-in-netapi
  - 51972d0724 Removes a redundant test case after removed 'batch' in 'netapi'.
• PR #39315: (Ch3LL) improve salt-run salt.cmd test @ 2017-02-13 19:00:14 UTC
  - 60640f77d7 Merge pull request #39315 from Ch3LL/fix_run_salt_test
  - b3cb5a408 improve salt-run salt.cmd test
• ISSUE #39243: (morganwillcock) win_system.reboot: can return True without rebooting (refs: #39311)
• PR #39311: (morganwillcock) win_system: return False from a skipped reboot @ 2017-02-13 18:59:11 UTC
  - 2ca63a93cd Merge pull request #39311 from morganwillcock/skip-reboot
  - 0f3abb613d Clarify success for shutdown function
  - dcb4d05275 win_system: return False from a skipped reboot
• PR #39346: (joe-niland) Ignore non-HTTP IIS bindings @ 2017-02-13 18:18:36 UTC
  - 082105fa84 Merge pull request #39346 from joe-niland/handle-iis-bindings
  - 8d5a6db0ae win_iis module: list_sites - when retrieving bindings, ignore bindings whose protocols do not have host headers
• ISSUE #39321: (mgresser) Grain matching failing where grain value is an INT (refs: #39361)
• PR #39361: (gtmanfred) make sure both variables are strings. @ 2017-02-13 17:20:17 UTC
  - a3a9a8e1ed Merge pull request #39361 from gtmanfred/2016.11
  - ee2275ad67 make sure both variables are strings.
  - PR #39341: (eliasp) Add creation/configuration of Salt PKI dirs to hacking docs
• PR #39317: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-02-10 23:07:32 UTC
  - ce1f01f81a Merge pull request #39317 from rallytime/merge-2016.11
  - c1df446b7a Merge branch '2016.3' into '2016.11'
  - 9de559ff4e Merge pull request #39313 from rallytime/merge-2016.3
    * 0b8ddd1f12b Merge branch '2015.8' into '2016.3'
    * fc551bfc5d Merge pull request #39293 from sergeizv/grammar-fix
      * 70f2b58d63 Rewrap paragraph
      * e6ab5178ea Grammar fix
    * 8a1b45632a Merge pull request #39295 from sergeizv/typo-fix
      * 5d9f36d58d Fix typo
    * cfaaafec34 Merge pull request #39296 from sergeizv/whitespace-fix
      * 1d4c1dc140 Whitespace fix in docs Makefile
• 0b4dcf4a47 Merge pull request #39294 from sergeizv/fix-link
  - 04bde6eed2 Fix link in proxyminion guide
  - dd3ca0ecb0 Fix #38595 - Unexpected error log from redis retuner in master's log (#39299)
  - f16027d30e Merge pull request #39297 from cro/pg_returner_docs
    - 28bac649ae TYPO
    - 19fedcdd23 Add doc to recommend pgjsonb for master job caches
  - 77e50ed8b7 Merge pull request #39286 from terminalmage/fix-pillarenv-precedence
    - 3cb9833e57 Allow minion/CLI saltenv/pillarenv to override master when compiling pillar
  - 5244016ca Merge pull request #39221 from lvg01/fix-bug-39220
    - e8a41d6341 Removes to early content stripping (stripping is allready done when needed with ident:true), fixes #39220
    - a4b169e0bd Fixed wrong logic, fixes #39220
  - 5a270270c57 Add warning for Dulwich removal (#39280)
• ISSUE #38451: (ezh) 2016.11 file.replace has multiple errors under python 3 (refs: #38464)
• PR #38464: (ezh) [38451] Fix file.replace 2016.11 @ 2017-02-09 23:07:49 UTC
  - c3c621aab0 Merge pull request #38464 from doublescoring/fix-2016.11-38451
  - 81f0337338 [38451] Fix few bugs after review
  - 1bdab253ad [38451] Fix pylint W1699(incompatible-py3-code)
  - 3bfc6547da [38451] Fix file.replace to make it suitable to python 3
• PR #39291: (terminalmage) Add note about using saltenv jinja var in pillar top files @ 2017-02-09 21:43:50 UTC
  - 6365211a6f Merge pull request #39291 from terminalmage/pillarenv-docs
  - fbd551e069 Add note about using saltenv jinja var in pillar top files
• PR #39281: (twangboy) Require VCRedist on 2008R2 and below instead of 2008 @ 2017-02-09 17:59:57 UTC
  - a496ecca16 Merge pull request #39281 from twangboy/win_installer
  - ef5078729a Capitalize the 'r' for 2008R2
  - 1b6bd634ac Require VCRedist on 2008R2 and below instead of 2008
• PR #39264: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-02-09 17:10:14 UTC
  - db6140aa83 Merge pull request #39264 from rallytime/merge-2016.11
  - a9c2c106c1 Pylint fix
  - fbaad99db2 Merge branch '2016.3' into '2016.11'
    - 1b9217d636 Update jsonschema tests to reflect change in jsonschema 2.6.0 (#39260)
    - c1d16cc3d0 Better handling of enabled/disabled arguments in pkgrepo.managed (#39251)
    - 8e88f71dd9 Merge pull request #39227 from terminalmage/loader-optimization
      - c750662946 Loader optimization
    - be89b297f8 Merge pull request #39228 from gtmanfred/2016.3
      - afee047b08 default to utf8 encoding if not specified

30.2. Previous Releases 2465
2. d9b0671dbd Merge pull request #39231 from terminalmage/clarify-jenkins-depends
   - ad1b1255f2 Add clarification for jenkins execution module
3. ddcff89a84 Merge pull request #39232 from terminalmage/issue21342
   - c88896c277 Avoid recursion in s3/svn ext_pillars
4. ef4e437bbc Fix the win_ip_test failures (#39230)
5. df5f934c34 Merge pull request #39199 from rallytime/bp-39170
   - c129905310 Added missing source_hash_name argument in get_managed function Additional fix to #33187 Customer was still seeing errors, this should now work. Tested with 2015.8.13 and 2016.11.2
6. 2621c119fd Merge pull request #39206 from cachedout/issue_issue_37174
   - be31e0559c Ignore empty dicts in highstate outpunner
7. d440452ea Merge pull request #39209 from terminalmage/sorted-envs
   - e6dda4a625 Sort the return list from the fileserver.envs runner
8. 7bed68743e [2016.3] Pylint fix (#39202)
9. ab76054127 Merge pull request #39197 from cachedout/pr-38793
   - f3d35fb5c6 Lint fixes
   - 62f25b78d Fix for #38697

- ISSUE #39269: (alexharrington) Remount forced with lizardfs fuse filesystem due to device missmatch (refs: #39276)
- ISSUE #39106: (carsten-AEI) CVMFS fuse mount gets remounted every time (refs: #39276)
- PR #39276: (gtmanfred) _device_mismatch_ignored will never be True @ 2017-02-09 17:05:28 UTC
  - 304eb19b18 Merge pull request #39276 from gtmanfred/2016.11
  - 6635a9fd3b _device_mismatch_ignored will never be True
- PR #39238: (dmurphy18) Update disk fstype, inodeusage, percent and mount.active functions for AIX support @ 2017-02-08 21:53:32 UTC
  - 7611698474 Merge pull request #39238 from dmurphy18/fix_aix_disk_mount
  - a8a519c493 Removed space for pylint
  - 8fa0ffafa27 Updates due to code review comments
  - 97c59a8d1c Updated mount functionality for active on AIX
  - 1a32b2cc89 Updated disk functionality for fstype, inodeusage and percent on AIX
- PR #39233: (rallytime) Various doc updates to fix warnings in doc build @ 2017-02-08 19:29:53 UTC
  - 99bfa7dfee Merge pull request #39233 from rallytime/fixup-more-doc-build-warnings
  - 2f74dcf685 Various doc updates to fix warnings in doc build
- PR #39237: (axmetishe) fix rhs subnet group creation @ 2017-02-08 19:04:31 UTC
  - 59e927b520 Merge pull request #39237 from axmetishe/2016.11
  - 6f4be38b69c fix rhs subnet group creation
  - PR #39234: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11
- **PR #39225**: (terminalmage) Put legacy git_pillar on a deprecation path for Oxygen

- **ISSUE #39078**: (morganwillcock) setup.py: cannot install without setting global options (refs: #39180)

- **PR #39180**: (morganwillcock) setup.py: Remove global options from install command @ 2017-02-07 16:20:49 UTC
  - 19c3d90a32 Merge pull request #39180 from morganwillcock/setup
  - d7e0509a2 Remove global options from Install

- **PR #38863**: (hujunya) fix django auth not work @ 2017-02-07 15:43:00 UTC
  - a097bc861 Merge pull request #38863 from hujunya/fix_django_auth
  - 2a99ff46d3 check if django_auth_path has been in sys.path
  - 933ebf15d7 fix pylint violations
  - 6b5a7f4b64 fix django auth not work

- **PR #39198**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-02-06 21:01:56 UTC
  - c3e541e0a2 Merge pull request #39198 from rallytime/merge-2016.11
  - 7ea5f7f2f2 Merge branch '2016.3' into '2016.11'
    * fa45cbc359 Merge pull request #39166 from Ch3LL/fix_boto_ec2_docs
      * 90afs96331 fix boto ec2 module create_image doc
    * a40cb46249 Merge pull request #39173 from rallytime/restore-community-docs
      * 5aeddf42a0 Restore "Salt Community" doc section

- **ISSUE #39059**: (mirceaulinic) KeyError: 'multiprocessing' in the master logs (proxy minions) (refs: #39063)

- **PR #39063**: (mirceaulinic) Avoid KeyError: 'multiprocessing' in the master logs @ 2017-02-06 19:37:35 UTC
  - 2a85d73f59 Merge pull request #39063 from cloudflare/ISS-39059
  - 7118eff034 Merge pull request #39063 from Ch3LL/fix_boto_ec2_docs

- **ISSUE #38782**: (lomeroe) win_lgpo unable to find some Administrative Template policies (refs: #38783, #39083, #39090)

- **ISSUE #38761**: (DaveOHenry) Cannot apply state that contains lgpo.set (refs: #39083, #39088)

- **ISSUE #38689**: (lomeroe) win_lgpo state fails to set single policy due to case sensitive check (refs: #39083, #39084, #38690)

- **ISSUE #38100**: (skjaro) Problem with win_lgpo.py in salt 2016.11.0 (refs: #39083, #39089, #38779)

- **ISSUE #21485**: (lorendgordon) Feature Request: Manage Windows Local Security Policy Settings (refs: #36336)

- **PR #39083**: (lomeroe) Backport #36336 to 2016.11 @ 2017-02-06 18:50:52 UTC
  - PR #36336: (lomeroe) add additional static policies to computer configuration policy class (refs: #39083)
  - 91c25bd651 Merge pull request #39083 from lomeroe/bp-36336
  - 03e5319124 Merge branch '2016.11' into bp-36336
  - 981ec89a4d update command line example to correct policy name
  - e2574da0b8 Fix/Add documentation, 80 char line lengths
  - 5e94a30a34 add additional static policies to computer configuration policy class duplicate code cleanup/misc code efficiencies
• PR #39153: (nicholasmhughes) Fix selinux.mode state config file handling @ 2017-02-06 18:37:34 UTC
  - 30455079fe Merge pull request #39153 from nicholasmhughes/fix-selinux.mode-config-predictability
  - 8d8ba9c7d2 added the new getconfig function to the test
  - a6a24e1a1b Addressed edge case when attempting to set the config file to 'Disabled'. The state should only check the file, since the in-memory setting won't disappear until after reboot.
  - 6858658ccc2 The selinux.mode state only checked the current status of SELinux in memory (getenforce) when determining if changes needed to be made. The /etc/selinux/config file could have a different value, and it would not be changed. This commit enhances idempotency of the state in regards to both the in-memory and configuration file enforcement of SELinux.

• ISSUE #38081: (haraldrudell) x509 state or module cannot generate password protected private keys (refs: #39159)

• PR #39159: (clinta) Csr crl passphrase @ 2017-02-06 18:36:05 UTC
  - 7b5eb17cbe Merge pull request #39159 from clinta/csr-crl-passphrase
  - cf548ac717 Remove unnecessary pass
  - 4ebf7a3df4 Remove unnecessary pass statement
  - 6a8046970e fix csr bugs and pep8
  - 36dcf5f3da only overwrite if overwrite option is specified
  - 403000d375 recreate cert on bad password
  - 6497094ba7 passphrase for crl
  - 3ef809fb0f passphrase for csr

• PR #39162: (meaksh) Adding more function to Snapper module @ 2017-02-06 18:33:53 UTC
  - b240468525 Merge pull request #39162 from meaksh/snapper-module-improvements
  - f950732fa0 pylint fixes
  - aa29906e0 Removing extra spaces
  - 9d6a33f257 Adds 'snapper.create_config' unit tests
  - d38ed505f8 Adds 'snapper.modify_snapshots' unit tests
  - d5496ccc99 Adds 'snapper.delete_snapshots' unit tests
  - 3eeb6076b Snapper: Adding support for creating configurations
  - 041e54d42a Snapper: Adding support for snapshot metadata modification
  - eaf5de9dce Snapper: Adding support for deleting snapshots

• ISSUE #38370: (tjyang) Salt-Cloud: There was a query error: Required field "deviceChange" not provided (not @optional) (refs: #39171)

• PR #39171: (techhat) Raise an error for a disk size that is too small @ 2017-02-06 18:19:46 UTC
  - 6f9251ebed Merge pull request #39171 from techhat/issue38370
  - ec57a39c00 Typo
  - 2ed2932387 Clean up debug logs
  - 671282656a Raise an error for a disk size that is too small

• PR #39179: (mcalmer) fix error parsing @ 2017-02-06 17:57:00 UTC
- 036f36dc9b Merge pull request #39179 from mcalmer/fixedockerng-error-parsing
- 6750cc7d8e fix error parsing

- **PR #39189**: (morganwillcock) Fix NetBSD sockstat parsing @ 2017-02-06 17:28:08 UTC
  - 30f83156cb Merge pull request #39189 from morganwillcock/sockstat
  - 344d13e6f5 Fix NetBSD sockstat example
  - 64b693195c Fix NetBSD sockstat parsing

- **ISSUE #38003**: (morganwillcock) salt.runners.cache functions seem to ignore minion targeting parameter (refs: #39141)

- **PR #39141**: (UtahDave) Don't overwrite the minion_ids var that was passed @ 2017-02-03 20:56:25 UTC
  - 6a9704189f Merge pull request #39141 from UtahDave/fixed_cache_lookup_ZD1187
  - 0340614d155 return all minions' grains if no tgt
  - f833bf3a79 Don't overwrite the minion_ids var that was passed

- **PR #39164**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-02-03 17:57:07 UTC
  - d19cece71f Merge pull request #39164 from rallytime/merge-2016.11
  - 6504bb60b2 Merge branch '2016.3' into '2016.11'
    * 9de08af950 Apply fix from #38705 to 2016.3 branch (#39077)
    * da3053ea9b update vmware getting started doc (#39146)
    * e78ca0f575 Fixing a weird edge case when using salt syndics and targetting via pillar. Without this fix the master of masters ends up in an infinite loop since the data returned from the minions is differently structured than if a sync was not in use. (#39145)
    * cd8077ab81 Merge pull request #38804 from alexbleotu/root_dir_fix-2016.3-gh
      - b3b3d3b04a Add missing whiteline
      - c7715acd53 Merge pull request #3 from cro/ab_rootdirfix
      - e8cbafaf1 When running testsuite, salt.syspaths.ROOT_DIR is often empty.
      - b12dd44a26 Merge pull request #1 from cro/ab_rootdirfix
      - bff537aca Remove extra if statements (rstrip will check for the presence anyway).
      - 9be521b3468 Second attempt to fix prepending of root_dir to paths
    * 6ffeda3ee5 Clarify ipv6 option for minion and interface for master, closes #39118 (#39131)
    * 6469ea4e5 Don't abort pillar.get with merge=True if default is None (#39116)

- **PR #39152**: (twangboy) Remove files not needed by salt-minion @ 2017-02-03 17:11:11 UTC
  - 5f88a14317 Merge pull request #39152 from twangboy/win_installer
  - 5f88a14317 Fix problem deleting files
  - 452a2d44b4 Remove files not needed by salt-minion

- **ISSUE #38691**: (lomeroe) win_lgpo module throws a key error when run with return_not_configured=True (refs: #39085, #38666)
  - **PR #39085**: (lomeroe) Backport #38666 to 2016.11
  - **PR #38666**: (lomeroe) correct issue when running lgpo.get with return_not_configured=True (refs: #39085)

30.2. Previous Releases

2469
- PR #39086: (lomero) Backport #38165 to 2016.11
  - PR #38165: (lomero) have \_in\_range\_inclusive function attempt to convert a string to an i... (refs: #39086)

- **ISSUE** #38241: (frogunder) mine.get and salt-ssh gives error message (refs: #38970)

- PR #38970: (gtmanfred) when using local_cache we have to pass the list of minions @ 2017-02-02 19:24:39 UTC
  - 4ece641b65 Merge pull request #38970 from gtmanfred/2016.11
  - ebb9d3ec7 when using local_cache we have to pass the list of minions

- **ISSUE** #39110: (morganwillcock) archive.extracted: 2016.11.2 returns state failure for some zip formats, if already extracted (refs: #39128)
  - PR #39128: (terminalmage) Fix archive.list on Windows

- **ISSUE** saltstack/salt#36712: (dmitrievav) s3.put function does not create s3 bucket (refs: #36714)
  - PR #39133: (rallytime) Back-port #36714 to 2016.11
  - PR #36714: (dmitrievav) s3.put can't create s3 bucket (refs: #39133)

- **ISSUE** #38689: (lomero) win_lgpo state fails to set single policy due to case sensitive check (refs: #39083, #39084, #38690)
  - PR #39084: (lomero) Backport #38690 to 2016.11
  - PR #38690: (lomero) correct checking of policy_class to compare with lower() version of t... (refs: #39084)

- **ISSUE** #38100: (skjaro) Problem with win_lgpo.py in salt 2016.11.0 (refs: #39083, #39089, #38779)
  - PR #39089: (lomero) Backport #38779 to 2016.11
  - PR #38779: (lomero) win_lgpo handle errors when 'encoding="unicode"' exists in ADMX file (refs: #39089)

- **ISSUE** #38782: (lomero) win_lgpo unable to find some Administrative Template policies (refs: #38783, #39083, #39090)
  - PR #39090: (lomero) Backport #38783 to 2016.11
  - PR #38783: (lomero) Perform a "starts-with" search to match ADML text names (refs: #39090)

- **ISSUE** #38761: (DaveOHenry) Cannot apply state that contains lgpo.set (refs: #39083, #39088)
  - PR #39088: (lomero) Backport #37262 to 2016.11
  - PR #37262: (lomero) correct issues in win_lgpo module (refs: #39088)

- **PR** #39122: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-02-01 21:41:59 UTC
  - 50d72da3f6 Merge pull request #39122 from rallytime/merge-2016.11
  - a782b00ee1 Merge branch '2016.3' into '2016.11'
  - cc9b69b6bc Merge pull request #39091 from terminalmage/update-test-valid-docs
    * d7f0380d0 add debug logging for batch vars
    * b4afea2a25 Don't fail test if data is empty
    * b3a5d549c1 Account for trimmed value in 'salt -d' output
    * 909916c78e Run test_valid_docs in batches
  - bcee3d1ef6 Move fileclient tests to tests/integration/fileserver/fileclient_test.py (#39081)
- 122422bc08 Bump openstack deprecation notice to Oxygen (#39067)

- **PR #39087**: (lomeroe) Backport #37375 to 2016.11 @ 2017-02-01 19:02:58 UTC
  - **PR #37375**: (lomeroe) add updating gpt.ini file when ADM template policies are modified (gp... (refs: #39087)
  - f8a6863d98 Merge pull request #39087 from lomeroe/bp-37375
  - c3aaa536f3 _in_range_inclusive class method incorrectly called isinstanc
  - ce263f9372 set_computer_policy and set_user_policy call "set" by the original function name (set) instead of the aliased function name set_
  - ff7d74bf0 correct tool extension guid for user registry policies
  - 08f007ef3 spelling correction
  - 5fc40485f7 add updating gpt.ini file when ADM template policies are modified (gpt.ini file must exist with proper data for ADM policies to apply)

- **PR #39094**: (rallytime) Add a bunch of missing doc module references @ 2017-02-01 18:56:27 UTC
  - c4c6e701af Merge pull request #39094 from rallytime/doc-build-warnings
  - b866427f59 Add a bunch of missing doc module references

- **PR #39108**: (janhorstmann) [Bugfix] Fix state x509.crt_managed @ 2017-02-01 18:32:43 UTC
  - d302bb747e Merge pull request #39108 from janhorstmann/fix-x509-state
  - 9f5c532510 [Bugfix] Fix state x509.crt_managed

- **ISSUE #39100**: (whytwolf) salt-run fileserver.update Exception (refs: #39107)

- **ISSUE #39098**: (FraaJad) state.event runner fails with TypeError: argument of type 'NoneType' is not iterable (refs: #39107)

- **ISSUE #38638**: (mirceaulinic) salt.cmd runner raises TypeError when function returns bool (refs: #39107)

- **PR #39107**: (mirceaulinic) Check if data['return'] is dict type @ 2017-02-01 18:21:46 UTC
  - bf61ec9515 Merge pull request #39107 from cloudflare/FIX-38638
  - 7c34815979 Check if data['return'] is dict type

- **ISSUE #39065**: (jak3kaj) primary bonding option is not applied (refs: #39068, #39069)
  - **PR #39069**: (jak3kaj) Update primary bonding option in rh_ip.py

- **ISSUE #39065**: (jak3kaj) primary bonding option is not applied (refs: #39068, #39069)
  - **PR #39068**: (jak3kaj) Update primary bonding option in debian_ip.py

- **ISSUE #38704**: (nasenbaer13) Archive extracted fails when another state run is queued (refs: #38705)

- **PR #39076**: (terminalmage) Re-submit PR #38705 against 2016.11 branch @ 2017-01-31 20:11:55 UTC
  - **PR #38705**: (nasenbaer13) Fix for #38704 archive extracted and dockerio states (refs: #39077, #39076)
  - 9836d7dd29 Merge pull request #39076 from terminalmage/pr-38705
  - 15dbd84e0ed Fix for #38704 archive extracted and dockerio states

- **ISSUE #39057**: (sergeizv) modules.linux_lvm.fullversion provides incomplete info (refs: #39058)

- **PR #39058**: (sergeizv) Fix salt.modules.linux_lvm.fullversion @ 2017-01-31 19:01:12 UTC
  - 86b4b77bfe Merge pull request #39058 from sergeizv/fx-lvm-fullversion
- e46c89f9ed Fix `salt.modules.linux_lvm.fullversion`
- fb7ef99838 Fix mock emulating lvm version

- **ISSUE #39051**: (afletch) `salt.roster.cache / salt.utils.cloudis_public_ip - incorrect public IP address` (refs: #39066)
- **PR #39066**: (techhat) 127.0.0.0/8 is all loopback @ 2017-01-31 18:43:22 UTC
  - 721b245f90 Merge pull request #39066 from techhat/issue39051
  - ea43bb8101 127.0.0.0/8 is all loopback

- **ISSUE #39070**: (sergeizv) `modules.linux_lvm.pvcreate misbehaves if all submitted devices are already LVM PVs` (refs: #39071)
- **PR #39071**: (sergeizv) Fix `modules.linux_lvm.pvcreate` on existing LVM PVs @ 2017-01-31 18:36:54 UTC
  - c54d9f4e2a Merge pull request #39071 from sergeizv/fix-lvm-pvcreate
  - f1e3e86e6a Fix `modules.linux_lvm.pvcreate` on existing LVM PVs
  - 0f84ca2487 Add test for `modules.linux_lvm.pvcreate` on existing LVM PVs
  - 3967992bfd Fix test for `modules.linux_lvm.pvcreate`

- **PR #39048**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-01-31 15:55:49 UTC
  - 88b171f863 Merge pull request #39048 from rallytime/merge-2016.11
  - b2b3989773 Merge branch '2016.3' into '2016.11'

  - a24af5ac46 Merge pull request #39047 from rallytime/merge-2016.3
    - b732a1f646 Merge branch '2015.8' into '2016.3'
    - 56cca68f7 Add 2015.8.14 release notes file (#39046)
    - 5943fe65d3 Update 2015.8.13 release notes (#39037)
  - fef1b1133d Add 2016.3.6 release notes file (#39045)
  - 7c43f4ac32 [2016.3] Update release numbers for doc build (#39042)
  - ff324599d5 Update 2016.3.5 release notes (#39038)
  - 5b09dc4198 Merge pull request #39028 from terminalmage/clarify-delimiter-argument
    - f29ef071f3 Clarify delimiter argument
  - 1ff359fa58 Add CLI Example for `rest_sample_utils.get_test_string` function (#39030)
  - f13fb9e1f1e Enable `__proxy__` availability in states, highstate, and utils. Enable `__utils__` availability in proxies. (#38899)

- **PR #39035**: (cro) Add CLI Examples so tests will pass
- **PR #39044**: (rallytime) Add 2016.11.3 release notes file
- **PR #39040**: (rallytime) [2016.11] Update release numbers for doc build
- **PR #39039**: (rallytime) Update 2016.11.2 release notes
- **PR #39005**: (cro) Ungate the `status.py` module and raise unsupported errors in functions not executable on Windows. (refs: #39536)

- **PR #39012**: (terminalmage) Fix "invalid lexer" errors in docs build @ 2017-01-28 06:47:45 UTC
  - e7090c4880 Merge pull request #39012 from terminalmage/invalid-lexer
  - 868001baac Fix "invalid lexer" errors in docs build
• PR #39003: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-01-28 00:09:09 UTC
  - cea0f32936 Merge pull request #39003 from rallytime/merge-2016.11
  - 76e95087fd Merge branch '2016.3' into '2016.11'
  - da96221741 Merge pull request #38951 from DSRCorporation/bugs/37938_fix_depends_decorator_memleak
    - 0b18f34678 Keep the only one record per module-function in depends decorator.
  - 8516ed70 Merge pull request #38982 from rallytime/fixed-34780
    - 1583c557a Set response when using "GET" method in s3 utils
  - cfdb99e12 Merge pull request #38989 from alpr/docfix-state_pt3_environ
    - 52a9ad1c60 fix SLS in environment variable examples
  - 55e42572e Merge pull request #39000 from rallytime/skip-badload-test
    - 4b3ff0ef6f Skip the test_badload test until Jenkins move is complete
  - fe054eb772 Merge pull request #38995 from terminalage/fixed-pillar.item-docstring
    - 06d094dd8f Fix pillar.item docstring

• ISSUE #38853: (bobrik) file.serialize still expects show_diff instead of show_changes (refs: #38908)

• PR #38908: (bobrik) Deprecate show_diff for file.serialize to mimic file.managed, closes #38853 @ 2017-01-27 17:15:37 UTC
  - 58543d5cbf Merge pull request #38908 from bobrik/show-changes-for-serialize
  - e0af212c1b Remove unnecessary blank lines
  - a08c1ca530 Deprecate show_diff for file.serialize to mimic file.managed, closes #38853

• ISSUE saltstack/salt-bootstrap#1021: (sjorge) salt-bootstrap missing salt-api.xml on smartos (refs: #38978)

• PR #38978: (sjorge) fixes saltstack/salt-bootstrap#1021 @ 2017-01-27 17:05:10 UTC
  - 4b75dfac95 Merge pull request #38978 from sjorge/2016.11-bootstrap
  - 26eb35f9d6 fixes salt/salt-bootstrap`#1021`

• PR #38991: (isbm) Isbm zypper state unknown pkg crash @ 2017-01-27 16:59:38 UTC
  - b40f369d98 Merge pull request #38991 from isbm/isbm-zypper-state-unknown-pkg-crash
  - 35f620e1c8 Prevent crash on unknown to the repo package

• PR #38979: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-01-26 22:56:13 UTC
  - 3e766216b Merge pull request #38979 from rallytime/merge-2016.11
  - fdaaa5ac1b8 Merge branch '2016.3' into '2016.11'
  - b6b6f6423 Merge pull request #38950 from mbom2004/2016.3
    - c09f39d6c9 Remove unused json import
    - 249efa3068 Fixed Logstash Engine in file logstash.py
  - a6c6e47842 Handle changing "is_default" value in moto package for boto test mock (#38973)
  - b965b5dc2 Merge pull request #38952 from terminalmage/zd1168
    - 6b014e53fc Rename on_demand_pillar to on_demand_ext_pillar
    - d216f90c63 Document new on_demand_pillar option and add to config template
• 426b20f02f Add documentation for on-demand pillar to pillar.ext docstring
• 7b10274b6b Make on-demand ext_pillars tunable
• d54723ccae Add on_demand_pillar config option
  – 2c4ad85a78 Merge pull request #38948 from rallytime/bump-template-context-deprecation
  – 749e0031d7 Bump the template context deprecation version to Oxygen
• e4514ca7d8 Merge pull request #38946 from rallytime/bp-37632
  – ee37cdace9 Fix some lint
  – c08071e182 Fix versions report for server OSs
• 953a20350a Merge pull request #38913 from Adaephon-GH/patch-1
  – e2fa16fdd Removing trailing whitespace
  – 616292c6b1 Ignore plist files without Label key
  – 826dce1059 Merge pull request #38917 from twangboy/update_jinja_mac
    – 62e60b627 Update Jinja2 to 2.9.4
  – b27733ec33 Merge pull request #38925 from terminalmage/issue38540
    – 76392fc6ad Fix traceback when a netapi module uses wheel_async
  – ba4474fa62 Fix 'success' value for wheel commands
  – 618596f0cc Merge pull request #38926 from gtmanfred/2016.3
    – 9cae953e93 add note about pysss for pam eauth
• PR #38937: (arthru) Fix smtp ret require gnupg @ 2017-01-26 20:08:16 UTC
  – 0660cc3cf2 Merge pull request #38937 from HashBangDev/fix-smtp-ret-require-gnupg
  – 399556b9fe Remove trailing whitespace
  – f308d13a17 log an error on gnupg absence instead of raising an exception
  – 0427879d19 fails if gpgowner is set in smtp returner config but the installation lacks gnupg module
  – 27449c5a9b smtp returner does not require gnupg to be installed
• ISSUE #38816: (grichmond-salt) Errors in cloud runners are not reliably being captured as failures. (refs: #38955)
• PR #38955: (techhat) Do a better job at error detection in runners @ 2017-01-26 20:00:18 UTC
  – d947c5ec49 Merge pull request #38955 from techhat/issue38816
  – ea8654f400 Typo
  – 94050ff716 Watch out for bools
  – 0142b0cbb3 Do a better job at error detection in runners
• PR #38972: (rallytime) Add CLI Example for rest_sample_utils.get_test_string function (refs: #39030)
- **PR #38957**: (mcalmer) Fix timezone handling for rpm installtime @ 2017-01-26 18:41:15 UTC
  - 27166fad4e Merge pull request #38957 from mcalmer/fix-rpm-install_date-timezone
  - c7da9f87b6 Fix timezone handling for rpm installtime

- **PR #38965**: (toanju) salt-cloud will use list_floating_ips for OpenStack @ 2017-01-26 16:44:12 UTC
  - PR #34280: (kevinanderson1) salt-cloud will use list_floating_ips for Openstack (refs: #38965)
  - ec690a0a12 Merge pull request #38965 from toanju/2016.11
  - 1253ce9b63 salt-cloud will use list_floating_ips for OpenStack

- **PR #38949**: (clinta) Use signing passphrase as public passphrase when generating self-sign... @ 2017-01-25 20:20:58 UTC
  - d906e8fad8 Merge pull request #38949 from clinta/x509-passphrase-bug
  - c8697e38a8 Use signing passphrase as public passphrase when generating self-signed certificates

- **PR #38929**: (MTecknology) Fix psutil regressions in 2016.11 @ 2017-01-25 20:17:41 UTC
  - de3b2cc97b Merge pull request #38929 from MTecknology/2016.11
  - 73a8c6d121 Load core grains only if required.
  - 4966011cb5 Modules might still be needed, even if psutil loads.
  - fb0432fd21 Fixes a regression with old versions of python-psutil.

- **PR #38940**: (isbm) Isbm sanitizers fix and unit test @ 2017-01-25 20:15:56 UTC
  - 3ec806c003 Merge pull request #38940 from isbm/isbm-sanitizers-fix-and-unit-test
  - a112b790fe Fix typo
  - 47a16916c3 Add unit test
  - 046c5436eb Fix leading dots on sanitized hostname

- **PR #38944**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-01-25 19:44:42 UTC
  - e420763285 Merge pull request #38944 from rallytime/merge-2016.11
  - ee33a53a64 Merge branch '2016.3' into '2016.11'
    - 405d86a2ca Merge pull request #38847 from terminalmage/issue38825
      - 11a47803ce Use log.exception() instead
      - e40fac589a Catch MinionError in file.source_list
    - b5df104fc2 Merge pull request #38875 from terminalmage/issue36121
      - fb4d2a2e4c reactor: ensure glob_ref is a string
      - 2e443d79a3 cp.cache_file: add note re: return for nonexistent salt:// path
    - e9ebec4d80 Merge pull request #38890 from cro/vmware_reset_vm_20163
      - 0146562fb4 Call correct function for resetting a VM
    - c3bfcd231 Merge pull request #38883 from techhat/dontrequire
      - 67bc4d6687 Don't require text_out path to exist
    - 6430a45196 Merge pull request #38851 from terminalmage/docker-py-2.0
      - 3c061b21fe Support docker-py 2.0 in dockerng
- ac8008d843 Merge pull request #38844 from cachedout/http_memory_leak
  - c46b85518 Fix memory leak in HTTP client
- dfe6dfe963 Merge pull request #38823 from gtmanfred/2016.3
  - 0a4ab86da1 Merge pull request #38833 from Ch3LL/add_release_notes_2016.3.5
- 374dc1ab88 skip 2016.3.5 due to :doc: references
  - 31f324c4ff add 2016.3.5 changelog to release notes
  - ISSUE #38753: (alexbleotu) __proxy__ dunder is not injected when invoking the salt variable in sls files (refs: #38899, #38900, #38829)
  - ISSUE #38557: (alexbleotu) Proxy not working on develop (refs: #38829)
  - ISSUE #38265: (mirceaulinic) __utils__ object not available in proxy module (refs: #38899, #38900, #38829)
  - ISSUE #32918: (mirceaulinic) Proxy minions reconnection (refs: #38829)
  - PR #38900: (cro) Enable __proxy__ availability in states, highstate, and utils. Enable __utils__ for proxies. @ 2017-01-25 19:36:48 UTC
    - PR #38899: (cro) Enable __proxy__ availability in states, highstate, and utils. Enable __utils__ for proxies. (refs: #38900)
    - PR #38829: (cro) MANY dunder variable fixes for proxies + proxy keepalive from @mirceaulinic (refs: #38899, #38900)
    - PR #37864: (mirceaulinic) Proxy keepalive feature (refs: #38829)
    - bd4889ac73 Merge pull request #38900 from cro/px_dunder_201611
    - 9a86fdda1 Remove extra call to salt.loader.utils.
    - f4ba89735c Resolve merge conflict
  - PR #38918: (thatch45) Thorium typos @ 2017-01-25 19:00:40 UTC
    - f4b8798b6 Merge pull request #38918 from thatch45/thorium_typos
    - 0b4aca9145 fix some minor typos in the thorium docs
    - 58a18e2b58 Add test= True to the master so that thorium does not stack trace
  - ISSUE #38543: (amendlik) salt --subset returns wrong number of minions (refs: #38919)
  - PR #38919: (cachedout) Correctly pass subset to cmd_subset @ 2017-01-25 18:59:16 UTC
    - 32fbb945b7 Merge pull request #38919 from cachedout/issue_38543
    - a555de7c56 Correctly pass subset to cmd_subset
  - PR #38922: (twangboy) Fix 64bit detection, vcredist only on <= 2008 @ 2017-01-25 18:47:41 UTC
    - 6b3c738bfd Merge pull request #38922 from twangboy/fix_vcredist
    - 214e1cc598 Fix 64bit detection, vcredist only on <= 2008
  - ISSUE #38371: (syphernl) [2016.11.1] Scheduled highstates not returning to master (refs: #38923)
  - PR #38923: (DmitryKuzmenko) Fixed broken __schedule_return handler. @ 2017-01-25 18:45:30 UTC
    - PR #36202: (hu-dabao) for 36049, log current connected master and make status module more useful and efficient (refs: #38923)
    - 954658523b Merge pull request #38923 from DSRCorporation/bugs/38371_fix_schedule_return
Salt Documentation, Release 3002.5

- b18f675486 Fixed broken __schedule_return handler.
- **PR #38927**: (l2ol33rt) Adding explicit install of python-systemd in jessie-backports on Debian Guide @ 2017-01-25 18:21:18 UTC
  - 828e9bd8f9 Merge pull request #38927 from l2ol33rt/debian_doc_fix
  - 9cc9c6110d Adding explicit call to python-systemd in jessie-backports
- **ISSUE #37413**: (Snarfingcode666) Salt-cloud vmware missing reboot command (refs: #38890, #38887, #38889)
- **PR #38889**: (cro) Backport #38887 to 2016.11: Call correct function for resetting a VM @ 2017-01-24 15:20:29 UTC
  - **PR #38887**: (cro) Enable resetting a VM via salt-cloud & VMware driver (refs: #38890, #38889)
  - 5f5e97598 Merge pull request #38889 from cro/vmware_reset_vm_201611
  - 76a9920a6b Call correct function for resetting a VM
- **PR #38891**: (UtahDave) Proper function parameter default @ 2017-01-24 15:06:09 UTC
  - 53d0aa8855 Merge pull request #38891 from UtahDave/fix_cassandra_protocol_version
  - c475609683 Proper function parameter default
- **PR #38904**: (terminalmage) Add top file merging docs to the master config file documentation @ 2017-01-24 14:59:26 UTC
  - c680ee3174 Merge pull request #38904 from terminalmage/docs
  - 42a3652620 Add top file merging docs to the master config file documentation
- **PR #38885**: (meaksh) Increasing timeouts for running integrations tests @ 2017-01-23 18:59:50 UTC
  - 41a3055213 Merge pull request #38885 from meaksh/2016.11-fix-tests-issues
  - 4311b0b6de Increasing timeouts for running integrations tests
- **PR #38639**: (isbm) Isbm disable custom roster for api 2016.11 @ 2017-01-23 18:59:11 UTC
  - bde6d3ee7 Merge pull request #38639 from isbm/isbm-disable-custom-roster-for-api-2016.11
  - ffbd45062e Explain what it is about and how to configure that

### 30.2.56 Salt 2016.11.4 Release Notes

Version 2016.11.4 is a bugfix release for **2016.11.0**.

**Statistics**

- Total Merges: 276
- Total Issue References: 63
- Total PR References: 223
- Contributors: **62** (Ch3LL, DennisHarper, DmitryKuzmenko, L4rS6, MasterNayru, Seb-Solon, The-Loeki, UtahDave, aabognah, alankrita, amontalban, ardarkuyumcu, attiasr, bdruing, bewing, cachedout, cro, defanator, discountbin, dmurphy18, drawsmcgraw, eldadru, garethgreenaway, githubcdr, gtmanfred, hkrist, isbm, jbadson, jeanpralo, jettero, jinm, joe-niland, kaszuba, lomeroe, lorengordon, mateiw, mcalmer, mchugh19, meaksh, mirceaulinic, mlalphi, narendraingale2, nmadhok, rallytime, redbaron4, roaldnefs, s0undt3ch, skazi0, skizunov, smarsching, sofixa, sp1r, sthrasher, techhat, terminalmage, thatch45, thor, ticosax, twangboy, vutny, whiteinge, zer0def)
AIX Support Expanded

AIX support has been added for the following execution modules:

- user
- group
- network
- status
- timezone

Additionally, AIX is now supported in the `disk.iostat` remote-execution function, and the `status` beacon is now supported.

Minion Data Cache Enhancement

Memcache is now supported as a data store for the minion data cache.

Memcache is an additional cache layer that keeps a limited amount of data fetched from the minion data cache for a limited period of time in memory that makes cache operations faster. It doesn't make much sense for the localfs cache driver but helps for more complex drivers like consul.

For more details see `memcache_expire_seconds` and other `memcache_*` options in the master config reference.

Docker Fixes

- Docker authentication has been re-organized. Instead of attempting a login for each push/pull (which was unnecessary), a new function called `dockerng.login` has been added, which authenticates to the registry and adds the credential token to the `~/.docker/config.json`. After upgrading, if you have not already performed a `docker login` on the minion using the docker CLI, you will need to run `dockerng.login` to login. This only needs to be done once.

- A bug in resolving the tag name for images in a custom registry (where a colon can appear in the image name, e.g. `myregistry.com:5000/image:tagname`) has been fixed. In previous releases, Salt would use the colon to separate the tag name from the image name, and if there was no colon, the default tag name of `latest` would be assumed. However, this caused custom registry images to be misidentified when no explicit tag name was passed (e.g. `myregistry.com:5000/image`). To work around this in earlier releases, simply specify the tag name.

Salt-Cloud Fixes

2016.11.0 added support for templating userdata files for the `ec2` driver, using the `renderer` option from the master config file. However, as the default renderer first evaluates jinja templating, followed by loading the data as a YAML dictionary, this results in unpredictable results when userdata files are comprised of non-YAML data (which they generally are).

2016.11.4 fixes this by only templating the userdata_file when it is explicitly configured to do so. This is done by adding a new optional parameter to the cloud profile called `userdata_template`. This option is used in the same way as the `template` argument in `file.managed` states, it is simply set to the desired templating renderer:
my-ec2-config:

```
# Pass userdata to the instance to be created
userdata_file: /etc/salt/my-userdata-file
userdata_template: jinja
```

If no `userdata_template` option is set in the cloud profile, then salt-cloud will check for the presence of the master configuration parameter `userdata_renderer`. If this is also not set, then no templating will be performed on the `userdata_file`.

In addition, the other cloud drivers which support setting a `userdata_file` (azurearm, nova, and openstack) have had templating support added to bring them to feature parity with the ec2 driver's implementation of the `userdata_file` option.

**Changelog for v2016.11.3..v2016.11.4**

*Generated at: 2018-05-27 19:46:47 UTC*

- **PR #40708**: (Ch3LL) Add 2016.11.4 Release Note ChangeLog @ 2017-04-14 22:12:57 UTC
  - e5cd6086a7 Merge pull request #40708 from Ch3LL/2016.11.4_release
  - d228fb6e02 Add 2016.11.4 Release Note ChangeLog
- **PR #40685**: (Ch3LL) Fix errno code for filecache test for other operating systems. @ 2017-04-14 16:54:25 UTC
  - 77028a6c4e Merge pull request #40685 from Ch3LL/fix_mac_file
  - 9ea6e8b456 remove io and change to EROFS
  - 688791ff60 remove try-except and change errno
  - e30afc4c01 add exception type
  - acf333df08 change errno code for fileclient test
- **ISSUE #40688**: (jbadson) Syslog returner does not work with Python 2.6 (refs: #40689)
- **PR #40689**: (jbadson) Fixes bug that prevents syslog returner from working under Python 2.6 @ 2017-04-14 10:45:13 UTC
  - bc70772f9d Merge pull request #40689 from jbadson/fix-syslog-returner
  - e5a3ad7217 Fixes bug that prevents syslog returner from working under Python 2.6
- **ISSUE #40658**: (sebw) State tomcat.war_deployed regression when WAR filename contains version (refs: #40690)
- **PR #40690**: (thor) Fixes #40658: even clearer and working(!) Tomcat version handling @ 2017-04-14 10:44:02 UTC
  - 983d35ad38 Merge pull request #40690 from thor/2016.11-tomcat
  - 09145ea1a5 Fixes unindexed strfmt curly braces for python 2.6
  - b78fc46b91 Fixes #40658: clearer version handling
- **PR #40686**: (twangboy) Fix `salt-minion` service for Win 10 Creators Update 1703 @ 2017-04-13 20:00:12 UTC
  - 3cd9a5b22 Merge pull request #40686 from twangboy/fix_service
  - b6ac4aa86d Fix service for win10 update
- **PR #40675**: (gtmanfred) use loader for getting war version @ 2017-04-13 19:58:30 UTC
  - ad4d6839fd Merge pull request #40675 from gtmanfred/2016.11
- a61fc824c4 use loader for war extraction

- **ISSUE #38497**: (chrisLeeTW) local_batch client ignore external auth (refs: #40598)

- **PR #40680**: (rallytime) Back-port #40598 to 2016.11 @ 2017-04-13 19:58:16 UTC
  - **PR #40598**: (mchugh19) Ensure batch uses passed eauth token or credentials (refs: #40680)
  - 7ea526f59e Merge pull request #40680 from rallytime/bp-40598
  - cc1643eb1f Fix netapi lint
  - e790930f5a re-add batch support to cherrypy saltapi
  - 6ec04b2db pop out of kwargs
  - 260dd84758 Create eauth dict for passing into batch class
  - 5fb8190d44 Ensure batch uses passed eauth token or credentials

- **PR #40681**: (cachedout) Allow status beacon to run on all operating systems @ 2017-04-13 19:33:10 UTC
  - db68df23dd Merge pull request #40681 from cachedout/status_beacon
  - ecb0d186f Allow status beacon to run on all operating systems

- **PR #40678**: (Ch3LL) fix test_fstype test for mac @ 2017-04-13 19:20:32 UTC
  - 39dd6e284d Merge pull request #40678 from Ch3LL/fx_mac_fstype
  - 60724980ec fix test_fstype test for mac

- **PR #40665**: (rallytime) Back-port #35665 to 2016.11 @ 2017-04-12 21:06:36 UTC
  - **PR #35665**: (sthrasher) Speed up /jobs for salt-api when run under cherrypy. (refs: #40665)
  - 6df76f6587 Merge pull request #40665 from rallytime/bp-35665
  - 0f897b2426 Switch from comprehension to logic used in jobs runner. This makes it easier to deal with potential unicode in returns.
  - 78dd629f09 Fix compat issues with /jobs return values.
  - 4778bc7365 Speed up /jobs for salt-api when run under cherrypy.

- **PR #40666**: (gtmanfred) make sure userdata is always defined in ec2 @ 2017-04-12 21:06:00 UTC
  - 3e41a248a5 Merge pull request #40666 from gtmanfred/userdata
  - 5e92d0948 make sure userdata is always defined in ec2

- **PR #40662**: (twangboy) Backport msi-conformant-version function @ 2017-04-12 18:49:23 UTC
  - b245abbea5 Merge pull request #40662 from twangboy/backport_msi_versioning
  - 825832812b Backport msi-conformant-version function

- **ISSUE #39868**: (amontalban) archive.extracted issue when source_hash_update=True and extracted files does not exist (refs: #40551)

- **PR #40551**: (terminalmage) Fix four issues in archive.extracted state @ 2017-04-12 18:37:52 UTC
  - 92b5f03beb Merge pull request #40551 from terminalmage/issue39868
  - a722ca9cfc archive.extracted: also cleanup fileclient's cached location
  - 5ea1f607b0 Fix mocking in unit tests
  - 8dfa51f31f Moar fixes for source_hash_update
  - 7103707d49 Remove unnecessary versionadded lines
- a717881f53 Just get a hash for the source archive
- 9da4eb18bf Check hash of cached source against source_hash before downloading archive
- ad24fa59d Fix three issues in archive.extracted state

**PR #40637:** (twangboy) Add unicode_literals import @ 2017-04-12 16:55:03 UTC
- 0638418d2 Merge pull request #40637 from twangboy/fix_unicode_issues
- 021783dbae Add unicode_literals import

**PR #40651:** (twangboy) Fix status.diskusage for Windows on Py3 @ 2017-04-12 16:21:29 UTC
- 491661f32 Merge pull request #40651 from twangboy/fix_diskusage_py3
- 7c5079ec91 Correct capitalization problem with api call

**ISSUE #40631:** (gtmanfred) if grain is defined as None still convert in append @ 2017-04-12 16:19:16 UTC
- 3aab85e53 Merge pull request #40631 from gtmanfred/grains
- b0b9c26d add comment and unit test
- b21bc7528f if grain is defined as None still convert in append

**ISSUE #40167:** (alias454) file.replace diff results output showing additional characters (refs: #40629)

**PR #40629:** (aabognah) Fixing issue # 40167 @ 2017-04-11 22:45:08 UTC
- 3737289bee Merge pull request #40629 from aabognah/fix-bug-40167
- 28f7744cb6 Fixing issue # 40167 with file.replace where the diff output does not display correctly.

**PR #40646:** (twangboy) Keep network.py execution module @ 2017-04-11 22:03:02 UTC
- 2a22bea290 Merge pull request #40646 from twangboy/fix_win_network
- 07a81cd34 Keep network.py execution module

**PR #40645:** (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-04-11 20:59:13 UTC
- e1f5a5dfe3 Merge pull request #40645 from rallytime/merge-2016.11
- 8de6497933 Merge branch '2016.3' into '2016.11'
  - 2ae9eaa176 Merge pull request #40638 from rallytime/bp-40571
    - 2d1c4be2df pkgrepo.managed: properly handle comments for debian

**ISSUE #40594:** (anlutro) salt-ssh file.recurse adds a lot of unwanted directories (refs: #40642)

**ISSUE #38458:** (duk3luk3) salt-ssh uses sudo to create cache dir, later fails to access it (refs: #40442)

**PR #40642:** (DmitryKuzmenko) Correctly resolve relative cache path to absolute. @ 2017-04-11 20:43:57 UTC
- PR #40442: (gtmanfred) allow file_client to figure out cachedir (refs: #40642)
- 6c44ae6c914 Merge pull request #40642 from DSRCorporation/bugs/40594_ssh_cachedir
- 055256c518 Correctly resolve relative cache path to absolute.

**ISSUE #40075:** (afletch) salt-ssh temporary files - insecure permissions (refs: #40609)

**PR #40609:** (gtmanfred) stat_file when keep is set, instead of mirroring all file permissions @ 2017-04-11 18:48:47 UTC
- 8492ce7a5 Merge pull request #40609 from gtmanfred/2016.11
– 6e34c2b5e5 stat file when placing it on server instead of caching

- **PR #40620**: (mateiw) SUSE specific changes to salt-api.service @ 2017-04-11 14:45:00 UTC
  - 05ac613ecf Merge pull request #40620 from mateiw/2016.11-suse-saltapi-service
  - ee91a74b4 suse specific changes to salt-api.service

- **ISSUE #39463**: (githubcdr) Transport TCP minions don’t reconnect/recover (refs: #40614)
  - **PR #40614**: (gtmanfred) add retries on authentications of the salt minion reconnecting @ 2017-04-10 22:42:16 UTC
    - b0a2414d68 Merge pull request #40614 from gtmanfred/tcp
    - a86b101ae6 add retries on authentications of the salt minion reconnecting

- **PR #40615**: (rallytime) Call out to _pki_minions() once, rather than in a loop in _check_list_minions() @ 2017-04-10 22:22:18 UTC
  - **PR #34920**: (cachedout) Key cache (refs: #40615)
    - b6cf948afe Merge pull request #40615 from rallytime/fix-39863
    - 1a9f03ab92 Call out to _pki_minions() once, rather than in a loop in _check_list_minions()

- **PR #40588**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-04-07 19:30:14 UTC
  - 4fa58be222 Merge pull request #40588 from rallytime/merge-2016.11
  - 5a419b8aae Merge branch '2016.3' into '2016.11'
  - 83f6d3d9bb Merge pull request #40567 from terminalmage/fix-pillar-get-merge-lists
    * cb4db56eb5 Allow pillar.get to merge list as well as dictionaries
    * a8304cd5a1 Merge pull request #40552 from terminalmage/fix-hash-type.refs
      * 8c61f333ae Don't use __opts__.get() for hash_type
    - 705e1d9a08 Merge pull request #40562 from terminalmage/fix-get-client
      * 7f1ef72f83 Fix dockerng._get_client() regression
    - 00f8ef0c55 Merge pull request #40548 from Ch3LL/vultrpy
      * 7710355e3a check for salt install fail on vultur test
      * aae3d14ea4 fix vultr cloud race condition to match on 0

- **PR #40575**: (rallytime) Back-port #40559 to 2016.11 @ 2017-04-07 15:42:26 UTC
  - **PR #40559**: (jimm) Fix v3 for https://github.com/saltstack/salt/issues/38472 (refs: #40575)
  - 8d07f637ca Merge pull request #40575 from rallytime/bp-40559
  - 8280e5256e Fix v3 for https://github.com/saltstack/salt/issues/38472

- **PR #40576**: (rallytime) Back-port #40573 to 2016.11 @ 2017-04-07 15:20:11 UTC
  - **PR #40573**: (ardakuyumcu) Fix typo in IAM state for managed policies (refs: #40576)
- 9041ca2ba5 Merge pull request #40576 from rallytime/bp-40573
- 12180808ee Fix typo in IAM state for managed policies

- **PR #40563**: (terminalmage) Merge-forward 2016.3 -> 2016.11 @ 2017-04-07 15:08:20 UTC
  - **PR #40562**: (terminalmage) Fix dockerng _get_client() regression (refs: #40563)
  - **PR #40481**: (terminalmage) Backport auth and custom registry fixes from #40480 to 2016.3 branch (refs: #40563, #40562)
  - **PR #40480**: (terminalmage) Improved Docker auth handling and other misc. Docker improvements (refs: #40481)
  - f8bc423ef9 Merge pull request #40563 from terminalmage/merge-2016.3-2016.11
  - 0c608d7417 Add client_args_mock back to test
  - a7a78da984 remove unused imports
  - a6d68f50fe Merge remote-tracking branch 'upstream/2016.3' into merge-2016.3-2016.11
    - * 0918311330 Don't mark files that already were deleted as errors
    - * 51d88a16c8 Merge branch 'zer0def-fix-31363' into 2016.3
      - 7f3cb05cf9 Merge branch 'fix-31363' of https://github.com/zer0def/salt into zer0def-fix-31363
      - 3c750c2b24 Changed rm_rf's argument to actually remove intended file. (refs #31363)
      - 9ed85f35f9 Remove directory content instead of directory itself when using force_clone in git.latest state. (refs #31363)
    - * cfba4cb422 Merge pull request #40534 from terminalmage/issue39892
      - ad88a5a09 Check master's ssh_minion_opts for fileserver/pillar values and ignore them
    - * 8da27c9e1d Merge pull request #40306 from terminalmage/issue40279
      - 57ace1f336 Merge branch 'issue40279' of https://github.com/terminalmage/salt into issue40279
      - 8bdf1a761 Remove unused import for lint
      - 808ad76149 systemd.py: when getting all services, don't repeat gathering of systemd services
      - 2d219af67a Don't use context caching for gathering systemd services
    - * 97caac4c0a Merge pull request #40481 from terminalmage/docker-auth-handling-2016.3
      - dcefc1db4b Make sure we keep the cached client when clearing context
      - 1e2a04f5c5 Backport auth and custom registry fixes from #40480 to 2016.3 branch
    - * e62603d5eb Merge pull request #40505 from gtmanfred/2016.3
      - 6e2f9080ca update docs for logging handlers

- **ISSUE #39778**: (Talkless) pkgrepo.managed state always report changes with test=True on APT system (refs: #40571)

- **PR #40571**: (terminalmage) pkgrepo.managed: properly handle comments for debian (refs: #40638) @ 2017-04-06 21:55:46 UTC
  - fd750fefa3 Merge pull request #40571 from terminalmage/issue39778
  - 191610482d pkgrepo.managed: properly handle comments for debian
ISSUE #40278: (UtahDave) cloud.action giving errors on 2016.11.1 (refs: #40572)

PR #40572: (rallytime) Clean out kwargs dict in cloud.action before calling cloud driver function @ 2017-04-06 21:53:40 UTC
- b1698e830e Merge pull request #40572 from rallytime/fix-40278
- c978486452 Clean out kwargs dict in cloud.action before calling cloud driver function

ISSUE #39842: (smarsching) File module removes trailing newline on Windows (refs: #39882)

PR #39882: (smarsching) Fix handling of trailing newlines on Windows @ 2017-04-06 21:12:24 UTC
- 62d8ad2b4b Merge pull request #39882 from smarsching/issue-39842
- d485d1af44 Fix context for _splitlines_preserving_trailing_newline.
- 76cb7bf612 Fix trailing newlines on Windows (#39842).

PR #40451: (isbm) Fileclient testcase (2016.11) @ 2017-04-06 19:53:31 UTC
- ae13de62a2 Merge pull request #40451 from isbm/isbm-fileclient-testcase-2016.11
- 74c65557dd Add space before in-lint comment for lint
- 35fcb8b52d Fix race condition on cache directory creation
- aba94495a5 Lintfix (Py3 code compat)
- 9f9dc6e4e7 Add unit test case for fileclient

ISSUE #40084: (podstava) profile fields in azurearm salt-cloud need to be actualized to sources (refs: #40564)

PR #40564: (techhat) Update Azure ARM docs @ 2017-04-06 18:17:32 UTC
- 74366c57a4 Merge pull request #40564 from techhat/azuredocs
- 08d071bc68 Update Azure ARM docs

ISSUE #40005: (vutny) ssh_known_hosts.present does not support SHA256 key fingerprints (refs: #40543)

PR #40453: (rallytime) Add the "fingerprint_hash_type" option to ssh state and module @ 2017-04-05 21:21:16 UTC
- cb9dcb1e1b Merge pull request #40453 from rallytime/fix-40005
- 1ef816a55 Add the "fingerprint_hash_type" option to ssh state and module

PR #40540: (DmitryKuzmenko) A quick fix for Cache has no 'list' attribute. @ 2017-04-05 18:50:18 UTC
- PR #40494: (rallytime) [develop] Merge forward from 2016.11 to develop (refs: #40540)
- 3f069557dd Merge pull request #40540 from DSRCorporation/bugs/40494_merge_forward_cache_list_fix
- c0fd5634cf A quick fix for Cache has no 'list' attribute.

ISSUE #32662: (anlutro) salt-cloud: allow templating of EC2 userdata, similar to deploy script (refs: #32698)

PR #40464: (terminalmage) salt-cloud: Do not pass userdata_file through yaml renderer @ 2017-04-05 17:32:07 UTC
- PR #32698: (techhat) Allow EC2 userdata to be templated (refs: #40464)
- 28fc048030 Merge pull request #40464 from terminalmage/userdata-renderer
- 84ee693006 Nova and openstack don't accept base64-encoded userdata
- 73f4c43e2a Allow for userdata_template to be disabled in a cloud_profile
- 78b4798b1b Update compile_template test to use StringIO
- 5f7c5613ce Properly handle renderers which return StringIO objects
- d551b0d857 Bring in salt.utils.stringio from develop branch
- 6a6ef0ad88 Move userdata templating to salt.utils.cloud
- b440d0c679 Update 2016.11.4 release notes for userdata_renderer -> userdata_template
- a6183d93d3 Preserve windows newlines in salt.template.compile_template()
- 04f02df5fe Try to read compiled template as StringIO
- 79cc253bbf Only template the userdata_file if explicitly configured to do so
- b58065f85 Update cloud docs to reflect userdata_renderer -> userdata_template
- a6064b2e4 Rename userdata_renderer -> userdata_template in master config docs
- 50f2b2831f Remove userdata_renderer value
- cc2186f35a Add templating support for other cloud drivers that support userdata_file
- be8d34c59b ec2: Add support for using userdata_renderer to template userdata_file
- eddbd41265 Openstack did not have templating support for userdata_file before 2016.11.4
- a85a416c72 Add userdata_renderer fix info to 2016.11.4 release notes
- 111188742a Add documentation for userdata_renderer
- 9ee2d2fc2d Add userdata_renderer master config param
- **PR #40530** (dmurphy18) Update release information for 2016.11.4 for additional AIX support @ 2017-04-05 16:20:22 UTC
  - 990bde4c07 Merge pull request #40530 from dmurphy18/aix_docupd
  - fd93ca206 Added further support for functionality on AIX for 2016.11.4
  - 17b58917f2 Update release information for new AIX support
- **PR #40528** (dmurphy18) Allow for nightly build designations in Salt versions @ 2017-04-04 20:34:26 UTC
  - 4d932691f1 Merge pull request #40528 from dmurphy18/salt_nightlybuild
  - d62a119fc1 Allow for nightly build designations in Salt versions
- **ISSUE #37699** (gstachowiak) Artifactory state. Incorrect timeout error reporting. (refs: #40465)
- **PR #40465** (rallytime) Artifactory Execution & State Module: Fixup Error Handling @ 2017-04-04 20:12:21 UTC
  - 0ed385210f Merge pull request #40465 from rallytime/fixed-37699
  - 8f084f7056 Update unit test to look for actual string comment
  - ef664b46ae Artifactory State: Only wrap main function call to module in try/except and wrap exception in str()
  - f1015e3900 Artifactory Module: catch URLErrors as well as HTTPErrors
- **ISSUE #39275** (yhekma) Cache backend gets hit a lot (refs: #40497, #40429)
- **PR #40497** (DmitryKuzmenko) Memcache documentation and minor updates. @ 2017-04-04 19:55:18 UTC
  - **PR #40429** (DmitryKuzmenko) MemCache - a minion data cache booster. (refs: #40497, #40468)
  - 7a04ed2439 Merge pull request #40497 from DSRCorporation/features/39275_memcache
  - 82c45b1a52 Memcache documentation and minor updates.
• **ISSUE #38683**: (gstachowiak) require/order/failhard combination error (refs: #40504)

• **PR #40504**: (rallytime) Group checks for failhard setting in () in state.check_faihhard function @ 2017-04-04 19:53:48 UTC
  - d654de52ed Merge pull request #40504 from rallytime/fix-38683
  - ed4e28887 Group checks for failhard setting in () in state.check_faihhard function

• **PR #40503**: (thatch45) first pass at adding support for pycryptodome installed as @ 2017-04-04 19:39:02 UTC
  - 4d5d7d9712 Merge pull request #40503 from thatch45/2016.11
  - 60113248b1 pycryptodome adds RSA to the key header which the openssl
  - 206dec63ff fix the cryptodrome version lookup for the versions report
  - d3b7792b5 good catch
  - 31c6a10d1b first pass at adding support for pycryptodome installed as

• **PR #40525**: (dmurphy18) Add support for disk.iostat on AIX @ 2017-04-04 19:31:41 UTC
  - 0dd92c63ea Merge pull request #40525 from dmurphy18/aix_dskiostat
  - 712537272b Added support on AIX for disk.iostat

• **PR #40496**: (rallytime) Back-port #40415 to 2016.11 @ 2017-04-04 17:19:39 UTC
  - PR #40415: (defanator) Fix boto_vpc.create_route() to work with interface_id (refs: #40496)
  - a6291b17c1 Merge pull request #40496 from rallytime/bp-40415
  - f8b3006898 Fix boto_vpc.create_route() to work with interface_id

• **ISSUE #39275**: (yhekma) Cache backend gets hit a lot (refs: #40497, #40429)

• **PR #40468**: (techhat) Add __func_alias__ back in @ 2017-04-04 17:02:43 UTC
  - PR #40429: (DmitryKuzmenko) MemCache - a minion data cache booster. (refs: #40497, #40468)
  - 3eb8e0ba1f Merge pull request #40468 from techhat/cachealias
  - 6ec0baa9a0 Swap around aliases
  - 76e54a2900 Add __func_alias__ back in

• **ISSUE #29104**: (adithep) Merging Order warning (refs: #39109)

• **PR #39109**: (bdrung) Fix top_file_merging_strategy warning if env_order is set @ 2017-04-04 14:20:56 UTC
  - 8c0befaa8b Merge pull request #39109 from bdrung/fix-merge-order-warning
  - fb8fca98 Simplify __get_envs() by using list comprehensions
  - 74a3b066e9 Fix top_file_merging_strategy warning if env_order is set
  - ec219b5f42 Remove duplicate client_envs variable definitions
  - 6279f7c120 fix do to pre correct on python randome function
  - 66b9515af7 Fix up the doc for failover clarity

• **PR #40495**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-04-03 18:36:16 UTC
  - 02a1f642ab Merge pull request #40495 from rallytime/merge-2016.11
  - 8111909bb1 Merge branch '2016.3' into '2016.11'
• **PR #40466**: (dmurphy18) Support for execution module status on AIX @ 2017-04-01 00:28:51 UTC
  - ac82972cb3 Merge pull request #40466 from dmurphy18/aix_status
  - 7c0b30d9a4 Support for AIX

• **ISSUE #39275**: (yhekma) Cache backend gets hit a lot (refs: #40497, #40429)

• **PR #40429**: (DmitryKuzmenko) MemCache - a minion data cache booster. (refs: #40497, #40468) @ 2017-03-31 20:21:00 UTC
  - fdb0250c95 Merge pull request #40429 from DSRCorporation/features/39275_memcache
  - 4475d1757d In-memory minion data cache.

• **ISSUE #38458**: (duk3luk3) salt-ssh uses sudo to create cache dir, later fails to access it (refs: #40442)

• **PR #40442**: (gtmanfred) allow file_client to figure out cachedir (refs: #40642) @ 2017-03-31 20:14:27 UTC
  - 31d4e6949c Merge pull request #40442 from gtmanfred/salt-ssh
  - 8367735063 allow file_client to figure out cachedir

• **PR #40456**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-31 17:51:11 UTC
  - 0fcfd188a9 Merge pull request #40456 from rallytime/merge-2016.11
  - 0da4c46b68 Merge branch '2016.3' into '2016.11'
  - c26f4cc76c Merge pull request #40371 from terminalmage/pr-40344
    * a8bcaa73d7 Force use of posixpath when joining salt fileserver paths in gitfs
    * cafa08d8e0 Add ability for salt.utils.path_join to force the use of posixpath
  - df9df82959 Merge pull request #40379 from rallytime/tests-for-39855
    * 96259d6c63 Lint fix
    * 4f7ac1431e Create a unit test for the _replace_auth_key function in the ssh module

• **PR #40443**: (gtmanfred) prepend ssh_log_file with root_dir @ 2017-03-31 09:23:46 UTC
  - 8617be9c6d Merge pull request #40443 from gtmanfred/sshlog
  - 7f6046dec3 prepend ssh_log_file with root_dir

• **PR #40376**: (nmadhok) Backporting changes in vmware cloud driver from develop branch to 2016.11 branch @ 2017-03-30 22:35:13 UTC
  - 132d8b7b88 Merge pull request #40376 from nmadhok/2016.11
  - dd62310941 Adding unit tests for vmware_test
  - 36edf0af64 Add additional VMware related exceptions
  - 034ef307c Remove old vmware unit tests
  - 7c144888da Backporting changes in vmware cloud driver from develop branch to 2016.11 branch

• **ISSUE #39692**: (djsly) tuned module and state are broken on 7.3 families. (refs: #40387, #39719, #39768)

• **PR #40387**: (redbaron4) More complete fix for 39692 @ 2017-03-30 22:29:05 UTC
ISSUE #7287: (dragozov) django.loaddata treats fixture list as arguments and prepends "--" for each (refs: #40404)

PR #40404: (roaldnefs) Fix for fixtures in the djangomod module @ 2017-03-30 22:26:09 UTC
- 313d21626f Merge pull request #40404 from roaldnefs/fix-djangomod-loaddata
- 92285cb045 Fix for fixtures in the djangomod module

PR #40416: (lorenegordon) Adds some missing file functions on Windows @ 2017-03-30 22:22:44 UTC
- 5379899442 Merge pull request #40416 from lorenegordon/win-file-funcs
- 8edaf25e10 Adds some missing file functions on Windows

ISSUE #40417: (lorenegordon) temp.file does not close the file handle (refs: #40418)

PR #40418: (lorenegordon) Closes handle to temporary file before returning the path @ 2017-03-30 22:22:03 UTC
- 1f56d8b88f9 Merge pull request #40418 from lorenegordon/close-temp-file
- 7baf2809cf Closes handle to temporary file before returning the path

PR #40430: (twangboy) Fix logic for __virtual__ in win_dsc and win_psget @ 2017-03-30 22:06:16 UTC
- 5c78d55eab Merge pull request #40430 from twangboy/fix_virtual
- 08eb95ce4f0 Add logging on __virtual__ failures
- 43ecb1a597 Fix logic for __virtual__

PR #40431: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-30 21:37:39 UTC
- b855f29928 Merge pull request #40431 from rallytime/merge-2016.11
- d5576d75e7 Merge branch '2016.3' into '2016.11'
- b6770fd81f Merge pull request #40407 from aesdana/fix_rabbitmq_version_check
  * 4c0763fa2f Added split to cut off debian_revision from rabbitmq-server version Fixes #40396
- d4bf45d9f8 Merge pull request #40424 from terminalimage/fix-open-filehandle
  * 66251263cf Fix open filehandles
- 8708096365 Merge pull request #40399 from terminalimage/docker-py_version
  * 14c6575655 Add docker-py version to the versions report
- ff1266b3a6 Merge pull request #40391 from Ch3LL/2016.3.7_release_notes
  * f532ec5288 initial 2016.3.7 release notes
- 96bf9427b0 Merge pull request #40368 from Ch3LL/bump_version_3
  * e02fa7dd1f [2016.3] Bump previous version to 2016.3.6

PR #40401: (roaldnefs) fix Ubuntu notation in docs/faq.rst @ 2017-03-29 20:28:31 UTC
- 7d900d31ea Merge pull request #40401 from roaldnefs/fix-doc-faq
- 21f161fecc fix Ubuntu notation in docs/faq.rst

ISSUE #29028: (kevins9) state.sls fails to render state with pillar data: Jinja variable 'dict object' has no attribute (refs: #37795)
• PR #40390: (rallytime) Back-port #37795 to 2016.11 @ 2017-03-29 19:05:12 UTC
  – PR #37795: (jettero) please tell me where is the "error: 'dict' object has no " (refs: #40390)
  – 70a3f963ec Merge pull request #40390 from rallytime/bp-37795
  – 1ba15577bd Pylint fix
  – ec65924659 please tell me where is the "error: 'dict' object has no attribute 'seek' " ??
• PR #40395: (rallytime) Handle AttributeError for dockerng_mod.docker attempt fails and docker is installed @ 2017-03-29 17:47:11 UTC
  – f8fbff7dc Merge pull request #40395 from rallytime/catch-attribute-error-docker-test
  – 99c8dc18e Handle AttributeError for dockerng_mod.docker attempt fails and docker is installed
• PR #40362: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-28 22:50:32 UTC
  – d763d68035 Merge pull request #40362 from rallytime/merge-2016.11
  – 4f1543c2a1 Merge branch '2016.3' into '2016.11'
    * 1381f97292 Merge pull request #40264 from meaksh/2016.3-gather_job_timeout-fix
      - 68dcaae5b4 Makes sure "gather_job_timeout" is an integer
• PR #40372: (zer0def) Fixes related to cache directory argument changes in pip>=6. @ 2017-03-28 22:48:41 UTC
  – 2febd05896 Merge pull request #40372 from zer0def/pip-cache-fixes
  – d680671d7 Merge remote-tracking branch 'main/2016.11' into pip-cache-fixes
  – 4f23a23ca8 Fixed the test_install_download_cache_argument_in_resulting_command to accomodate introduced cache directory argument fixes and renamed it to test_install_download_cache_dir_arguments_in_resulting_command.
  – 9df094e6ba Fixed unnecessary API changes introduced with suggested changes.
• PR #40369: (Ch3LL) [2016.11] Bump previous version to 2016.3.6 @ 2017-03-28 18:50:39 UTC
  – 6162698c87 Merge pull request #40369 from Ch3LL/bump_version_11
  – 7597d96db [2016.11] Bump previous version to 2016.3.6
• ISSUE #40322: (Whissi) ssh_auth.absent: Wrong comment when test=True (refs: #40333)
• ISSUE #40321: (Whissi) state.alternatives: Wrong comment when test=True (refs: #40333)
• PR #40333: (gtmanfred) fix some test=True comments @ 2017-03-28 16:11:01 UTC
  – 2d2cb5b837 Merge pull request #40333 from gtmanfred/2016.11
  – 5596620db fix some test=True comments
• PR #40347: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-28 02:39:31 UTC
  – bb37f133fc Merge pull request #40347 from rallytime/merge-2016.11
  – e77e86db3a Merge branch '2016.3' into '2016.11'
  – 17ab0a00eab Merge pull request #40345 from twangboy/fix_osx_build
    * 3207d670c5 Fix osx build
  – 7ab0a91ab Merge pull request #40338 from UtahDave/fix_cherrypy_ssl_error_link
    * 280501950 Upstream cherrypy moved to Github from Bitbucket
- **PR saltstack/salt#40332**: (zer0def) Fixes related to cache directory argument changes in pip>=6. (refs: #40346)

- **PR #40346**: (cachedout) Revert "Fixes related to cache directory argument changes in pip>=6." @ 2017-03-27 23:17:29 UTC
  - a572b46183 Merge pull request #40346 from saltstack/revert-40332-pip-cache-fixes
  - b4753d1a5a Revert "Fixes related to cache directory argument changes in pip>=6."

- **ISSUE #40296**: (L4rS6) Wrong documentation in mount.mounted (refs: #40326)

- **PR #40326**: (L4rS6) Update mount state documentation (Fixes: #40296) @ 2017-03-27 23:15:53 UTC
  - a91bab867e Merge pull request #40326 from L4rS6/update-mount-state-doc
  - a717c527a1 Update mount state documentation (Fixes: #40296)

- **PR #40328**: (L4rS6) Fixes wrong compared extra_mount_ignore_fs_keys key. @ 2017-03-27 23:14:22 UTC
  - ca2980c6b0 Merge pull request #40328 from L4rS6/fix-mount-state-extra-ignore-fs-key
  - f0f68b9033 Fixes wrong compared extra_mount_ignore_fs_keys key.

- **PR #40329**: (ismb) Merge tops (backport) @ 2017-03-27 23:13:47 UTC
  - 3a6c5d0297 Merge pull request #40329 from isbm/ismb-merge-tops-201611
  - a762c9edda Merge output from master_tops

- **PR #40285**: (rallytime) Dockerng unit tests fixes: isolate global variables @ 2017-03-27 23:05:03 UTC
  - 2b7b2f1cb4 Merge pull request #40285 from rallytime/docker-test-fixes
  - 0f263a52e0 Mock out the get_client_args mocks in the dockerng module tests more aggressively
  - f1352fe253 Add one more dockerng.version mock that was missed previously
  - 0d31d2c4d1 Add a couple more patches for docker.version information
  - a9c5e6ba0 Clean up dockerng unit tests to avoid global variables and fixup some patching

- **PR #40341**: (twangboy) Fix service.create, fix docs @ 2017-03-27 21:46:19 UTC
  - 01efc842c1 Merge pull request #40341 from twangboy/fix_win_service
  - 6736457ec8 Docs for create
  - 652cf08f8a Fix service.create, fix docs

- **PR #40332**: (zer0def) Fixes related to cache directory argument changes in pip>=6. @ 2017-03-27 21:01:15 UTC
  - 8eabcc6dc Merge pull request #40332 from zer0def/pip-cache-fixes
  - 7976840100 Fixes related to cache directory changes in pip>=6.

- **PR #40337**: (Ch3LL) Add archive.extracted with use_cmd_unzip argument @ 2017-03-27 21:00:23 UTC
  - ceba1b9bc6 Merge pull request #40337 from Ch3LL/add_unzip_test
  - 8b21b4c8bb add use_cmd_unzip test

- **PR #40312**: (rallytime) Update minion data cache documentation @ 2017-03-27 20:56:55 UTC
  - a192597ec2 Merge pull request #40312 from rallytime/cache-docs
  - 5363e0b588 Update minion cache documentation

- **PR #40315**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-27 15:11:25 UTC
  - 7f16754619 Merge pull request #40315 from rallytime/merge-2016.11
- c65d602f60 Merge branch '2016.3' into '2016.11'
  - 7c21153d3a Merge pull request #40300 from meaksh/2016.3-adding-timeouts-parameters-to-cmd_batch
    - 9174e6f281 Fixes testing opts dict for batch unit tests
    - b1de79abcf Adds custom 'timeout' and 'gather_job_timeout' to 'local_batch' client
- **PR #40313**: (techhat) Add minimum and maximum to calls to calc @ 2017-03-27 14:54:15 UTC
  - a9a73bf8dc Merge pull request #40313 from techhat/calcref
  - 7106a86258 Use named kwargs
  - 822f3b81c3 Add minimum and maximum to calls to calc
- **ISSUE #40247**: (eldadru) boto_rds.delete wait_for_deletion checks rds status incorrectly and always loop until timeout (refs: #40277)
- **PR #40277**: (eldadru) Fixing boto_rds.py delete() wait_for_deletion, if statement was inco... @ 2017-03-24 22:29:25 UTC
  - 9d0762deca Merge pull request #40277 from eldadru/Fix-40247-boto_rds-delete-wait-for-deletion-failure
  - 3c15a32764 Fixing boto_rds.py delete() wait_for_deletion, if statement was incorrectly checking the return value of boto_rds.py exists() method.
- **PR #40280**: (bewing) Clean up temporary file in net.load_template @ 2017-03-24 22:27:04 UTC
  - PR #40273: (bewing) Clean up temporary file in net.load_template (refs: #40280)
  - 6c29c81d01 Merge pull request #40280 from bewing/bp_40273
  - f028e939f5 Clean up temporary file in net.load_template
- **ISSUE #37972**: (ebauman) salt-run execution for master with no AAAA record adds significant execution time (refs: #40310)
- **PR #40310**: (gtmanfred) add warning when no host/dns record is found for fqdn_ip @ 2017-03-24 21:55:20 UTC
  - 839b620f32 Merge pull request #40310 from gtmanfred/2016.11
  - cff027dc6 add warning when no host/dns record is found for fqdn
- **PR #40288**: (dmurphy18) Execution module network support for AIX @ 2017-03-24 20:10:36 UTC
  - eb86d55478 Merge pull request #40288 from dmurphy18/aix_network
  - b53a95dab1 Further update to us in similar to review comments
  - 59c0bdc14d Updated for review comments
  - 031c9457ba Execution module network support for AIX
- **PR #40308**: (rallytime) Back-port #38835 to 2016.11 @ 2017-03-24 19:00:46 UTC
  - **PR #38835**: (UtahDave) Cache docs (refs: #40308)
  - 4928026253 Merge pull request #40308 from rallytime/bp-38835
  - 3ba50d5c52 add info about what is cached
  - 77e8f6aff9 fix config example
  - 61f2fa9339 Add documentation for the Minion data cache
- **PR #40287**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-24 16:50:23 UTC
  - 12a9fc43c9 Merge pull request #40287 from rallytime/merge-2016.11
- 77415369cc Merge branch '2016.3' into '2016.11'
- 0e2d52c3ea Merge pull request #40260 from lubyou/fix-join_domain
  * 1cb15d1ea8 use win32api.FormatMessage() to get the error message for the system code
- 0c62b37d3 Merge pull request #40275 from UtahDave/2016.3local
  * 9f0c9802c2 remove reference to auth_minion.
- 57ce474d73 Merge pull request #40265 from terminalmage/issue40219
  * 1a731e0216 Pop off the version when aggregating pkg states
  * 0055fda3e9 Properly aggregate version when passed with name
  * 62d76f50fc Don't aggregate both name/pkgs and sources in pkg states
- b208630d85 Merge pull request #40201 from sergeizv/cloud-roster-fixes-2016.3
  * d87b377ad2 cloud roster: Don't stop if minion wasn't found in cloud cache index
  * a685e0283 cloud roster: Check whether show_instance succeeded on node
  * 1b45c8e8c2 cloud roster: Check provider and profile configs for ssh_username
  * a18250b2e4 cloud roster: Return proper target name
  * 637930b2b3 cloud roster: Fix extracting instance's info
  * dd1d3aacc7 cloud roster: Work with custom conf dir

• PR #40250: (techhat) Add wait_for_fun() to set_tags() @ 2017-03-23 16:42:13 UTC
  - PR #40225: (techhat) Add wait_for_fun() to set_tags() (refs: #40250)
  - b7f9100e6d Merge pull request #40250 from techhat/settags
    - baff7a046d Add wait_for_fun() to set_tags()

• ISSUE #39976: (peterhirn) win_lgpo missing policies, eg. Prevent the usage of OneDrive for file storage (refs: #40255, #40253)

• PR #40255: (lomeroe) backport #40253 @ 2017-03-23 16:36:44 UTC
  - PR #40253: (lomeroe) correct method of getting 'text' of the XML object to compare to the ... (refs: #40255)
  - 904e144ae4 Merge pull request #40255 from lomeroe/fix_39976_2016.11
  - 0e9f5820cc backport #40253

• PR #40240: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-23 14:14:11 UTC
  - PR #40237: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 (refs: #40240)
  - 720a362c7a Merge pull request #40240 from rallytime/merge-2016.11
  - 5c5b74b09a Merge branch '2016.3' into '2016.11'
    * 35ced607dd Merge pull request #40226 from terminalmage/issue40149
      * 2a8df9384c Fix wrong errno in systemd.py
    * 24c4ae9c21 Merge pull request #40232 from rallytime/update-release-notes
      * 2ead8bb4f Update release notes for 2016.3.6
    * c59ae9a82c Merge pull request #39855 from Foxlik/use_regex_to_compare_authorized_keys
      * d46845a5b6 Add newline at end of file
- d4a3c8a66a Use regular expression instead of split when replacing authorized_keys
  - fd10430018 Merge pull request #40221 from rallytime/bp-39179
    - 07dc2de084 fix error parsing
  - a27a2cc3bb Merge pull request #40206 from cro/sign_pub_take2
    - 01048de83f leave sign_pub_messages off on minion by default.
    - a82bo05507 Leave sign_pub_messages off by default.
  - d1abb4cbba Merge pull request #40193 from rallytime/bp-40117
    - cf1857904b More optimization.
    - 5a08266814 Removed debug statemnt
    - f557f7c6bb Added fix for issue 39393
    - bb62278b73 Reverting changes.
    - a9107cde44 Added if condition for broken link.
  - 0f1ff4d4a8 Merge pull request #40196 from twangboy/win_fix_deps
    - 6761527793 Update dependencies for PyOpenSSL
  - b0501515cb Merge pull request #40184 from terminalmage/link-reactor-example
    - a42be82993 Link to minion start reactor example from FAQ.

- ISSUE #39445: (systemtrap) state file.copy for directories does not set ownership recursively (refs: #40030)

- PR #40231: (rallytime) Back-port #40030 to 2016.11 @ 2017-03-22 23:14:40 UTC
  - PR #40030: (narendraingale2) Added changes for fix_39445 (refs: #40231)
  - c40376250f Merge pull request #40231 from rallytime/bp-40030
  - 4d16c876fbbf Using lchown insted of chown.
  - 52b3d986b5 Added changes for fix_39445
  - PR saltstack/salt#40225: (techhat) Add wait_for_fun() to set_tags() (refs: #40239)

- PR #40239: (cachedout) Revert "Add wait_for_fun() to set_tags()" @ 2017-03-22 22:59:16 UTC
  - e39f5c6bf40 Merge pull request #40239 from saltstack/revert-40225-waitforfun
  - 95bdab87b4 Revert "Add wait_for_fun() to set_tags()"

- PR #40225: (techhat) Add wait_for_fun() to set_tags() (refs: #40250) @ 2017-03-22 18:15:35 UTC
  - 11d2f5abec Merge pull request #40225 from techhat/waitforfun
  - 89b5010883 Add wait_for_fun() to set_tags()

- PR #40172: (dmurphy18) Fix solaris network @ 2017-03-22 17:41:56 UTC
  - c8e0bb7dfe Merge pull request #40172 from dmurphy18/fixed_solaris_network
  - a621b99484 Updated use of tail on Solaris and Sun-like OS
  - 90e6a1d8f6 Further update to support correct tail in network for Solaris
  - 5d6d3d4d70 Fix use of correct tail on Solaris for active_tcp

- PR #40210: (rallytime) Skip flaky test for now @ 2017-03-22 16:34:41 UTC
  - e9a4e8548b Merge pull request #40210 from rallytime/test-skip
• ISSUE #40204: (sofixa) InfluxDB returner present on salt-minion (installed via salt-bootstrap and updated via apt-get) has a bug (refs: #40209)

• PR #40209: (sofixa) change InfluxDB get_version to expect status code 204 @ 2017-03-21 21:42:26 UTC
  - 0b00489eb2 Merge pull request #40209 from sofixa/2016.11
  - e1cc7234ff change InfluxDB get_version to expect status code 204

• ISSUE #39775: (mirceaulinic) Proxy mine_interval config ignored (refs: #39935, #saltstack/salt#39935_, #39776)
  - PR saltstack/salt#39935: (cro) Add special token to insert the minion id into the default_include path (refs: #40202)

• PR #40202: (cro) Revert "Add special token to insert the minion id into the default_include path" @ 2017-03-21 21:37:33 UTC
  - 66bc680d0a Merge pull request #40202 from saltstack/revert-39935-namespace_proxy_cfg
  - bb71710747 Revert "Add special token to insert the minion id into the default_include path"

• PR #40199: (whiteinge) Ponysay emergency hotfix @ 2017-03-21 21:10:21 UTC
  - d8f0b79997 Merge pull request #40199 from whiteinge/ponysay-emergency-hotfix
  - 85ea61b544 Add depends note
  - 5a271acfdc Fix ponysay outputer hardcoded path

• PR #40194: (terminalmage) Change imports for dockerng tests @ 2017-03-21 19:34:55 UTC
  - 82ce58e72 Merge pull request #40194 from terminalmage/fix-docker-test-imports
  - 6caedb0de8 Change imports for dockerng tests

• PR #40189: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-21 18:02:51 UTC
  - 0b512f9fffb Merge pull request #40189 from rallytime/merge-2016.11
  - a55c4138a8 Merge branch '2016.3' into '2016.11'
    - d4ec58526 Merge pull request #40182 from terminalmage/dockerng-mod_watch-stopped
      - 4629a26fb7 Add support for "stopped" state to dockerng's mod_watch
    - a0b4082484 Merge pull request #40171 from Ch3LL/2016.3.6_release
      - 9c6d8d892f additional PRs/issues for 2016.3.6 release notes
    - 33ba7821f7 Merge pull request #40120 from sergeizv/gce-expand-node-fix
      - 9d0f6be7e01 gce: Exclude GCENodeDriver objects from _expand_node result
    - 48843977c3 Merge pull request #40122 from meaksh/2016.3-yum-downloadonly-support
      - 067f3f77c2 Adding downloadonly support to yum/dnf module
    - 60e1d4e2f3 Merge pull request #40159 from cro/sign_pub
      - e663b761fb Fix small syntax error
      - 0a0f46fb14 Turn on sign_pub_messages by default. Make sure messages with no `sig` are dropped with error when sign_pub_messages is True.

• ISSUE #39779: (sp1r) Pillar scheduling is broken (refs: #40034)

• ISSUE #38523: (MorphBonehunter) schedule not changed on pillar update after minion restart (refs: #40034)
• ISSUE #36134: (Ch3LL) carbon: multi-master with failover does not failover when master goes down (refs: #36437)

• PR #40034: (sp1r) Disallow modification of jobs from pillar with schedule execution module @ 2017-03-21 16:36:34 UTC
  - PR #36437: (DmitryKuzmenko) Keep the schedule jobs in ONE place. (refs: #40034)
  - d9cb222aa8 Merge pull request #40034 from sp1r/fix-pillar-scheduling
  - 595f786327 fix evaluating jobs when "pillar" is missing in opts
  - 9d5db1910c fix initial data structure for schedule tests
  - d3a2489e9c schedule tests to ensure pillar jobs are not modified
  - 27385f49e added a check ensuring schedule is a dict before merging
  - 14d7191b2 Fixes #39779

• PR #40160: (eldadru) Fix this issue: https://github.com/saltstack/salt/issues/40073, descr... @ 2017-03-20 21:37:43 UTC
  - 257c862c52 Merge pull request #40160 from eldadru/fix-issue-40073-boto-rcds-describe-empty-dict
  - 954c871332 Fix this issue: https://github.com/saltstack/salt/issues/40073, describe return dictionary returned empty , probably as result of incorrect past merge (see discussion on issue)

• PR #40162: (rallytime) Make sure the tornado web server is stopped at the end of the test class @ 2017-03-20 20:35:21 UTC
  - aec504173a Merge pull request #40162 from rallytime/archive-integration-test-fixes
  - dd193cc740 Make sure the tornado web server is stopped at the end of the test class

• PR #40158: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-20 20:34:23 UTC
  - 461e15f0f4 Merge pull request #40158 from rallytime/merge-2016.11
  - 88f3ebd7e9 Remove extra "connect" kwarg caught by linter
  - f4d4768a6d Merge branch '2016.3' into '2016.11'
    - 28e4fc17b6 Merge pull request #40123 from twangboy/win_fix_network
      - 06dfdf55e9 Adds support for inet_pton in Windows to network util
    - 35ddc79f59 Merge pull request #40141 from bobrik/fallback-resolve
      - af1545deed Use the first address if cannot connect to any

• PR #40165: (rallytime) Don't try to run the dockerng unit tests if docker-py is missing @ 2017-03-20 20:33:19 UTC
  - b235f0953f Merge pull request #40165 from rallytime/gate-docker-unit-tests
  - f32d8a8683 Don't try to run the dockerng unit tests if docker-py is missing

• PR #40085: (mirceaulinic) VRF arg and better doc for ping and traceroute @ 2017-03-20 19:48:57 UTC
  - db9f5b8b82 Merge pull request #40085 from cloudflare/fixed-ping-tr
  - 6cbb6d61b54 Strip trailing whitespaces
  - 897a2a37c3 VRF arg and better doc for ping and traceroute

• PR #40095: (skizunov) dns_check should not try to connect when connect=False @ 2017-03-17 17:31:42 UTC
  - 3bac06f099 Merge pull request #40095 from skizunov/develop2
• PR #40096: (skizunov) When building up the 'master_uri_list', do not try to connect when connect=False
  - 880790f743 dns_check should not try to connect when connect=False
  - 31da90edd9 Merge pull request #40096 from skizunov/develop3
  - eb9a06fd1 When building up the 'master_uri_list', do not try to connect
• PR #40111: (eldadru) Fixing simple issue 40081 - the key parameter of the method create overw... @ 2017-03-17 17:00:03 UTC
  - 5303386d93 Merge pull request #40111 from eldadru/fix-issue-40081-boto-rds-create-overwritten-key-parameter
  - 78b5d112d7 Fixing simple issue 40081 - the key parameter of the method create overwritten by internal loop.
• PR #40118: (rallytime) Add CLI Example for dockerng.get_client_args @ 2017-03-17 16:34:13 UTC
  - d2e376e8f2 Merge pull request #40118 from rallytime/cli-example
  - bb496bb7f4 Add CLI Example for dockerng.get_client_args
• PR #40097: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-17 15:17:08 UTC
  - bae5009aa Merge pull request #40097 from rallytime/merge-2016.11
  - e1f338f8d Merge branch '2016.3' into '2016.11'
  - 116201f345 Merge pull request #40059 from terminalmage/fix-virtualenv-traceback
    - e3cfdd29d6b Fix traceback when virtualenv.managed is invoked with nonexistant user
  - a01b529a3 Merge pull request #40090 from rallytime/bp-40056
    - ae012db87a update mention bot blacklist
  - d1570baa4c Merge pull request #40057 from cachedout/ollie_blacklist
    - 0ac2e83d37 Merge branch '2016.3' into ollie_blacklist
    - 5592c680b5 More mentionbot blacklists
• ISSUE #39771: (mirceaulinic) Empty __proxy__ dunder inside scheduler (refs: #40077)
• PR #40077: (mirceaulinic) Fix #39771 (Empty __proxy__ dunder inside scheduler) @ 2017-03-16 20:56:02 UTC
  - 9ef3e070c2 Merge pull request #40077 from cloudflare/fix-39771
  - cd319e7e39 Add proxy kwarg to scheduler
  - c6e6dd1a04 ProxyMinion: correctly build the scheduler
• PR #40088: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-16 19:58:44 UTC
  - b12720a56f Merge pull request #40088 from rallytime/merge-2016.11
  - 626bd03885 Merge branch '2016.3' into '2016.11'
  - d36bdb1a6e Merge pull request #40070 from Ch3LL/2016.3.6_release
    - a1f8b49b41 update 2016.3.6 release notes with additional PR's
  - 8dccc7751 Merge pull request #40018 from meaksh/2016.3-handling-timeouts-for-manage.up-runner
    - 9f5c3b7dcd Allows to set custom timeouts for 'manage.up' and 'manage.status'
    - 21029c97c5c Allows to set 'timeout' and 'gather_job_timeout' via kwargs
  - 22fc5299a2 Merge pull request #40038 from velom/fix-pip-freeze-parsing
• 3fae91d879 correctly parse "pkg_name==version" from pip freeze
  - 3584f935fa Merge pull request #40053 from saltstack/rh_ip_patch
    • 219947acdb Update rh_ip.py
  - 837432d3d2 Merge pull request #40041 from terminalmage/issue40011
    • 5b5d1b375c Fix transposed lines in salt.utils.process

• PR #40055: (rallytime) Update "yaml" code-block references with "jinja" where needed @ 2017-03-16 16:30:38 UTC
  - 703ab23953 Merge pull request #40055 from rallytime/doc-build-warnings
  - 72d16c9fa9 Update "yaml" code-block references with "jinja" where needed

• PR #40072: (meaksh) [2016.11] Allows overriding 'timeout' and 'gather_job_timeout' to 'manage.up' runner call @ 2017-03-16 15:31:46 UTC
  - PR #40018: (meaksh) Allows overriding 'timeout' and 'gather_job_timeout' to 'manage.up' runner call (refs: #40072)
  - e73a1d6e54 Merge pull request #40072 from meaksh/2016.11-handling-timeouts-for-manage.up-runner
  - 40246d3723 Allows to set custom timeouts for 'manage.up' and 'manage.status'
  - ad232f0d01 Allows to set 'timeout' and 'gather_job_timeout' via kwargs

• PR #40045: (terminalmage) Fix error when chhome is invoked by user.present state in Windows @ 2017-03-15 19:00:41 UTC
  - 2f28ec26ee Merge pull request #40045 from terminalmage/fix-windows-user-present
  - 359a3b2bb2b Fix error when chhome is invoked by user.present state in Windows

• PR #40047: (rallytime) Back-port #40000 to 2016.11 @ 2017-03-15 17:47:37 UTC
  - PR #40000: (skizunov) Fix exception in salt-call when master_type is 'disable' (refs: #40047)
  - 4067625676 Merge pull request #40047 from rallytime/bp-40000
  - 11766c7259 Fix exception in salt-call when master_type is 'disable'

• PR #40023: (jeanpralo) We need to match on .p not just strip '.p' otherwise it will remove a... @ 2017-03-14 23:14:56 UTC
  - 86f7195e0e Merge pull request #40023 from jeanpralo/fix-minions-cant-finish-by-char-p
  - d7b0c8ae88 We need to match on .p not just strip '.p' otherwise it will remove any p from the string even if we have no dot

• PR #40025: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-14 23:14:33 UTC
  - 277bd17ff2 Merge pull request #40025 from rallytime/merge-2016.11
  - 029f28bbd5 Merge branch '2016.3' into '2016.11'
  - ee7f3b1200 Merge pull request #40021 from Ch3LL/2016.3.6_release
    • f3e7e4fb2a Add 2016.3.6 Release Notes
  - 26895b7be2 Merge pull request #40016 from terminalmage/fix-grains-test
    • 0e25d3d4cde Fixup a syntax error
    • 5d84b40b0b Attempt to fix failing grains tests in 2016.3
  - 0c61d06ad Merge pull request #39980 from vutny/cmd-run-state-bg
* a81dc9dfc1 [2016.3] Allow to use bg kwarg for cmd.run state function
  - b042484455 Merge pull request #39994 from rallytime/ulimits-dockerng-version
  * 37bd800fac Add a versionadded tag for dockerng ulimits addition
  - e125e94baf5 Merge pull request #39988 from terminalmage/dockerng-timeout
  * bd2519ed1b Add comment explaining change from #39973

** PR #40020: (dmurphy18) Full support for execution module timezone on AIX @ 2017-03-14 21:05:31 UTC
  - 8db74fb275 Merge pull request #40020 from dmurphy18/aix_timezone
  - aabbfffd45 Full support to execution module timezone on AIX
  - 16d5c7ce4a WIP: timezone support for AIX

** PR #39924: (dmurphy18) Add AIX support for user and group execution modules @ 2017-03-14 21:04:02 UTC
  - 60066da614 Merge pull request #39924 from dmurphy18/salt_aix_fixMar
  - 5077c989bb Updated changes file for added AIX support
  - 8e107bd43e WIP: support for useradd on AIX
  - 2f87d727d6 WIP: group support for AIX

** PR #40010: (jettero) S3 bucket path broken @ 2017-03-14 19:01:01 UTC
  - cd73eafe8c Merge pull request #40010 from jettero/s3-bucket-path-broken
  - ace5bf7c8 clarify this, because it messes people up in the mailing lists, and myself briefly before I thought about it
  - 8102ac8e3c same here
  - 21b79e00be In order for the heredoc to be correct, bucket and path have to default to '', not None

** PR #39991: (terminalmage) Document the fact that the checksum type can be omitted in file.managed states @ 2017-03-14 15:58:11 UTC
  - 61f1fb04c5 Merge pull request #39991 from terminalmage/source_hash-docs
  - 537fc36029 Document the fact that the checksum type can be omitted in file.managed states

** PR #39984: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-13 18:30:16 UTC
  - 53d14d8ad9 Merge pull request #39984 from rallytime/merge-2016.11
  - ef6f4b15ca Merge branch '2016.3' into '2016.11'
  - cd0336e868 Merge pull request #39973 from terminalmage/dockerng-timeout
  * 869416e7db Don't use docker.Client instance from context if missing attributes

** PR #39967: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-10 23:45:33 UTC
  - 31c00740e7 Merge pull request #39967 from rallytime/merge-2016.11
  - 3022466615 Merge branch '2016.3' into '2016.11'
  - 282c607d26 Merge pull request #39962 from cachedout/disable_mentionbot_delay_3
  * 7a638f204b Disable mention bot delay on 2016.3
  - 1e0c88ae08 Merge pull request #39937 from cachedout/gpg_zypper
  * 13ed0d1209 Fix --non-gpg-checks in zypper module

** PR #39963: (cachedout) Mention bot delay disable for 2016.11 @ 2017-03-10 20:25:25 UTC

2498 Chapter 30. Release Notes
- 269a2fd739 Merge pull request #39963 from cachedout/disable_mentionbot_delay_11
- 5fcea05691 Mention bot delay disable for 2016.11

• ISSUE #7997: (shantanub) Proper way to upgrade salt-minions / salt-master packages without losing minion connectivity (refs: #39952)

• PR #39952: (vutny) Fix #7997: describe how to upgrade Salt Minion in a proper way @ 2017-03-10 18:41:57 UTC
  - 6350b07384 Merge pull request #39952 from vutny/doc-faq-minion-upgrade-restart
  - d989d749d6 Fix #7997: describe how to upgrade Salt Minion in a proper way

• ISSUE #39775: (mirceaulinic) Proxy mine_interval config ignored (refs: #39935, #saltstack/salt`#39935`_, #39776)

• PR #39935: (cro) Add special token to insert the minion id into the default_include path @ 2017-03-10 17:51:55 UTC
  - dc7d4f4224 Merge pull request #39935 from cro/namespace_proxy_cfg
  - e4ae54c73 Add special token to insert the minion id into the default_include path

• PR #39936: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-10 17:05:04 UTC
  - 9503a1d0c6 Merge pull request #39936 from rallytime/merge-2016.11
  - c8b5d390b5 Merge branch '2016.3' into '2016.11'
    * 4526fc6e08 Merge pull request #39929 from terminalimage/pr-39770-2016.3
      - cf0100dabe Scrap event-based approach for refreshing grains
    * 111110caf8 Merge pull request #39919 from The-Loeki/patch-1
      - 170cbadc54 CIDR matching supports IPv6, update docs
    * caf10e9988 Merge pull request #39899 from techhat/cleanupdisks
      - baf4579e63 Update cleanup function for azure
    * fcf95f3654 Merge pull request #39871 from terminalimage/squelch-import-warning
      - 2b2ec69d04 Squelch warning for pygit2 import
    * f223fa8906 Merge pull request #39794 from cachedout/clean_monitor_socket_shutdown
      - 2e683e788b Clean up errors which might be thrown when the monitor socket shuts down
    * 4002dc1947 Merge pull request #39819 from terminalimage/top-file-matching-docs
      - 7178e77eee Improve the Top File matching docs
    * c08aeb7fd Merge pull request #39820 from ni3mm4nd/beacons_topic_doc_typo
      - 804b12048c Add missing apostrophe
    * cbd2a4e3cc Merge pull request #39826 from cachedout/yubikey_fix
      - 6125eff02d Add group func to yubikey auth
    * f575ef459f Merge pull request #39624 from drawsmcgraw/39622
      - 13da50be33 Fix indentation lint errors
      - 545026352f Address issue 39622
    * 1f3619c1e5 Merge pull request #39796 from cachedout/master_shutdown
* e31d46c1b8 Stop the process manager when it no longer has processes to manage
  * 53341cf152 Merge pull request #39791 from gtmanfred/2016.3
  * 3ab4f843bf load runners if role is master
  * c234c25092 Merge pull request #39784 from sergeizv/fix-39782
    * b71c3fe13c Revert "cloud.clouds.ec2: cache each named node (#33164)"
  * 4ee59be22c Merge pull request #39766 from rallytime/fix-ipv6-connection
    * 65b239664e Restore ipv6 connectivity and "master: <ip>:<port>" support

** ISSUE #38121: (Da-Juan) Beacon configuration doesn’t work as a list (refs: #39932, #39930)**

** PR #39932: (rallytime) Cherry-pick the beacon fixes made in #39930 to 2016.11 @ 2017-03-10 00:21:09 UTC**
  - PR #39930: (s0undt3ch) Moar Py3 and a fix for #38121 (refs: #39932)
  - 899e037f0a Merge pull request #39932 from rallytime/cp-beacon-fixes
  - 4a52ca926 Pylint fixes
  - 4627c4ea6d Code cleanup and make sure the beacons config file is deleted after testing
  - c7fc09f97d Support the new list configuration format.
  - be06d9b64 Remove "*args, **kwargs. Not needed, not useful.
  - 4a242829ee These tests aren’t even using mock!
  - 6408b123e7 These tests are not destructive
  - 50e51b5b9d The beacons configuration is now a list. Handle it!

** PR #39933: (hkrist) Fixed rawfile_json returner output format. @ 2017-03-10 00:20:52 UTC**
  - 2e68edee4a Merge pull request #39933 from hkrist/fix-rawfile_json_returner-format
  - 4d0ddcd110 Fixed rawfile_json returner output format. It outputted python object instead of standard json.

** PR #39934: (dumurphy18) Correct comment lines output from execution module’s host.list_hosts @ 2017-03-10 00:20:14 UTC**
  - fb0dc333c4 Merge pull request #39934 from dumurphy18/fix_host_list
  - e7b9a45079 Correct comment lines output got list_hosts

** PR #39900: (twangboy) Namespace the line function properly in win_file @ 2017-03-09 22:19:12 UTC**
  - a6f8d03df Merge pull request #39900 from twangboy/win_fix_line
  - 462bdec33 Namespace the line function properly in win_file

** ISSUE #37741: (discountbin) Check in file.replace state for ignore_if_missing (refs: #37743, #39910)**

** PR #39910: (rallytime) Back-port #37743 to 2016.11 @ 2017-03-09 22:16:58 UTC**
  - PR #37743: (discountbin) Adding check for ignore_if_missing param when calling _check_file. (refs: #39910)
  - 77ecff4e02 Merge pull request #39910 from rallytime/bp-37743
  - ca30e0860 Replace pass with updated comment for return
  - 1a7887b47 Adding check for ignore_if_missing param when calling _check_file.

** PR #39770: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-03-09 22:00:17 UTC**
- c2d4d17589 Merge pull request #39770 from rallytime/merge-2016.11
- dbaea3de73 Remove extra refresh reference that snuck in
- d9f48ac6ea Don't shadow refresh_pillar
- d86b03dc90 Remove manual refresh code from minion.py
- a7e419e35f Scrap event-based approach for refreshing grains
- 776a9431b9 Merge branch '2016.3' into '2016.11'
  - a24da31131 Merge pull request #39761 from cachedout/issue_33187
    - c2df29edb2 Properly display error in jboss7 state
  - 0888bc32ef Merge pull request #39728 from rallytime/update-release-ver-2016.3
    - c9bc8af8f2 [2016.3] Bump latest release version to 2016.11.3
  - b52dbeec68 Merge pull request #39619 from terminalmage/zd1207
    - c7df494a6 Fix mocking for grains refresh
    - 7e0ced3b45 Properly hand proxy minions
    - 692c456da3 Add a function to simply refresh the grains

- **PR #39872**: (techhat) Add installation tips for azurearm driver @ 2017-03-07 23:18:04 UTC
  - 801f28053 Merge pull request #39872 from techhat/fixdocs
  - 35440c5936 Add installation tips for azure
  - 2a1ae0bf2e Change example master in azure docs

- **PR #39837**: (terminalmage) Fix regression in archive.extracted when it runs file.directory @ 2017-03-07 04:09:51 UTC
  - 6d0f15c31a Merge pull request #39837 from terminalmage/more-issue39751
  - 0285ff3c7d Fix regression in archive.extracted when it runs file.directory

- **PR #39858**: (techhat) Reorder keys that were being declared in the wrong place @ 2017-03-07 03:51:56 UTC
  - 68752a2a18 Merge pull request #39858 from techhat/statuskey
  - 507a4f7f93 Reorder keys that were being declared in the wrong place

- **ISSUE #38830**: (danielmotaleite) salt-ssh: vault fails to use config (refs: #38943)

- **PR #39862**: (rallytime) Back-port #38943 to 2016.11 @ 2017-03-07 03:34:40 UTC
  - **PR #39843**: (thatch45) When we generate the pillar we should send in the master opts (refs: #39862)
  - 49c8f8a141 Merge pull request #39862 from rallytime/bp-38943
  - e21b16c002 try it with a different init sequence
  - 92cac0f8b make it a deepcopy
  - 58cb8cd4f5 make sure to copy the top dict reference since we are moding it
  - a0b671ea43 When we generate the pillar we should send in the master opts

- **PR #39852**: (rallytime) Back-port #39651 to 2016.11 @ 2017-03-06 21:18:34 UTC
  - **PR #39651**: (DennisHarper) Checking Instance when calling a function that can return None (refs: #39852)
  - 8ecc719f90 Merge pull request #39852 from rallytime/bp-39651

20.2. Previous Releases 2501
bb5ddbe18c Checking instance exists in master._get_cached_minion_data when cache.fetch returns None
79f2a7cbb7 Update __init__.py
e2a232921d Checking instance exists in master._get_cached_minion_data when cache.fetch returns None
838774291d Update __init__.py
ff6f63e9dd Checking instance exists in master._get_cached_minion_data when cache.fetch returns None
855f87554c Checking instance exists in master._get_cached_minion_data when cache.fetch returns None

• ISSUE #39052: (githubcdr) Minion restart very slow since 2016.11.2 (refs: #39104)
  PR #39851: (rallytime) Back-port #39104 to 2016.11 @ 2017-03-06 21:17:43 UTC
    PR #39104: (githubcdr) Do not use name resolving for --notrim check (refs: #39851)
      897275ae5f Merge pull request #39851 from rallytime/bp-39104
      6539dbdbca Do not use name resolving for --notrim check
• ISSUE #38231: (tjuup) Typo: salt-key deleteed (refs: #39799)
  PR #39799: (Ch3LL) Fix deleteed message when key is deleted @ 2017-03-03 05:17:43 UTC
    d0440e2a2a Merge pull request #39799 from Ch3LL/fixed_salt_key_msg
    8346682cf7 Fix deleteed message when key is deleted
• ISSUE #38962: (gstachowiak) Broken /jobs in salt-api in salt 2016.11.1 (Carbon) (refs: #39472)
  PR #39472: (whiteinge) Update _reformat_low to not run kwarg dicts through parse_input @ 2017-03-02 17:46:20 UTC
    9f70ad7164 Merge pull request #39472 from whiteinge/_reformat_low-update
    d11f5381a4 Add RunnerClient test for old/new-style arg/kwarg parsing
    ec377ab379 Reenable skipped RunnerClient tests
    2ff7fd9ad4 Update _reformat_low to run arg through parse_input
    5177153459 Revert parse_input change from #32005
• PR #39727: (terminalmage) salt.modules.state: check gathered pillar for errors instead of in-memory pillar @ 2017-03-02 17:06:43 UTC
  7dfc4f572a Merge pull request #39727 from terminalmage/issue39627
  3bb0ed872 Update tests for PR 39727
  c334b59c96 salt.modules.state: check gathered pillar for errors instead of in-memory pillar
  97dd8a13d9 Ensure that ext_pillar begins with pillar_override if ext_pillar_first is True
  f951266944 Add log message for successful makostack processing
• ISSUE #39775: (mirceaulinic) Proxy mine_interval config ignored (refs: #39935, #saltstack/salt #39935'
  PR #39776: (mirceaulinic) WIP: Save _schedule.conf under <proxy ID> dir @ 2017-03-02 16:27:45 UTC
    965f474316 Merge pull request #39776 from cloudflare/proxy-schedule
    35b8b8fd64 Save _schedule.conf under <minion ID> dir
• PR #39788: (cachedout) Disable one API test that is flaky @ 2017-03-02 16:17:31 UTC
- 555f1473f6 Merge pull request #39788 from cachedout/disable_api_test
- 523e377b33 Disable one API test that is flaky

**PR #39762**: (terminalmage) Fix regression in file.get_managed @ 2017-03-02 02:59:34 UTC
- 793979cbe6 Merge pull request #39762 from terminalmage/issue39751
- 64db0b8563 Add integration tests for remote file sources
- f9f894d981 Fix regression in file.get_managed when skip_verify=True
- 28651a6699 Remove next(iter()) extraction

**ISSUE #35088**: (Modulus) salt/cloud/ec2.py encoding problems. (refs: #37912)

**PR #39767**: (rallytime) Back-port #38316 to 2016.11 @ 2017-03-02 02:54:57 UTC
- PR #38316: (nlalph) salt utils aws encoding fix (refs: #39767)
- PR #37912: (attiasr) fix encoding problem aws responses (refs: #38316)
- 91a9337ab3 Merge pull request #39767 from rallytime/bp-38316
- 1dcf018df7 requests api says Response.encoding can sometimes be None http://docs.python-requests.org/en/master/api/#requests.Response.encoding and result.text.encode() doesn't accept None and expects a string.

**ISSUE #39692**: (djstly) tuned module and state are broken on 7.3 families. (refs: #40387, #39719, #39768)

**PR #39768**: (rallytime) Back-port #39719 to 2016.11 @ 2017-03-02 02:54:40 UTC
- PR #39719: (Seb-Solon) Support new version of tuned-adm binary (refs: #39768)
- 4a01bd64ea Merge pull request #39768 from rallytime/bp-39719
- d7cb70f203 Enh: Support new version of tuned-adm binary

**PR #39760**: (Ch3LL) Initial 2016.11.4 Release Notes Doc @ 2017-03-01 18:43:39 UTC
- 780457f934 Merge pull request #39760 from Ch3LL/2016.11.4_notes
- 1853c998c4 add initial 2016.11.4 release notes

**PR #39731**: (twangboy) Add docs for Kwargs in pkg.refresh_db @ 2017-02-28 22:02:59 UTC
- 0147f78ab5 Merge pull request #39731 from twangboy/win_pkg_docs
- 423e6f7448 Add docs for Kwargs in pkg.refresh_db

**ISSUE #39710**: (huangfupeng) schedule.add parameter can not use "after" (refs: #39734)

**PR #39734**: (garethgreenaway) Missing parameter in the schedule.add function @ 2017-02-28 20:43:08 UTC
- fce2d184f3 Merge pull request #39734 from garethgreenaway/39710_missing_schedule_add_parameter
- 63eb610245 Per #39710, missing parameter in the schedule.add function

**PR #39729**: (rallytime) [2016.11] Bump latest release version to 2016.11.3 @ 2017-02-28 18:08:25 UTC
- 7b4865c058 Merge pull request #39729 from rallytime/update-release-ver-2016.11
- b5a7111ad9 [2016.11] Bump latest release version to 2016.11.3

**PR #39721**: (vutny) DOCS: add 2nd level header for advanced targeting methods @ 2017-02-28 17:57:46 UTC
- 47e494fe07 Merge pull request #39721 from vutny/doc-targeting
- 1d86cf1161 DOCS: add 2nd level header for advanced targeting methods

**ISSUE #39683**: (alankrita) Error in Saltstack’s rest auth ”Authentication module threw ’status’ “ (refs: #39711)
• PR #39711: (alankrita) Fix error in Saltstack's rest auth "Authentication module threw 'status' " @ 2017-02-28 15:56:09 UTC
  - d39b679d82 Merge pull request #39711 from alankrita/fixed-rest-eauth
  - ee426562a7 Fix error in Saltstack's rest auth "Authentication module threw 'status' 

• PR #39699: (techhat) Strip shabang line from rendered HTTP data @ 2017-02-28 00:05:01 UTC
  - 3940321462 Merge pull request #39699 from techhat/httpshabang
  - 559eb93576 Strip shabang line from rendered HTTP data

• PR #39694: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-02-27 22:13:49 UTC
  - 00f121ead Merge pull request #39694 from rallytime/merge-2016.11
  - 756f1de2d2 Merge branch '2016.3' into '2016.11'
    * 3f8b5e6733 Merge pull request #39487 from bobrik/mode-docs
      - 41ef69b3ca Document default permission modes for file module
    * f7389bf1f5 Merge pull request #39641 from smarsching/issue-39169-2016.3
      - 88c2da95a40 Fix return data structure for runner (issue #39169).
    * fc970b2a16 Merge pull request #39633 from terminalmage/fix-systemd-typo
      - ca54541abe Add missing unit test for disable func
      - 17109e1522 Fix misspelled argument in salt.modules.systemd.disable()
    * 53e78d67f6 Merge pull request #39613 from terminalmage/fix-docs
      - 9342eda377 Fix inaccurate documentation

• ISSUE #39642: (drawsmcgraw) boto_vpc.nat_gateway_present does not honor the allocation_id parameter like the module does (refs: #39643)

• PR #39643: (drawsmcgraw) issue 39642 - boto_vpc.nat_gateway_present should accept parameter al... @ 2017-02-27 20:19:09 UTC
  - 2c919e31d6 Merge pull request #39643 from drawsmcgraw/39642
  - 56d9adfb66 issue 39642 - boto_vpc.nat_gateway_present should accept parameter allocation_id.

• PR #39666: (terminalmage) Rewrite the test_valid_docs test @ 2017-02-26 20:14:33 UTC
  - df013c5f31 Merge pull request #39666 from terminalmage/test_valid_docs
  - 5ac8c99e4f Rewrite the tests_valid_docs test

• PR #39662: (The-Loeki) Py3 compat: Force minions to be a list for local serialized caches @ 2017-02-26 02:36:46 UTC
  - a29a7e7f8 Merge pull request #39662 from The-Loeki/py3cachefix
  - b02ef984f7 Add comment
  - 0fe5c90a05 Py3 compat: Force minions to be a list for local serialized caches

• PR #39644: (vutny) Improve and align dockerng execution module docs @ 2017-02-25 04:16:28 UTC
  - bd6ed18b1 Merge pull request #39644 from vutny/dockerng-docs
  - c4988e874e Improve and align dockerng execution module docs

• PR #39516: (jettero) Prevent spurious "Template does not exist" error @ 2017-02-24 23:41:36 UTC
Salt Documentation, Release 3002.5

- ffab54078 Merge pull request #39516 from jettero/give-pillarenv-tops-similar-treatment
- 8fe48fa5c4 prevent billions of inexplicable lines of this:

- **PR #39654**: (skizunov) Fix issue where compile_pillar failure causes minion to exit @ 2017-02-24 22:47:52 UTC
  - be9629b180 Merge pull request #39654 from skizunov/develop2
  - 9f80bbce07 Fix issue where compile_pillar failure causes minion to exit

- **PR #39653**: (cachedout) Use salt's ordereddict for comparison @ 2017-02-24 22:46:24 UTC
  - e63cbbaa9 Merge pull request #39653 from cachedout/26_odict
  - 91eb7210bb Use salt's ordereddict for comparison

- **ISSUE #38836**: (toanctruong) file.managed with S3 Source errors out with obscure message (refs: #39609, #39589)

- **PR #39609**: (gtmanfred) intialize the Client stuff in FSClient @ 2017-02-24 18:50:55 UTC
  - 0bc6027e68 Merge pull request #39609 from gtmanfred/2016.11
  - 0820620ef8 intialize the Client stuff in FSClient

- **PR #39615**: (skizunov) Bonjour/Avahi beacons: Make sure TXT record length is valid @ 2017-02-24 18:47:05 UTC
  - 28035c07b3 Merge pull request #39615 from skizunov/develop2
  - b1c7e9b505 Bonjour/Avahi beacons: Make sure TXT record length is valid

- **PR #39617**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-02-24 16:07:55 UTC
  - e9410fb669 Merge pull request #39617 from rallytime/merge-2016.11
  - 13622899d2 Merge branch '2016.3' into '2016.11'
  - 4e2b852f83 Merge pull request #39600 from vutny/state-file-docs
    - 9b0427c27a state.file: drop non-relevant examples for source_hash parameter
    - ed83420417 Merge pull request #39584 from cachedout/mentionbot_docs
      - 652044b18f A note in the docs about mentionbot
    - d3e50b4f2f Merge pull request #39583 from cachedout/mentionbot_blacklist
      - 62491c900d Add empty blacklist to mention bot

- **ISSUE #38758**: (bobrik) Remote state execution is much slower on 2016.11.1 compared to 2016.3.4 (refs: #39505)

- **ISSUE #33575**: (anlutro) File states seem slower in 2016.3, especially on first cache retrieval (refs: #33896)

- **ISSUE #29643**: (matthayes) Can’t get batch mode and --failhard to work as expected (refs: #31164)

- **ISSUE #28569**: (andrejohansson) Reactor alert on highstate fail (refs: #31164)

- **PR #39505**: (cachedout) Threadsaafety option for context dictionaries @ 2017-02-23 19:38:13 UTC
  - **PR #37378**: (skizunov) Fix __context__ to properly sandbox (refs: #39505)
  - **PR #33896**: (DmitryKuzmenko) Don't deep copy context dict values. (refs: #39505)
  - **PR #31164**: (DmitryKuzmenko) Issues/29643 fix invalid retcode (refs: #33896)
  - 0d31201e08 Merge pull request #39505 from cachedout/issue_38758
  - 1dba2f9c90 Add warning in docs

30.2. Previous Releases
• **PR #39507:** (joe-niland) Detect IIS version and vary certificate association command depending on version @ 2017-02-23 19:15:40 UTC
  - c0d4357f46 Merge pull request #39507 from joe-niland/iis-7-cert-binding
  - c9f0b8c62 Fix additional issue whereby existing certificate bindings were not found in IIS 7.5, due to the fact that IIS earlier than 8 doesn't support SNI
  - 18effe0103 Detect IIS version and vary certificate association command depending on version

• **PR #39565:** (terminalmage) states.file.patch/modules.file.check_hash: use hash length to determine type @ 2017-02-23 19:14:28 UTC
  - e6f5e8a474 Merge pull request #39565 from terminalmage/issue39512
  - cbdf905b9f Update test to reflect new state comment
  - 650dbac4e4 states.file.patch/modules.file.check_hash: use hash length to determine type

• **PR #39591:** (mcalmer) fix case in os_family for Suse @ 2017-02-23 19:07:17 UTC
  - 53e22b8f15 Merge pull request #39591 from mcalmer/fix-case-in-os_family
  - 81bd96e32d fix case in os_family for Suse

• **ISSUE #38452:** (jf) file.line with mode=delete does not preserve ownership of a file (refs: #39592)

• **PR #39592:** (skazi0) Ensure user/group/file_mode after line edit @ 2017-02-23 18:40:05 UTC
  - aee43f7fa4 Merge pull request #39592 from skazi0/line-user-fix
  - baf84b4430 Ensure user/group/file_mode after line edit

• **PR #39596:** (ticosax) Reduce scope of try except StopIteration wrapping @ 2017-02-23 18:16:17 UTC
  - 6ab4151213 Merge pull request #39596 from ticosax/reduce-scope-catched-exception
  - 54cdach680 Reduce scope of try except StopIteration wrapping

• **ISSUE #38836:** (toanctruong) file.managed with S3 Source errors out with obscure message (refs: #39609, #39589)

• **PR #39610:** (rallytime) Back-port #39589 to 2016.11 @ 2017-02-23 17:48:03 UTC
  - PR #39589: (MasterNayru) Allow masterless minions to pull files from S3 (refs: #39610)
  - b1c3b84862 Merge pull request #39610 from rallytime/bp-39589
  - 83ec174d44 Set utils property explicitly for FSClient
  - 3889006149 Allow masterless minions to pull files from S3

• **PR #39606:** (rallytime) [2016.11] Pylint: add missing import @ 2017-02-23 16:39:55 UTC
  - fe15ed9b92 Merge pull request #39606 from rallytime/lint-2016.11
  - 7164348e7 [2016.11] Pylint: add missing import

• **PR #39573:** (thatch45) Added a few more comments to the ssl docs @ 2017-02-23 02:17:13 UTC
  - PR #39554: (DmitryKuzmenko) Cosmetic: support bool value for 'ssl' config option. (refs: #39573)
  - PR #39528: (thatch45) Add better ssl option docs (refs: #39554)
  - 5987c4e30e Merge pull request #39573 from thatch45/ssl_docs
  - b23de35eac This should be good to go now

• **PR #39577:** (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-02-23 02:10:12 UTC
- b8e321cbec Merge pull request #39577 from rallytime/merge-2016.11
- 397c756a01 Merge branch '2016.3' into '2016.11'
  - 8352e6b44b Merge pull request #39579 from rallytime/fix-lint
    - 65889e1f30 [2016.3] Pylint: Remove unused import
  - 43dba3254c Merge pull request #39578 from cachedout/2016.3
    - 34449eeef7 Add mention-bot configuration
- c52cecd856 Fix syntax error leftover from incomplete merge-conflict resolution
- 7b9b3f700d Merge branch '2016.3' into '2016.11'
  - 8f7a0f9d96 Merge pull request #39542 from twangboy/gate_ssh_known_hosts
    - c90a52ef27 Remove expensive check
    - 6d645cae0e Add __virtual__ function
  - c10965833a Merge pull request #39289 from bobrik/autodetect-ipv6
    - 2761a1b244 Move new kwargs to the end of argument list
    - 0df6b922e7 Narrow down connection exception to socket.error
    - e8a2cc0488 Do no try to connect to salt master in syndic config test
    - af9578631e Properly log address that failed to resolve or pass connection check
    - 9a34beba9 Actually connect to master instead of checking route availability
    - c494839c65 Avoid bare exceptions in dns_check
    - 29f376676d Rewrite dns_check to try to connect to address
    - 55965ce505 Autodetect IPv6 connectivity from minion to master
  - 3fb928b63a Merge pull request #39569 from s0undt3ch/2016.3
    - 49da135abd Don't use our own six dictionary fixes in this branch
- 91e3319df8 Merge pull request #39508 from dincamihai/openscap
  - 9fedb84607 Always return oscap's stderr
  - 0ecde2cd02 Include oscap returncode in response
- fbe2194a93 Merge pull request #39562 from terminalmage/issue30802
  - c50374041d Add ulimits to dockerng state/exec module
  - da42040c1a Try the docker-py 2.0 client name first
- 01d4a84a2f dockerng.get_client_args: Fix path for endpoint config for some versions of docker-py (#39544)
- PR #39574: (Ch3LL) Update 2016.11.3 release notes @ 2017-02-23 00:10:23 UTC
  - cff9334929 Merge pull request #39574 from Ch3LL/update_release_notes
  - c0f8c35df7 fix reference to set in docs
  - 663f6f159d add additional PRs to 2016.11.3 release notes
- PR #39528: (thatch45) Add better ssl option docs (refs: #39554) @ 2017-02-22 18:29:47 UTC
  - b492f7094c Merge pull request #39528 from thatch45/ssl_docs

30.2. Previous Releases
• ISSUE saltstack/salt#35869: (amontalban) timezone.system state fails on FreeBSD when /etc/localtime does not exists (refs: #39532)
  • PR #39532: (amontalban) Fix case when /etc/localtime is a file and it is not updated @ 2017-02-22 18:28:54 UTC
    - 0dad49cddf Merge pull request #39532 from amontalban/corner_case_35869
    - f0d3c16547 Fix case when /etc/localtime is a file and it is not updated
  • PR #39540: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-02-22 18:24:01 UTC
    - 9cfa3b599 Merge pull request #39540 from rallytime/merge-2016.11
    - 49fe4e891e Merge branch '2016.11' into '2016.11'
    - c613d19e76 Merge branch '2016.3' into '2016.11'
    - dff35b58f8 Merge pull request #39498 from terminalmage/pr-39483
      * 20b097a745 dockerng: compare sets instead of lists of security_opt
    - 6418e725ed Merge pull request #39497 from terminalmage/docker-compat-fixes
      * cbd0270bac docker: make docker-exec the default execution driver
      * a6a17d58aa Handle docker-py 2.0's new host_config path
    - 9c4292fb4e Merge pull request #39423 from dincamihai/openscap
      * 9d13422ac1 OpenSCAP module
    - 7dd2502360 Merge pull request #39464 from gtmanfred/2016.3
      * f829df9fc skip false values from preferred_ip
    - db359ff2c3 Merge pull request #39460 from cachedout/win_dism_test_fix
      * e652a45592 Fix mocks in win_dism tests
    - 9dfba9b57 Merge pull request #39426 from morganwillcock/dism
      * a7d5118262 Return failure when package path does not exist
    - 56162706e3 Merge pull request #39431 from UtahDave/fixtures.grains.setval_performance
      * 391bbec90 add docs
      * 709c197f84 allow sync_grains to be disabled on grains.setval
    - 239e166e12 Merge pull request #39405 from rallytime/fix-39304
      * bd1fe03ce7 Update :depends: docs for boto states and modules
    - 415102f346 Merge pull request #39411 from rallytime/fix-38762
      * e13febe58d Update external_cache docs with other configuration options
    - 7e1803b617 Update docs on upstream EPEL7 pygit2/libgit2 issues (#39421)
  • PR #39554: (DmitryKuzmenko) Cosmetic: support bool value for 'ssl' config option. (refs: #39573) @ 2017-02-22 16:59:03 UTC
    - PR #39528: (thatch45) Add better ssl option docs (refs: #39554)
    - 56fe2f198e Merge pull request #39554 from DSRCorporation/bugs/ssl_bool
    - 7a6fc11291 Cosmetic: support bool value for 'ssl' config option.
• PR #39560: (vutny) [CLOUD] Log error when private/public IP was not detected @ 2017-02-22 16:49:46 UTC
  - cf37f83565 Merge pull request #39560 from vutny/cloud-detect-ips
  - 567bb50884 [CLOUD] Log error when private/public IP was not detected

30.2.57 Salt 2016.11.5 Release Notes

Version 2016.11.5 is a bugfix release for 2016.11.

Statistics

• Total Merges: 82
• Total Issue References: 23
• Total PR References: 80
• Contributors: 32 (BenoitKnecht, Ch3LL, DmitryKuzmenko, Enquier, SolarisYan, UtahDave, alexproca, benediktwerner, bobrik, brd, cachedout, clinta, corywright, cro, danlsgiga, drawsmcgraw, ezh, gtmanfred, isbm, jf, jleproust, lorengordon, nevins-b, oeufete, peter-funktionIT, rallytime, rkgrunt, senthilkumar-e, sjorge, skizunov, terminalmage, twangboy)

Patched Packages

Due to the critical nature of issue issue #41230 we have decided to patch the 2016.11.5 packages with PR #41244. This issue affects all calls to a salt-minion if there is an ipv6 nameserver set on the minion's host. The patched packages on repo.saltstack.com will divert from the v2016.11.5 tag and pypi packages due to the patches applied to the packages.

Changelog for v2016.11.4..v2016.11.5

Generated at: 2018-05-27 20:12:47 UTC

• PR #41134: (twangboy) Fix pkg.install on Windows on 2016.11 @ 2017-05-09 15:10:19 UTC
  - a10f0146a4 Merge pull request #41134 from twangboy/fix_get_msiexec
  - d808a60129 Remove redundant if statement
  - b4d65a927 Fix for version_num of None and Latest
  - 0f31822a83 Fix problem when use_msiexec is a bool
• ISSUE #41100: (frogunder) Exception occurred in runner jobs.list_jobs (refs: #41102)
• PR #41102: (gtmanfred) don’t pass jid to list_jobs @ 2017-05-08 17:45:40 UTC
  - 4ecab68bb9 Merge pull request #41102 from gtmanfred/2016.11
  - 83057d0f0f don’t pass jid to list_jobs
  - de9f66b448 show changes in file.blockreplace function in testing mode. also used same programming style as in file.managed function: (ret['changes']['diff'] = ret['pchanges']['diff'])
• PR #41103: (lorengordon) Adds a get_route() function to win_network.py @ 2017-05-06 06:19:42 UTC
  - 2af89beb53 Merge pull request #41103 from lorengordon/win.get_route
Salt Documentation, Release 3002.5

- 93ce5644ea Adds test for win_network.get_route
- b9cbcc0290 Adds a get_route() function to win_network.py

• PR #41098: (rallytime) Back-port #41088 to 2016.11 @ 2017-05-05 19:04:03 UTC
  - PR #41088: (sjorge) Fix docs for zfs state module (refs: #41098)
  - 2f9b5a4074 Merge pull request #41098 from rallytime/bp-41088
  - dc6cd2ea45 Fix docs for zfs state module

• PR #41097: (rallytime) Back-port #41079 to 2016.11 @ 2017-05-05 19:03:43 UTC
  - PR #41079: (brd) Remove an extra colon that is causing rendering issues (refs: #41097)
  - 2123001f32 Merge pull request #41097 from rallytime/bp-41079
  - 845b4e304 Remove and extra colon that is causing rendering issues

• PR #41093: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-05-05 17:22:09 UTC
  - f6f5a2b120 Merge pull request #41093 from rallytime/merge-2016.11
  - a670ee1ad1 Merge branch '2016.3' into '2016.11'
  - 247400c44e Merge pull request #41083 from rallytime/git-state-fix
    - b85ee48ff4 Git state: head_ref should be head_rev in "latest" function

• PR #41084: (rallytime) Skip the test_salt_documentation_arguments_not_assumed test for Arch @ 2017-05-04 21:56:29 UTC
  - PR #41074: (rallytime) Skip integration.shell.matcher.MatchTest.test_salt_documentation test for Arch (refs: #41084)
  - 4c2e636cd1 Merge pull request #41084 from rallytime/disable-matcher-test-arch
  - da811fe505 Skip the correct test for the matcher tests in Arch
  - b91ce9aad Revert "Skip integration.shell.matcher.MatchTest.test_salt_documentation test for Arch"

• PR #41069: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-05-04 20:34:58 UTC
  - 1179720327 Merge pull request #41069 from rallytime/merge-2016.11
  - 08c58919cb Merge branch '2016.3' into '2016.11'
    - 69418092bd Merge pull request #41070 from rallytime/lint-2016.3
      - 486e2ba62e Pylint: remove extra line in mac_system module
    - db70b2d42e Pylint: remove extra line in mac_system module
  - 855d157aa6 Merge branch '2016.3' into '2016.11'
    - 310169d71 Merge pull request #41048 from willkil/mac_system_non_root
      - b65b82a750 mac_system: return False for non-root user

• PR #41074: (rallytime) Skip integration.shell.matcher.MatchTest.test_salt_documentation test for Arch (refs: #41084) @ 2017-05-04 19:26:16 UTC
  - 9d638abc62 Merge pull request #41074 from rallytime/disable-matcher-test-arch
  - 9eb4b2d5c7 Skip integration.shell.matcher.MatchTest.test_salt_documentation test for Arch

• PR #41078: (Ch3LL) Add 2016.11.5 release notes and change log @ 2017-05-04 19:00:58 UTC
  - 72e854d9ac Merge pull request #41078 from Ch3LL/add_2016.11.5_release
- 96ed815687 Add 2016.11.5 release notes and change log

- **PR #40879: (peter-funktionIT)** Update win_pki.py @ 2017-05-04 16:12:00 UTC
  - eaec8401e90 Merge pull request #40879 from peter-funktionIT/2016.11
  - 80fa9e5b76 Update win_pki.py
  - a48b05f158 Update win_pki.py
  - 3a46ed9d91 Update win_pki.py

- **ISSUE #40928: (sokratisg)** Orchestration runner, highstate and environment question (refs: #41036)

- **PR #41036: (terminalmage)** Do not force effective saltenv when running states via orchestration @ 2017-05-04 15:44:14 UTC
  - 547a9738db Merge pull request #41036 from terminalmage/issue40928
  - 72ef34c420 Do not force effective saltenv when running states via orchestration

- **PR #41039: (terminalmage)** Look for currently-running python's pip first @ 2017-05-04 15:43:52 UTC
  - 6e2458e171 Merge pull request #41039 from terminalmage/improve-pip-bin
  - efe8fb9432 Look for currently-running python's pip first

- **PR #41049: (Ch3LL)** fix integration wheel test_gen test @ 2017-05-04 15:33:59 UTC
  - ff39613a53 Merge pull request #41049 from Ch3LL/fixed_wheel_test
  - ba23827b9 fix integration wheel test_gen test

- **PR #41054: (terminalmage)** Update package targets for Arch pkg tests @ 2017-05-04 14:59:42 UTC
  - 4e4b3514b4 Merge pull request #41054 from terminalmage/salt-jenkins-315
  - ee493bae47 Update package targets for Arch pkg tests

- **PR #41046: (twangboy)** Fix pkg.remove @ 2017-05-04 14:58:57 UTC
  - 62df52820 Merge pull request #41046 from twangboy/fix_pkg_remove
  - 2af38e5564 Use target instead of version_num

- **PR #41045: (terminalmage)** Clarify gitfs docs @ 2017-05-03 22:24:55 UTC
  - 2b47b7bce6 Merge pull request #41045 from terminalmage/clarify-gitfs-docs
  - c757eda331 Clarify gitfs docs

- **PR #41032: (rallytime)** [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-05-03 19:31:58 UTC
  - 819007cd00 Merge pull request #41032 from rallytime/merge-2016.11
  - d26d0bbfd4 Merge branch '2016.3' into '2016.11'
    - b00acbb034 Merge pull request #41011 from terminalmage/docker-refresh-credentials
      - b8d1dcccc Use proposed docker-py reload_config() func

- **ISSUE #35699: (jleproust)** LVM state fails to add new device, volume group name is empty string (refs: #41007)

- **PR #41007: (jleproust)** Recognize LVM2 pv with empty vg as orphan @ 2017-05-03 18:24:51 UTC
  - d7fbd38474 Merge pull request #41007 from jleproust/fix_lvm_empty_vg
  - 3b9a45145 Recognize LVM2 pv with empty vg as orphan

- **PR #41029: (rallytime)** Back-port #38565 to 2016.11 @ 2017-05-03 17:05:10 UTC
• PR #38565: (drawsmcgraw) Update management of ip addresses for salt cloud azurearm module (refs: #41029)
  4eab96e9e Merge pull request #41029 from rallytime/bp-38565
  2df93ae3ab Update management of ip addresses. - Assign static, private IP addresses. - Ability to not assign a public IP to a VM.

• PR #41012: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-05-02 22:06:40 UTC
  97500f078d Merge pull request #41012 from rallytime/merge-2016.11
  fc756c595c Merge branch '2016.3' into '2016.11'
  19894f68ca Merge pull request #40724 from cro/minion_key_revoke_cfg
    • cbc70195c0 Change message level when minion requests key revoke and feature is turned off.
    • 65ea8997b7 Add allow_minion_key_revoke config option
    • 8920495943 Add config option to prevent minions from revoking their own keys.
  12985f7927 Merge pull request #40952 from terminalmage/fix-dockerng.login-docs
    • dfbbeb5946 Fix documentation for docker login function in pre-nitrogen release branches

• PR #40726: (benediktwerner) Fixed minion keys remaining pending after auto signing and fixed typo (Resubmitted to 2016.3) @ 2017-05-02 16:57:34 UTC
  e210eaaed4 Merge pull request #40726 from benediktwerner/fix-minions-remain-pending-after-autosign-and-typo
  82c144e960 Fixed minion keys remaining pending after auto signing and fixed typo

• PR #40960: (danlsgiga) Fix consul module "AttributeError: 'dict' object has no attribute 'json'" @ 2017-05-02 16:16:57 UTC
  4f342e2fe5 Merge pull request #40960 from danlsgiga/2016.11
  6ed4cc6db47 Fix consul module "AttributeError: 'dict' object has no attribute 'json'"

• PR #40963: (twangboy) Fix fullname parameter for add function @ 2017-05-02 16:08:59 UTC
  c3b329b398 Merge pull request #40963 from twangboy/fix_win_useradd
  5371b6b85e Fix fullname parameter for add function

• PR #40995: (twangboy) Remove unused code fragments @ 2017-05-02 15:31:58 UTC
  d79f033239 Merge pull request #40995 from twangboy/remove_utils
  8c01aad9b Remove unused code fragments

• ISSUE #40981: (ezh) docker-events engine is broken with modern docker (refs: #40982)

• PR #40991: (rallytime) Back-port #40982 to 2016.11 @ 2017-05-01 22:31:30 UTC
  PR #40982: (ezh) Fix docker_events field handling (refs: #40991)
  c6162876d6 Merge pull request #40991 from rallytime/bp-40982
  8fcb7205db Fix docker_events field handling

• ISSUE #40965: (weirdbricks) salt-cloud sudo failing (refs: #40987)

• PR #40987: (gtmanfred) get sudo_password correctly @ 2017-05-01 19:39:55 UTC
  3fb24929c6 Merge pull request #40987 from gtmanfred/2016.11
  2ed69ac6 get sudo_password correctly
• ISSUE #40988: (santzi) status.netdev tx_bytes is always zero (refs: #40992)

• PR #40992: (gtmanfred) fix bug in status.netdev @ 2017-05-01 19:38:35 UTC
  – ecbac138d1 Merge pull request #40992 from gtmanfred/status.netdev
  – a9eed7f1c9 fix bug in status.netdev

• ISSUE #40976: (sjorge) smtp.send_msg state oddities (refs: #40993)

• PR #40993: (gtmanfred) smtp state can use profile or sender @ 2017-05-01 19:35:47 UTC
  – d852320d34 Merge pull request #40993 from gtmanfred/smtp
  – 068ebd9ec smtp state can use profile or sender

• PR #40958: (rallytime) Back-port #40939 to 2016.11 @ 2017-04-28 18:01:17 UTC
  – PR #40939: (Ch3LL) Allow vmware to query deploy arg from opts (refs: #40958)
  – fc26f8a05 Merge pull request #40958 from rallytime/bp-40939
  – 3e9394862f allow vmware to query deploy arg from opts

• ISSUE saltstack/salt#34640: (nevins-b) utils.shlex_split removing quotes which are required for augeas (refs: #saltstack/salt#34643)
  – PR saltstack/salt#34643: (nevins-b) fix augeas module so shlex doesn't strip quotes (refs: #38115)

• PR #40957: (rallytime) Back-port #38115 to 2016.11 @ 2017-04-28 18:01:02 UTC
  – PR #38115: (cro) Revert "fix augeas module so shlex doesn't strip quotes" (refs: #40957)
  – a586e12180 Merge pull request #40957 from rallytime/bp-38115
  – eb889173b0 Revert "fix augeas module so shlex doesn't strip quotes"

• ISSUE #40635: (promorphus) Orchestrator + Batches returns false failed information (refs: #40905)

• PR #40905: (rkgrunt) Fixed issue with parsing of master minion returns when batching is en... @ 2017-04-28 17:52:32 UTC
  – 00a15eba60 Merge pull request #40905 from rkgrunt/40635
  – 4f9c92a012 Fixed issue with parsing of master minion returns when batching is enabled.

• PR #40954: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-04-28 16:41:49 UTC
  – bb50d4f6a6 Merge pull request #40954 from rallytime/merge-2016.11
  – 7f31e41aa6 Merge branch '2016.3' into '2016.11'
  – 55a399583e Merge pull request #40930 from rallytime/bp-40811
    - 3c853f89f get config_dir based off conf_file
  – 7bc01be859 Merge pull request #40927 from terminalmage/docs
    - 8c078f144c Add additional note about quoting within load_yaml
    - 123b5edc11 Add documentation for PyYAML's loading of time expressions
  – 7eb9c6cf4 Merge pull request #40891 from terminalmage/pip-installed
    - 7e6c0aa3 Fix two issues with pip.install

• ISSUE #39531: (ypid) Use yaml.safe_* instead of yaml.load / yaml.dump / ... (refs: #40751)

• PR #40751: (rallytime) Use Salt's SaltYamlSafeLoader and SafeOrderedDumper classes for yaml.load/dump @ 2017-04-28 12:56:06 UTC
- 909d519ddb Merge pull request #40751 from rallytime/fix-39531
- 85dc4164f5 Don’t change the salt.utils.jinja yaml Dumper class
- 4fe6ac93c6 Add extra line for lint
- 55ca12975 Use salt.utils.yamlidumper with SafeOderedDumper as the Dumper in yaml.dump
- 62c4d37c2f Use salt.utils.yamlloader with SaltYamlSafeLoader as the Loader with yaml.load

**ISSUE #37507**: (szjur) Minions run every job twice and open 2 connections to the same syndic - apparently after reconnection between masters (refs: #40861)

**PR #40861**: (DmitryKuzmenko) Don’t run status.master while minion is failing-over. @ 2017-04-28 12:14:56 UTC
- 18fdd8cc34 Merge pull request #40861 from DSRCorporation/bugs/37507_minion_run_jobs_twice
- f0d46d04af Don’t run status.master while minion is failing-over.

**PR #40923**: (terminalmage) aptpkg: fix temp pkg unhold when version is specified @ 2017-04-28 11:59:54 UTC
- 62cb7b1ae6 Merge pull request #40923 from terminalmage/aptpkg-install-fix-unhold
- 6dda4f2bc3 aptpkg: fix temp pkg unhold when version is specified

**ISSUE #40908**: (nicksloan) If master_port is a string the minion cannot connect and prints an unhelpful error message (refs: #40933)

**ISSUE #39118**: (bobrik) Minion ipv6 option is not documented (refs: #39289)

**PR #40933**: (gtmanfred) allow master_port to be a string @ 2017-04-28 11:54:58 UTC
- #39289: (bobrik) Autodetect IPv6 connectivity from minion to master (refs: #40933)
- 9d92ba7878 Merge pull request #40933 from gtmanfred/2016.11
- 194423c08e allow master_port to be a string

**ISSUE #40912**: (razed11) IPV6 Warning when ipv6 set to False (refs: #40934)

**PR #40934**: (gtmanfred) Only display IPvX warning if role is master @ 2017-04-28 11:53:50 UTC
- d5e0bb655 Merge pull request #40934 from gtmanfred/ipv6
- 7855cd6ce6 Only display IPvX warning if role is master

**ISSUE #40881**: (stamak) 2016.11 SoftLayer salt-cloud driver connects on private IP instead of public IP (refs: #40935)

**PR #40935**: (gtmanfred) Attempt to connect to public ip address in softlayer @ 2017-04-28 11:43:57 UTC
- 8fdfe4ec6 Merge pull request #40935 from gtmanfred/softlayer
- d6eb1140f Attempt to connect to public ip address in softlayer

**PR #40936**: (terminalmage) Add dockerng fixes to 2016.11.4 release notes @ 2017-04-27 19:54:16 UTC
- 7404309bec Merge pull request #40936 from terminalmage/release_notes
- e494ae43e5 Add dockerng fixes to 2016.11.4 release notes

**ISSUE #33093**: (gtmanfred) [salt-cloud][nova] race condition when assigning floating ips to cloud servers (refs: #37696)

**PR #40929**: (rallytime) Back-port #37696 to 2016.11 @ 2017-04-27 17:43:26 UTC
- #37696: (SolarisYan) if vm state is not ACTIVE, it will fail (refs: #40929)
- a622518ad2 Merge pull request #40929 from rallytime/bp-37696
1a28722c5a Pylint fix
8e0a9864e5 if vm state is not ACTIVE, associate floating ip to it will fail. So we should wait for state of vm is ACTIVE, then associate the assigned floating ip to it

**PR #40921:** (corywright) Make salt.auth.rest heading consistent with all other salt.auth documentation @ 2017-04-27 17:36:47 UTC

- f88ce8e4de Merge pull request #40921 from corywright/consistent-salt-auth-headings
- 2995a05c2b Make salt.auth.rest heading consistent with all other salt.auth documentation

**ISSUE #37824:** (dxiri) SSLError Trying to use v3 API of Openstack Newton as provider. (refs: #40752)

**PR #40752:** (Enquier) Add ability to specify a custom SSL certificate or disable SSL verification in KeystoneAuth v3 @ 2017-04-27 17:29:09 UTC

- 26be306b5c Merge pull request #40752 from Enquier/nova_ssl_2
- 817f49296e fixing lint errors in keystone auth error
- f683636c61 fix trailing whitespace
- 4a70b8c0cc fixing minor error in security_groups security groups parser had incorrect split action which caused errors
- c9d6f8e5ed adding note in documentation
- c24de3fba adding support for cacert verification
- bfa5e322d Merge pull request #5 from saltstack/2016.11

**ISSUE #40845:** (e-senthilkumar) /jobs call is broken in 2016.11.4 (refs: #40894)

**PR #40894:** (senthilkumar-e) Fix for broken /jobs/<jid> in 2016.11.4 @ 2017-04-27 11:33:00 UTC

- 0f2ec1e1db Merge pull request #40894 from senthilkumar-e/broken_jobs_api_fix
- 2f55b26e08 Fixing the pylint issue
- fb607bab75 Fix for broken /jobs/<jid> in 2016.11.4

**PR #40876:** (BenoitKnecht) states: sqlite3: fix table_present with multi-line schema @ 2017-04-26 15:21:19 UTC

- ea55ce2a37 Merge pull request #40876 from BenoitKnecht/fix-sqlite3-table-present-with-multiline-schema
- 2ca627d02d states: sqlite3: fix table_present with multi-line schema

**ISSUE #40741:** (clinta) Regression in 2016.11.3. File.managed downloads every time. (refs: #40742)

**PR #40742:** (clinta) Fix #40741 @ 2017-04-25 22:52:06 UTC

- e09bafdcfe Merge pull request #40742 from clinta/40741
- 72bf5af9e6 Set sfn if cached_sum == source_sum

**PR #40859:** (skizunov) Fix TCP Transport to work with Tornado 4.5 @ 2017-04-25 04:29:00 UTC

- 524949e7f74 Merge pull request #40859 from skizunov/develop2
- 958ecedace8 Fix TCP Transport to work with Tornado 4.5

**PR #40862:** (gtmanfred) status should be an int @ 2017-04-24 23:11:31 UTC

- ca80f287af Merge pull request #40862 from gtmanfred/2016.11
- 87ec1da771 status should be an int

**PR #40865:** (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-04-24 23:06:28 UTC
- c95341959d Merge pull request #40865 from rallytime/merge-2016.11
- 53ad3159cc Merge branch '2016.3' into '2016.11'
- 2a71dc3552 Merge pull request #40854 from Ch3LL/11.4_release_2016.3
  * 889540a313 [2016.3] Bump latest release version to 2016.11.4
- b5f67f0750 Merge pull request #40822 from lordcirth/rsync-changes
  * 1b304bb476 Extra space before inline comment
  * ea4592de91 rsync.py: Don't return changes when clean
- PR #40855: (Ch3LL) [2016.11] Bump latest release version to 2016.11.4 @ 2017-04-24 17:37:47 UTC
  - 7861f12df8 Merge pull request #40855 from Ch3LL/11.4_release_2016.11
  - e7b604339d [2016.11] Bump latest release version to 2016.11.4
- PR #40817: (isbm) Some UT for cloud @ 2017-04-23 10:01:40 UTC
  - 25b62aee47 Merge pull request #40817 from isbm/isbm-skip-false-values-from-preferred-ip-201611
  - 7c5714b90b Describe debug information
  - e0210ff8cb Reformat idents, fix typos
  - fb777e3f3e PEP8: fix unused variable
  - b2e85de85d Fix lint, typos and readability
  - 116e96a4b7 Fix UT parameter changes
  - 6155f08d78 Lintfix E0602
  - ed8443df0 Add unit test for node ip filtering
  - 82582c7f77 Skip test, if libcloud is not around
  - f005d53c56 Fix name error exception
  - b668e60b4c Move out nested function for testing purposes
  - 5e574a24d9 Add unit test for nova connector
  - 181d0780d0 Lintfix
  - 8e9ce1a68d Move out nested function to be unit-testable
  - cd43805770 Add initial unit test for openstack cloud module
  - 177f31446d Add fake preferred IP function for testing
  - daeb13ac7 Move out openstack's nested function to be testable
- PR #40824: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-04-21 20:03:10 UTC
  - 50ddf219a6 Merge pull request #40824 from rallytime/merge-2016.11
  - f31f9512b8 Merge branch '2016.3' into '2016.11'
    * 3b9ebefb98f Merge pull request #40754 from lordcirth/fix-uppercase-checksums
      * c80c792704 remove too many newlines for lint
      * a7df375e8 file.manage_file: uppercase checksums now work
- PR #40811: (UtahDave) get config_dir based off conf_file if __opts__['_config_dir'] doesn't exist (refs: #40930) @ 2017-04-21 17:44:42 UTC
- d6e26d18cb Merge pull request #40811 from UtahDave/2016.11local
- 9f6e2e9c92 get config_dir based off conf_file

- **PR #40820**: (gtmanfred) remove deprecated firstgen rackspace cloud driver @ 2017-04-21 17:42:19 UTC
  - dded05b7d Merge pull request #40820 from gtmanfred/2016.11
  - b60a8d013a remove rackspace from index
  - 559a1d8b6e remove deprecated firstgen rackspace cloud driver

- **PR #40797**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-04-20 19:42:04 UTC
  - 2ab42489df Merge pull request #40797 from rallytime/merge-2016.11
  - 22500a7261 Merge branch '2016.3' into '2016.11'
    - 623e2eb61f Merge pull request #40791 from a-powell/s3-util-get-memory-fix
    - 36f5521014 Merge remote-tracking branch 'upstream/2016.3' into s3-util-get-memory-fix
    - 04637cd4eb Fixing objects being loaded into memory when performing a GET request with a local file specified.

- **PR #40800**: (rallytime) Back-port #40720 to 2016.11 @ 2017-04-20 19:41:41 UTC
  - PR #40720: (oeuftete) Call tornado.httputil.url_concat compatibly (refs: #40800)
  - ced839f841 Merge pull request #40800 from rallytime/bp-40720
  - 6c0124ae21 Call tornado.httputil.url_concat compatibly

- **ISSUE #19137**: (jeffclay) MSI installer(s) for windows minion (refs: #40716)

- **PR #40785**: (alexproca) win_pkg: backport 2016.11 add msiexec override to enable selection of 32 or 64 msiexec.exe @ 2017-04-20 16:45:14 UTC
  - PR #40716: (alexproca) win_pkg: add msiexec override to enable selection of 32 or 64 msiexec.exe (refs: #40785)
  - 5388fa7a2 Merge pull request #40785 from alexproca/backport-winexec-selection
  - 91caf5094 Add option to select 32 or 64 version of msiexec

- **PR #40796**: (terminalmage) Fix inaccurate nodegroup docs @ 2017-04-20 16:08:22 UTC
  - f0f135c71d Merge pull request #40796 from terminalmage/fix-nodegroup-docs
  - f99259a6eb Fix inaccurate nodegroup docs

- **ISSUE #40737**: (jf) Fix consul_pillar documentation: 'root=’ canNOT start with a slash (refs: #40760)

- **PR #40769**: (rallytime) Back-port #40760 to 2016.11 @ 2017-04-19 20:23:22 UTC
  - PR #40760: (jf) Fix 'root=/' references in consul_pillar documentation: 'keys should not start with a forward slash!' (refs: #40769)
  - d8f78550d9 Merge pull request #40769 from rallytime/bp-40760
  - 71ac15f0e4 Fix 'root=/...' references in consul_pillar documentation: 'keys should not start with a forward slash!'
• 58b88859b3 unset the bitwise instead of toggle

- **ISSUE #29602**: (multani) cloud.action start raises "got an unexpected keyword argument 'kwargs'" (refs: #40735)

- **PR #40735**: (rallytime) Handle stacktraces in cloud.action function in module and runner @ 2017-04-18 20:05:06 UTC
  - 3557b5140e Merge pull request #40735 from rallytime/handle-cloud-traces
  - 87154a95a4 Use log.error instead of log.err
  - b35bf919a3 Handle stacktraces in cloud.action function in module and runner

- **PR #40745**: (cro) Backport Add support for specifying a datastore for new disks. PR #36457 @ 2017-04-18 20:00:51 UTC
  - PR #36457: (cro) Add support for specifying a datastore for new disks. (refs: #40745)
  - e700d8183b Merge pull request #40745 from cro/vmware_disk_datastore_bp
  - 1460f82ce4 Remove leftover conflict markers (oops! :-/ )
  - b26be652dd Remove leftover conflict markers (oops! :-/ )
  - 096f063464 Remove leftover conflict markers (oops! :-/ )
  - d24078d1a0 Add docs for "datastore" param for disks
  - 500d6b281d Document validity of a datastore key inside a disk definition.
  - 7608b10225 Add support for specifying a datastore for new disks.

- **PR #40740**: (cro) Backport pr #39802 to add random_startup_delay @ 2017-04-18 19:47:55 UTC
  - PR #39802: (cachedout) A random startup delay option for minions (refs: #40740)
  - 78dbab01dc Merge pull request #40740 from cro/minion_delay_start
  - 2ab95b7dd5 Set minion test to use default opts
  - 785e060a9 Add requested docs
  - 8ab321f934 A random startup delay option for minions

- **PR #40728**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-04-17 21:13:15 UTC
  - a48ec4a5c Merge pull request #40728 from rallytime/merge-2016.11
  - 0a5e05a6e5 Merge branch '2016.3' into '2016.11'
  - bf8bb0fde6 Merge pull request #40719 from rallytime/bp-40714
    - d6c436246b Make salt.modules.pw_user.get_loginclass return string rather than dict
    - 4145d33e46 Merge pull request #40718 from terminalmage/fix-docstring
    - 14e8b85da5 Fix copypasta in the pw_user docstring

- **ISSUE #36967**: (gmykhailiuta) S3fs objects list gets truncated (refs: #40707)

- **PR #40707**: (gtmanfred) Use markers when s3 bucket list is truncated @ 2017-04-17 16:45:21 UTC
  - c5cbfc2e63 Merge pull request #40707 from gtmanfred/2016.11
  - 1932f7265d Use markers when s3 bucket list is truncated
30.2.58 Salt 2016.11.6 Release Notes

Version 2016.11.6 is a bugfix release for 2016.11.0.

Statistics

- Total Merges: 137
- Total Issue References: 58
- Total PR References: 153
- Contributors: 49 (BenoitKnecht, Ch3LL, Enquier, F30, Foxlik, The-Loeki, UtahDave, abednarik, alex-zel, arifuli, automatic-solutions, axmetishe, bdrung, cachedout, cro, darenjacobs, dmurphy18, dschaller, epcim, gareth-greenaway, github-abede, gtmanfred, isbm, jettero, jmarinaro, kiorky, lomeroe, lordcirth, lorengordon, lubyou, mcalmer, moio, onlyanegg, peter-funktionIT, pkazmierczak, prrkut, rallytime, ricohouse, seanjnkns, sebw, skizunov, svinota, tf0fik, terminalmage, tmeneau, tonybaloney, twangboy, whiteinge, yannj-fr)

Changelog for v2016.11.5..v2016.11.6

Generated at: 2018-05-27 20:18:17 UTC

- PR #41861: (twangboy) Fix problems with get_rule and delete_rule @ 2017-06-20 20:37:23 UTC
  - afc61ffe63 Merge pull request #41861 from twangboy/fix_win_firewall
  - 78892074f5 Fix problems with get_rule and delete_rule
- ISSUE #41778: (frogunder) 2016.11.6 - TCP Transport gives Exception (refs: #41787)
- PR #41787: (skizunov) Fix #41778 @ 2017-06-20 20:11:23 UTC
  - PR #41436: (skizunov) TCP transport: Fix occasional errors when using salt command (refs: #41787)
  - 9384f4dfdf Merge pull request #41787 from skizunov/develop3
  - 2ff220cede Fix #41778
- PR #41812: (skizunov) TCP: Fix salt-master in bad state if remote side closed connection @ 2017-06-20 19:46:53 UTC
  - 03b6ae5ea8 Merge pull request #41812 from skizunov/develop4
  - 736420eb83 TCP: Fix salt-master in bad state if remote side closed connection
- PR #41857: (dmurphy18) Modified support for deprecated netstat being removed by utilizing ss @ 2017-06-20 18:46:27 UTC
  - cfe2252bec Merge pull request #41857 from dmurphy18/netstat_fix
  - 017fbd6c53 Modified support for deprecated netstat being removed by utilizing ss
- ISSUE #40878: (joewreschnig) SSH modules spam warning about MD5 fingerprints when there aren't any (refs: #41837)
- ISSUE #40005: (vutny) ssh_known_hosts.present does not support SHA256 key fingerprints (refs: #40543)
- PR #41837: (rallytime) Add fingerprint_hash_type option to ssh_auth state and related functions @ 2017-06-20 18:14:53 UTC
  - PR #40543: (rallytime) Add the "fingerprint_hash_type" option to ssh state and module (refs: #41837)
  - 12ec5f9f23 Merge pull request #41837 from rallytime/fx-40878
- 48ff5d2a62 Add fingerprint_hash_type option to ssh_auth state and related functions

- **PR #41839**: (cro) Extend proxy to jinja @ 2017-06-19 23:03:00 UTC
  - e7fc30f82 Merge pull request #41839 from cro/extend_proxy_to_jinja
  - 172d3520ea Merge branch 'extend_proxy_to_jinja' of github.com:cro/salt into extend_proxy_to_jinja
    - 2e4a0633da Extend __proxy__ to jinja as proxy (like __salt__->salt)
    - 2ffad2af35 Extend __proxy__ to jinja as proxy (like __salt__->salt)

- **ISSUE #41733**: (sumeetisp) Salt Rest Api call (refs: #41786)

- **ISSUE #40845**: (e-senthilkumar) /jobs call is broken in 2016.11.4 (refs: #41786)

- **ISSUE #38962**: (gstachowiak) Broken /jobs in salt-api in salt 2016.11.1 (Carbon) (refs: #39472)

- **PR #41786**: (whiteinge) Runner arg parsing regressions @ 2017-06-19 23:00:07 UTC
  - **PR #39472**: (whiteinge) Update _reformat_lowtonotrunkwargdict through parse_input (refs: #41786)
  - 58387b127a Merge pull request #41786 from whiteinge/runner-arg-parsing-regressions
  - bf15c0b5f Restore sending __current_eauth_* through to the function
  - 6be975da2c Fix regressions from not calling load_args_and_kwargs
  - 9d1cc1a76 Add test to check that runners ignore invalid kwargs

- **PR #41776**: (gtmanfred) npm 5.0.0 added a second line after fsevents @ 2017-06-19 16:53:43 UTC
  - be0e9abed6 Merge pull request #41776 from gtmanfred/2016.11
  - 733a2279ca npm 5.0.0 added a second line after fsevents

- **ISSUE #32400**: (rallytime) Document Default Config Values (refs: #41783)

- **PR #41783**: (rallytime) Add a bunch of config options to the various master/minion files that are missing @ 2017-06-19 16:42:54 UTC
  - d94d4e4d19 Merge pull request #41783 from rallytime/config-doc-updates
  - c828ad803a Add a bunch of config options to the various master/minion files that are missing

- **PR #41816**: (twangboy) Upgrade psutil to version 5.2.2 @ 2017-06-17 01:51:29 UTC
  - 2c681887d3 Merge pull request #41816 from twangboy/update_psutil_req
  - 8b4e3ad77d Upgrade psutil to version 5.2.2

- **ISSUE #41785**: (UtahDave) Using master tops without a top.sls file causes extra errors in minion log (refs: #41803)

- **PR #41803**: (terminalmage) Don’t log an error when no top.sls is found @ 2017-06-16 22:49:08 UTC
  - 3e5fe7ca4f Merge pull request #41803 from terminalmage/issue41785
  - f9fd4d9f05 Don’t log an error when no top.sls is found

- **PR #41801**: (terminalmage) Don’t take hostname from name param when creating docker container (2016.11 branch) @ 2017-06-16 17:02:02 UTC
  - d12bc4ee68 Merge pull request #41801 from terminalmage/issue41781-2016.11
  - 8236d3e1c3 Don’t take hostname from name param when creating docker container (2016.11 branch)

- **PR #41768**: (rallytime) Manually back-port the changes in PR #41615 @ 2017-06-15 20:41:45 UTC
  - **PR #41615**: (Ch3LL) Fix get_hwclock_aix test on MacOSX (refs: #41768)
- 87e2c72d94 Merge pull request #41768 from rallytime/bp-41615
- b6cc0b6bf0 Manually backport the changes in PR #41615

- **PR #41740**: (terminalmage) Fix spurious error when glob/regex used in publisher_acl @ 2017-06-15 15:14:56 UTC
  - 36cb223ab2 Merge pull request #41740 from terminalmage/zd1532
  - e5f3d08751 Fix spurious error when glob/regex used in publisher_acl

- **PR #41749**: (terminalmage) Fix bug in pkg_resource.parse_targets when version passed @ 2017-06-15 15:05:52 UTC
  - 126a36747b Merge pull request #41749 from terminalmage/parse_targets
  - 698806fb09 No need to manually create pkg_params dict when name and version passed
  - 7484bccc6 parse_targets: include version in packed return data

- **PR #41753**: (rallytime) Back-port #41449 to 2016.11 @ 2017-06-14 22:16:10 UTC
  - PR #41449: (sebw) Fix state "svn.latest" diff output in test mode (refs: #41753)
  - 2c24012ded Merge pull request #41753 from rallytime/bp-41449
  - fae41c2875 Adjusting SVN unit test
  - eac6b151eb Improved SVN output in test mode

- **PR #41750**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-06-14 22:15:41 UTC
  - e685858269 Merge pull request #41750 from rallytime/merge-2016.11
  - 89834e49c2 Merge branch '2016.3' into '2016.11'
    - c5a79a1ea6 Merge pull request #41695 from xiaoanyunfei/fixRecursion
      - c54fde69a0 fix spell error
      - bc855b4711 fix swallow exception
      - c0b1f57fc0 add exception
      - aaf9f0a44 fix maximum recursion depth exceeded
    - 4b43ba3366 Merge pull request #41585 from cro/Sign_minion_messages
      - 628f709c3c Correct test--caching requires files on disk but the test just supplies what would have been read from disk.
      - 687872a488 Lint
      - dadf4b851c Add documentation to the example master and minion configuration files. Move minion event signing to a saner place. Enable dropping messages when signature does not verify or when minion is not adding the signature to its payloads.
      - e44673cdae Add caching of key.
      - c3917d1e91 Fat finger fix.
      - 3b9326fda7 Sign_minion_messages support

- **PR #41756**: (Ch3LL) Add Change Log to 2016.11.6 Release Notes @ 2017-06-14 20:57:08 UTC
  - fa368f21ac Merge pull request #41756 from Ch3LL/2016.11.6_release

- **ISSUE #40155**: (grichmond-salt) State module boto_vpc not working with boto 2 (refs: #41692)
• **PR #41692**: (rallytime) Add boto and boto3 version dependencies to boto_vpc state docs @ 2017-06-14 19:05:07 UTC
  - edcafc6a26 Merge pull request #41692 from rallytime/fix-40155
  - 539c1b0692 Add boto and boto3 version dependencies to boto_vpc state docs

• **ISSUE #39918**: (kivoli) Enabling list merging leads to multiplying of unique list items (refs: #40902)

• **PR #40902**: (lorenngordon) Removes duplicates when merging pillar lists and adds pillar.get override for pillar_merge_lists @ 2017-06-14 18:39:09 UTC
  - bdaeb55a77 Merge pull request #40902 from lorenngordon/pillar-get-merge-lists
  - 6e35673fe3 Preserves order when removing duplicates
  - 18eda7084c Updates list merge tests to check for sorted, unique lists
  - 74bf91f99e Sorts the list when removing duplicates
  - 26a4b1b17f Adds pillar.get param to control list merge/overwrite behavior
  - ed04bae94c Removes duplicate values when merging lists

• **ISSUE #32743**: (tonybaloney) Issue with salt-cloud on OpenSUSE (refs: #41723)

• **PR #41723**: (rallytime) Support apache-libcloud work-around for issue #32743 for versions older than 2.0.0 @ 2017-06-14 17:13:38 UTC
  - PR #40837: (tonybaloney) Upgrade apache-libcloud package dependency for 2.0 (refs: #41723)
  - 203ec6730f Merge pull request #41723 from rallytime/libcloud-support
  - 1e9a06000b Bump version check down to 1.4.0 and use distutils.version lib
  - a30fe54b04 Support apache-libcloud work-around for issue #32743 for versions older than 2.0.0

• **ISSUE #41654**: (Enquier) Nova Cloud module doesn’t work for python-novaclient 8.0.0+ (refs: #41655)

• **PR #41655**: (Enquier) Allow Nova cloud module to set a specific floating ip address @ 2017-06-14 16:44:05 UTC
  - 62dbf5083c Merge pull request #41655 from Enquier/nova-cloud-set_ip_address
  - 293bc64158 Removed empty debug log
  - 3d9871fe11 Cleaning up, removing debugging tests
  - c78e5fee9 Fixing error message
  - 404dfbf6b8 Debugging variable format
  - 6a3b976a5 removing string call
  - 005995e1b0 modifying variable calls
  - 9e5e7a38ec Testing variable changes
  - 05e240f37f Debugging Format of floating_ip variable
  - 366aca00a8 Adding Max version check for Nova since Cloud no longer operates at higher versions
  - 6f66c9d10c Fixing response of floating_ip_show to align with other floating ip's. Spelling fix
  - 58459adbe8 Adding ability to set a Floating IP by a specific IP address

• **PR #41731**: (terminalmage) Clarify that archive_format is required pre-2016.11.0 @ 2017-06-14 15:05:21 UTC
  - 82ea84883 Merge pull request #41731 from terminalmage/docs
  - d3f4ea1a84 Clarify that archive_format is required pre-2016.11.0
• **PR #41663**: (skizunov) Don’t invoke lspci if enable_lspci is False @ 2017-06-13 21:19:42 UTC
  - b6d27beac2 Merge pull request #41663 from skizunov/develop3
  - 154d6ce59e Don’t invoke lspci if enable_lspci is False

• **ISSUE #40464**: (sumeetisp) [Documentation] include list of kwargs for ec2.create_volume in cloud driver (refs: #41693)

• **PR #41693**: (rallytime) Document available kwargs for ec2.create_volume function @ 2017-06-13 19:51:10 UTC
  - 46b8d5dc4b Merge pull request #41693 from rallytime/fix-40446
  - 569eb2b7e Document available kwargs for ec2.create_volume function

• **ISSUE #41691**: (jdonofrio728) Can’t pass integers as cmd.run environment variables (refs: #41696)

• **PR #41696**: (terminalmage) Handle a few edge/corner cases with non-string input to cmd.run @ 2017-06-13 18:48:56 UTC
  - aab55d304a Merge pull request #41696 from terminalmage/issue41691
  - 0623e40d33 Apparently some funcs are passing tuples to cmd.run *
  - cdbbf94cf Handle a few edge/corner cases with non-string input to cmd.run

• **PR #41697**: (terminalmage) Resubmit #41545 against 2016.11 branch @ 2017-06-13 16:10:37 UTC
  - PR #41545: (kiorky) Make print_cli resilient on slow systems (refs: #41697)
  - 97897da7a7 Merge pull request #41697 from terminalmage/pr-41545
  - faaacf88bf Use error name instead of error number
  - 7ead54b5f Make print_cli resilient on slow systems

• **ISSUE #40605**: (sumeetisp) Salt-run manage.bootstrap (refs: #41711)

• **PR #41711**: (rallytime) Update deprecated version info in manage.bootstrap func for root_user @ 2017-06-13 16:04:32 UTC
  - 09260d7c08 Merge pull request #41711 from rallytime/fix-40605
  - 903c2ffca5 Update deprecated version info in manage.bootstrap func for root_user

• **ISSUE #39668**: (mirceaaulinic) Master scheduled job not recorded on the event bus (refs: #41658)

• **PR #41658**: (garethgreenaway) Fixes to the salt scheduler @ 2017-06-13 16:00:57 UTC
  - d563b3e345 Merge pull request #41658 from garethgreenaway/39668_schedule_runners_fire_events
  - d688a1cd8 Enable jobs scheduled on the master to fire their return data to the event bus

• **PR #41706**: (twangboy) Add missing batch files @ 2017-06-13 15:32:53 UTC
  - 3c3b934b7 Merge pull request #41706 from twangboy/batch_files
  - 0d4be0220b Add batch files for master

• **PR #41710**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-06-13 15:11:38 UTC
  - 1afc4adc5a Merge pull request #41710 from rallytime/merge-2016.11
  - 5150916556 Merge branch '2016.3' into '2016.11'
  - 5058b0de1f Merge pull request #41707 from terminalmage/master-tops-docs
    - 6ec9dfb7f Update version in master-tops docs
  - 1c1964d807 Merge pull request #41689 from yannj-fr/fix-41688
* a47eddccd2 Fix #41688 : fix mkfs command linux-swap support

- **PR #41702**: (gtmanfred) npm 5 and greater requires --force for cache clean @ 2017-06-12 23:21:56 UTC
  - 5d763b9b7f Merge pull request #41702 from gtmanfred/2016.11
  - 8bd19fccc17 fix version number
  - 0fa380f75c npm 5 and greater requires --force for cache clean

- **ISSUE #41668**: (yannj-fr) Parted modules mkfs command does not work with NTFS (refs: #41670)

- **PR #41704**: (rallytime) Back-port #41670 to 2016.11 @ 2017-06-12 23:20:31 UTC
  - PR #41670: (yannj-fr) fixes #41668 ntfs case problem in parted module (refs: #41704)
  - f6519e7f80 Merge pull request #41704 from rallytime/bp-41670
  - 8ae8792d1 fixes #41668 ntfs case problem in parted module

- **ISSUE #39939**: (martinschipper) Relative symlinks are changed with file.recurse 2016.11.3 (refs: #41700)

- **PR #41700**: (terminalmage) roots: return actual link destination when listing symlinks @ 2017-06-12 22:07:03 UTC
  - 0b89377dce Merge pull request #41700 from terminalmage/issue39939
  - bdbb265a0b roots: return actual link destination when listing symlinks

- **PR #41699**: (rallytime) Remove note about version incompatibility with salt-cloud @ 2017-06-12 19:44:28 UTC
  - 7cf47f9651 Merge pull request #41699 from rallytime/troubleshooting-doc-update
  - c91ca5f809 Remove note about version incompatibility with salt-cloud

- **ISSUE #40410**: (DarrenDai) Targeting Minions by IP Range via restful API doesn’t work (refs: #41694)

- **PR #41694**: (rallytime) Add ipcidr options to "Allowed Values" list in LocalClient expr_form docs @ 2017-06-12 19:06:16 UTC
  - d68a316b8 Merge pull request #41694 from rallytime/fix-40410
  - 6de9da1d5d Add ipcidr options to "Allowed Values" list in LocalClient expr_form docs

- **ISSUE #41365**: (lubyou) file.managed chokes on windows paths when source_hash is set to the URI of a file that contains source hash strings (refs: #41659)

- **PR #41659**: (lubyou) Use re.escape to escape paths before handing them to re.match @ 2017-06-12 18:10:53 UTC
  - 80da4ab98 Merge pull request #41659 from lubyou/41365-fix-file-managed
  - d4a1579b0 Use re.escape to escape paths, before handing them to re.match
  - ac240facca use correct variable
  - c777e2a2c1 Use re.escape to escape paths, before handing them to re.match

- **PR #41661**: (whiteinge) Add note about avoiding the -i flag for the /keys endpoint @ 2017-06-09 15:03:40 UTC
  - 564df5d9d3 Merge pull request #41661 from whiteinge/rest_cherrypy-keys-headers
  - a66fe9d3e Add note about avoiding the -i flag for the /keys endpoint

- **ISSUE #41651**: (Sakorah) pkg.installed fails when unholding and test=true (refs: #41660)

- **PR #41660**: (garethgreenaway) Fix to modules/aptpkg.py for unheld @ 2017-06-09 14:53:23 UTC
  - 384da3e3e Merge pull request #41660 from garethgreenaway/41651_fixing_aptpkg_held_unheld_with_test
  - 30da2370a4 Fix when test=True and packages were being set to unheld.
• **PR #41656**: (rallytime) Back-port #41575 to 2016.11 @ 2017-06-08 22:43:23 UTC
  
  - **PR #41575**: (dschaller) Fix 41562 (refs: #41656)
  - a308b960d8 Merge pull request #41656 from rallytime/bp-41575
  - 4374e6b034 Replace "tbd" with release version information
  - 81413896d1 Lint: Add index numbers to format {} calls
  - 384570384e only list top level npm modules during {un)install

• **PR #41456**: (bdrung) Fix pkgrepo.managed always return changes for test=true @ 2017-06-08 18:21:05 UTC
  
  - e6d37b5f3e Merge pull request #41456 from bdrung/fix-pkgrepo.managed-changes-check
  - d3ce7bf05f Fix pkgrepo.managed always return changes for test=true
  - 1592687294 Document aptpkg architectures parameter

• **ISSUE #41478**: (jf) security / information leak with consul pillar when subsitution values are not present (refs: #41530)

• **PR #41530**: (gtmanfred) Set default for consul_pillar to None @ 2017-06-08 18:13:15 UTC
  
  - 721e56ecb9 Merge pull request #41530 from gtmanfred/2016.11
  - 2a463ce16 Set default for consul_pillar to None

• **ISSUE #41629**: (lubyou) salt.states.cmd.script: Parameter "args" is overwritten if "name/id" contains spaces (refs: #41638)

• **PR #41638**: (gtmanfred) don't overwrite args if they are passed to the script @ 2017-06-08 17:48:48 UTC
  
  - 8926d1c731 Merge pull request #41638 from gtmanfred/cmdscript
  - 6c7d68b97d don't overwrite args if they are passed to the script

• **PR #41639**: (dmurphy18) Update notrim check, netstat takes minutes if large number connections @ 2017-06-07 23:03:24 UTC
  
  - ec89b8694 Merge pull request #41639 from dmurphy18/minion_netstat_check
  - 7ab3319090 Update notrim check, netstat takes minutes if large number connections - 260K

• **ISSUE #38894**: (amendlik) salt.runner and salt.wheel ignore test=True (refs: #41309, #41611)

• **PR #41611**: (garethgreenaway) Additional fixes to states/saltmod.py @ 2017-06-07 22:58:24 UTC
  
  - 2913a33b27 Merge pull request #41611 from garethgreenaway/41309_right_return_res
  - fda41ede76 Updating result values to be None for test cases.
  - 003f2d9323 Following the documentation, when passed the test=True argument the runner and wheel functions should return a result value of False.

• **ISSUE #41626**: (ruiaylin) When onlyif and bg are used together the (refs: #41637)

• **PR #41637**: (gtmanfred) never run bg for onlyif or unless cmd states @ 2017-06-07 17:37:47 UTC
  
  - 334a56c2a0 Merge pull request #41637 from gtmanfred/cmd
  - 40b69c6249 never run bg for onlyif or unless cmd states

• **PR #41255**: (lordcirth) linux_sysctl.default_config(): only return path, don't create it @ 2017-06-07 14:13:07 UTC
  
  - 34dd9e862 Merge pull request #41255 from lordcirth/fix-sysctl-test-11
  - 0089be4440 linux_sysctl: use dirname() as suggested
• ISSUE #35481: (giany) global_identifier does not work when using Softlayer driver (refs: #41551)

• PR #41616: (rallytime) Back-port #41551 to 2016.11 @ 2017-06-06 22:44:09 UTC
  - PR #41551: (darenjacobs) Update __init__.py (refs: #41616)
  - 4cf577771b Merge pull request #41616 from rallytime/bp-41551
  - 53bca96328 Update __init__.py

• PR #41552: (Enquier) Adding logic so that update_floatingip can disassociate floatingip's @ 2017-06-06 18:25:56 UTC
  - 846ca54688 Merge pull request #41552 from Enquier/neutron-floatingip-remove
  - aeed51c1e3 Adding port=None default and documentation
  - fccce05e1e4 Adding logic so that update_floatingip can disassociate floatingip's Previously update_floatingip would cause an error if port is set to None.

• PR #41569: (gtmanfred) Check all entries in result @ 2017-06-06 18:18:17 UTC
  - b720eb732 Merge pull request #41569 from gtmanfred/fix_test_result_check
  - 19ea5481b6 remove test that never passed
  - e2a4d5e1e2 Check all entries in result

• ISSUE #41540: (UtahDave) archive.extracted fails on second run (refs: #41599)

• PR #41599: (garethgreenaway) Fixes to modules/archive.py @ 2017-06-06 18:02:14 UTC
  - d9546c6283 Merge pull request #41599 from garethgreenaway/41540_fixes_to_archive_module
  - 66a1366ed8 Fixing issues raised in #41540 when a zip file is created on a Windows system. The issue has two parts, first directories that end up in the archive end up in the results of archive.list twice as they show up as both files and directories because of the logic to handle the fact that Windows doesn't mark them as directories. This issue shows up when an extraction is run a second time since the module verified the file types and the subdirectory is not a file. The second issue is related to permissions, if Salt is told to extract permissions (which is the default) then the directory and files end up being unreadable since the permissions are not available. This change sets the permissions to what the default umask for the user running Salt is.

• ISSUE #40950: (idokaplan) Import certificate (refs: #41453, #41383)

• PR #41453: (peter-funktionIT) Update win_pki.py @ 2017-06-06 17:15:55 UTC
  - PR #41383: (peter-funktionIT) Update win_pki.py (refs: #41453)
  - 10ac80ee96 Merge pull request #41453 from peter-funktionIT/fix_win_pki_state_import_cert
  - d146fd029c Update win_pki.py
  - efb8e3ef569 Update win_pki.py

• PR #41557: (dmurphy18) Add symbolic link for salt-proxy service similar to other service files @ 2017-06-06 17:13:52 UTC
  - 3335f6bc7d Merge pull request #41557 from dmurphy18/fix-proxy-service
  - ffe492d6a9 Add symbolic link salt-proxy service similar to other service files

• PR #41597: (rallytime) Back-port #41533 to 2016.11 @ 2017-06-06 15:15:09 UTC
- PR #41533: (svinota) unit tests: add pyroute2 interface dict test (refs: #41597)
- 65ed230f45 Merge pull request #41597 from rallytime/bp-41533
- 535b8e8d8e Update new pyroute2 unit test to conform with 2016.11 branch standards
- 5c86dee73c unit tests: test_pyroute2 -- add skipIf
- 026b3949f3 unit tests: add encoding clause into test_pyroute2
- 9ab203d54b unit tests: fix absolute imports in test_pyroute2
- 1f507cf47a unit tests: add pyroute2 interface dict test

- PR #41596: (rallytime) Back-port #41487 to 2016.11 @ 2017-06-06 02:44:17 UTC
- PR #41487: (svinota) clean up change attribute from interface dict (refs: #41596)
- bf8aed153d Merge pull request #41596 from rallytime/bp-41487
- 7b497d9ec6 clean up change attribute from interface dict

- ISSUE #41435: (seanjnkns) 2016.11: Keystone.endpoint_present overwrites all interfaces (refs: #41509)
- PR #41509: (seanjnkns) Add keystone V3 API support for keystone.endpoint_present|absent @ 2017-06-03 03:01:05 UTC
  - cc6c98a8d8 Merge pull request #41509 from seanjnkns/fix-keystone-v3-endpoint_present
  - 095e5949a3 Fix unit tests for PR #41509
  - eb7e98c856 Add keystone V3 API support for keystone.endpoint_present|get, endpoint_absent|delete.

- ISSUE #38061: (Ch3LL) x509.crl_managed ValueError when digest is not specified in the module (refs: #41539)
- PR #41539: (gtmanfred) allow digest to be empty in create_crl @ 2017-06-02 17:00:04 UTC
  - 0a08649637 Merge pull request #41539 from gtmanfred/x509
  - 0998be8919 allow digest to be empty in create_crl

- ISSUE #41154: (mephi42) archive.extracted outputs password embedded in archive URL (refs: #41561)
- PR #41561: (terminalmage) Redact HTTP basic authentication in archive.extracted @ 2017-06-02 15:33:14 UTC
  - 3ae8336895 Merge pull request #41561 from terminalmage/issue41154
  - cbf8acbfac Redact HTTP basic authentication in archive.extracted

- PR #41436: (skizunov) TCP transport: Fix occasional errors when using salt command (refs: #41787) @ 2017-06-01 16:37:43 UTC
  - 39840be4e Merge pull request #41436 from skizunov/develop2
  - 07d5682773 unit.transport.tcp_test: Clean up channel after use
  - 4b6aace7154 Preserve original IO Loop on cleanup
  - 892c6d42d4 TCP transport: Fix occasional errors when using salt command

- ISSUE #41335: (syphernl) [2016.11.5] ssh_auth.present: IndexError: list index out of range (refs: #41337)
- PR #41337: (Foxlik) Fix ssh_auth.present: list index out of range on empty line in authorized_keys @ 2017-06-31 19:59:17 UTC
  - 916fcb64f modify ssh_test.py, to check empty lines and comments in authorized_keys #41335
  - 011d6d567 Fix #41335 - list index out of range on empty line in authorized_keys
• **PR #41512**: (twangboy) Use psutil where possible in win_status.py @ 2017-05-31 19:56:00 UTC
  
  - 1ace72d871 Merge pull request #41512 from twangboy/fix_win_status
  - 582d09b484 Get psutil import
  - fd88b277f Remove unused imports (lint)
  - 41a39dff00 Use psutil where possible

• **PR #41490**: (t0fik) Backport of SELinux module installation and removal @ 2017-05-31 19:38:00 UTC
  
  - 683cc5f414 Merge pull request #41490 from jdsieci/2016.11_selinux
  - e2fbada1c1 Backport of SELinux module installation and removal

• **PR #41522**: (jettero) Sadly, you can’t have `.s and `$’s in dict keys in a mongodb doc. @ 2017-05-31 15:55:24 UTC
  
  - 2e7e84b8f2 Merge pull request #41522 from jettero/mongodb-keys-are-stupid
  - 12648f5439 dang, thought I already got that. Apparently only got the bottom one. This should do it.
  - 7ca763518 ugh, forgot about this lint too. This one looks especially terrible.
  - c9793988d8d forgot about the linter pass ... fixed
  - da0d9e4045 Sadly, you can’t have `.s and `$’s in dict keys in a mongodb doc.

• **ISSUE #41504**: (mtkennenly) Can’t set REG_DWORD registry value larger than 0x7FFFFFFF (refs: #41506)

• **PR #41506**: (gtmanfred) check for integer types @ 2017-05-31 00:48:21 UTC
  
  - 30ad4fd9a0 Merge pull request #41506 from gtmanfred/2016.11
  - 5fe2e9bbf5 check for integer types

• **PR #41469**: (Ch3LL) Fix keep_jobs keyerror in redis returner @ 2017-05-30 18:37:42 UTC
  
  - 7a09b2b678 Merge pull request #41473 from twangboy/fix_win_firewall
  - e503b455c3 Fix lint error
  - d3f08bedc2 Fix win_firewall execution and state modules

• **PR #41473**: (twangboy) Fix win_firewall execution and state modules @ 2017-05-30 18:35:24 UTC
  
  - f635cb11c4 Merge pull request #41499 from rallytime/merge-2016.11
  - 20d893d397 Merge branch '2016.3' into '2016.11'
  - 964b1ee027 Merge pull request #41439 from terminalmage/salt-cp-base64
  
  * ebf6cc78c7 base64 encode binary data sent using salt-cp

• **PR #41499**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-05-30 18:06:03 UTC
  
  - 6db8915021 Endpoint handling per region, fixes #35874 - extend tests for multiple regions - region arg by default set to None - print verbose changes to be exec.
- **PR #41443:** (UtahDave) use proper arg number @ 2017-05-26 20:36:37 UTC
  - 960c5767fa Merge pull request #41443 from UtahDave/fix_args_masterpy
  - dbd2c75ca use proper arg number

- **ISSUE #41444:** (lorendgordon) TypeError traceback in network.system with retain_settings=True (refs: #41350)

- **PR #41350:** (lorendgordon) Supports quoted values in /etc/sysconfig/network @ 2017-05-26 16:22:03 UTC
  - 88c28c18c3 Merge pull request #41350 from lorendgordon/issue-41341
  - f2f6da7039 Supports quoted values in /etc/sysconfig/network

- **PR #41398:** (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-05-26 15:17:49 UTC
  - 824f2d3b69 Merge pull request #41398 from rallytime/merge-2016.11
  - 2941e9c923 Merge pull request #22 from terminalmage/merge-2016.11
    - 087a958af base64 encode binary data sent using salt-cp
  - 503925275 Add missing import
  - d2d9a3d29f Merge branch '2016.3' into '2016.11'
    - d617c9fe72 Merge pull request #41265 from terminalmage/issue41234
      - edf552fe9a Update PKG_TARGETS for RHEL-based distros
        - 0ecb7b9b20 yumpkg: fix latest_version() when showduplicatesfromrepos=1 set in /etc/yum.conf
    - 26bd914580 Merge pull request #41316 from Ch3LL/update_latest_2016.3
      - 520740d862 [2016.13] Bump latest release version to 2016.11.5
    - 18898b7d1f Merge pull request #41216 from terminalmage/issue16592
      - 0e15fd9a1 Update salt-cp integration test to reflect recent changes
      - 1dc92c594 Make salt-cp work with larger files
      - c078180539 Make KeyErrors more specific when interpreting returns
      - fc401c9eb4 Add generator functions for reading files

- **PR #41442:** (UtahDave) use proper arg number @ 2017-05-26 13:42:50 UTC
  - ec08064b99 Merge pull request #41442 from UtahDave/fix_args
  - 032483c9e use proper arg number

- **ISSUE #37824:** (dxiri) SSLError Trying to use v3 API of Openstack Newton as provider. (refs: #41397, #40752)

- **ISSUE #36548:** (abonillasuse) openstack auth with nova driver (refs: #38647)

- **PR #41397:** (Enquier) Updating Nova/Neutron modules to support KeystoneAuth and SSLVerify @ 2017-05-25 21:16:14 UTC
  - **PR #40752:** (Enquier) Add ability to specify a custom SSL certificate or disable SSL verification in KeystoneAuth v3 (refs: #41397)
  - **PR #38647:** (gtmanfred) Allow novaclient to use keystoneauth1 sessions for authentication (refs: #41397)
  - 22096d9213 Merge pull request #41397 from Enquier/neutron-ssl-verify
  - d25dcf61d5 Small error in nova that was preventing execution
  - 0e7a1009ed Updated module docs to include changes made
  - 05e0192665 Adding missing os_auth_system

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30.2. Previous Releases 2529
– 4e0f4981e4 allow service_type to be specified default is now 'network'
– 991e84343f Added non-profile and defaults for Neutron
– c93f112c9b Updating Nova Module to include use_keystone Auth
– 66ab1e5184 Re-adding neutron dependency check
– cce07ee5f2 Updating Neutron module to suport KeystoneAuth
• ISSUE #34460: (Ch3LL) Receive an error when using salt-api to call a runner (refs: #41409)
• PR #41409: (garethgreenaway) Fixes to ipc transport @ 2017-05-25 21:06:27 UTC
  – 14a58cf536 Merge pull request #41409 from garethgreenaway/34460_fixes_ipc_transport
  – 5613b72dfe Updating the exception variable to be more in line with the rest of the exception code
  – 41ee5b333 Fixing a potential lint issue
  – 760d561dfe Fixing a potential lint issue
  – c11dcd01d12 Changing the approaching and including an except for the action socket.error exception, then logging a trace log if error number is 0 and an error log otherwise.
  – 3f950596f4 Fixing lint issues.
  – f3631f6a69 On occasion an exception will occur which results in the event not returning properly, even though the wire_bytes is correctly populated. In this situation, we log to trace and continue. #34460
• PR #41421: (UtahDave) Correct doc to actually blacklist a module @ 2017-05-25 21:01:46 UTC
  – 824428700d Merge pull request #41421 from UtahDave/fix_blacklist_docs
  – 5eb72751a0 Correct doc to actually blacklist a module
• ISSUE #41353: (rmarchei) Orchestrate runner needs saltenv on 2016.11.5 (refs: #41431)
• PR #41431: (terminalmage) Fix regression in state orchestration @ 2017-05-25 18:44:53 UTC
  – b98d5e0d4 Merge pull request #41431 from terminalmage/issue41353
  – 16eae64cca Fix regression in state orchestration
• ISSUE #41338: (ricohouse) Exception not raised when running config compare and the device (Juniper) returns error (refs: #41429)
• PR #41429: (ricohouse) Issue #41338: Return false when compare config fails @ 2017-05-25 17:18:02 UTC
  – eeff3dd7fb Merge pull request #41429 from ricohouse/fix-compare-bug
  – 9b61665c4c Issue #41338: Return false when compare config fails
• PR #41414: (Ch3LL) Update bootstrap script version to latest release(v2017.05.24) @ 2017-05-24 19:51:49 UTC
  – 561a16ec3 Merge pull request #41414 from Ch3LL/update_bootstrap
  – d8c03eeb60 Update bootstrap script version to latest release(v2017.05.24)
• PR #41336: (mcalmer) fix setting and getting locale on SUSE systems @ 2017-05-24 17:46:08 UTC
  – 88f30c0ed9 Merge pull request #41336 from mcalmer/fix-locale-on-SUSE
  – f365c8a25 fix unit tests
  – 428ba9b8c6e fix setting and getting locale on SUSE systems
• PR #41393: (rallytime) Back-port #41235 to 2016.11 @ 2017-05-24 16:08:56 UTC
  – PR #4135: (moio) rest_cherrypy: remove sleep call (refs: #41393)
- 4265959647 Merge pull request #41393 from rallytime/bp-41235
- c79c0e3f43 rest_cherrypy: remove sleep call

• PR #41394: (rallytime) Back-port #41243 to 2016.11 @ 2017-05-24 16:00:17 UTC
  - PR #41243: (arif-ali) Remove the keys that don't exist in the new change (refs: #41394)
  - 83f54694f9 Merge pull request #41394 from rallytime/bp-41243
  - a5351302af Lint fix
  - 05fad0a0f3 Remove the keys that don't exist in the new change

• PR #41401: (bdrung) Add documentation key to systemd service files @ 2017-05-24 15:49:54 UTC
  - 3a45ac30f0 Merge pull request #41401 from bdrung/systemd-service-documentation-key
  - 3f730895d  Add documentation key to systemd service files

• PR #41404: (bdrung) Fix typos @ 2017-05-24 14:42:44 UTC
  - d34333c30b Merge pull request #41404 from bdrung/fixed-typos
  - 33a7a8b2ec Fix typos

• PR #41388: (bdrung) Do not require sphinx-build for cleaning docs @ 2017-05-23 19:32:41 UTC
  - 3083764195 Merge pull request #41388 from bdrung/clean-doc-without-sphinx
  - 5b79a0a9f8 Do not require sphinx-build for cleaning docs

• ISSUE #41362: (automate-solutions) On AWS EC2: `salt-cloud -f delete_keypair ec2 keyname=mykeypair` doesn't delete the keypair (refs: #41364)

• PR #41364: (automate-solutions) Fix issue #41362 invalid parameter used: KeyName.1 instead of KeyName @ 2017-05-23 17:32:10 UTC
  - 842875e590 Merge pull request #41364 from automate-solutions/fix-issue-41362
  - cfd8eb7a87 Set DescribeKeyPairs back to KeyName.1 according to documentation
  - 6a82dd66fc Fix issue #41362 invalid parameter used: KeyName.1 instead of KeyName

• ISSUE #40950: (idokaplan) Import certificate (refs: #41453, #41383)

• PR #41383: (peter-funktionIT) Update win_pki.py (refs: #41453) @ 2017-05-23 17:26:43 UTC
  - 92f94e66bc Merge pull request #41383 from peter-funktionIT/fix-win_pki-get_cert_file
  - 4d9bd06176 Update win_pki.py

• PR #41113: (cro) Rescue proxy_auto_tests PR from git rebase hell @ 2017-05-22 17:05:07 UTC
  - PR #39575: (cro) WIP: Proxy auto test, feedback appreciated (refs: #41113)
  - 1ba95684a8 Merge pull request #41113 from cro/proxy_auto_test2
  - 19db038b99 Fix test--use proxy_config instead of minion_config
  - 7749eadb6 Change default proxy minion opts so only the proxy-specific ones are listed, and the rest are taken from DEFAULT_MINION_OPTS.
  - 106394c8bc Lint.
  - 3be90cc9f4 Rescue proxy_auto_tests PR from git rebase hell

• PR #41360: (cro) Sysrc on FreeBSD, YAML overeager to coerce to bool and int @ 2017-05-22 15:54:31 UTC
  - 375892d910 Merge pull request #41360 from cro/sysrc_fix
- 6db31ce52a Fix problem with sysrc on FreeBSD, YAML overeager to coerce to bool and int.

- **ISSUE #41190**: (jheidbrink) Cannot extract tar.xz archive when it exceeds size of /tmp (refs: #41372)

- **PR #41372**: (terminalmage) Don’t use intermediate file when listing contents of tar.xz file @ 2017-05-22 15:36:45 UTC
  - 01b71c75c1 Merge pull request #41372 from terminalmage/issue41190
  - 1f08936d9c Remove unused import
  - 68cb897520 Replace reference to fileobj
  - 788874408a Remove "" from mode
  - 3d4b833627 Don’t use intermediate file when listing contents of tar.xz file

- **PR #41373**: (alex-zel) Allow HTTP authentication to ES. @ 2017-05-22 15:32:09 UTC
  - 5edfcf972c Merge pull request #41373 from alex-zel/patch-3
  - 3192eab128 Allow HTTP authentication to ES.

- **ISSUE #40748**: (djhaskin987) Consul backend minion cache does not work (refs: #41287)

- **PR #41287**: (garethgreenaway) Fix to consul cache @ 2017-05-19 18:32:56 UTC
  - 29bd7f48b7 Merge pull request #41287 from garethgreenaway/40748_2016_11_consul
  - 5039fe12fb Removing chdir as it is no needed with this change
  - 4550ec3ce49 Updating the code that is pulling in the list of cached minions to use self.cache.list instead of relying on checking the local file system, which only works for the localfs cache method. #40748

- **ISSUE #38894**: (amendlik) salt.runner and salt.wheel ignore test=True (refs: #41309, #41611)

- **PR #41309**: (garethgreenaway) Adding test argument for runners & wheel orchestration modules @ 2017-05-19 18:26:09 UTC
  - 672aaa88d3 Merge pull request #41309 from garethgreenaway/38894_allowing_test_argument
  - e1a88e8f7f Allowing test=True to be passed for salt.runner and salt.wheel when used with orchestration

- **ISSUE #41306**: (lomeroe) win_lgpo does not properly pack group policy version number in gpt.ini (refs: #41319, #41307)

- **PR #41319**: (lomeroe) backport #41307 to 2016.11, properly pack version numbers into single @ 2017-05-19 18:25:00 UTC
  - **PR #41507**: (lomeroe) properly pack/unpack the verison numbers into a number (refs: #41319)
  - 140b0427e1 Merge pull request #41319 from lomeroe/bp_41307
  - 4f0aa577a5 backport 41307 to 2016.11, properly pack version numbers into single number

- **PR #41327**: (Ch3LL) Add 2016.11.6 Release Notes @ 2017-05-19 18:05:09 UTC
  - 6dbb7cca7d Merge pull request #41327 from Ch3LL/add_2016.11.6_release
  - e5fc0aeb9c Add 2016.11.6 Release Notes

- **PR #41329**: (lorenzgordon) Corrects versionadded for win_network.get_route @ 2017-05-19 17:47:57 UTC
  - 1fabf3932 Merge pull request #41329 from lorenzgordon/doc-fix
  - 3c47124f0 Corrects versionadded for win_network.get_route

- **PR #41332**: (Ch3LL) Add patched packages warning to 2016.11.5 release notes @ 2017-05-18 21:53:26 UTC
  - 6ca65592da Merge pull request #41332 from Ch3LL/fix_release_2016.11.5_notes
- 9a1bf4205f fix url refs in rst
- cde08ff77 Add patched packages warning to 2016.11.5 release notes

- **PR #41208:** (pkazmierczak) Fix: zypper handling of multiple version packages @ 2017-05-18 15:44:26 UTC
  - 9f359d841f Merge pull request #41208 from pkazmierczak/pkazmierczak-zypper-multiple-ver-pkgs
  - d411a91676 Reverted back to cascading with statements for python 2.6 compat
  - 7204013653 Compacted with statements in the unit test.
  - 64c08042c Added unit tests and copied the behavior to .upgrade method, too.
  - 5f952007f6 Fix: zypper handling of multiple version packages

- **PR #41317:** (Ch3LL) [2016.11] Bump latest release version to 2016.11.5 @ 2017-05-18 15:34:13 UTC
  - bcef99ad6 Merge pull request #41317 from Ch3LL/update_latest_2016.11
  - cdb072c207 [2016.11] Bump latest release version to 2016.11.5

- **PR #41232:** (axmetishe) Add basic auth for SPM @ 2017-05-17 19:08:56 UTC
  - b8ddd7e08 Merge pull request #41232 from axmetishe/2016.11
  - 7610423b4 Add basic auth for SPM

- **PR #41236:** (BenoitKnecht) states: cron: show correct changes when using special @ 2017-05-17 18:51:58 UTC
  - 7bd66d969 Merge pull request #41236 from BenoitKnecht/2016.11
  - 33211d032e states: cron: show correct changes when using special

- **PR #41269:** (ismb) Bugfix: Unable to use "127" as hostname for the Minion ID @ 2017-05-17 18:31:15 UTC
  - 1c1e925f6 Merge pull request #41269 from ismb/ismb-minion-id-127-name
  - 5168ef959 Add unit test for hostname can be started from 127
  - 0d035198b Harden to 127. IP part
  - d9c8324a6b Unit test for accepting hosts names as 127
  - 65b03667b Bugfix: unable to use 127 as hostname

- **PR #41289:** (garethgreenaway) Fixing consul cache @ 2017-05-17 16:54:12 UTC
  - d0fa31d4c4a Merge pull request #41289 from garethgreenaway/2016_11_5_fix_consul_cache_ls
  - 780a28c9a0 Swapping the order in the func_alias so the ls function is available.

- **ISSUE #41291:** (lomeroe) win_lgpo does not properly convert large decimal values in regpol data (refs: #41301, #41303)

- **PR #41303:** (lomeroe) backport #41301 -- properly convert packed string to decimal values @ 2017-05-17 16:32:22 UTC
  - PR #41301: (lomeroe) properly convert packed string to decimal values (refs: #41303)
  - 6566648948 Merge pull request #41303 from lomeroe/bp-41301
  - f4b93f9d9a properly convert packed string to decimal values

- **ISSUE #41231:** (kaihowl) PR #30777 misses an update to the documentation for pkg.installed and hold:true (refs: #41251)

- **ISSUE #30773:** (ealphonse) version-controlled packages with hold: True can no longer be upgraded by salt (refs: #30777)
• PR #41283: (terminalmage) Backport #41251 to 2016.11 @ 2017-05-16 18:01:17 UTC
  – PR #41251: (abednarik) Update apt module regarding upgrade against hold packages. (refs: #41283)
  – PR #30777: (abednarik) Fix update apt hold pkgs (refs: #41251)
  – 44598617be Merge pull request #41283 from terminalmage/bp-41251
  – ed03ca534f Update apt module regarding upgrade against hold packages.
• PR #41181: (gtmanfred) add resolving extra flags to yum upgrade @ 2017-05-16 04:07:47 UTC
  – d8e9676cf Merge pull request #41181 from gtmanfred/2016.11
  – 2ca71713b1 use six and clean_kwargs
  – c9bf09a5a1 add resolving extra flags to yum upgrade
• ISSUE #40177: (eldadru) libcloud_dns state "global name '__salt__' is not defined" in salt.cmd runner (refs: #40246)
• PR #41220: (rallytime) Back-port #40246 to 2016.11 @ 2017-05-15 17:59:38 UTC
  – PR #40246: (tonybaloney) Fix libcloud_dns state module bug (refs: #41220)
  – 759422350f Merge pull request #41220 from rallytime/bp-40246
  – 79f1bb2bba Remove unused/duplicate imports leftover from merge-conflict resolution
  – 2f610680e5 remove unused imports
  – 9b7de2e7d7 fix unit tests
  – 49d94559ab linting
  – 4b260a4594 linting
  – 41d1adab5f fix up tests
  – b3822e03fc add fixes for incorrectly importing modules directly instead of using __salt__
• ISSUE #41230: (RealKelsar) 2016.11.5 IPv6 nameserver in resolv.conf leads to minion exception (refs: #41244)
• ISSUE #40912: (razed11) IPV6 Warning when ipv6 set to False (refs: #40934)
• PR #41244: (cachedout) Fix ipv6 nameserver grains @ 2017-05-15 17:55:39 UTC
  – PR #40934: (gtmanfred) Only display IPvX warning if role is master (refs: #41244)
  – 53d5b3e816 Merge pull request #41244 from cachedout/fixed_ipv6_nameserver_grains
  – f745db1a43 Lint
  – 6e1ab69710 Partial revert of #40934
  – 88f49f146 Revert "Only display IPvX warning if role is master"
• PR #41242: (pprkut) Fix changing a mysql user to unix socket authentication. @ 2017-05-15 17:00:06 UTC
  – 895fe582eb Merge pull request #41242 from M2Mobi/mysql_socket_auth
  – 7d8359766d Fix changing a mysql user to unix socket authentication.
• ISSUE #40940: (djhaskin987) When state_aggregate is set to True, the latest keyword doesn't work with pkg.installed (refs: #41101)
• PR #41101: (terminalmage) Fix "latest" keyword for version specification when used with aggregation @ 2017-05-15 16:52:35 UTC
  – 50d8fde123 Merge pull request #41101 from terminalmage/issue40940
- 7fe64219ae Add rtag check to integration test for pkg.refresh_db
- 88a08aa3bf Add comments to explain what removing the rtag file actually does
- 92011dbe5f Fix "latest" keyword for version specification when used with aggregation

- **ISSUE #34775**: (babilen) Please allow users to disable branch environment mapping in GitFS (refs: #41144)

- **PR #41146**: (terminalmage) gitfs: Backport performance fixes for getting tree objects @ 2017-05-12 17:35:47 UTC
  - PR #41144: (terminalmage) gitfs: Add two new options to affect saltenv mapping (refs: #41146)
  - 049712ba53 Merge pull request #41146 from terminalmage/backport-get_tree-performance-improvement
  - f9d6734afe gitfs: Backport performance fixes for getting tree objects

- **ISSUE #41135**: (shallot) gpg renderer doesn’t seem to work with salt-ssh, tries to execute gpg on the minion? (refs: #41161)

- **PR #41161**: (The-Loeki) gpg renderer: fix gpg_keydir always reverting to default @ 2017-05-12 17:19:07 UTC
  - 4215a0b99d Merge pull request #41161 from The-Loeki/2016.11
  - 249468ef18 gpg renderer: fix gpg_keydir always reverting to default

- **ISSUE #41162**: (onlyanegg) Elasticsearch module functions should pass hosts and profile to index_exists() (refs: #41163)

- **PR #41163**: (onlyanegg) Elasticsearch - pass hosts and profile to index_exists() @ 2017-05-12 17:18:06 UTC
  - 5b10cf58ba Merge pull request #41163 from onlyanegg/elasticsearch-pass_profile_to_index_exists
  - 7f512c701b Pass hosts and profile to index_exists() method

- **ISSUE #41185**: (jmarinaro) package name collisions in chocolatey state (refs: #41186)

- **PR #41186**: (jmarinaro) Fix package name collisions in chocolatey state @ 2017-05-12 17:01:31 UTC
  - d433cf850d Merge pull request #41186 from jmarinaro/fix-chocolatey-package-collision
  - 229f3b9f3 apply changes to uninstalled function
  - ffd4c7e04 Fix package name collisions in chocolatey state

- **PR #41189**: (github-abcde) util/minions.py: Fixed case where data is an empty dict resulting in... @ 2017-05-12 16:32:25 UTC
  - bb5ef41ce0 Merge pull request #41189 from github-abcde/util-minions-fix
  - 853dec506c util/minions.py: Fixed case where data is an empty dict resulting in errors.

- **PR #41104**: (Ch3LL) Add test to query results of /jobs call in api @ 2017-05-10 20:11:08 UTC
  - b136b15330 Merge pull request #41104 from Ch3LL/add_jobs_test
  - dac16583b7 add test to query results of /jobs call in api

- **PR #41170**: (lomeroe) Backport #41081 to 2016.11 @ 2017-05-10 19:58:52 UTC
  - PR #41081: (lomeroe) Update win_dns_client to use reg.read_value and set_value (refs: #41170)
  - ca18b4df93 Merge pull request #41170 from lomeroe/bp-41081
  - 2af882fe15 update mock data
  - b7fa115a59 update win_dns_client tests with correct module names
  - 4d05a22675 Update win_dns_client to use reg.read_value and set_value
- **PR #41173**: (twangboy) Add silent action to MsgBox for Path Actions @ 2017-05-10 19:57:06 UTC
  - d7ec37b003 Merge pull request #41173 from twangboy/fix_installer
  - 24b11fdec2 Add release notes
  - 96918dfca6 Add silent action to MsgBox for Path Actions

- **PR #41158**: (Ch3LL) 2016.11.5 release notes: add additional commits @ 2017-05-09 22:41:40 UTC
  - 88e93b7fe5 Merge pull request #41158 from Ch3LL/update_2016.11.5

- **PR #41148**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-05-09 20:23:28 UTC
  - d2ae7def2 Merge pull request #41148 from rallytime/merge-2016.11
  - aba35e20dd Merge branch ’2016.3’ into ’2016.11’
    - 2969153097 Merge pull request #41122 from terminalmage/masterless-env_cache-fix
      - be732f0577 gifs: refresh env cache during update in masterless
    - b8f0af108 Merge pull request #41123 from terminalmage/gitfs-vsts-note
      - f6a16956a0 Add note on lack of support for VSTS in older libssh2 releases.
    - 8f79b6f537 Merge pull request #41090 from bbinet/rdurations_float
      - fd48a63653 rdurations should be floats so that they can be summed when profiling

- **PR #41147**: (rallytime) Back-port #39676 to 2016.11 @ 2017-05-09 18:40:44 UTC
  - **PR #39676**: (F30) Fix comments about the ”hash_type” option (refs: #41147)
  - 2156395b2e Merge pull request #41147 from rallytime/bp-39676
  - 5b55b2452 Fix comments about the ”hash_type” option

- **PR #40852**: (isbm) Isbm fix coregrains constants bsc#1032931 @ 2017-05-09 18:35:46 UTC
  - a2f359fa13 Merge pull request #40852 from isbm/isbm-fix-coregrains-constants-bsc#1032931
  - f3b12a3f5b Do not use multiple variables in ”with” statement as of lint issues
  - 35a8d9934 Disable the test for a while
  - 76cb1b7150 Rewrite test case for using no patch decorators
  - f71af0b625 Fix lint issues
  - 0e6abb3e37 Add UT on set_hw_clock on Gentoo
  - a2b1d4638c Add UT for set_hwclock on Debian
  - 5356a0821a Bugfix: use correct grain name for SUSE platform
  - 88e8184702 Add UT set_hwclock on SUSE
  - 0cd590f927 Fix UT names
  - bee94ade63 Add UT for set_hwclock on RedHat
  - dfe2610d05 Add UT for set_hwclock on Arch
  - d00a8a6f5 Add UT for set_hwclock on solaris
  - d2614aedaa Fix docstrings
  - 6d782191dc Add UT for set_hwclock on AIX
- d303e0dd8a Add UT for AIX on get_hwclock
- 86f2d83781 Add UT on Solaris
- c3caf6d65 Add UT for Debian on get_hwclock
- d337e09357 Add UT for RedHat/SUSE platforms on get_hwclock
- 501a59ca7e Bugfix: use correct grain for SUSE and RedHat platform
- f25dec5c56e Add UT for get_hwclock on SUSE platform
- 08e05c8568 Remove dead code
- 1216a0b1f2 Add UT for get_hwclock on UTC/localtime
- 39332c71d3 Remove duplicate code
- 58676c568d Add UT for Debian on set_zone
- 1b9ec37b1b Add UT for gentoo on set_zone
- cf7f766a68 Bugfix: use correct os_family grain value for SUSE series
- 6ed9be985e Adjust UT to use correct grain for SUSE series
- ce4c836a60 Add UT for set_zone on SUSE series
- 155498b49 Doc fix
- a40876cdac Remove unnecessary mock patch
- ffab2db213 Fix doc for RH UT
- 72388f7ae2 Add UT for RedHat's set_zone
- 11595d3a42 Refactor with setup/teardown
- ce6a0de98e Bugfix: use correct grain constant for platform
- 28072c9e41 Adjust the test so it is using the right grain for SUSE systems
- 7a0e4be4f8 Add unit test for get_zone and various platforms

- **ISSUE #41105**: (terminalmage) ssl_verify gitfs/git_pillar option does not work with pygit2 (refs: #41111)
- **PR #41111**: (terminalmage) Allow "ssl_verify: False" to work with pygit2 @ 2017-05-09 17:56:12 UTC
  - 6fa41dc89d Merge pull request #41111 from terminalmage/issue41105
  - 8c6410e3cd Add notices about ssl_verify only working in 0.23.2 and newer
  - 98c82972f9 Support ssl_verify in pygit2
- f73c471677 Add http(s) auth config docs for GitPython

- **PR #41008**: (cro) Look in /opt/lib instead of just /opt/local/lib on Illumos distros. @ *2017-05-09 16:56:00 UTC
  - 81add1b944 Merge pull request #41008 from cro/rsax_smos
  - a4f7a145e Look for libcrypto in both /opt/tools and /opt/local on Illumos-based distros.

- **PR #41124**: (gtmanfred) add user_data to digitalocean @ 2017-05-09 16:47:42 UTC
  - c649725e9b Merge pull request #41124 from gtmanfred/do
  - 2370d9316b add user_data to digital ocean

- **ISSUE #41125**: (tmeneau) service.running returns True if enable=None and init script returns 0 (refs: #41127)

### 30.2. Previous Releases
• PR #41127: fix incorrect service.running state response when enable=None and init script returns 0 @ 2017-05-09 16:43:35 UTC
  - d0a3cf33a Merge pull request #41127 from xetus-oss/fix-41125-service-running
  - d8766562c9 fix incorrect service.running success response

30.2.59 Salt 2016.11.7 Release Notes

Version 2016.11.7 is a bugfix release for 2016.11.0.

Security Fix

CVE-2017-12791 Maliciously crafted minion IDs can cause unwanted directory traversals on the Salt-master

This release corrects a flaw in minion ID validation which could allow certain minions to authenticate to a master despite not having the correct credentials. To exploit the vulnerability, an attacker must create a salt-minion with an ID containing characters that will cause a directory traversal. Credit for discovering the security flaw goes to: Vernhk@qq.com

30.2.60 Salt 2016.11.8 Release Notes

Version 2016.11.8 is a bugfix release for 2016.11.0.

Statistics

• Total Merges: 171
• Total Issue References: 68
• Total PR References: 202
• Contributors: 61 (AFriemann, Ch3LL, CorvinM, Da-Juan, DmitryKuzmenko, UtahDave, abulford, amalleo25, amendlik, aneeshusa, aogier, arount, arthurloglhab, astronouth7303, binocvlar, blarghmatey, cachedout, clem-compilatio, corywright, cri-epita, damon-atkins, davidjb, dglloyd, dmurphy18, ferringb, garethgreenaway, gdubroeucq, gilbsgilbs, goten4, gtmanfred, ibsm, jagguli, kevinanderson1, kojiromike, kstreee, leeclemens, lomeroe, lorengordon, lubyou, mcarlton00, meaksh, morganwillcock, nhavens, pabloh007, rallytime, remijouannet, renner, root360-AndreasUlm, s-sebastian, sarcasticadmin, sbojarski, shengis, tdturion, terminal-mage, toanju, twangboy, ushmodin, viktorkrivak, vutny, whiteinge, xiaoanyunfei)

Security Fix

CVE-2017-14695 Directory traversal vulnerability in minion id validation in SaltStack. Allows remote minions with incorrect credentials to authenticate to a master via a crafted minion ID. Credit for discovering the security flaw goes to: Julian Brost (julian@0x4a42.net)

CVE-2017-14696 Remote Denial of Service with a specially crafted authentication request. Credit for discovering the security flaw goes to: Julian Brost (julian@0x4a42.net)
Anonymous Binds and LDAP/Active Directory

When `auth.ldap.anonymous` is set to `False`, the bind password can no longer be empty.

Changelog for v2016.11.7..v2016.11.8


- **PR #43508**: (rallytime) Back-port #43333 to 2016.11.8 @ 2017-09-14 21:40:19 UTC
  - PR #43333: (damon-atkins) Docs are wrong cache_dir (bool) and cache_file (str) cannot be passed as params + 1 bug (refs: #43508)
  - a648f75949 Merge pull request #43508 from rallytime/bp-43333
  - d4981a2717 Update doco
  - a7c8b9e048 Update win_pkg.py
  - 1d6c6fb72 Docs are wrong cache_dir (bool) and cache_file (str) cannot be passed on the cli (#2)

- **PR #43434**: (rallytime) Add 2016.11.8 release notes @ 2017-09-11 17:06:29 UTC
  - e7009877bc Merge pull request #43434 from rallytime/2016.11.8-release-notes
  - 68f529ee5e Add 2016.11.8 release notes

- **PR #43271**: (twangboy) Fix minor formatting issue @ 2017-08-30 14:26:21 UTC
  - 3a0b02f3ae Merge pull request #43271 from twangboy/win_fix_pkg.install
  - 13dfabb1ce Fix regex statement, add .
  - 31ff6f0ad Add underscore to regex search
  - 3cf2b6575c Fix spelling
  - ed030a35a5 Use regex to detect salt-minion install
  - e5daff495a Fix pkg.install

- **PR #43191**: (viktorkrivak) Fix apache.config with multiple statement @ 2017-08-28 18:13:44 UTC
  - b4c689df5 Merge pull request #43191 from viktorkrivak/fix-apache-config-multi-entity
  - c15bcbe1cc Merge remote-tracking branch 'upstream/2016.11' into fix-apache-config-multi-entity
  - 4164047951 Fix apache.config with multiple statement At this moment when you post more than one statement in config only last is used. Also file is rewrited multiple times until last statement is written. Example: salt '*' apache.config /etc/httpd/conf.d/ports.conf config='[\{'Listen': '8080', \'} Proxy': "Something"\]" Ends only with Proxy Something and ignore Listen 8080, This patch fix this issue.

- **ISSUE #42279**: (dafyddj) win_lgpo matches multiple policies due to startswith() (refs: #43154, #43116)

- **PR #43154**: (lomeroe) Backport #43116 to 2016.11 @ 2017-08-28 16:40:41 UTC
  - PR #43116: (lomeroe) Fix 42279 in develop (refs: #43154)
  - b90e59ede9 Merge pull request #43154 from lomeroe/bp-43116-2016.11
– 8f593b0b02 verify that files exist before trying to remove them, win_file.remove raises an exception if the file does not exist
– 33a30bac06 correcting bad format statement in search for policy to be disabled
– acc3d7ac82 correct fopen calls from salt.utils for 2016.11’s utils function
– 2da1ced109 lint fix
– 61bd12c0de track xml namespace to ensure policies w/duplicate IDs or Names do not conflict
– f232bedf9f add additional checks for ADM policies that have the same ADMX policy ID (#42279)

• ISSUE #42642: (githubcdr) state.augeas (refs: #42669, #43202)
• PR #43202: (garethgreenaway) Reverting previous augeas module changes @ 2017-08-28 13:14:27 UTC
  – 5308c27f9f Merge pull request #43202 from garethgreenaway/2642_2016_11_augeas_module_revert_fix
  – e7e93eb3f Reverting this change due to it breaking other uses.
• ISSUE #43101: (aogier) genesis.bootstrap fails if no pkg AND exclude_pkgs (which can’t be a string) (refs: #43103)
• PR #43103: (aogier) genesis.bootstrap deboostrap fix @ 2017-08-25 20:48:23 UTC
  – f16b7246ed4 Merge pull request #43103 from aogier/43101-genesis-bootstrap
  – db94f3bb1c better formatting
  – e5cc67762 tests: fix a leftover and simplify some parts
  – 13e597457 lint
  – 216ed69e95 allow comma-separated pkgs lists, quote args, test deb behaviour
  – d8412eaa06 fix debootstrap and enhance packages selection/deletion via cmdline
• ISSUE #42329: (jagguli) State git.latest does not pull latest tags (refs: #42663)
• PR #42663: (jagguli) Check remote tags before deciding to do a fetch #42329 @ 2017-08-25 20:14:32 UTC
  – 4863771428 Merge pull request #42663 from StreetHawkInc/fix_git_tag_check
  – 2b5af5b59d Remove refs/tags prefix from remote tags
  – 3f2e96e561 Convert set to list for serializer
  – 2728e5d977 Only include new tags in changes
  – 4b1df2f223 Exclude annotated tags from checks
  – 389c03785 Check remote tags before deciding to do a fetch #42329
• ISSUE #43198: (corywright) disk.format._ needs to be aliased to disk.format (refs: #43199)
• PR #43199: (corywright) Add disk.format alias for disk.format._ @ 2017-08-25 19:21:07 UTC
  – 4193e7f0a2 Merge pull request #43199 from corywright/disk-format-alias
  – f00d3a9ddc Add disk.format alias for disk.format_
• ISSUE saltstack/salt-jenkins#495: (Ch3LL) npm tests failing (refs: #43196)
• PR #43196: (gtmanfred) Pin request install to version for npm tests @ 2017-08-25 18:43:06 UTC
  – 5471f9fe0c Merge pull request #43196 from gtmanfred/2016.11
  – ccc2b41777 Pin request install to version
• ISSUE #43143: (abulford) git.detached does not fetch if rev is missing from local (refs: #43178)
• **PR #43178**: (terminalmage) git.detached: Fix traceback when rev is a SHA and is not present locally @ 2017-08-25 13:58:37 UTC
  - ace2715c60 Merge pull request #43178 from terminalmage/issue43143
  - 2640833400 git.detached: Fix traceback when rev is a SHA and is not present locally
• **PR #43179**: (terminalmage) Fix missed deprecation @ 2017-08-24 22:52:34 UTC
  - 12e9507b9e Merge pull request #43179 from terminalmage/old-deprecation
  - 3adf8ad04b Fix missed deprecation
• **PR #43171**: (terminalmage) Add warning about adding new functions to salt/utils/__init__.py @ 2017-08-24 19:10:23 UTC
  - b595440d90 Merge pull request #43171 from terminalmage/salt-utils-warning
  - 7b5943a31a Add warning about adding new functions to salt/utils/__init__.py
• **PR #43173**: (Ch3LL) Add New Release Branch Strategy to Contribution Docs @ 2017-08-24 19:04:56 UTC
  - 4f273cac4f Merge pull request #43173 from Ch3LL/add_branch_docs
  - 1b24244bd3 Add New Release Branch Strategy to Contribution Docs
• **PR #43151**: (ushmodin) state.sls hangs on file.recurse with clean: True on windows @ 2017-08-23 17:25:33 UTC
  - PR #42969: (ushmodin) state.sls hangs on file.recurse with clean: True on windows (refs: #43151)
  - 669b376abf Merge pull request #43151 from ushmodin/2016.11
  - c5841e2ade state.sls hangs on file.recurse with clean: True on windows
• **PR #42986**: (renner) Notify systemd synchronously (via NOTIFY_SOCKET) @ 2017-08-22 16:52:56 UTC
  - ae9d2b7f85 Merge pull request #42986 from renner/systemd-notify
  - 79c53f3f81 Fallback to systemd_notify_call() in case of socket.error
  - f1765472dd Notify systemd synchronously (via NOTIFY_SOCKET)
• **ISSUE #43036**: (mcarlton00) Linux VMs in Bhyve aren’t displayed properly in grains (refs: #43037)
• **PR #43037**: (mcarlton00) Issue #43036 Bhyve virtual grain in Linux VMs @ 2017-08-22 16:43:40 UTC
  - b420f6e618 Merge pull request #43037 from mcarlton00/fix-bhyve-grains
  - 73315f0cf0 Issue #43036 Bhyve virtual grain in Linux VMs
• **PR #43100**: (vutny) [DOCS] Add missing utils sub-dir listed for extension_modules @ 2017-08-22 15:40:09 UTC
  - 0ab87f2d884 Merge pull request #43100 from vutny/doc-add-missing-utils-ext
  - af743ff6c3 [DOCS] Add missing utils sub-dir listed for extension_modules
• **ISSUE #15171**: (JensRantil) Maximum recursion limit hit related to requisites (refs: #42985)
• **PR #42985**: (DmitryKuzmenko) Properly handle prereq having lost requisites. @ 2017-08-21 22:49:39 UTC
  - e2b2f448e Merge pull request #42985 from DSRCorporation/bugs/15171_recursion_limit
  - 651b1bab09 Properly handle prereq having lost requisites.
• **PR #43092**: (blarghmatey) Fixed issue with silently passing all tests in Testinfra module @ 2017-08-21 20:22:08 UTC
  - e51333306c Merge pull request #43092 from mitodl/2016.11
  - d4b113acdf Fixed issue with silently passing all tests in Testinfra module
• PR #43060: (twangboy) Osx update pkg scripts @ 2017-08-21 20:06:12 UTC
  - 77a443ce8e Merge pull request #43060 from twangboy/osx_update_pkg_scripts
  - ef8a14cd9 Remove /opt/salt instead of /opt/salt/bin
  - 2dd62aa1da Add more information to the description
  - f44f5b70dc Only stop services if they are running
  - 3b62bf953c Remove salt from the path
  - ebdca3a0f5 Update pkg-scripts

• ISSUE #42869: (abednarik) Git Module : Failed to update repository (refs: #43064)

• PR #43064: (terminalmage) Fix race condition in git.latest @ 2017-08-21 14:29:52 UTC
  - 1b1b6da803 Merge pull request #43064 from terminalmage/issue42869
  - 093c02f77 Fix race condition in git.latest

• ISSUE #42041: (lorenegordon) pkg.list_repo_pkgs fails to find pkgs with spaces around yum repo enabled value
  (refs: #43054)

• PR #43054: (lorenegordon) Uses ConfigParser to read yum config files @ 2017-08-18 20:49:44 UTC
  - PR #42045: (arount) Fix: salt.modules.yumpkg: ConfigParser to read ini like files. (refs: #43054)
  - 96e8e836d1 Merge pull request #43054 from lorenegordon/fix/yumpkg/config-parser
  - 3b2cb81a72 fix typo in salt.modules.yumpkg
  - 38add0e4a2 break if leading comments are all fetched
  - d7f65dc7a7 fix configparser import & log if error was raised
  - ca1b1bb633 use configparser to parse yum repo file

• PR #43048: (rallytime) Back-port #43031 to 2016.11 @ 2017-08-18 12:56:04 UTC
  - PR #43031: (gtmanfred) use a ruby gem that doesn't have dependencies (refs: #43048)
  - 43aa46f512 Merge pull request #43048 from rallytime/bp-43031
  - 35e45049e2 use a ruby gem that doesn't have dependencies

• PR #43023: (terminalmage) Fixes/improvements to Jenkins state/module @ 2017-08-18 01:33:10 UTC
  - ad89ff3104 Merge pull request #43023 from terminalmage/fix-jenkins-xml-caching
  - 33fd8ff939 Update jenkins.py
  - fc306fc8c3 Add missing colon in if statement
  - 822eabc81 Catch exceptions raised when making changes to jenkins
  - 91b583b493 Improve and correct exception raising
  - f096917a0e Raise an exception if we fail to cache the config xml

• PR #43026: (rallytime) Back-port #43020 to 2016.11 @ 2017-08-17 23:19:46 UTC
  - PR #43020: (gtmanfred) test with gem that appears to be abandoned (refs: #43026)
  - 2957467ed7 Merge pull request #43026 from rallytime/bp-43020
  - 0eb15a1f67 test with gem that appears to be abandoned

• ISSUE #40490: (alxwr) saltstack x509 incompatible to m2crypto 0.26.0 (refs: #42760)
• PR #43033: (rallytime) Back-port #42760 to 2016.11 @ 2017-08-17 22:24:43 UTC
  - PR #42760: (AFriemann) Catch TypeError thrown by m2crypto when parsing missing subjects in c...
    (refs: #43033)
  - 4150b094fe Merge pull request #43033 from rallytime/bp-42760
  - 3e37f5d8e Catch TypeError thrown by m2crypto when parsing missing subjects in certificate files.

• PR #43032: (rallytime) Back-port #42547 to 2016.11 @ 2017-08-17 21:53:50 UTC
  - PR #42547: (blarghmatey) Updated testinfra modules to work with more recent versions (refs: #43032)
    b124d3667e Merge pull request #43032 from rallytime/bp-42547
    ea4d7f4176 Updated testinfra modules to work with more recent versions

• ISSUE #42992: (pabloh007) docker.save flag push does is ignored (refs: #43027)

• PR #43027: (pabloh007) Fixes ignore push flag for docker.push module issue #42992 @ 2017-08-17 19:55:37 UTC
  - a88386ad44 Merge pull request #43027 from pabloh007/fix-docker-save-push-2016-11
  - d0fd94f85 Fixes ignore push flag for docker.push module issue #42992

• ISSUE #42627: (taigrrr8) salt-cp no longer works. Was working a few months back. (refs: #42890)

• PR #42890: (DmitryKuzmenko) Make chunked mode in salt-cp optional @ 2017-08-17 18:37:44 UTC
  - 51d16840bb Merge pull request #42890 from DSRCorporation/bugs/42627_salt-cp
  - cfddb1c75 Apply code review: update the doc
  - afedd3b654 Typos and version fixes in the doc.
  - 9fed6012e Fixed 'test_valid_docs' test.
  - 999388680c Make chunked mode in salt-cp optional (disabled by default).

• PR #43009: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-08-17 18:00:09 UTC
  - b3c253cdfa Merge pull request #43009 from rallytime/merge-2016.11
  - 566ba4fe76 Merge branch '2016.3' into '2016.11'
    - 13b8637d53 Merge pull request #42942 from Ch3LL/2016.3.6_follow_up
      - f281e1795f move additional minion config options to 2016.3.8 release notes
      - 168604ba6b remove merge conflict
      - 8a07d95212 update release notes with cve number
      - 149633fdca Add release notes for 2016.3.7 release
      - 7a4cddcd95 Add clean_id function to salt.utils.verify.py
    - bbb1b29cb Merge pull request #42954 from Ch3LL/latest_2016.3
      - b551e66744 [2016.3] Bump latest and previous versions
    - 5d5edc54b7 Merge pull request #42949 from Ch3LL/2016.3.7_docs
      - d75d374f18 Add Security Notice to 2016.3.7 Release Notes

• PR #43021: (terminalmage) Use socket.AF_INET6 to get the correct value instead of doing an OS check @ 2017-08-17 17:57:09 UTC
  - PR #43014: (Ch3LL) Change AF_INET6 family for mac in test_host_to_ips (refs: #43021)
    - 37c63e7cf2 Merge pull request #43021 from terminalmage/fix-network-test
• PR #43019: (rallytime) Update bootstrap script to latest stable: v2017.08.17 @ 2017-08-17 17:56:41 UTC
  - 8f6423247c Merge pull request #43019 from rallytime/bootstrap_2017.08.17
  - 2f7623a17 Update bootstrap script to latest stable: v2017.08.17

• PR #43014: (Ch3LL) Change AF_INET6 family for mac in test_host_to_ips (refs: #43021) @ 2017-08-17 16:17:51 UTC
  - ff1caee68 Merge pull request #43014 from Ch3LL/fix_network_mac
  - b8ee4401e Change AF_INET6 family for mac in test_host_to_ips

• PR #42968: (vutny) [DOCS] Fix link to Salt Cloud Feature Matrix @ 2017-08-16 13:16:16 UTC
  - 1ee9499d28 Merge pull request #42968 from vutny/doc-salt-cloud-ref
  - 44ed53b1df [DOCS] Fix link to Salt Cloud Feature Matrix

• ISSUE #38839: (DaveOHenry) Invoking runner.cloud.action via reactor sls fails (refs: #42291)

• PR #42291: (vutny) Fix #38839: remove state from Reactor runner kwags @ 2017-08-15 23:01:08 UTC
  - 923f9741fe Merge pull request #42291 from vutny/fix-38839
  - 5f8f98a01f Fix #38839: remove state from Reactor runner kwags

• ISSUE #42644: (stamak) nova salt-cloud -P Private IPs returned, but not public. Checking for misidentified IPs (refs: #42940)

• PR #42940: (gtmanfred) create new ip address before checking list of allocated ips @ 2017-08-15 21:47:18 UTC
  - c20bc7d515 Merge pull request #42940 from gtmanfred/2016.11
  - 253e216a8d fix IP address spelling
  - bd63074e7a create new ip address before checking list of allocated ips

• PR #42959: (rallytime) Back-port #42883 to 2016.11 @ 2017-08-15 21:25:48 UTC
  - PR #42883: (rallytime) Fix failing boto tests (refs: #42959)
  - d6496eca72 Merge pull request #42959 from rallytime/bp-42883
  - c6b9ca4b9e Lint fix: add missing space
  - 5597b1a30e Skip 2 failing tests in Python 3 due to upstream bugs
  - a0b19bd27 Update account id value in boto_secgroup module unit test
  - 60b406e088 @mock_elb needs to be changed to @mock_elb_deprecated as well
  - 6ae1111295 Replace @mock_ec2 calls with @mock_ec2_deprecated calls

• PR #42944: (Ch3LL) [2016.11] Add clean_id function to salt.utils.verify.py @ 2017-08-15 18:06:12 UTC
  - 6366e0d0d Merge pull request #42944 from Ch3LL/2016.11.6_follow_up
  - 7e0a20afca Add release notes for 2016.11.7 release
  - d63823f8c3e Add clean_id function to salt.utils.verify.py

• PR #42952: (Ch3LL) [2016.11] Bump latest and previous versions @ 2017-08-15 17:23:02 UTC
  - 49d339c976 Merge pull request #42952 from Ch3LL/latest_2016.11
  - 74e7055d54 [2016.11] Bump latest and previous versions

• PR #42950: (Ch3LL) Add Security Notice to 2016.11.7 Release Notes @ 2017-08-15 16:50:23 UTC
- b0d2e05a79 Merge pull request #42950 from Ch3LL/2016.11.7_docs
- a6f902db40 Add Security Notice to 2016.11.77 Release Notes

- **PR #42836:** (aneeshusa) Backport salt.utils.versions from develop to 2016.11 @ 2017-08-14 20:56:54 UTC
  - PR #42835: (aneeshusa) Fix typo in utils/versions.py module (refs: #42836)
  - c0ff69f88c Merge pull request #42836 from lyft/backport-utils.versions-to-2016.11
  - 86ce7004a2 Backport salt.utils.versions from develop to 2016.11

- **PR #42919:** (rallytime) Back-port #42871 to 2016.11 @ 2017-08-14 20:44:00 UTC
  - PR #42871: (amalleo25) Update joyent.rst (refs: #42919)
  - 64a79dd5ac Merge pull request #42919 from rallytime/bp-42871
  - 4e46c968e6 Update joyent.rst

- **ISSUE #42803:** (gmcwhistler) master_type: str, not working as expected, parent salt-minion process dies. (refs: #42848)

- **ISSUE #42753:** (grichmond-salt) SaltReqTimeout Error on Some Minions when One Master in a Multi-Master Configuration is Unavailable (refs: #42848)

- **PR #42918:** (rallytime) Back-port #42848 to 2016.11 @ 2017-08-14 20:43:43 UTC
  - PR #42848: (DmitryKuzmenko) Execute fire_master asynchronously in the main minion thread. (refs: #42918)
  - bea8ec1098 Merge pull request #42918 from rallytime/bp-42848
  - cdb48126f7 Make lint happier.
  - 62eca9b00b Execute fire_master asynchronously in the main minion thread.

- **PR #42861:** (twangboy) Fix pkg.install salt-minion using salt-call @ 2017-08-14 19:07:22 UTC
  - 52bce329cb Merge pull request #42861 from twangboy/win_pkg_install_salt
  - 0d3789f0c6 Fix pkg.install salt-minion using salt-call

- **PR #42798:** (s-sebastian) Update return data before calling returners @ 2017-08-14 15:51:30 UTC
  - b9f4f87aa5 Merge pull request #42798 from s-sebastian/2016.11
  - 1cc86592ed Update return data before calling returners

- **ISSUE #41976:** (abulford) dockerng network states do not respect test=True (refs: #41977)

- **PR #41977:** (abulford) Fix dockerng.network_* ignoring of tests=True @ 2017-08-11 18:37:20 UTC
  - c15d0034fe Merge pull request #41977 from redmatter/fixedockerng-network-ignores-test
  - 1cc2aa503a Fix dockerng.network_* ignoring of tests=True

- **PR #42886:** (sarcasticadmin) Adding missing output flags to salt cli docs @ 2017-08-11 18:35:19 UTC
  - 3b9c3c5671 Merge pull request #42886 from sarcasticadmin/adding_docs_salt_outputs
  - 744bf95ffc Adding missing output flags to salt cli

- **PR #42882:** (gtmanfred) make sure cmd is not run when npm isn't installed @ 2017-08-11 17:53:14 UTC
  - e59c48a88 Merge pull request #42882 from gtmanfred/2016.11
  - da3402a53d make sure cmd is not run when npm isn't installed

- **PR #42788:** (amendlik) Remove waits and retries from Saltify deployment @ 2017-08-11 15:38:05 UTC
- 5962c95888b Merge pull request #42788 from amendlik/saltify-timeout
- 928b523797 Remove waits and retries from Saltify deployment

- **PR #42877**: (terminalmage) Add virtual func for cron state module @ 2017-08-11 15:33:09 UTC
  - 227eceddd13 Merge pull request #42877 from terminalmage/add-cron-state-virtual
  - f1de196740 Add virtual func for cron state module

- **PR #42859**: (terminalmage) Add note about git CLI requirement for GitPython to GitFS tutorial @ 2017-08-11 14:53:03 UTC
  - ab9f6cefd3 Merge pull request #42859 from terminalmage/gitpython-git-cli-note
  - 35e05c9515 Add note about git CLI requirement for GitPython to GitFS tutorial

- **ISSUE saltstack/salt-jenkins#475**: (rallytime) Arch is failing npm cache test (refs: #42856)

- **ISSUE #41770**: (Ch3LL) NPM v5 incompatible with salt.modules.cache_list (refs: #42856)

- **PR #42856**: (gtmanfred) skip cache_clean test if npm version is >= 5.0.0 @ 2017-08-11 13:39:20 UTC
  - 682b4a8d14 Merge pull request #42856 from gtmanfred/2016.11
  - b458b99fb8 skip cache_clean test if npm version is >= 5.0.0

- **PR #42864**: (whiteinge) Make syndic_log_file respect root_dir setting @ 2017-08-11 13:28:21 UTC
  - 01ea854029 Merge pull request #42864 from whiteinge/syndic-log-root_dir
  - 4bf1f55da9c Make syndic_log_file respect root_dir setting

- **PR #42851**: (terminalmage) Backport #42651 to 2016.11 @ 2017-08-10 18:02:39 UTC
  - PR #42651: (gtmanfred) python2- prefix for fedora 26 packages (refs: #42851)
  - 2d0e1f77e9 Merge pull request #42851 from terminalmage/bp-42651
  - a3d6e68ee8 fix syntax
  - 6ec8d3cc1d make sure names are correct
  - 7b3553d6ef add py3 for versionlock
  - 21934f61bb python2- prefix for fedora 26 packages

- **ISSUE #42683**: (rgcosma) Gluster module broken in 2017.7 (refs: #42806)

- **PR #42806**: (rallytime) Update doc references in glusterfs.volume_present @ 2017-08-10 14:10:16 UTC
  - c746f7903a Merge pull request #42806 from rallytime/fx-42683
  - 8c6d04d888 Update doc references in glusterfs.volume_present

- **PR #42829**: (twangboy) Fix passing version in pkgs as shown in docs @ 2017-08-10 14:07:24 UTC
  - 27a3a2695a Merge pull request #42829 from twangboy/win_pkg_fix_install
  - 83b9b230cd Add winrepo to docs about supporting versions in pkgs
  - 81efbfa6e67 Add ability to pass version in pkgs list

- **PR #42838**: (twangboy) Document requirements for win_pki @ 2017-08-10 13:59:46 UTC
  - 3c3e6aeb2 Merge pull request #42838 from twangboy/win_doc_pki
  - f0a1d0b46 Standardize PKI Client
  - 7de687aa57 Document requirements for win_pki
• PR #42805: (rallytime) Back-port #42552 to 2016.11 @ 2017-08-09 22:37:56 UTC
  - PR #42552: (remijouannet) update consul module following this documentation https://www.consul.io/api/acl/acl.html
  - b3e2ae3c58 Merge pull request #42805 from rallytime/bp-42552
  - 5a91c1f2d1 update consul module following this documentation https://www.consul.io/api/acl/acl.html

• ISSUE #42731: (infoveinx) http.query template_data render exception (refs: #42804)

• PR #42804: (rallytime) Back-port #42784 to 2016.11 @ 2017-08-09 22:37:40 UTC
  - PR #42784: (gtmanfred) only read file if ret is not a string in http.query (refs: #42804)
  - d2ee7934ed Merge pull request #42804 from rallytime/bp-42784
  - dbd29e4aaa only read file if it is not a string

• PR #42826: (terminalmage) Fix misspelling of "versions" @ 2017-08-09 19:39:43 UTC
  - 4cbf8057b3 Merge pull request #42826 from terminalmage/fix-spelling
  - 00f93142e4 Fix misspelling of "versions"

• PR #42786: (Ch3LL) Fix typo for template_dict in http docs @ 2017-08-08 18:14:50 UTC
  - de997edd90 Merge pull request #42786 from Ch3LL/fix_typo
  - 90a2fb66a2 Fix typo for template_dict in http docs

• ISSUE #42600: (twangboy) Unable to set 'Not Configured' using win_lgpo execution module (refs: #42795, #42744)

• PR #42795: (lomeroe) backport #42744 to 2016.11 @ 2017-08-08 17:17:15 UTC
  - PR #42744: (lomeroe) fix #42600 in develop (refs: #42795)
  - bf6153eb5e Merge pull request #42795 from lomeroe/bp-42744_201611
  - 695f8c1a44 fix #42600 in develop

• ISSUE #42747: (whiteinge) Outputters mutate data which can be a problem for Runners and perhaps other things (refs: #42748)

• PR #42748: (whiteinge) Workaround Orchestrate problem that highstate outputter mutates data @ 2017-08-07 21:11:33 UTC
  - 61fad97286 Merge pull request #42748 from whiteinge/save-before-output
  - de60b77c82 Workaround Orchestrate problem that highstate outputter mutates data

• PR #42764: (amendlik) Fix infinite loop with salt-cloud and Windows nodes @ 2017-08-07 20:47:07 UTC
  - a4e3e7e786 Merge pull request #42764 from amendlik/cloud-win-loop
  - f3d87fa1a5 Fix infinite loops on failed Windows deployments

• ISSUE #42690: (ChristianBeer) git.latest state with remote set fails on first try (refs: #42694)

• PR #42694: (gtmanfred) allow adding extra remotes to a repository @ 2017-08-07 18:08:11 UTC
  - da853d48d4 Merge pull request #42694 from gtmanfred/2016.11
  - 1a0457a51f allow adding extra remotes to a repository

• ISSUE #42642: (githubcdr) state.augeas (refs: #42669, #43202)

• PR #42669: (garethgreenaway) [2016.11] Fixes to augeas module @ 2017-08-06 17:58:03 UTC
- 7b2119fee Merge pull request #42669 from garethgreenaway/2016_11_augeas_module_fix
- 24413084e2 Updating the call to shlex_split to pass the posix=False argument so that quotes are preserved.

- **PR #42629:** (xiaoanyunfei) tornado api @ 2017-08-03 22:21:20 UTC
  - 30725769ed Merge pull request #42629 from xiaoanyunfei/tornadoapi
  - 1e13383b95 tornado api

- **PR #42655:** (whiteinge) Reenable cpstats for rest_cherrypy @ 2017-08-03 20:44:10 UTC
  - **PR #33806:** (cachedout) Work around upstream cherrypy bug (refs: #42655)
  - f0f00fcee1 Merge pull request #42655 from whiteinge/rest_cherrypy-reenable-stats
  - deb6316d67 Fix lint errors
  - 6bd91c8b03 Reenable cpstats for rest_cherrypy

- **ISSUE #42869:** (gilbsgilbs) Unable to set multiple RabbitMQ tags (refs: #42693)

- **PR #42693:** (gilbsgilbs) Fix RabbitMQ tags not properly set. @ 2017-08-03 20:23:08 UTC
  - 21cf15f9c3 Merge pull request #42693 from gilbsgilbs/fix-rabbitmq-tags
  - 78fcdcc7e2 Cast to list in case tags is a tuple.
  - 287b57b5c5 Fix RabbitMQ tags not properly set.

- **ISSUE #41433:** (sbojarski) boto_cfn.present fails when reporting error for failed state (refs: #42574)

- **PR #42574:** (sbojarski) Fixed error reporting in "boto_cfn.present" function. @ 2017-08-01 17:55:29 UTC
  - f2b0c9b4fa Merge pull request #42574 from sbojarski/boto-cfn-error-reporting
  - 5c945f10c2 Fix debug message in "boto_cfn._validate" function.
  - 181a1beec8 Fixed error reporting in "boto_cfn.present" function.

- **PR #42623:** (terminalmage) Fix unicode constructor in custom YAML loader @ 2017-07-31 19:25:18 UTC
  - bc1efc4f2 Merge pull request #42623 from terminalmage/fix-unicode-construct
  - fcf45899dd Fix unicode constructor in custom YAML loader

- **PR #42515:** (gtmanfred) Allow not interpreting backslashes in the repl @ 2017-07-28 16:00:09 UTC
  - cb7f52cd73 Merge pull request #42515 from gtmanfred/\backslash
  - cc445656dAllow not interpreting backslashes in the repl

- **ISSUE #42456:** (gdubroeucq) Use yum lib (refs: #42586)

- **PR #42586:** (gdubroeucq) [Fix] yumpkg.py: add option to the command "check-update" @ 2017-07-27 23:52:00 UTC
  - 54995831f Merge pull request #42586 from gdubroeucq/2016.11
  - 9c0b5cc1d6 Remove extra newline
  - d2ef4483e4 yumpkg.py: clean
  - a96f7c09e0 yumpkg.py: add option to the command "check-update"

- **ISSUE #41982:** (abulford) dockerng.network_* matches too easily (refs: #41988)

- **PR #41988:** (abulford) Fix dockerng.network_* name matching @ 2017-07-27 21:25:06 UTC
  - 6b45debf28 Merge pull request #41988 from redmatter/fix-dockerng-network-matching
- 9eea796da8 Add regression tests for #41982
- 3369f0072f Fix broken unit test test_network_absent
- 0ef6cf634c Add trace logging of dockerng.networks result
- 515c612808 Fix dockerng.network.* name matching

- **PR #42339:** [isbm] Bugfix: Jobs scheduled to run at a future time stay pending for Salt minions (bsc#1036125) @ 2017-07-27 19:05:51 UTC
  - 4b16109122 Merge pull request #42339 from isbm/isbm-jobs-scheduled-in-a-future-bsc1036125
  - bbba84ce2d Bugfix: Jobs scheduled to run at a future time stay pending for Salt minions (bsc#1036125)

- **ISSUE #23516:** [dkiser] BUG: cron job scheduler sporadically works (refs: #42077)

- **PR #42077:** [vutny] Fix scheduled job run on Master if when parameter is a list @ 2017-07-27 19:04:23 UTC
  - PR #41973: [vutny] Fix Master/Minion scheduled jobs based on Cron expressions (refs: #42077)
  - 6c5a7c604a Merge pull request #42077 from vutny/fix-jobs-scheduled-with-whens
  - b1960cea44 Fix scheduled job run on Master if when parameter is a list

- **PR #42414:** [vutny] DOCS: unify hash sum with hash type format @ 2017-07-27 18:48:40 UTC
  - f9cb536589 Merge pull request #42414 from vutny/unify-hash-params-format
  - d1f2a93368 DOCS: unify hash sum with hash type format

- **ISSUE #42375:** [dragonpaw] salt.modules.*.__virtualname__ doesn't work as documented. (refs: #42523)

- **PR #42523:** [rallytime] Add a mention of the True/False returns with __virtual__() @ 2017-07-27 18:13:07 UTC
  - 535c922511 Merge pull request #42523 from rallytime/fix-42375
  - 685c2c6d6 Add information about returning a tuple with an error message
  - fa466519c4 Add a mention of the True/False returns with __virtual__()

- **PR #42527:** [twangboy] Document changes to Windows Update in Windows 10/Server 2016 @ 2017-07-27 17:45:38 UTC
  - 0df0e7e749 Merge pull request #42527 from twangboy/win_wua
  - 0373791f2a Correct capatialization
  - af3bce927b Document changes to Windows Update in 10/2016

- **PR #42551:** [binocvlar] Remove '-s' (--script) argument to parted within align_check function @ 2017-07-27 17:35:31 UTC
  - 69b06586da Merge pull request #42551 from binocvlar/fix-lack-of-align-check-output
  - c4faba192 Remove '-s' (--script) argument to parted within align_check function

- **ISSUE #42403:** [astronouth7303] [2017.7] Pillar empty when state is applied from orchestrate (refs: #42433)

- **PR #42573:** [rallytime] Back-port #42433 to 2016.11 @ 2017-07-27 13:51:21 UTC
  - PR #42433: [terminalmage] Only force saltenv/pillarenv to be a string when not None (refs: #42573)
  - 9e0b4e9faf Merge pull request #42573 from rallytime/bp-42433
  - 0293429e24 Only force saltenv/pillarenv to be a string when not None

- **PR #42571:** [twangboy] Avoid loading system PYTHON* environment vars @ 2017-07-26 22:48:55 UTC
  - e931ed2517 Merge pull request #42571 from twangboy/win_add_pythonpath
- d55a44dd1a Avoid loading user site packages
- 9af1eb2741 Ignore any PYTHON* environment vars already on the system
- 4e2f03a95 Add pythonpath to batch files and service

- ISSUE #42371: (tsaridas) Minion unresponsive after trying to failover (refs: #42387)
- PR #42387: (DmitryKuzmenko) Fix race condition in usage of weakvaluedict @ 2017-07-25 20:57:42 UTC
  - de2f397041 Merge pull request #42387 from DSRCorporation/bugs/42371_Keyword_WeakValueDict
  - e721c7eeee Don’t use key in weakvaluedict because it could lie.

- ISSUE #41955: (root360-AndreasUlm) rabbitmq 3.6.10 changed output => rabbitmq-module broken (refs: #41968)
- PR #41968: (root360-AndreasUlm) Fix rabbitmqctl output sanitizer for version 3.6.10 @ 2017-07-25 19:12:36 UTC
  - 641a9d7efed Merge pull request #41968 from root360-AndreasUlm/fix-rabbitmqctl-output-handler
  - 76fd941d91 added tests for rabbitmq 3.6.10 output handler
  - 3602af1e1b Fix rabbitmqctl output handler for 3.6.10

- ISSUE #42477: (aikar) Invalid ssh_interface value prevents salt-cloud provisioning without reason of why (refs: #42479)
- PR #42479: (gtmanfred) validate ssh_interface for ec2 @ 2017-07-25 18:37:18 UTC
  - 66fede378a Merge pull request #42479 from gtmanfred/interface
  - c32c1b2803 fix pylint
  - 99ec634c6b validate ssh_interface for ec2

- ISSUE #42405: (felrivero) The documentation is incorrectly compiled (PILLAR section) (refs: #42516)
- PR #42516: (rallytime) Add info about top file to pillar walk-through example to include edit.vim @ 2017-07-25 17:01:12 UTC
  - a925c7029a Merge pull request #42516 from rallytime/fix-42405
  - e3a6717efa Add info about top file to pillar walk-through example to include edit.vim

- ISSUE #42417: (clem-compilatio) salt-cloud - openstack - "no more floating IP addresses" error - but public_ip in node (refs: #42509)
- PR #42509: (clem-compilatio) Fix _assign_floating_ips in openstack.py @ 2017-07-24 17:14:13 UTC
  - 1bd5bb0cc2 Merge pull request #42509 from clem-compilatio/fix-42417
  - 72924b06b8 Fix _assign_floating_ips in openstack.py

- PR #42464: (garethgreenaway) [2016.11] Small fix to modules/git.py @ 2017-07-21 21:28:57 UTC
  - 4bf35a74de Merge pull request #42464 from garethgreenaway/2016_11_remove_tmp_identity_file
  - ff24102d51 Uncomment the line that removes the temporary identity file.

- ISSUE #42357: (Giandom) Salt pillarenv problem with slack engine (refs: #42443)
- PR #42443: (garethgreenaway) [2016.11] Fix to slack engine @ 2017-07-21 15:48:57 UTC
  - e2120dbd0e Merge pull request #42443 from garethgreenaway/42357_pass_args_kwargs_correctly
  - 635810b3e3 Updating the slack engine in 2016.11 to pass the args and kwargs correctly to LocalClient

- ISSUE #42198: (shengis) state sqlite3.row_absent fail with "parameters are of unsupported type" (refs: #42200)
• PR #42200: (shengis) Fix #42198 @ 2017-07-21 14:47:29 UTC
  - 8262cc9054 Merge pull request #42200 from shengis/sqlite3_fix_row_absent_2016.11
  - 407bf84bb3 Fix #42198 If where_args is not set, not using it in the delete request.
• ISSUE #42413: (goten4) Invalid error message when proxy_host is set and tornado not installed (refs: #42424)
• PR #42424: (goten4) Fix error message when tornado or pycurl is not installed @ 2017-07-20 21:53:40 UTC
  - d9df97e5a3 Merge pull request #42424 from goten4/2016.11
  - 1c0574d05e Fix error message when tornado or pycurl is not installed
• PR #42350: (twangboy) Fixes problem with Version and OS Release related grains on certain versions of Python (2016.11) @ 2017-07-19 17:07:26 UTC
  - 42bb1a64ca Merge pull request #42350 from twangboy/win_fix_ver_grains_2016.11
  - 8c048403d7 Detect Server OS with a desktop release name
• PR #42356: (meaksh) Allow to check whether a function is available on the AliasesLoader wrapper @ 2017-07-19 16:56:41 UTC
  - 0a7e56f60b Merge pull request #42356 from meaksh/2016.11-AliasesLoader-wrapper-fix
  - 915d94219e Allow to check whether a function is available on the AliasesLoader wrapper
• PR #42368: (twangboy) Remove build and dist directories before install (2016.11) @ 2017-07-19 16:47:28 UTC
  - 10eb7b7a79 Merge pull request #42368 from twangboy/win_fix_build_2016.11
  - a7c910c31e Remove build and dist directories before install
• PR #42370: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-07-18 22:39:41 UTC
  - 016189f62f Merge pull request #42370 from rallytime/merge-2016.11
  - 0aa5dde1de Merge branch '2016.3' into '2016.11'
  - e9b0f20f8a Merge pull request #42359 from Ch3LL/doc-update-2016.3
    - dc85b5edbe [2016.3] Update version numbers in doc config for 2017.7.0 release
• PR #42360: (Ch3LL) [2016.11] Update version numbers in doc config for 2017.7.0 release @ 2017-07-18 19:23:30 UTC
  - f06a6f1796 Merge pull request #42360 from Ch3LL/doc-update-2016.11
  - b90b7a7506 [2016.11] Update version numbers in doc config for 2017.7.0 release
• ISSUE #32400: (rallytime) Document Default Config Values (refs: #42319)
• PR #42319: (rallytime) Add more documentation for config options that are missing from master/minion docs @ 2017-07-18 18:02:32 UTC
  - e0595b0a0f Merge pull request #42319 from rallytime/config-docs
  - b40f980632 Add more documentation for config options that are missing from master/minion docs
• ISSUE #42333: (b3hni4) Getting "invalid type of dict, a list is required" when trying to configure engines in master config file (refs: #42352)
• PR #42352: (CorvinM) Multiple documentation fixes @ 2017-07-18 15:10:37 UTC
  - 78940400e3 Merge pull request #42352 from CorvinM/issue42333
  - 526b6ee14d Multiple documentation fixes
• PR #42353: (terminalmage) is_windows is a function, not a property/attribute @ 2017-07-18 14:38:51 UTC

30.2. Previous Releases 2551
- b256001760 Merge pull request #42353 from terminalmage/fix-git-test
- 14cf6ce322 is_windows is a function, not a proprey/attribute

- **ISSUE #41116**: (hrumph) FAQ has wrong instructions for upgrading Windows minion. (refs: #42264)
- **PR #42264**: (rallytime) Update minion restart section in FAQ doc for windows @ 2017-07-17 17:40:40 UTC
  - 866a1feb4 Merge pull request #42264 from rallytime/fix-41116
  - bd638880e3 Add mono-spacing to salt-minion reference for consistency
  - 30d62f43da Update minion restart section in FAQ doc for windows

- **ISSUE #42194**: (jryberg) pkg version: latest are now broken, appending <package>-latest to filename (refs: #42275)
- **PR #42275**: (terminalmage) pkg.installed: pack name/version into pkgs argument @ 2017-07-17 17:38:39 UTC
  - 9a707088ad Merge pull request #42275 from terminalmage/issue42194
  - 663874908a pkg.installed: pack name/version into pkgs argument

- **ISSUE #41721**: (sazaro) state.sysrc broken when setting the value to YES or NO (refs: #42269)
- **PR #42269**: (rallytime) Add some clarity to "multiple quotes" section of yaml docs @ 2017-07-17 17:38:18 UTC
  - e588f235e0 Merge pull request #42269 from rallytime/fix-41721
  - f2250d474a Add a note about using different styles of quotes.
  - 38d9b3d553 Add some clarity to "multiple quotes" section of yaml docs

- **ISSUE #42152**: (dubb-b) salt-cloud errors on Rackspace driver using -out=yaml (refs: #42282)
- **PR #42282**: (rallytime) Handle libcloud objects that throw RepresenterErrors with --out=yaml @ 2017-07-17 17:36:35 UTC
  - 5aaa214a75 Merge pull request #42282 from rallytime/fix-42152
  - f032223843 Handle libcloud objects that throw RepresenterErrors with --out=yaml

- **ISSUE #42295**: (lubyou) file.absent fails on windows if the file to be removed has the "readonly" attribute set (refs: #42308)
- **PR #42308**: (lubyou) Force file removal on Windows. Fixes #42295 @ 2017-07-17 17:12:13 UTC
  - fb5697a4bc Merge pull request #42308 from lubyou/42295-fix-file-absent-windows
  - 026ccf401a Force file removal on Windows. Fixes #42295

- **ISSUE #42267**: (gzcwnk) salt-ssh not creating ssh keys automatically as per documentation (refs: #42314)
- **PR #42314**: (rallytime) Add clarification to salt ssh docs about key auto-generation. @ 2017-07-17 14:07:49 UTC
  - da2a8a518f Merge pull request #42314 from rallytime/fix-42267
  - c406046940 Add clarification to salt ssh docs about key auto-generation.

- **ISSUE #41936**: (michaellkarrer81) git.latest identity does not set the correct user for the private key file on the minion (refs: #41945)
- **PR #41945**: (garethgreenaway) Fixes to modules/git.py @ 2017-07-14 17:46:10 UTC
  - acadd54013 Merge pull request #41945 from garethgreenaway/41936_allow_identity_files_with_user
  - 44841e5626 Moving the call to cp.get_file inside the with block to ensure the umask is preserved when we grab the file.
  - f9ba60eed8 Merge pull request #1 from terminalmage/pr-41945
• 1b6026177c Restrict set_umask to mkstemp call only
  – 68549f3496 Fixing umask to we can set files as executable.
  – 494bf3f3 Updating to swap on the new salt.utils.files.set_umask context_manager
  – 8faa9f6d92 Updating PR with requested changes.
  – 494765e939 Updating the git module to allow an identity file to be used when passing the user parameter
• ISSUE #42240: (casselt) empty_password in user.present always changes password, even with test=True (refs: #42289)
• PR #42289: (CorvinM) Multiple empty_password fixes for state.user @ 2017-07-14 16:14:02 UTC
  – PR #41543: (cri-epita) Fix user creation with empty password (refs: #42289)
  – f90e04a2bc Merge pull request #42289 from CorvinM/bp-41543
  – 357dc2f05 Fix user creation with empty password
• PR #42123: (vutny) DOCS: describe importing custom util classes @ 2017-07-12 15:53:24 UTC
  – a91a3f81b1 Merge pull request #42123 from vutny/fix-master-utils-import
  – 6bb8bf898c Add missing doc for util_s_dirs Minion config option
  – f1bc58f6d5 Utils: add example of module import
• PR #42261: (rallytime) Some minor doc fixes for dnsutil module so they'll render correctly @ 2017-07-11 23:14:53 UTC
  – e2aa5114e4 Merge pull request #42261 from rallytime/minor-doc-fix
  – 8c76bb53d Some minor doc fixes for dnsutil module so they'll render correctly
• PR #42262: (rallytime) Back-port #42224 to 2016.11 @ 2017-07-11 23:14:25 UTC
  – PR #42224: (tdutrition) Remove duplicate instruction in Openstack Rackspace config example (refs: #42262)
  – 3e9d1bc9cc Merge pull request #42262 from rallytime/bp-42224
  – c31d3341c Remove duplicate instruction in Openstack Rackspace config example
• ISSUE #42137: (kiemlicz) cmd.run with multiple commands - random order of execution (refs: #42181)
• PR #42181: (garethgreenaway) fixes to state.py for names parameter @ 2017-07-11 21:21:32 UTC
  – 7780579c36 Merge pull request #42181 from garethgreenaway/42137_backport_fix_from_2017_7
  – a34970b45b Back porting the fix for 2017.7 that ensures the order of the names parameter.
• PR #42253: (gtmanfred) Only use unassociated ips when unable to allocate @ 2017-07-11 20:53:51 UTC
  – PR #38965: (toanju) salt-cloud will use list_floating_ips for OpenStack (refs: #42253)
  – PR #34280: (kevinanderson1) salt-cloud will use list_floating_ips for Openstack (refs: #38965)
  – 72537868a6 Merge pull request #42253 from gtmanfred/2016.11
  – 53e25760be Only use unassociated ips when unable to allocate
• PR #42252: (UtahDave) simple docstring updates @ 2017-07-11 20:48:33 UTC
  – b2a4698b5d Merge pull request #42252 from UtahDave/2016.11local
  – e6a9563d47 simple doc updates
• ISSUE #42232: (astronouth7303) Half of dnsutil refers to dig (refs: #42235)
• PR #42235: (astronouth7303) Abolish references to `dig` in examples. @ 2017-07-10 20:06:11 UTC
  - 781fe13be7 Merge pull request #42235 from astronouth7303/patch-1-2016.3
  - 4cb51bd03a Make note of `dig` partial requirement.
  - 08e7d8351a Abolish references to `dig` in examples.

• PR #42215: (twangboy) Add missing config to example @ 2017-07-07 20:18:44 UTC
  - 83cb7d61f16 Merge pull request #42215 from twangboy/win_iis_docs
  - c07e22041a Add missing config to example

• PR #42211: (terminalmage) Only pass a saltenv in orchestration if one was explicitly passed (2016.11) @ 2017-07-07 20:16:35 UTC
  - 274946a0b0 Merge pull request #42211 from terminalmage/issue40928
  - 22a18fa2ed Only pass a saltenv in orchestration if one was explicitly passed (2016.11)

• PR #42173: (rallytime) Back-port #37424 to 2016.11 @ 2017-07-07 16:39:59 UTC
  - PR #37424: (kojiromike) Avoid Early Convert ret['comment'] to String (refs: #42173)
  - 89261cf06c Merge pull request #42173 from rallytime/bp-37424
  - 01add6b053 Avoid Early Convert ret['comment'] to String

• ISSUE #39365: (dglloyd) service.running fails if sysv script has no status command and enable: True (refs: #39366)

• PR #42175: (rallytime) Back-port #39366 to 2016.11 @ 2017-07-06 19:51:47 UTC
  - PR #39366: (dglloyd) Pass sig to service.status in after_toggle (refs: #42175)
  - 3b17fb7f83 Merge pull request #42175 from rallytime/bp-39366
  - 53f7b987e8 Pass sig to service.status in after_toggle

• PR #42172: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-07-06 18:16:29 UTC
  - ea16f47f0a Merge pull request #42172 from rallytime/merge-2016.11
  - b1fa33a11 Merge branch '2016.3' into '2016.11'
    - 8fa1fa5bb1 Merge pull request #42155 from phsteve/doc-fix-puppet
      - fb2c878a31 Fix docs for puppet.plugin_sync so code-block renders properly and sync is spelled consistently

• PR #42176: (rallytime) Back-port #42109 to 2016.11 @ 2017-07-06 18:15:35 UTC
  - PR #42109: (arthurlogilab) [doc] Update aws.rst - add Debian default username (refs: #42176)
  - 6307b987f3 Merge pull request #42176 from rallytime/bp-42109
  - 686926dafa7 Update aws.rst - add Debian default username

• PR #42095: (terminalmage) Add debug logging to dockerng.login @ 2017-07-06 17:13:05 UTC
  - 28ac4ec3b7 Merge pull request #42095 from terminalmage/docker-login-debugging
  - bd27870a71 Add debug logging to dockerng.login

• ISSUE #42116: (terminalmage) CLI pillar override regression in 2017.7.0rc1 (refs: #42119)

• PR #42119: (terminalmage) Fix regression in CLI pillar override for salt-call @ 2017-07-06 17:02:52 UTC
  - 2b754bc5af Merge pull request #42119 from terminalmage/issue42116

2554 Chapter 30. Release Notes
- 9a268949e3 Add integration test for 42116
- 1bb42bb609 Fix regression when CLI pillar override is used with salt-call

**ISSUE #42114:** (clallen) saltenv bug in pillar.get execution module function (refs: #42121)

**PR #42121:** (terminalmage) Fix pillar.get when saltenv is passed @ 2017-07-06 16:52:34 UTC
- 8c0a83cb5 Merge pull request #42121 from terminalmage/issue42114
- d14291267f Fix pillar.get when saltenv is passed

**PR #42094:** (terminalmage) Prevent command from showing in exception when output_loglevel=quiet @ 2017-07-06 16:18:09 UTC
- 687992c240 Merge pull request #42094 from terminalmage/quiet-exception
- 47d61f4edf Prevent command from showing in exception when output_loglevel=quiet

**ISSUE #42115:** (nomeelnoj) Installing EPEL repo breaks salt-cloud (refs: #42163)

**PR #42163:** (vtuny) Fix #42115: parse libcloud "rc" version correctly @ 2017-07-06 16:15:07 UTC
- dad255160c Merge pull request #42163 from vtuny/fix-42115
- b271e340fa Fix #42115: parse libcloud "rc" version correctly

**PR #42164:** (Ch3LL) Fix kerberos create_keytab doc @ 2017-07-06 15:55:33 UTC
- 2a8ae2b3b6 Merge pull request #42164 from Ch3LL/fixed_kerb_doc
- 7c0b248ec6 Fix kerberos create_keytab doc

**PR #42141:** (rallytime) Back-port #42098 to 2016.11 @ 2017-07-06 15:11:49 UTC
- PR #42098: (twangboy) Change repo_ng to repo-ng (refs: #42141)
- 678d4d49d8 Merge pull request #42141 from rallytime/bp-42098
- bd80243233 Change repo_ng to repo-ng

**PR #42140:** (rallytime) Back-port #42097 to 2016.11 @ 2017-07-06 15:11:29 UTC
- PR #42097: (gtmanfred) require large timediff for ipv6 warning (refs: #42140)
- c8af7a3c9 Merge pull request #42140 from rallytime/bp-42097
- 9c4e132540 Import datetime
- 1435bf177e require large timediff for ipv6 warning

**PR #42142:** (Ch3LL) Update builds available for rc1 @ 2017-07-05 21:11:56 UTC
- c239664c8b Merge pull request #42142 from Ch3LL/change_builds
- e1694af39c Update builds available for rc1

**PR #42078:** (damon-atkins) pkg.install and pkg.remove fix version number input. @ 2017-07-05 06:04:57 UTC
- 4780d7830a Merge pull request #42078 from damon-atkins/fix_convert_flt_str_version_on_cmd_line
- 09d37dd892 Fix comment typo
- 7167549425 Handle version=None when converted to a string it becomes 'None' parm should default to empty string rather than None, it would fix better with existing code.
- 4fb2bb1856 Fix typo
- cf55c3361c pkg.install and pkg.remove on the command line take number version numbers, store them within a float. However version is a string, to support versions numbers like 1.3.4
• PR #42105: (Ch3LL) Update releasecandidate doc with new 2017.7.0rc1 Release @ 2017-07-04 03:14:42 UTC
  - 46d575acbc Merge pull request #42105 from Ch3LL/update_rc
  - d4e7b91608 Update releasecandidate doc with new 2017.7.0rc1 Release
• ISSUE #41885: (astronouth7303) Recommended pip installation outdated? (refs: #42099)
• PR #42099: (rallytime) Remove references in docs to pip install salt-cloud @ 2017-07-03 22:13:44 UTC
  - d38548bbbd Merge pull request #42099 from rallytime/fix-41885
  - c2822e05ad Remove references in docs to pip install salt-cloud
• ISSUE #42076: (abulford) dockerng.volume_present test looks as though it would cause a change (refs: #42086)
• PR #42086: (abulford) Make result=true if Docker volume already exists @ 2017-07-03 15:48:33 UTC
  - 81d606a8cb Merge pull request #42086 from redmatter/fix-dockerng-volume-present-result
  - 8d549685a7 Make result=true if Docker volume already exists
• ISSUE #25842: (shikhartanwar) Running salt-minion as non-root user to execute sudo commands always returns an error (refs: #42021)
• PR #42021: (gtmanfred) Set concurrent to True when running states with sudo @ 2017-06-30 21:02:15 UTC
  - 7160697123 Merge pull request #42021 from gtmanfred/2016.11
  - 26beb18aa5 Set concurrent to True when running states with sudo
• PR #42029: (terminalmage) Mock socket.getaddrinfo in unit.utils.network_test.NetworkTestCase.test_host_to_ips @ 2017-06-30 20:58:56 UTC
  - b784fbbdf8 Merge pull request #42029 from terminalmage/host_to_ips
  - 26f848e111 Mock socket.getaddrinfo in unit.utils.network_test.NetworkTestCase.test_host_to_ips
• PR #42055: (dmurphy18) Upgrade support for gnupg v2.1 and higher @ 2017-06-30 20:54:02 UTC
  - e067020b9b Merge pull request #42055 from dmurphy18/handle_gnupgv21
  - e20ce6350 Upgrade support for gnupg v2.1 and higher
• PR #42048: (Ch3LL) Add initial 2016.11.7 Release Notes @ 2017-06-30 16:00:05 UTC
  - 74ba2abc48 Merge pull request #42048 from Ch3LL/add_11.7
  - 1de5e008a0 Add initial 2016.11.7 Release Notes
• PR #42024: (leecelemens) doc: Specify versionadded for SELinux policy install/uninstall @ 2017-06-29 23:29:50 UTC
  - 55e619ed6 Merge pull request #42024 from leeclemens/doc/selinux
  - b63a3c0f0e doc: Specify versionadded for SELinux policy install/uninstall
  - PR saltstack/salt#41961: (cachedout) Allow docs to be built under Python 3 (refs: #42028)
• PR #42030: (whiteinge) Re-add msgpack to mocked imports @ 2017-06-29 20:47:59 UTC
  - PR #42028: (whiteinge) Revert "Allow docs to be built under Python 3" (refs: #42030)
  - 5085d0e28 Merge pull request #42030 from whiteinge/revert-py3-doc-chagnes-pt-2
  - 18d9893c Re-add msgpack to mocked imports
  - PR saltstack/salt#41961: (cachedout) Allow docs to be built under Python 3 (refs: #42028)
• PR #42028: (whiteinge) Revert "Allow docs to be built under Python 3" (refs: #42030) @ 2017-06-29 19:47:46 UTC
  - 53031d2f55 Merge pull request #42028 from saltstack/revert-41961-py3_doc
  - 55926e5d4 Revert "Allow docs to be built under Python 3"
• ISSUE #42013: (dusto) Misspelled nozeroconf in salt/modules/rh_ip.py (refs: #42017)
• PR #42017: (lorengordon) Fixes typo "nozerconf" -> "nozeroconf" @ 2017-06-29 17:30:48 UTC
  - 1416bf70b9 Merge pull request #42017 from lorengordon/issue-42013
  - b6cf5f2528 Fixes typo nozerconf -> nozeroconf
• PR #41906: (terminalmage) Better support for numeric saltenvs @ 2017-06-29 17:19:33 UTC
  - 0ebb50b601 Merge pull request #41906 from terminalmage/numeric-saltenv
  - 2d798de982 Better support for numeric saltenvs
• PR #41995: (terminalmage) Temporarily set the umask before writing an auth token @ 2017-06-29 01:09:48 UTC
  - 6a3c03c2d5 Merge pull request #41995 from terminalmage/token-umask
  - 4f54b0069f Temporarily set the umask before writing an auth token
• PR #41999: (terminalmage) Update IP address for unit.utils.network_test.NetworkTestCase.test_host_to_ips @ 2017-06-29 01:01:31 UTC
  - e3801b0e78 Merge pull request #41999 from terminalmage/fixed-network-test
  - fb6a93314f Update IP address for unit.utils.network_test.NetworkTestCase.test_host_to_ips
• ISSUE #18659: (whiteinge) mod_aggregate not working for list-form configuration (refs: #41991)
• PR #41991: (Da-Juan) Accept a list for state_aggregate global setting @ 2017-06-29 00:58:59 UTC
  - a7f38929cb Merge pull request #41991 from Da-Juan/fix-state_aggregate-list
  - c9075b8f84 Accept a list for state_aggregate setting
• PR #41993: (UtahDave) change out salt support link to SaltConf link @ 2017-06-29 00:55:20 UTC
  - 7424f879a3 Merge pull request #41993 from UtahDave/2016.11local
  - bf050ad52 change out salt support link to SaltConf link
• PR #41987: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-06-28 20:19:11 UTC
  - 3b9ccf09d7 Merge pull request #41987 from rallytime/merge-2016.11
  - 48867c4a82 Merge branch '2016.3' into '2016.11'
    * c589eae03f Merge pull request #41981 from Ch3LL/11.6_3
    * 2516ae1349 [2016.3] Bump latest release version to 2016.11.6
• PR #41985: (rallytime) Back-port #41780 to 2016.11 @ 2017-06-28 20:18:57 UTC
  - 768339d734 Merge pull request #41985 from rallytime/bp-41780
  - 8fc3d3a473a Fix salt.util.render_jinja_tmpl usage for when not used in an environment.
• ISSUE #34963: (craigafinch) Incorrect behavior or documentation for comments in salt.states.pkgrepo.managed (refs: #41820)
• PR #41986: (rallytime) Back-port #41820 to 2016.11 @ 2017-06-28 20:18:43 UTC
  - PR #41820: (nhavens) Fix yum repo file comments to work as documented in pkgrepo.managed (refs: #41986)
  - bd9090c0bf Merge pull request #41986 from rallytime/bp-41820
  - 72320e35b9 Fix yum repo file comments to work as documented in pkgrepo.managed

• PR #41973: (vutny) Fix Master/Minion scheduled jobs based on Cron expressions (refs: #42077) @ 2017-06-28 16:39:02 UTC
  - a31da52635 Merge pull request #41973 from vutny/fix-croniter-scheduled-jobs
  - 148788e652 Fix Master/Minion scheduled jobs based on Cron expressions

• PR #41980: (Ch3LL) [2016.11] Bump latest release version to 2016.11.6 @ 2017-06-28 15:35:11 UTC
  - 689ff93349 Merge pull request #41980 from Ch3LL/11.6_11
  - fe4f5711d5 [2016.11] Bump latest release version to 2016.11.6

• PR #41961: (cachedout) Allow docs to be built under Python 3 @ 2017-06-27 21:11:54 UTC
  - 82b1eb28ab Merge pull request #41961 from cachedout/py3_doc
  - 7aadcf69ef Allow docs to be built under Python 3

• PR #41948: (davidjb) Fix Composer state's name docs; formatting @ 2017-06-27 17:51:29 UTC
  - PR #41933: (davidjb) Fix Composer state's name docs and improve formatting (refs: #41948)
  - f6eb51df17 Merge pull request #41948 from davidjb/patch-9
  - 0e4b3d9a42 Fix Composer state's name docs; formatting

• PR #41914: (vutny) archive.extracted: fix hash sum verification for local archives @ 2017-06-26 17:59:27 UTC
  - e28e10ded2 Merge pull request #41914 from vutny/fix-archive-extracted-local-file-hash
  - 54910fe55f archive.extracted: fix hash sum verification for local archives

• PR #41912: (Ch3LL) Allow pacman module to run on Manjaro @ 2017-06-26 15:35:20 UTC
  - 76ad6f0f64 Merge pull request #41912 from Ch3LL/fix_manjaro
  - e4dd72a3e7 Update os_name_map in core grains for new manjaro systems
  - aa7c839fc5 Allow pacman module to run on Manjaro

• ISSUE #38093: (DmitryKuzmenko) Make threads avoid blocking waiting while communicating using TCP transport. (refs: #41516)

• PR #41516: (kstreee) Implements MessageClientPool to avoid blocking waiting for zeromq and tcp communications. @ 2017-06-26 14:41:38 UTC
  - PR #37878: (kstreee) Makes threads avoid blocking waiting while communicating using Zeromq. (refs: #41516)
  - ff67d47a2e Merge pull request #41516 from kstreee/fix-blocking-waiting-tcp-connection
  - df96969959 Removes redundant closing statements.
  - 949e51eb Implements MessageClientPool to avoid blocking waiting for zeromq and tcp communications.

• PR #41888: (Ch3LL) Add additional commits to 2016.11.6 release notes @ 2017-06-22 16:19:00 UTC
  - c90cb6798a Merge pull request #41888 from Ch3LL/change_release
- 4e1239d980 Add additional commits to 2016.11.6 release notes

- **PR #41882**: (Ch3LL) Add pycryptodome to crypt_test @ 2017-06-21 19:51:10 UTC
  - 4a326444fe Merge pull request #41882 from Ch3LL/fix_crypt_test
  - 6f708db0e1 Add pycryptodome to crypt_test

- **PR #41877**: (Ch3LL) Fix netstat and routes test @ 2017-06-21 16:16:58 UTC
  - 13df29ed9b Merge pull request #41877 from Ch3LL/fix_netstat_test
  - d2076a6c93 Patch salt.utils.which for test_route test
  - 51f7e107dc Patch salt.utils.which for test_netstat test

- **ISSUE #41367**: (lubyou) certutil.add_store does not work on non english windows versions or on Windows 10 (localised or English) (refs: #41566)

- **PR #41566**: (morganwillcock) win_certutil: workaround for reading serial numbers with non-English languages @ 2017-06-21 15:40:29 UTC
  - 66f8c83c93 Merge pull request #41566 from morganwillcock/certutil
  - c337d52d0c Fix test data for test_get_serial, and a typo
  - 7f6961378e test and lint fixes
  - 8ee48432f4 Suppress output of crypt context and be more specific with whitespace vs. serial
  - 61f817d172 Matchserials based on output position (fix for non-English languages)

- **PR #41679**: (terminalmage) Prevent unnecessary duplicate pillar compilation @ 2017-06-21 15:32:42 UTC
  - 4d0f5c433d Merge pull request #41679 from terminalmage/get-top-file-envs
  - a916e8da49 Improve normalization of saltenv/pillarenv usage for states
  - 02f293a19c Update state unit tests to reflect recent changes
  - b7e5c11165 Don't compile pillar data when getting top file envs
  - 8d66db7d9a Don't compile pillar twice for salt-call
  - d2ab7f4ed Add initial_pillar argument to salt.state
  - 70186de532 salt.pillar: rename the "pillar" argument to "pillar_override"

- **ISSUE #39668**: (mirceaulinic) Master scheduled job not recorded on the event bus (refs: #41658)

- **ISSUE #12653**: (pengyao) salt schedule doesn't return jobs result info to master (refs: #41853)

- **PR #41853**: (vutny) Fix master side scheduled jobs to return events @ 2017-06-20 22:06:29 UTC
  - PR #41695: (xiaoanyunfei) fix max RecursionError, Ellipsis (refs: #41853)
  - PR #41658: (garethgreenaway) Fixes to the salt scheduler (refs: #41853)
  - 29b0acc3a2 Merge pull request #41853 from vutny/fix-master-schedule-event
  - e206c381c6 Fix master side scheduled jobs to return events
30.2.61 Salt 2016.11.9 Release Notes

Version 2016.11.9 is a bugfix release for 2016.11.0.

Statistics

- Total Merges: 143
- Total Issue References: 60
- Total PR References: 167
- Contributors: 54 (Ch3LL, UtahDave, VertigoRay, akissa, aogier, arthtux, austinapp, basepi, benediktwerner, bobrik, brejoc, cachedout, cetanu, corywright, creideiki, cro, cruscio, damon-atkins, dayid, defanator, derekson, dijit, doesitblend, garethgreenaway, gtmanfred, gurubert, gvengel, jfindlay, johnj, jubrad, junovitch, lomeroe, lordcirth, lorengordon, mattLLVW, meaksh, moio, msummers42, mtkennerly, nicholasmhughes, oeultete, rallytime, rasathus, roadnfs, rossengeorgiev, seanjnkns, senthilkumar-e, techhat, terminalmage, twangboy, vernondcole, vutny, whiteinge, whytwolf)

Windows Changes

pkg Execution Module

Significant changes (PR #43708 & #45390, damon-atkins) have been made to the pkg execution module. Users should test this release against their existing package sls definition files.

- pkg.list_available no longer defaults to refreshing the winrepo meta database.
- pkg.install without a version parameter no longer upgrades software if the software is already installed. Use pkg.install version=latest (or simply use a pkg.latest state to get the old behavior.
- pkg.list_pkgs now returns multiple versions if software installed more than once.
- pkg.list_pkgs now returns Not Found when the version is not found instead of (value not set) which matches the contents of the sls definitions.
- pkg.remove will wait up to 3 seconds (normally about a second) to detect changes in the registry after removing software, improving reporting of version changes.
- pkg.remove can remove latest software, if latest is defined in sls definition.
- Documentation was update for the execution module to match the style in new versions, some corrections as well.
- All install/remove commands are prefix with cmd.exe shell and cmdmod is called with a command line string instead of a list. Some sls files in saltstack/salt-winrepo-ng expected the commands to be prefixed with cmd.exe (i.e. the use of &).
- Some execution module functions results, now behave more like their Unix/Linux versions.
Salt Documentation, Release 3002.5

**cmd Execution Module**

Due to a difference in how Python's `subprocess.Popen()` spawns processes on Windows, passing the command as a list of arguments can result in problems. This is because Windows' `CreateProcess` requires the command to be passed as a single string. Therefore, `subprocess` will attempt to re-assemble the list of arguments into a string. Some escaped characters and quotes can cause the resulting string to be incorrectly-assembled, resulting in a failure to execute the command.

Salt now deals with these cases by joining the list of arguments correctly and ensuring that the command is passed to `subprocess.Popen()` as a string.

**Changelog for v2016.11.8..v2016.11.9**

*Generated at: 2018-05-27 20:28:05 UTC*

- **PR #45638**: (twangboy) Win fix shell info @ 2018-01-23 22:38:22 UTC
  - 10812969f0 Merge pull request #45638 from twangboy/win_fix_shell_info
  - 872da3fba Only convert text types in the list_values function
  - 0e41535cdb Fix reg.py to only convert text types to unicode
  - 3579534ea5 Fix issue with detecting powershell

- **PR #45564**: (Ch3LL) Add PR changes to 2016.11.9 Release Notes @ 2018-01-19 21:36:05 UTC
  - 2d1dd1186e Merge pull request #45564 from Ch3LL/r-notes-2016
  - 325f4c6da Add PR changes to 2016.11.9 Release Notes

- **PR #45563**: (Ch3LL) Update man pages for 2016.11.9 @ 2018-01-19 21:19:00 UTC
  - 28e4398150 Merge pull request #45563 from Ch3LL/man_2016
  - 529bc0c680 update release number for salt-call man page 2016.11.9
  - 11b7222148 Update man pages for 2016.11.9

- **PR #45532**: (gtmanfred) fix mock for opensuse @ 2018-01-18 22:48:30 UTC
  - 654df0f526 Merge pull request #45532 from gtmanfred/2016.11.9
  - 6c26025664 fix mock for opensuse

- **PR #45518**: (gtmanfred) fix last 2016.11.9 failing tests @ 2018-01-18 12:03:50 UTC
  - 571c33aa39 Merge pull request #45518 from gtmanfred/2016.11.9
  - 5455d2de66 fix centos 6 pip test
  - 40255194b0 fix fedora pkg test

- **ISSUE #45394**: (dmurphy18) git.latest fails when "depth" is used with a non-default branch (refs: #45399)

- **PR #45443**: (rallytime) Back-port #45399 to 2016.11.9 @ 2018-01-17 14:53:58 UTC
  - **PR #45399**: (terminalmage) Fix git.latest failure when rev is not the default branch (refs: #45443)
  - 4e0a0eeecf Merge pull request #45443 from rallytime/bp-45399-2016.11.9
  - 919e92c911 Fix git.latest failure when rev is not the default branch

- **ISSUE #45432**: (TheBigBear) winrepo-ng fault pkg.refresh_db doesn't work - it processes ANY stray '.git' metadata '*.sls' files present on minion (refs: #45493)

30.2. Previous Releases
• PR #45493: (damon-atkins) win_pkg: pkg.refresh_db report an issue if a sls pkg definition does not contain a dict instead of aborting @ 2018-01-17 14:52:03 UTC
  - ebd4db66b8 Merge pull request #45493 from damon-atkins/2016.11_fix_sls_defintion_wrong_type
  - af108440df win_pkg lint space after ,
  - c6e922a236 win_pkg lint issues
  - f4627d7a80 fix quote i.e. change ` to ’
  - 6938a4c099 pkg.refresh_db report an issue if a sls pkg definition id not a dict instead of aborting.
• PR #45446: (rallytime) Back-port #45390 to 2016.11.9 @ 2018-01-16 20:08:38 UTC
  - PR #45390: (damon-atkins) win_pkg: fix pkg.remove, pkg.list_pkgs (refs: #45446)
  - 7322efba92 Merge pull request #45390 from rallytime/bp-45390
  - 69f045ea24 lint too-many-blank-lines
  - 10a7501ede Update release notes
  - 6f2affe01c fix pkg.remove, pkg.list_pkgs
• PR #45424: (twangboy) Fix some issues with reg.py @ 2018-01-13 19:34:47 UTC
  - b0ece9f4d4 Merge pull request #45424 from twangboy/win_reg
  - 30f06205f7 Fix some issues with reg.py
• PR #45327: (lomeroe) Backport #44861 to 2016.11 @ 2018-01-08 21:10:41 UTC
  - PR #44861: (twangboy) Fix win_lgpo for unknown values (refs: #45327)
  - 0959ae4ea3 Merge pull request #45327 from lomeroe/bp-44861_2016.11
  - 784139f734 Check for values other than 0 or 1
• PR #45268: (damon-atkins) Fix pkg.install packagename version=latest i.e. if on an old version upgrade to the latest @ 2018-01-08 17:34:15 UTC
  - a6db5f95f0 Merge pull request #45268 from damon-atkins/2016.11_win_pkg.pkg_install_latest
  - 325a9f0f66 Update 2016.11.9.rst
  - 4da200b9c Update 2016.11.9.rst
  - 126ae36361 Update 2016.11.9.rst
  - 1c01967943 Update 2016.11.9.rst
  - a0d89882b8 Fix pkg.install packagename version=latest i.e. if on an old version upgrade to the latest
• PR #45256: (rallytime) Back-port #45034 to 2016.11 @ 2018-01-04 14:25:42 UTC
  - PR #45034: (brejoc) Fix for pidfile removal logging (refs: #45256)
  - 1c5e905b61 Merge pull request #45034 from rallytime/bp-45034
  - 68f971b38f Apply test fixes from #45034 to parsers_test.py
  - 9454236694 Fix for pidfile removal logging
• ISSUE saltstack/salt-jenkins#598: (rallytime) [oxygen] CentOS 7 is failing ~ 20 tests in the integration.ssh.test_state.SSHStateTest (refs: #45209)
• PR #45235: (rallytime) Back-port #45209 to 2016.11 @ 2018-01-02 20:20:15 UTC
  - PR #45209: (gtmanfred) enable UsePAM for ssh tests (refs: #45235)
- b75f50afe3 Merge pull request #45235 from rallytime/bp-45209
- 2d0a9bbf7e enable UsePAM for ssh tests

**PR #44965:** (gtmanfred) check if VALUE is a string_type @ 2018-01-02 16:42:39 UTC
- 3ab962b01a Merge pull request #44965 from gtmanfred/2016.11
- a5d8a6340e check if VALUE is a string_type

**ISSUE #27160:** (martinadolfi) salt.states.mount persistence error using spaces in route (refs: #45232)

**PR #45232:** (rasathus) Backport #27160 to 2016.11 @ 2018-01-02 15:48:22 UTC
- 40fb30f63f Merge pull request #45232 from rasathus/2016.11
- 7a2bd8f49b Merge branch '2016.11' into 2016.11

**ISSUE #44516:** (doesitblend) Windows PY3 Minion Returns UTF16 UnicodeError (refs: #44944, #45161)

**PR #45161:** (lomeroe) Backport #44944 to 2016.11 @ 2017-12-30 13:19:35 UTC
- **PR #44944:** (lomeroe) win_lgpo registry.pol encoding updates (refs: #45161)
- 707ef5175 Merge pull request #45161 from lomeroe/bp-44944_2016.11
- 0a4c6b5a83 remove references to six.unichr
- f3196d795d lint fixes for static regexes
- 11b637d108 lint fixes
- c14d628ad do not decode registry.pol file wholesale, but instead decode individual elements of the file

**ISSUE #45188:** (jak3kaj) salt state status.process always returns false (refs: #45199)

**PR #45199:** (gtmanfred) status.pid returns pid ids not process names @ 2017-12-28 19:06:11 UTC
- 6f52034e08 Merge pull request #45199 from gtmanfred/status
- fb07f9ea7d status.pid returns pid ids not process names

**ISSUE #44728:** (casselt) Nodegroups can not be defined by glob with ? or seq (refs: #45118)

**PR #45118:** (garethgreenaway) [2016.11] Fix to allow nodegroups to include sequences @ 2017-12-27 18:49:10 UTC
- d3381e27d0 Merge pull request #45118 from garethgreenaway/44728_nodegroups_seq
- 0ff811de70 Swapping import to be the old path for 2016.11
- b3e2f388f5 Fix to allow nodegroups to include sequences

**PR #45127:** (twangboy) Fix issue with 1641 return code @ 2017-12-22 15:18:28 UTC
- f969ac3aa3 Merge pull request #45127 from twangboy/win_fix_pkg
- 14639739f2 Fix issue with 1641 return code

**PR #45137:** (twangboy) Catch correct error type in list_keys and list_values @ 2017-12-22 14:45:22 UTC
- dc357b39f0 Merge pull request #45137 from twangboy/win_fix_reg_tests
- b64e6f87d5 Catch correct error type in list_keys and list_values

**PR #45130:** (rallytime) Resolve groups for salt api @ 2017-12-21 20:38:32 UTC
- 0aa1662731 Merge pull request #45130 from rallytime/api-groups
- 2dcc8df845 Resolve groups for salt api
• **PR #45114**: (twangboy) Move pam library load to try/except block @ 2017-12-21 14:37:17 UTC
  - 7dc3cc4641 Merge pull request #45114 from twangboy/win_fix_pam
  - cf5eae1f77 Move pam library load to try/except block

• **ISSUE #45049**: (vernondcole) salt cloud module documentation is missing from the index. (refs: #45070)

• **PR #45100**: (rallytime) Back-port #45070 to 2016.11 @ 2017-12-20 14:55:01 UTC
  - PR #45070: (vernondcole) insert clouds modules in index (refs: #45100)
  - 7e128e68f15 Merge pull request #45100 from rallytime/bp-45070
  - 08d7b6d6813 Add clouds modules to index

• **PR #45098**: (rallytime) Back-port #45092 to 2016.11 @ 2017-12-20 14:40:51 UTC
  - PR #45092: (terminalmage) Fix integration.states.test_pip.PipStateTest.test_pip_installed_weird_install (refs: #45098)
  - bdf93f3397 Merge pull request #45098 from rallytime/bp-45092
  - 80b6d6813 Fix integration.states.test_pip.PipStateTest.test_pip_installed_weird_install

• **ISSUE #41044**: (pirxthepilot) user.present 'date' parameter is not applying (refs: #44078)

• **PR #44078**: (rossengeorgiev) user.present: allow date param to be 0 @ 2017-12-19 15:59:29 UTC
  - 324b7d4058 Merge pull request #44078 from rossengeorgiev/fx-41044
  - a81a6fe23c Fix #41044; allow for date param to be 0

• **PR #44970**: (rallytime) Update bootstrap script to latest release: 2017.12.13 @ 2017-12-19 15:49:05 UTC
  - PR #44970: (rallytime) Update bootstrap script to latest release: 2017.12.13
  - 48a59761df Merge pull request #44970 from rallytime/update-bootstrap-script
  - 82e8057427 Update bootstrap script to latest release: 2017.12.13

• **ISSUE #45036**: (dijit) Quiet installation of packaged minions fails due to redistributable not being quietly installed [py3] [Windows] (refs: #45040)

• **PR #45069**: (rallytime) Back-port #45040 to 2016.11 @ 2017-12-19 14:25:57 UTC
  - PR #45040: (dijit) Installation Fails on headless machines. (refs: #45069)
  - 6837fdaed8 Merge pull request #45069 from rallytime/bp-45040
  - a948e1605 Installation Fails on headless machines.
    - d5c45c29f9 Backport #27160 to 2016.11

• **ISSUE #41286**: (arthtux) boto_vpc.accept_vpc_peering_connection wait a object (refs: #41305)

• **PR #44969**: (rallytime) Back-port #41305 to 2016.11 @ 2017-12-15 17:22:18 UTC
  - PR #41305: (arthtux) correct accept_vpc_peering_connection (refs: #44969)
  - 4a064d8391 Merge pull request #44969 from rallytime/bp-41305
  - 5c4bee43dc correct accept_vpc_peering_connection

• **PR #45031**: (terminalmage) Fix invalid exception class in mysql returner @ 2017-12-15 15:00:15 UTC
  - 10de66f13 Merge pull request #45031 from terminalmage/fix-mysql-returner
  - 82bd12c7c Fix invalid exception class in mysql returner

• **ISSUE #44820**: (msteed) Custom returner breaks manage runner (refs: #44958)

• **PR #44972**: (terminalmage) Backport #44958 to 2016.11 branch @ 2017-12-14 16:56:02 UTC
- **PR #44958**: (terminalmage) Fix a race condition in manage runner (refs: #44972)
  - 9a7406207f Merge pull request #44972 from terminalmage/bp-44958
  - a416b0f112 No need to manually do connect_pub, use listen=True in run_job
  - 3ec004bd2e Fix a race condition in manage runner

- **ISSUE #44378**: (llua) minion: infinite loop during start when schedule key is null (refs: #44385)

- **PR #44385**: (gtmanfred) schedule should be a dict in opts @ 2017-12-12 20:44:02 UTC
  - 1032ca3290 Merge pull request #44385 from gtmanfred/schedule
  - 9e15c38da2 add comma
  - 855d93cb7 schedule should be a dict

- **ISSUE #44734**: (cruscio) Documentation inconsistency for minion ping_interval timing (refs: #44770)

- **PR #44770**: (cruscio) Fix minion ping_interval documentation @ 2017-12-11 19:50:19 UTC
  - 68d901b12c Merge pull request #44770 from cruscio/2016.11
  - e2682bf441 Fix minion ping_interval documentation

- **ISSUE #44292**: (andrew-regan) grains['virtual_subtype'] assignment for Docker broken on Mac (refs: #44335)

- **PR #44335**: (gtmanfred) add docker-ce to docker subtype grains check @ 2017-12-10 17:17:49 UTC
  - d4ab55ec47 Merge pull request #44335 from gtmanfred/2016.11
  - 3f1268d67f fix patching for python 2.6
  - 1d0bd5bb32 Merge branch '2016.11' into 2016.11
  - f02b02032d Merge pull request #4 from terminalmage/pr-44335
    - b4eb1527a6 Add test for PR 44335
  - a30af3252e add docker-ce to docker subtype grains check

- **ISSUE #44530**: (roaldnefs) Identifier not working in salt.states.cron when special is used (refs: #44579)

- **PR #44579**: (roaldnefs) Fix bug in cron module and state - Fixes #44530 @ 2017-12-07 20:18:27 UTC
  - bb1f8dceaf Merge pull request #44579 from roaldnefs/fix-cron-identifier
  - d73a4a051 Merge branch '2016.11' into fix-cron-identifier

- **PR #44852**: (damon-atkins) win_pkg fix spelling typos and minion option 2016.11 @ 2017-12-06 16:49:17 UTC
  - af0131fa1f Merge pull request #44852 from damon-atkins/2016.11_win_pkg_typo_n_fix
  - 0e7c19084f Lint: Remove extra whitespace
  - 7c7e21f94d Fix spelling typo, and fix backwards compatible minion option for repo location

- **ISSUE #44365**: (icycle77) file.managed appears to ignore source_hash check (refs: #44794)

- **PR #44794**: (terminalmage) Fix regression in file.managed when source_hash used with local file @ 2017-12-04 14:23:29 UTC
  - 88c0d6b4e Merge pull request #44794 from terminalmage/issue44365
  - 3b886f25e6 Remove debugging line
  - 153bf45b03 Fix regression in file.managed when source_hash used with local file

- **ISSUE #35777**: (rallytime) Properly deprecate template context data in Fluorine (refs: #44738)
• ISSUE #35523: (rallytime) Come up with a reasonable alternative for lxc.edited_conf (refs: #44738)
• PR #44738: (rallytime) Bump some deprecation warnings from Oxygen to Fluorine @ 2017-12-01 23:10:08 UTC
  – c8bb9dfbbb Merge pull request #44738 from rallytime/bump-oxygen-warnings
  – ead3c569e1 Bump deprecation warnings from Oxygen to Fluorine
• ISSUE #44730: (msciciel) State network.routes could not add route without gateway on centos7 (refs: #44741)
• PR #44741: (gtmanfred) if gateway is not specified use iface @ 2017-12-01 23:09:03 UTC
  – 88e3aab00d Merge pull request #44741 from gtmanfred/hiph
  – 439dc8dce6 if gateway is not specified use iface
• ISSUE #31405: (SEJeff) Salt leaves tmp file when file.managed dest file is immutable (refs: #44699)
• PR #44699: (jfindlay) utils/files.py remove temp file upon move failure @ 2017-12-01 15:03:54 UTC
  – 97e0cf569c Merge pull request #44699 from jfindlay/attr_file
  – 9e5a40ea7c Merge branch '2016.11' into attr_file
  – 5c34607f6c utils/files remove temp file upon move failure
• ISSUE #44556: (doesitblend) --static option doesn't return highstate output (refs: #44714)
• PR #44714: (rallytime) Allow --static option to display state runs with highstate output @ 2017-12-01 14:31:19 UTC
  – 743e0a6df Merge pull request #44714 from rallytime/fix-44556
  – 1bbe1abe62 Allow --static option to display state runs with highstate output
• PR #44517: (whytwolf) Publish port doc missing @ 2017-11-28 21:50:19 UTC
  – 998d714ee7 Merge pull request #44517 from whytwolf/publish_port_doc_missing
  – 4b5855283a missed one place where i didnt chanbge master_port from my copy to publish_port
  – e4610bae65 update doc to have publish port
• PR #41279: (Ch3LL) Add fqdn and dns core grain tests @ 2017-11-27 21:28:10 UTC
  – 6169b52749 Merge pull request #41279 from Ch3LL/add_grain_tests
  – 1b64f15692 Merge branch '2016.11' into add_grain_tests
  – 095f1b7d7a Merge branch '2016.11' into add_grain_tests
  – 9ea4db4224 mock socket.getaddrinfo
  – 78a07e30f4 add more fqdn tests and remove some of the mocking
  – 5dbf4f144ce add ipv6 in opts
  – eabc1b4f9c Add fqdn and dns core grain tests
  – 3ec4329307 Merge branch '2016.11' into fix-cron-identifier
• ISSUE #44544: (creideiki) pgjsonb returner sets wrong timezone on timestamps in database when using Python 2 (refs: #44563)
• PR #44563: (creideiki) Send Unix timestamps to database in pgjsonb returner @ 2017-11-21 17:44:32 UTC
  – dc6de050a9 Merge pull request #44563 from creideiki/pgjsonb-timestamps-44544
  – 231e412ca4 Merge branch '2016.11' into pgjsonb-timestamps-44544
• ISSUE #44601: (rallytime) CherryPy 12.0 removed support for "engine.timeout_monitor.on" config option (refs: #44602)

• PR #44602: (rallytime) Handle timeout_monitor attribute error for new versions of CherryPy @ 2017-11-20 21:38:40 UTC
  - 4369df020b Merge pull request #44602 from rallytime/fix-44601
  - ff303d060 Handle timeout_monitor/TimeoutError issues for new versions of CherryPy

• PR #44604: (lorenegordon) Documents the exclude argument in state execution module @ 2017-11-20 18:19:18 UTC
  - 4a4756fc37 Merge pull request #44604 from lorenegordon/doc-exclude
  - c4a6c40eb3 Documents the exclude argument in state execution module
  - 15c445e6b9 Send Unix timestamps to database in pgjsonb
    * 99fa05a456 Fix for bug in cron state
    * 97328faeac Fix for bug in cron module

• PR #44434: (whytewolf) add a note that describes grain rebuilding on restart and refresh @ 2017-11-14 11:21:54 UTC
  - 91d46d4fcfc Merge pull request #44434 from whytewolf/1837
  - d148e39dda change from md to rst for code reference
  - 955e305bda fix bad english, as requested by cachedout
  - 7256fccc1c9 update note to take into account grains_cache
  - 7a2981585e Merge branch '2016.11' into 1837
  - aca0405b26 add a note that describes grain rebuilding on restart and refresh

• ISSUE #41474: (dmaziuk) state.file:* line endings (refs: #44321)

• PR #44321: (gvengel) Fix file.line diff formatting. @ 2017-11-13 19:36:39 UTC
  - a3bd99317f Merge pull request #44321 from gvengel/fix-file-line-diff-output
  - 96a050204a6 Add newline for lint.
  - ef7b6b8b81 Fixed issue with file.line on Windows running Python 2.
  - 8f89c99fa5 Fix FileModuleTest setUp and tearDown to work on Windows.
  - 3ac5391f5f Namespace missing functions for file.line on Windows.
  - b2b8f075b9 Fixed test to work on Windows.
  - 5a5a2dd026 Added integration test for issue #41474
  - 24d7315f1a Fix file.line diff formatting.

• ISSUE #43417: (damon-atkins) win_pkg: pkg.install and pkg.remove general issues (refs: #43708)

• PR #43708: (damon-atkins) Merge Ready : Backport develop win_pkg to 2016.11 with additional bug fixes @ 2017-11-13 19:33:41 UTC
  - 9ca563718d Merge pull request #43708 from damon-atkins/2016.11_43417_Backport_and_Fixes
  - 04d03ea6b8 Updated comment
  - 1dd56e585 Merge remote branch 'upstream/2016.11' into 2016.11_43417_Backport_and_Fixes
  - dd48ba2616 Merge remote branch 'upstream/2016.11' into 2016.11_43417_Backport_and_Fixes
Salt Documentation, Release 3002.5

- a0d08598bf dco fix
- 9467899fc6 Merge remote branch 'upstream/2016.11' into 2016.11_43417_Backport_and_Fixes
- 6dc180fd0e dco fixes
- 2496a42ea4 lint fix
- 2c937fbe19 Merge remote branch 'upstream/2016.11' into 2016.11_43417_Backport_and_Fixes
- c9e8c48a4d all remove/install commands are passed to cmd.exe /s/c and commands are passed as strings to cmdmod
- 35024bd93 typo in comments and doc strings.
- ec31f5a9bd 2017.11/develop version() was ignoring saltenv setting.
- b314549a32 Backport of devlop to 2016.11 with additional bug fixes

- **ISSUE #44423**: (mtkennerly) The win_path.exists state cannot prepend to the very start of the PATH (refs: #44424)

- **PR #44477**: (rallytime) Back-port #44424 to 2016.11 @ 2017-11-13 17:33:29 UTC
  - **PR #44424**: (mtkennerly) Fix #44423: Handle index=None and index=0 distinctly in the win_path.exists state (refs: #44477)
  - 68ea22188e Merge pull request #44477 from rallytime/bp-44424
  - 4af8ddc96 Fix #44423: Handle index=None and index=0 distinctly

- **ISSUE #44034**: (seanjnkns) salt-call pillar overrides broken in 2016.11.8 and 2017.7.2 (refs: #44483)

- **PR #44483**: (terminalmage) salt-call: account for instances where __pillar__ is empty @ 2017-11-13 17:30:36 UTC
  - 2c89050a24 Merge pull request #44483 from terminalmage/issue44034
  - a9db8becce salt-call: account for instances where __pillar__ is empty

- **PR #44489**: (wytwewolf) update log-granular-levels to describe what they are filtering on @ 2017-11-13 17:27:37 UTC
  - b5c2028680 Merge pull request #44489 from wytwewolf/1956_log-granular-levels
  - 9cdeb4e903 update log-granular-levels to describe what they are filtering on

- **PR #44193**: (twangboy) Fix reg.py for use with LGPO module @ 2017-11-10 19:01:17 UTC
  - ea07f9c54e Merge pull request #44193 from twangboy/win_fix_reg
  - 44d6df9f4d Remove unused import (lint)
  - f7502436bd Fix various issues
  - 221e6e3b91 make salt.utils.to_unicode return none when passed none
  - ce41acc788 Fix many issues with reg.py
  - 4a19df1f7f Use six.text_type instead of str
  - 1b12ac303 Check type before casting
  - 03fa37b445 Cast vdata to its proper type

- **PR #43863**: (nicholasmhughes) Atomicfile only copies mode and not user/group perms @ 2017-11-10 18:47:55 UTC
  - ed8da2450b Merge pull request #43863 from nicholasmhughes/fix-atomicfile-permission-copy
- ea852ec5d3 remove index use with stat module attributes
- dbeeb0e917 fixes #38452 atomicfile only copies mode and not user/group perms

- **ISSUE #39901**: (seanjnkns) network.managed ipaddrs ignored (refs: #44260)
- **PR #44260**: (seanjnkns) Fixes #39901 for RH/CentOS 7 @ 2017-11-07 23:14:59 UTC
  - a66cd67d15 Merge pull request #44260 from seanjnkns/issue-39901
  - ed8ccf457 #39901: Fix pylint
  - 43c81dfdee #39901: Add unit tests
  - 613d500876 Merge branch '2016.11' into issue-39901
  - b97e8046ca Utilize salt.utils.validate.net.* and _raise_error_iface
  - 681f3631d Fixes #39901 for RH/CentOS 7

- **PR #44383**: (gtmanfred) switch salt-jenkins over to saltstack for kitchen-salt tests @ 2017-11-03 19:56:48 UTC
  - 5e289f42ba Merge pull request #44383 from gtmanfred/2016kitchen
  - b65f4ea4ea switch salt-jenkins over to saltstack

- **PR #44173**: (twangboy) Use google style docstrings in win_system.py @ 2017-10-31 17:56:34 UTC
  - cab54e34b5 Merge pull request #44173 from twangboy/win_system_docs
  - 8e111b413d Fix some of the wording and grammar errors
  - a12bc5ae41 Use google style docstrings

- **PR #44304**: (jfindlay) states.cron identifier defaults to name @ 2017-10-31 16:39:47 UTC
  - 7aaca1d179 Merge pull request #44304 from jfindlay/cron_id
  - cc038c5bec states.cron identifier defaults to name

- **ISSUE #44313**: (rossengeorgiev) salt-ssh: --user option missing from the cli documentation (refs: #44322)

- **PR #44322**: (rossengeorgiev) updated CLI docs for salt-ssh @ 2017-10-30 21:39:23 UTC
  - e4dbbde734 Merge pull request #44322 from rossengeorgiev/saltssh-docs-update
  - b18f2e5a6d fix program name and description for --static
  - 5b10918f02 updated CLI docs for salt-ssh

- **PR #44345**: (gtmanfred) remove binding from erb template rendering @ 2017-10-30 20:57:43 UTC
  - 4e6f09e3eb Merge pull request #44345 from gtmanfred/2016kitchen
  - 79b8b2d0bf remove binding

- **PR #44342**: (gtmanfred) render template files platforms.yml and driver.yml @ 2017-10-30 20:04:00 UTC
  - 209847c8c2 Merge pull request #44342 from gtmanfred/2016kitchen
  - c50508f0b7 render template files platforms.yml and driver.yml

- **ISSUE #44336**: (corywright) Docs for archive.tar should not use leading dash for tar options (refs: #44339)

- **PR #44339**: (corywright) Remove leading dash from options in archive.tar docs (2016.11) @ 2017-10-30 19:00:34 UTC
  - 1be65224cb Merge pull request #44339 from corywright/issue-44336-fix-archive-tar-docs-2016-11
  - 9c1c35a5f Remove leading dash (-) from options in archive.tar documentation
• ISSUE #44272: (gurubert) [patch] win_service.stop() fails (refs: #44295)
• PR #44295: (gurubert) fixes issue #44272 @ 2017-10-27 14:28:57 UTC
  – bebc33da5 Merge pull request #44295 from HeinleinSupport/issue44272
  – f972715a45 fixes issue #44272
• PR #44286: (gtmanfred) use our git repo for kitchen-salt @ 2017-10-25 19:27:32 UTC
  – e7ca9f8407 Merge pull request #44286 from gtmanfred/2016.11
  – 193e715e37 use our git repo for kitchen-salt
• PR #44259: (gtmanfred) begin switching in kitchen-salt for running the test suite @ 2017-10-25 13:30:35 UTC
  – 8a1ea165af Merge pull request #44259 from gtmanfred/2016.11
  – 56a3ad8f68 fix pylint comments
  – 4add666db1 add comment to Gemfile and move copyartifacts
  – b4c8f7eb57 fix pylint
  – 392fd4f837 try newest salttesting
  – 79251287d0 add logging
  – 38963d5a82 use transport if not set in state_file
  – 10e309a64f which vagrant should go to stderr
  – 9307564de0 fix output columns
  – 2da22f87e1 test opennebula
  – 9f38f16905 add opennebula to Gemfile
  – 7465f9b27a add script for copying back artifacts
  – 255118cfd7 run tests with kitchen
• PR #44268: (twangboy) Fix typo @ 2017-10-25 13:01:35 UTC
  – 9d6bc8509b Merge pull request #44268 from twangboy/win_fix_lgpo_typo
  – a6a4c10a77 Fix typo
• PR #44269: (terminalmage) Fix log message in salt.utils.gitfs @ 2017-10-25 13:00:58 UTC
  – 0beb65a283 Merge pull request #44269 from terminalmage/fix-log-message
  – bc9cd65496 Fix log message in salt.utils.gitfs
• ISSUE #44155: (rholts) file.directory with clean not triggering listener in test mode (refs: #44160)
• PR #44160: (gtmanfred) add changes to test return @ 2017-10-23 14:35:21 UTC
  – 304dd2529d Merge pull request #44160 from gtmanfred/directory
  – a7d3d668f4 missed removing changes in the next test
  – ac0b5ec440 fix test
  – d3d00c5e62 add changes to test return
• PR #44205: (rallytime) Back-port #44177 to 2016.11 @ 2017-10-23 14:09:07 UTC
  – PR #44177: (senthilkumar-e) Fixing default redis.host in documentation (refs: #44205)
  – e10395483d Merge pull request #44205 from rallytime/bp-44177
- b9940f8521 Fixing default redis.host in documentation

- **ISSUE #44140**: (vtolstov) incorrect network interfaces settings with network.managed under debian jessie (refs: #44167)

- **PR #44167**: (garethgreenaway) Fixes to modules/debian_ip @ 2017-10-20 14:25:39 UTC
  - 09ddfd0c08 Merge pull request #44167 from garethgreenaway/44140_debian_ip_fixes
  - 5f7555846f When looping through the various pre, post, up and down commands put them into the interface dict using the right internet family variable.

- **PR #43830**: (rallytime) Back-port #43644 to 2016.11 @ 2017-10-19 22:57:51 UTC
  - **PR #43644**: (defanator) Several fixes for RDS DB parameter group management (refs: #43830)
    - 9f9e936b52 Merge pull request #43830 from rallytime/bp-43644
    - 12845ae802 Several fixes for RDS DB parameter group management

- **ISSUE #43936**: (oeuftete) manage.present still reports lost minion (refs: #43994)

- **ISSUE #38367**: (tyeapple) logic error in connected_ids function of salt/utils/minions.py when using include_localhost=True (refs: #43994)

- **PR #43994**: (oeuftete) Fix manage.present to show lost minions @ 2017-10-19 22:27:59 UTC
  - 07db6a3d8b Merge pull request #43994 from oeuftete/fix-manage-runner-presence
  - f3980d7d83 Fix manage.present to show lost minions

- **ISSUE #44150**: (rossengeorgiev) version param in pkg.installed broken in 2016.11.8/2017.7.2 in EL6-7 (refs: #44188)

- **PR #44188**: (terminalmage) yumpkg: Check pkgname instead of name to see if it is a kernel pkg @ 2017-10-19 22:20:35 UTC
  - a07537e258 Merge pull request #44188 from terminalmage/issue44150
  - 0692f442db yumpkg: Check pkgname instead of name to see if it is a kernel pkg

- **ISSUE #43427**: (tylerjones4508) Salt-Cloud There was a profile error: invalid literal for int() with base 10: (refs: #44089)

- **PR #44158**: (rallytime) Back-port #44089 to 2016.11 @ 2017-10-19 20:38:15 UTC
  - **PR #44089**: (cetanu) Catch on empty Virtualbox network addr #43427 (refs: #44158)
    - 715edc0a3e Merge pull request #44158 from rallytime/bp-44089
    - 534f0b7a Catch on empty Virtualbox network addr #43427

- **ISSUE #43307**: (marek-knappe) Filesystem creation is failing on newly created LV (refs: #44029)

- **PR #44131**: (rallytime) Back-port #44029 to 2016.11 @ 2017-10-17 15:05:39 UTC
  - **PR #44029**: (msummers42) addresses issue #43307, disk.format_ to disk.format (refs: #44131)
    - 0cd493b601 Merge pull request #44131 from rallytime/bp-44029
    - b4ba7ae2fc addresses issue #43307, disk.format_ to disk.format

- **ISSUE #44087**: (mfussenegger) Using state.highstate with terse=true prevents useful error output (refs: #44093)

- **PR #44093**: (gtmanfred) don't filter if return is not a dict @ 2017-10-16 19:13:19 UTC
  - 3a68e356f8 Merge pull request #44093 from gtmanfred/fixed-44087
- 5455c5053b fix pylint
- f749cafa25 don’t filter if return is not a dict

- **PR #44122**: (cachedout) Add note about GPG signing to PR template @ 2017-10-16 19:09:38 UTC
  - c785d7a847 Merge pull request #44122 from cachedout/gpg_pr_template
  - e41e3d76be Typo fix
  - 37c980880 Add note about GPG signing to PR template

- **PR #44124**: (rallytime) [2016.11] Merge forward from 2016.11.8 to 2016.11 @ 2017-10-16 19:07:14 UTC
  - bf90ea1f51 Merge pull request #44124 from rallytime/merge-2016.11
  - 59861291c8 Merge branch '2016.11.8' into '2016.11'
    - 57623e2abe Merge pull request #44028 from rallytime/bp-44011
      - 89e084bda3 Do not allow IDs with null bytes in decoded payloads
      - 206ae23f15 Don’t allow path separators in minion ID

- **PR #44097**: (gtmanfred) OpenNebula does not require the template_id to be specified @ 2017-10-16 18:36:17 UTC
  - 13f3f8a83a Merge pull request #44097 from gtmanfred/openneb
  - c29655b2c2 Merge branch '2016.11' into openneb
  - bd2490b149 OpenNebula does not require the template_id to be specified

- **PR #44110**: (roaldnefs) Format fix code example local returner doc @ 2017-10-16 15:57:50 UTC
  - ac3e4df964 Merge pull request #44110 from roaldnefs/fix-doc-local-returner
  - ef658f7594 Merge branch '2016.11' into fix-doc-local-returner

- **PR #44092**: (techhat) Made sure that unicoded data is sent to sha256() @ 2017-10-13 21:20:12 UTC
  - c960ca32c2 Merge pull request #44092 from techhat/awsunicode
  - bb9d9d4d00 One more encoding
  - 0e8b325667 Apparently __salt_system_encoding__ is a thing
  - 1e7211838d Use system encoding
  - 1af21be5e Made sure that unicoded data is sent to sha256()

- **ISSUE #43581**: (jcourington) cherrypy stats issue (refs: #44021)

- **PR #44021**: (whiteinge) Also catch cpstats AttributeError for bad CherryPy release ~5.6.0 @ 2017-10-12 18:11:41 UTC
  - PR #42655: (whiteinge) Reenable cpstats for rest_cherrypy (refs: #44021)
  - PR #33806: (cachedout) Work around upstream cherrypy bug (refs: #42655)
  - d89c317d96 Merge pull request #44021 from whiteinge/cpstats-attribute-error
  - bf14e5f578 Also catch cpstats AttributeError for bad CherryPy release ~5.6.0

- **PR #44025**: (dayid) Typo correction of lover to lower @ 2017-10-11 17:31:45 UTC
  - bbdabe242a Merge pull request #44025 from dayid/lover_typo
  - 385980c21a Merge branch '2016.11' of https://github.com/saltstack/salt into lover_typo
  - 266dc00a23 Typo correction of lover to lower
- **PR #44030:** (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 @ 2017-10-11 13:01:42 UTC
  - d8f3891a5e Merge pull request #44030 from rallytime/merge-2016.11
  - 53eaf0d75c Merge branch '2016.3' into '2016.11'
  - 64fd839377 Merge pull request #44010 from Ch3LL/2016.3.7_follow_up
    - 9a00302cd8 fix 2016.3.7 release notes merge conflict
    - 63da1214db Do not allow IDs with null bytes in decoded payloads
    - ee792581fc Don't allow path separators in minion ID
    - 8aab65c718 fix 2016.3.7 release notes merge conflict
  - bd73db02c Merge pull request #43977 from Ch3LL/3.8_sec
- **PR #44011:** (Ch3LL) Security Fixes for 2016.11.8 (refs: #44028) @ 2017-10-10 20:04:36 UTC
  - 0dbf41e79e Merge pull request #44011 from Ch3LL/2016.11.7_follow_up
  - c0149101c0 Do not allow IDs with null bytes in decoded payloads
  - 19481423dd Don't allow path separators in minion ID
- **PR #44023:** (Ch3LL) Add 2016.11.9 Release Note File @ 2017-10-10 20:03:03 UTC
  - d61300df20 Merge pull request #44023 from Ch3LL/11.9rn
  - 7f9015eb41 Add 2016.11.9 Release Note File
- **PR #44019:** (benediktwerner) Added missing docs to the tutorial index and fixed spelling mistake @ 2017-10-10 19:57:06 UTC
  - 9f53bf63a Merge pull request #44019 from benediktwerner/2016.11
  - bc53598027 Fixed spelling mistake in salt_bootstrap tutorial
  - 6c30344824 Added missing tutorial docs to the tutorial index
- **PR #43955:** (meaksh) Enable a new '--with-salt-version' parameter for the "setup.py" script @ 2017-10-10 17:36:52 UTC
  - 364523f5f8 Merge pull request #43955 from meaksh/2016.11-fix-2291
  - a81b78381b Merge branch '2016.11' into 2016.11-fix-2291
  - 44bc91bb98 Enable '--with-salt-version' parameter for setup.py script
- **ISSUE #43945:** (bobrik) kmod.present doesn't work with compiled-in modules (refs: #43962)
- **PR #43962:** (bobrik) Report built-in modiles in kmod.available, fixes #43945 @ 2017-10-10 16:31:39 UTC
  - fec714b91d Merge pull request #43962 from bobrik/kmod-built-in
  - 95ab901553 Report built-in modiles in kmod.available, fixes #43945
- **PR #43960:** (cro) Require that bindpw be non-empty when auth.ldap.anonymous is False @ 2017-10-09 23:09:02 UTC
  - e434c39c4e Merge pull request #43960 from cro/ldap_nopw_bind2
  - 962a20cf4b Require that bindpw be non-empty if auth.ldap.anonymous=False
  - 9df3d91d8f Release notes blurb for change to bindpw requirements
- **PR #43991:** (Ch3LL) Add Security Notes to 2016.3.8 Release Notes @ 2017-10-09 22:00:25 UTC
• ISSUE #42947: (rossengeorgiev) Zenoss state changes production state even when test=true (refs: #43968)
• PR #43968: (rossengeorgiev) fix zenoss state module not respecting test=true @ 2017-10-09 21:27:31 UTC
  2346d2691e Merge pull request #43968 from rossengeorgiev/fix-zenoss-prod_state
  e6d31c1ea6 fix zenoss state module not respecting test=true
• PR #43776: (Ch3LL) [2016.11] Bump latest and previous versions @ 2017-10-09 17:22:15 UTC
  8d56a5ac45 Merge pull request #43776 from Ch3LL/2016.11.8_docs
  f72bc00000 [2016.11] Bump latest and previous versions
• PR #43976: (Ch3LL) Add Security Notes to 2016.11.8 Release Notes @ 2017-10-09 17:20:54 UTC
  21bf71c3f5 Merge pull request #43976 from Ch3LL/2016.11.8_sec
  8d56a5ac45 Merge pull request #43776 from Ch3LL/2016.11.8_docs
• PR #43973: (terminalmage) Fix grains.has_value when value is False @ 2017-10-09 14:59:20 UTC
  1d5397ab5b Merge pull request #43973 from terminalmage/fix-grains.has_value
  bf45ae66a Fix grains.has_value when value is False
• PR #43888: (rallytime) Back-port #43841 to 2016.11 @ 2017-10-05 20:09:58 UTC
  PR #43841: (austinpapp) add -n with netstat so we don't resolve IPs (refs: #43888)
  9ac3f2ea7b Merge pull request #43888 from rallytime/bp-43841
  87d676f08a add -n with netstat so we don't resolve
• PR #43916: (dereckson) Fix typo in salt-cloud scaleway documentation @ 2017-10-05 18:58:00 UTC
  f880ac4c08 Merge pull request #43916 from dereckson/fix-typo-cloud-scaleway
  15b888a9f4 Fix typo in salt-cloud scaleway documentation
• PR #43884: (UtahDave) Update SaltConf banner per Rhett's request @ 2017-10-04 13:08:30 UTC
  2ab7549d48 Merge pull request #43884 from UtahDave/2016.11local
  e3b2857285 Merge branch '2016.11' into 2016.11local
• PR #43869: (terminalmage) Only join cmd if it's not a string @ 2017-10-03 16:25:07 UTC
  4b882d4272 Merge pull request #43869 from terminalmage/issue43522
  fe28b0d4fb Only join cmd if it's not a string
  8c671fd0c1 Update SaltConf banner per Rhett's request
• ISSUE #43373: (rgcosma) use keyword breaks sls_id (refs: #43707)
• PR #43707: (terminalmage) Add missing support for use/use_in requisites to state.sls_id @ 2017-10-01 14:07:53 UTC
  a2161efda3 Merge pull request #43707 from terminalmage/issue43373
  3ebd1895f Merge branch '2016.11' into issue43373
  e580ed4caa Merge branch '2016.11' into issue43373
  5b3be68af Fix failing unit test
PR #43807: (terminalmage) cmdmod: Don't list-ify string commands on Windows @ 2017-09-29 02:48:36 UTC
- 85b3aa332a Merge pull request #43807 from terminalmage/issue43522
- d8708bf698 cmdmod: Don't list-ify string commands on Windows

PR #43768: (vutny) Fix Pylint deprecated option warnings @ 2017-09-28 12:27:36 UTC
- ea8d273c2b Merge pull request #43768 from vutny/fix-pylint-deprecation-warnings
- f8b3fa9da1 Merge branch '2016.11' into fix-pylint-deprecation-warnings

ISSUE #40311: (cralston0) --hide-timeout used with --output json --static produces unparsable JSON (refs: #43772)

PR #43772: (gtmanfred) dont print Minion not responding with quiet @ 2017-09-27 15:39:18 UTC
- 1a8cc60bb4 Merge pull request #43772 from gtmanfred/2016.11
- 0194c60960 dont print Minion not responding with quiet

PR #43747: (rallytime) Add GPG Verification section to Contributing Docs @ 2017-09-26 21:25:37 UTC
- 9dee896b9 Merge pull request #43747 from rallytime/gpg-verification
- 7a70de19f4 Merge branch '2016.11' into gpg-verification

ISSUE #43729: (The-Loeki) Docker events engine broken on newer docker.py (refs: #43733)

PR #43733: (terminalmage) Allow docker_events engine to work with newer docker-py @ 2017-09-26 16:47:40 UTC
- 1cc3ad1c8d Merge pull request #43733 from terminalmage/issue43729
- 6e5c99bda0 Allow docker_events engine to work with newer docker-py

ISSUE #42082: (stamak) [salt.utils.gitfs] [CRITICAL] Invalid gitfs configuration parameter 'saltenv' in remote git+ssh://git@ourgitserver/ourgitrepo.git. (refs: #43458)

PR #43458: (terminalmage) Fix missing PER_REMOTE_ONLY in cache.clear_git_lock runner @ 2017-09-26 14:39:01 UTC
- 5d38be4ff7 Merge pull request #43458 from terminalmage/issue42082
- 5f90812b12 Fix missing PER_REMOTE_ONLY in cache.clear_git_lock runner
  * 23bb45d8e Add GPG Verification section to Contributing Docs

ISSUE #43650: (rallytime) Review contributing documentation and the merge-forward process (refs: #43727)

ISSUE #42706: (blarghmatey) Parallel Cache Failure (refs: #43018)

PR #43727: (rallytime) Revise "Contributing" docs: merge-forwards/release branches explained! @ 2017-09-26 12:43:16 UTC
- PR #43018: (jubrad) Update state.py (refs: #43727)
  - 023a563657 Merge pull request #43018 from rallytime/fix-43650
  - babad12d83 Revise "Contributing" docs: merge-forwards/release branches explained!

PR #43648: (rallytime) Handle VPC/Subnet ID not found errors in boto_vpc module @ 2017-09-22 17:40:43 UTC
- f46c858f25 Merge pull request #43648 from rallytime/handle-boto-vpc-errors
- 54842b5012 Handle VPC/Subnet ID not found errors in boto_vpc module
  * 651ed16ad3 Fix Pylint deprecated option warnings
• PR #43575: (akissa) Fix CSR not recreated if key changes @ 2017-09-21 17:52:01 UTC
  - 9dba34aa06 Merge pull request #43575 from akissa/fix-csr-not-recreated-if-key-changes
  - b1b4dafd39 Fix CSR not recreated if key changes

• ISSUE #42165: (arount) top_file_merging_strategy: merge does not works (refs: #43415)

• PR #43672: (rallytime) Back-port #43415 to 2016.11 @ 2017-09-21 16:38:56 UTC
  - PR #43415: (mattLLVW) Fix env_order in state.py (refs: #43672)
  - 1d4fa48209 Merge pull request #43672 from rallytime/bp-43415
  - 3fb42bc238 Fix env_order in state.py

• PR #43673: (rallytime) Back-port #43652 to 2016.11 @ 2017-09-21 16:37:36 UTC
  - PR #43652: (VertigoRay) Salt Repo has Deb 9 and 8 (refs: #43673)
  - ff832ee607 Merge pull request #43673 from rallytime/bp-43652
  - d91c47c6f0 Salt Repo has Deb 9 and 8

• PR #43677: (terminalmage) Fix RST headers for runners (2016.11 branch) @ 2017-09-21 16:35:57 UTC
  - 365cb99ba8 Merge pull request #43677 from terminalmage/runners-docs-2016.11
  - 2fd88e94fa Merge pull request #43677 from rallytime/bp-43652

• PR #43534: (twangboy) Fixes removal of double-quotes by shlex_split in winrepo for 2016.11 @ 2017-09-21 14:39:42 UTC
  - be38239e5d Merge pull request #43534 from twangboy/win_fix_pkg.install_2016.11
  - 1546c1ca04 Add posix=False to call to salt.utils.shlex_split
  - PR #43663: (moio) multiprocessing minion option: documentation fixes (develop) (refs: #43661)

• PR #43661: (moio) multiprocessing minion option: documentation fixes (2016.11) @ 2017-09-21 13:02:27 UTC
  - 0d3fd3d374 Merge pull request #43661 from moio/2016.11-multiprocessing-doc-fix
  - 625eabb83f multiprocessing minion option: documentation fixes

• PR #43646: (brejoc) Added tests for pid-file deletion in DaemonMixIn @ 2017-09-20 19:21:54 UTC
  - 6b4516c025 Merge pull request #43646 from brejoc/2016.11.4-pidfile-tests
  - 96f39a420b Fixed linting
  - 08ba98735 Fixed several issues with the test
  - 3a089e450f Added tests for pid-file deletion in DaemonMixIn

• PR #43591: (rallytime) [2016.11] Merge forward from 2016.11.8 to 2016.11 @ 2017-09-19 16:18:34 UTC
  - cb1625741 Merge pull request #43591 from rallytime/merge-2016.11
  - 57b9d642c2 Merge branch '2016.11.8' into '2016.11'
  - e83421694f Merge pull request #43550 from twangboy/osx_fix_preinstall_2016.11.8
  - 1b04d39d2f Fix logic in /etc/paths.d/salt detection

• PR #43572: (vutny) cloud.action: list_nodes_min returns all EC2 instances @ 2017-09-18 20:36:44 UTC
  - 8671b91f62 Merge pull request #43572 from vutny/fixed-salt-cloud-list-min-instance-set
  - 21966e7ce8 cloud.action: list_nodes_min returns all instances
• PR #43461: (twangboy) Add /norestart switch to vcredist install @ 2017-09-12 20:33:46 UTC
  – f2b86fa2db Merge pull request #43461 from twangboy/win_norestart
  – 2d269d1a76 Change all comment markers to '#'
  – d80a16c9c0c Handle ErrorCode returned by VCRedist installer
  – fb31e9a530 Add /norestart switch to vcredist install

• ISSUE #43267: (brejoc) OSError - Can’t delete PIDfile when not root (refs: #43366)

• PR #43366: (brejoc) Catching error when PIDfile cannot be deleted @ 2017-09-12 15:31:16 UTC
  – 90e8ca9c36 Merge pull request #43366 from brejoc/2016.11.pidfile-fix
  – 6e3eb76c79 Removed unused format argument
  – daf498b3d Catching error when PIDfile cannot be deleted

• ISSUE #43386: (rajvidhimar) Scheduler's job_kwargs not working as expected. (refs: #43442)

• PR #43442: (garethgreenaway) [2016.11] Fixes to scheduler __pub values in kwargs @ 2017-09-12 15:16:20 UTC
  – ae6458607a Merge pull request #43442 from garethgreenaway/43386_2016_11_schedule_kwarg__pub
  – e637ebe86 Merge branch '2016.11' into 43386_2016_11_schedule_kwarg__pub
  – 6114d8dc3 Adding a small check to ensure we do not continue to populate kwargs with __pub_items from the kwargs item.

• ISSUE #43223: (rallytime) Properly deprecate describe_route_table function in boto_vpc module (refs: #43445)

• PR #43445: (rallytime) Add Neon to version list @ 2017-09-12 15:00:27 UTC
  – PR #43445: (rallytime) Bump deprecation warning for boto_vpc.describe_route_table (refs: #43456)
  – 3c429299f Merge pull request #43456 from rallytime/43445_follow_up
  – 35c1d889d Add Neon to version list

• PR #43441: (meaksh) Use $HOME to get the user home directory instead using '~' char @ 2017-09-11 21:25:20 UTC
  – 6db7a721c0 Merge pull request #43441 from meaksh/2016.11-salt-bash-completion-fix
  – be4f26ab21 Use $HOME to get the user home directory instead using '~/' char

• ISSUE #43223: (rallytime) Properly deprecate describe_route_table function in boto_vpc module (refs: #43445)

• PR #43445: (rallytime) Bump deprecation warning for boto_vpc.describe_route_table (refs: #43456) @ 2017-09-11 21:23:28 UTC
  – 05ff44a50 Merge pull request #43445 from rallytime/bump-deprecation-warning
  – c91cd1c6d9 Bump deprecation warning for boto_vpc.describe_route_table

• PR #43432: (rallytime) Back-port #43419 to 2016.11 @ 2017-09-11 17:36:37 UTC
  – PR #43419: (gtmanfred) make cache dirs when spm starts (refs: #43432)
  – c57dc50e3 Merge pull request #43432 from rallytime/bp-43419
  – c471a29527 make cache dirs when spm starts

• ISSUE #43387: (aogier) genesis.bootstrap debootstrap fails if no qemu specified (refs: #43390)

• PR #43390: (aogier) better qemu_static parameter mangle in debootstrap management, tests @ 2017-09-11 13:18:30 UTC
- 57cccd75d0 Merge pull request #43390 from aogier/43387-genesis-qemu
- 496f14a7e7 forgot to mock the proper one
- 51c7a1ba00 only check if static_qemu is_executable()
- 70642e495d better qemu_static parameter mangle in debootstrap management, tests

- **ISSUE #4338**: (LEMNX) virtualenv never-download (refs: #43356)

- **PR #43356**: (gtmanfred) never-download got readded @ 2017-09-07 17:46:05 UTC
  - 6106aec696 Merge pull request #43356 from gtmanfred/2016.11
  - 3f19b247f3 Add handler.messages back in for test comparison
  - 9911b04208 fix test
  - 3c6ae99a77 never-download got readded

- **PR #43325**: (doesitblend) mine_interval option is minutes not seconds @ 2017-09-07 16:58:11 UTC
  - e638fac54e Merge pull request #43325 from doesitblend/salt-mine-doc-fix
  - 1e9d40ac3a Lint: Remove trailing whitespace
  - 51af8f8757 Fix mine_interval phrasing in default file
  - ba0cdd4536 Fix phrasing for mine_interval description
  - 9f03c2d43 Update Salt Mine documentation to show that the mine_interval option is configured in minutes.

- **ISSUE #43086**: (aogier) pylint: Instance of 'tuple' has no 'extend' member (no-member) (refs: #43105)

- **PR #43105**: (aogier) groupadd module: string does not have attribute 'extend', plus homogeneous cmd parm building @ 2017-09-06 15:49:44 UTC
  - fe587f784a Merge pull request #43105 from aogier/43086-no-member
  - 5111ef8bad Merge branch '2016.11' into 43086-no-member

- **PR #43333**: (damon-atkins) Docs are wrong cache_dir (bool) and cache_file (str) cannot be passed as params + 1 bug @ 2017-09-06 14:21:35 UTC
  - d97a680372 Merge pull request #43333 from damon-atkins/2016.11
  - 92de2b498 Update doco
  - fc9e61d12e Update win_pkg.py
  - c91fc14704 Merge branch '2016.11' into 2016.11
  - cb3af2bbbd Docs are wrong cache_dir (bool) and cache_file (str) cannot be passed on the cli (#2)

- **ISSUE #43295**: (V3XATI0N) salt.cache.redis_cache does not actually work. (refs: #43329)

- **PR #43361**: (rallytime) Back-port #43329 to 2016.11 @ 2017-09-05 23:23:01 UTC
  - PR #43329: (johnj) Fix #43329, better handling of consul initialization (refs: #43361)
  - 0c986f5eba Merge pull request #43361 from rallytime/bp-43329
  - b09e5b4379 Fix #43295, better handling of consul initialization issues

- **ISSUE #35840**: (junovitch) preserve_minion_cache is broken in 2016.3+ (refs: #42903)

- **PR #42903**: (junovitch) Fix 'preserve_minion_cache: True' functionality (fixes #35840) @ 2017-09-05 22:57:14 UTC
- 22287439e6 Merge pull request #42903 from junovitch/issue-35840-fix-preserve-minion-cache-2016.11
- c9d4fdbd45 Merge branch '2016.11' into issue-35840-fix-preserve-minion-cache-2016.11
- 93a68e32a5 Merge branch '2016.11' into issue-35840-fix-preserve-minion-cache-2016.11
- 079f097985 Fix 'preserve_minion_cache: True' functionality (fixes #35840)

- **PR #43360:** (terminalmage) Fix failing tests in Fedora @ 2017-09-05 22:23:13 UTC
  - 4860e10757 Merge pull request #43360 from terminalmage/sj-496
  - 433bca14b1 Fix KeyError in yumpkg configparser code on Python 3
  - f6c16935d8 Move --showduplicates before repository-packages

- **PR #43244:** (rallytime) Update release branch section with a few more details @ 2017-09-05 20:27:59 UTC
  - 4ba2dbe41e Merge pull request #43244 from rallytime/release-branch-clarifications
  - 0d5a46baa Update release branch section with a few more details

- **ISSUE #43348:** (9maf4you) network.managed doesn't work on CentOS 7 (refs: #43359)

- **PR #43359:** (gtmanfred) ipaddr_start ipaddr_end for el7 @ 2017-09-05 19:44:24 UTC
  - 1a012eb3d7 Merge pull request #43359 from gtmanfred/ipaddr
  - 23d9aab560 ipaddr_start ipaddr_end for el7

- **PR #43247:** (rallytime) Back-port various mention bot settings to 2016.11 @ 2017-09-05 18:17:54 UTC
  - **PR #43206:** (rallytime) Always notify tkwilliams when changes occur on boto files (refs: #43247)
  - **PR #43183:** (basepi) Add basepi to userBlacklist for mention bot (refs: #43247)
  - **PR #42923:** (rallytime) Always notify ryan-lane when changes occur on boto files (refs: #43247)
  - 8f88111be8 Merge pull request #43247 from rallytime/mentionbot-backports
  - 2b85757d73 Always notify tkwilliams when changes occur on boto files
  - 40b5a29f90 Add basepi to userBlacklist for mention bot
  - bad8f56969 Always notify ryan-lane when changes occur on boto files

- **PR #43277:** (rallytime) Add CODEOWNERS file @ 2017-09-01 16:56:53 UTC
  - 02867fdcd2 Merge pull request #43277 from rallytime/owners-file
  - 2b4d0a0e7 Add CODEOWNERS file

- **PR #43312:** (lordcirth) cron docs: Remind user to use quotes for special strings @ 2017-09-01 16:24:15 UTC
  - 1c1c484479 Merge pull request #43312 from lordcirth/fix-cron-docs
  - ec94a13750 cron docs: Remind user to use quotes for special strings

- **PR #43290:** (lordcirth) Clarify file.py docs @ 2017-09-01 14:30:04 UTC
  - 0d1ed4b750 Merge pull request #43290 from lordcirth/fix-file-path-docs
  - 14a4591854 file.py docs: correct group and mode
  - d4214ca283 file.py docs: specify absolute paths

- **PR #43274:** (terminalmage) Use six.integer_types instead of int @ 2017-08-30 21:32:42 UTC
  - 26ff89539e Merge pull request #43274 from terminalmage/fix-int-types
  - d533877743 Use six.integer_types instead of int
Warning: Some Salt Masters may need to apply a patch for Default Job Cache to prevent a possible crash

An issue exists that prevents the Salt master from cleaning the default job cache. This issue can cause an over-consumption of resources resulting in a crash. 2016.3.0 Salt masters should apply the patch in PR #33555. This issue will be addressed in 2016.3.1.

- issue #33516: When upgrading from 2015.8.10 to 2016.3.0 on centos7/redhat7 salt-minion must be restarted twice.
- issue #33517: SPM does not work on amazon linux 2015 in 2016.3.0.

Backwards-incompatible Changes

- The default path for the extension_modules master config option has been changed. Prior to this release, the location was a directory named extmods in the Salt cachedir. On most platforms, this would put the extension_modules directory in /var/cache/salt/extmods. It has been moved one directory down, into the master cachedir. On most platforms, this is /var/cache/salt/master/extmods. Most users won’t have to worry about this, but those who have been manually placing custom runners into /var/cache/salt/extmods/runners, or outputters into /var/cache/salt/extmods/output, etc. will be affected by this. To transition, it is recommended not to simply move the extmods directory into /var/cache/salt/master, but to copy the custom modules into the salt fileserver under salt://_runners, salt://_output, etc. and sync them using the functions in the new saltutil runner.
- The pkg.check_db function has been removed for yum/dnf.

Core Changes

- The onchanges requisite now fires if any watched state changes. issue #19592.
- The ext_pillar functions must now accept a minion ID as the first argument. This stops the deprecation path started in Salt 0.17.x. Before this minion ID first argument was introduced, the minion ID could be retrieved accessing __opts__['id'] losing the reference to the master ID initially set in opts. This is no longer the case, __opts__['id'] will be kept as the master ID.
- Custom types can now be synced to the master using the new saltutil runner. Before, these needed to manually be placed under the extension_modules directory. This allows custom modules to easily be synced to the master to make them available when compiling Pillar data. Just place custom runners into salt://_runners, custom outputters into salt://_output, etc. and use the functions from the saltutil runner to sync them.
- The client_acl configuration options were renamed to publisher_acl.
- Added a new --config-dump option (issue #26639).
- TCP Transport presence events were updated to work with a NAT (PR #30629).
• A `minion_pillar_cache` setting was added to save rendered pillar data to cachedir for later use when `file_client` is set to local (PR #30428).

• Added the ability for binary data (such as a license key) to be distributed via pillar using the `file.managed` (issue #9569).

• Scheduled jobs now include `success` and `retcode` (issue #24237).

• The `saltversioninfo` grain was changed from a string to a list to enable reading values by index. (PR #30082).

• A `pillar_merge_lists` option was added to enable recursively merging pillar lists by aggregating them instead of replacing them (PR #30062).

• Grain values reported by Debian 8 (jessie) when `lsb-release` is installed were updated for consistency (PR #28649).

• A new option for minions called `master_tries` has been added. This specifies the number of times a minion should attempt to contact a master to attempt a connection. This allows better handling of occasional master downtime in a multi-master topology.

• The default directory for deploying the salt-thin tarball has changed for salt-ssh. It is now `/var/tmp` instead of `/tmp`. Users may also wish to delete any directories in `/tmp` ending with `_salt/` (issue #32771)

### External Module Packaging

Modules may now be packaged via entry-points in setuptools. See external module packaging tutorial for more information.

### Cloud Changes

• Refactored the OpenNebula driver and added numerous `--function` and `--action` commands to enhance Salt support for image, template, security group, virtual network and virtual machine management in OpenNebula.

• Added execution/state modules to support the deployment of AWS cognito identity pools (PR #31094).

• Added ability to set tags and listener policies on a AWS ELB (PR #27552).

### Platform Changes

• Renamed modules related to macOS. The following module filenames were changed. The virtual name remained unchanged.
  - PR ##30558: renamed osxdesktop.py to mac_desktop.py
  - PR ##30557: renamed macports.py to mac_ports.py
  - PR ##30556: renamed darwin_sysctl.py to mac_sysctl.py
  - PR ##30555: renamed brew.py to mac_brew.py
  - PR ##30552: renamed darwin_pkgutil.py to mac_pkgutil.py
Package Support

- Ubuntu Xenial: Packages for Ubuntu Xenial (16.04) are available for 2016.3.0 and onwards. See repo.saltstack.com for more information. Note that Xenial comes with Debian’s packaged version of Salt 2015.8.8 and official repo.saltstack.com packages are available for 2015.8 releases beginning with Salt 2015.8.11.

Proxy Minion Changes

The deprecated config option `enumerate_proxy_minions` has been removed.

As mentioned in earlier documentation, the `add_proxymodule_to_opts` configuration variable defaults to `False` in this release. This means if you have proxymodules or other code looking in `__opts__['proxymodule']` you will need to set this variable in your `/etc/salt/proxy` file, or modify your code to use the `__proxy__` injected variable.

The `__proxyenabled__` directive now only applies to grains and proxy modules themselves. Standard execution modules and state modules are not prevented from loading for proxy minions.

Support has been added to Salt's loader allowing custom proxymodules to be placed in `salt://_proxy`. Proxy minions that need these modules will need to be restarted to pick up any changes. A corresponding utility function, `saltutil.sync_proxymodules`, has been added to sync these modules to minions.

Enhancements in grains processing have made the `__proxyenabled__` directive somewhat redundant in dynamic grains code. It is still required, but best practices for the `__virtual__` function in grains files have changed. It is now recommended that the `__virtual__` functions check to make sure they are being loaded for the correct proxymodule, example below:

```python
def __virtual__():
    
    """
    Only work on proxy
    """
    try:
        if salt.utils.is_proxy() and __opts__['proxy']['proxytype'] == 'ssh_sample':
            return __virtualname__
    except KeyError:
        pass

    return False
```

Note: `salt.utils.is_proxy()` has been renamed to `salt.utils.platform.is_proxy` as of the Oxygen release.

The try/except block above exists because grains are processed very early in the proxy minion startup process, sometimes earlier than the proxy key in the `__opts__` dictionary is populated.

Grains are loaded so early in startup that no dunder dictionaries are present, so `__proxy__`, `__salt__`, etc. are not available. Custom grains located in `/srv/salt/_grains` and in the salt install grains directory can now take a single argument, `proxy`, that is identical to `__proxy__`. This enables patterns like

```python
def get_ip(proxy):
    
    """
    Ask the remote device what IP it has
    """
    return {'ip': proxy['proxymodulename.get_ip']()}
```
Then the grain ip will contain the result of calling the `get_ip()` function in the proxymodule called proxymodulename.

Proxy modules now benefit from including a function called `initialized()`. This function should return `True` if the proxy's `init()` function has been successfully called. This is needed to make grains processing easier.

Finally, if there is a function called `grains` in the proxymodule, it will be executed on proxy-minion startup and its contents will be merged with the rest of the proxy's grains. Since older proxy-minions might have used other methods to call such a function and add its results to grains, this is config-gated by a new proxy configuration option called `proxy_merge_grains_in_module`. This defaults to `False` in this release. It will default to `True` in the release after next. The next release is codenamed Carbon, the following is Nitrogen.

The example proxy minions `rest_sample` and `ssh_sample` have been updated to reflect these changes.

**Syndic Updates**

A major performance and management issue was found and fixed in the syndic. This makes the Salt Syndic substantially more reliable and performant. Please make sure that the syndic and the master of masters which syndics attach to are updated, otherwise the syndic fixes alone can cause minor performance issues with older master of masters. Please update masters first, then syndics. Minions do not need to be updated for this fix to work.

**Module Changes**

- **file execution module**: `show_diff` is deprecated in favor of `show_changes`. (PR #30988)
- **reg execution module**:
  - Removed the following deprecated functions from the reg module (PR #30956):
    - read_key
    - set_key
    - create_key
    - delete_key
  - Removed force parameter from reg state module
  - Fixed virtual function in state
  - Improved error information for reg.delete_value function
- **jboss7 execution module**: deployed function was decoupled from Artifactory by removing Artifactory-specific functionality. Note that the changes in some of the function arguments break existing state files, see issue #30515 and PR #3080 for details.
- **pkg state module**: The wait function was removed, the functionality was replaced with the onchanges requisite (PR #30297).
- **firewalld state module**: A permanent argument was added add_port. Note that permanent defaults to `True`, which changes previous behavior (PR #30275). A bind function was also added that allows binding zones to interfaces and sources (PR #29497).
- **journald beacon module**: The event string was updated to include a tag. Note this might impact existing reactors based on this beacon. (PR #30116).
- **postgres_privileges state module**: The default value of the prepend argument was changed from None to public.
- **zenoss execution module**: The add_device function was updated with a default value of 1000 for prod_state to match the documentation (PR #28924).
The etcd execution module, state module, returner module, and util module were refactor (PR #28599). This refactor changes error returns for several functions (primarily edge cases):

- get: Used to return " on key-not-found. Now returns None.
- set: Used to return " on issues setting keys. Now returns None.
- ls: Used to return [path: {}] on key-not-found. Now returns None.
- Tree: Used to return {} on key-not-found. Now returns None.

smartos_virt execution module: Updated to use most of the new smartos_vmadm (PR #28284).

apache_conf state module, apache_module state module, and apache_site state module: the enable and disable functions were renamed to enabled and disabled, respectively. In PR #33562, these functions were readded and properly deprecated and will be removed in Salt 2017.7.0. This fix will be available in 2016.3.1. As a workaround, try

```python
apache_module.enable({ 'd' if grains.saltversioninfo == [2016, 3, 0] else '' })
```

New Features

Thorium - Provisional New Reactor

The 2016.3 release introduces the new Thorium Reactor. This reactor is an experimental new feature that implements a flow programming interface using the salt state system as the engine. This means that the Thorium reactor uses a classic state tree approach to create a reactor that can aggregate event data from multiple sources and make aggregate decisions about executing reactions.

This feature is both experimental and provisional, it may be removed and APIs may be changed. This system should be considered as ambitious as the Salt State System in that the scope of adding a programmable logic engine of this scale into the event systems is non trivial.

See Thorium Complex Reactor.

Improved Mac OS Support

Improved Solaris Support

A lot of work was done to improve support for SmartOS. This work also resulted in improvements for Solaris and illumos as SmartOS.

- rewrite of vmadm module (SmartOS)
- rewrite of imgadm module (SmartOS)
- depreciation of virt module in favor of vmadm (SmartOS)
- implemented smartos state (SmartOS)
- improved zpool module add SmartOS, illumos and Solaris support
- improved zfs module add SmartOS, illumos and Solaris support
- implemented zpool state
- implemented zfs state implemented solaris_system system module to provide better Solaris support (PR #30519)
- other minor fixes to grains, localmod, ...
**Tornado Transport**

**Important:** The Tornado Transport wire protocol was changed in 2016.3, making it incompatible with 2015.8 (PR #29339).

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**Windows DSC Integration (Experimental)**

**Dimension Data Cloud Support**

A SaltStack Cloud driver for Dimension Data Public Cloud, provides the driver functionality to service automation for any of the Dimension Data Public Cloud locations:

- Deploy new virtual machines
- List and query virtual machine images
- Destroy and query virtual machines

Documentation of the Dimension Data SaltStack integration is found on developer.dimensiondata.com

**Minion Blackout**

During a blackout, minions will not execute any remote execution commands, except for saltutil.refresh_pillar. Blackouts are enabled using a special pillar key, minion_blackout set to True.

See Minion Blackout.

**Splunk Returner**

A Splunk Returner that uses HTTP Event Collector is now available (PR #30718).

**SQLCipher Pillar Module**

Support was added for retrieving pillar data via queries to SQLCipher databases (PR #29782).

**New Modules**

The following list contains a link to the new modules added in this release.
Beacons

- beacons.adb
- beacons.glxinfo
- beacons.memusage
- beacons.network_settings
- beacons.proxy_example
- beacons.salt_proxy

Engines

- engines.docker_events
- engines.redis_sentinel
- engines.slack
- engines.sqs_events
- engines.thorium

Execution Modules

- modules.bcache
- modules.beacons
- modules.boto_cloudtrail
  - modules.boto_datapipeline
- modules.boto_iot
- modules.boto_lambda
- modules.boto_s3_bucket
- modules.chronos
- modules.cytest
- modules.dockercompose
- modules.dsc
  - modules.ethtool
- modules.github
  - modules.infoblox
- modules.iwtools
- modules.jenkins
- modules.linux_ip
- modules.mac_assistive
- modules.mac_brew
- modules.mac_defaults
- modules.mac_desktop
- modules.mac_keychain
- modules.mac_pkgutil
- modules.mac_ports
- modules.mac_power
- modules.mac_service
- modules.mac_shadow
- modules.mac_softwareupdate
- modules.mac_sysctl
- modules.mac_system
- modules.mac_timezone
- modules.mac_xattr
- modules.marathon
- modules.minion
- modules.openvswitch
- modules.opkg
- modules.philips_hue
- modules.proxy
- modules.pushbullet
- modules.restartcheck
- modules.s6
- modules.salt_proxy
- modules.ssh_package
- modules.ssh_service
- modules.sysfs
- modules.vboxmanage
- modules.win_certutil
- modules.win_dism
- modules.win_dism
- modules.win_license
- modules.win_iis
- modules.win_task
- modules.zabbix
Pillar

- pillar.http_yaml
- pillar.stack

Proxy

- proxy.chronos
  - proxy.junos
- proxy.marathon
- proxy.phillips_hue
- proxy.ssh_sample

Roster

- roster.range

States

- states.apache_conf
- states.apache_site
- states.boto_cloudtrail
- states.boto_datapipeline
- states.boto_iot
- states.boto_lamda
- states.boto_s3_bucket
- states.chocolatey
- states.chronos_job
- states.firewall
- states.github
- states.gpg
- states.grafana_dashboard
- states.grafana_datasource
- states.infoblox
- states.jenkins
- states.mac_assistive
- states.mac_defaults
- states.mac_keychain
- states.mac_xattr
30.2.63 Salt 2016.3.1 Release Notes

Version 2016.3.1 is a bugfix release for 2016.3.0.

Statistics

- Total Merges: 87
- Total Issue References: 23
- Total PR References: 58
- Contributors: 25 (abednarik, amontalban, anlutro, habilen, cachedout, clburlison, danslimmon, eliasp, glomium, jacobhammons, jfindlay, kev009, lomeroe, michalsuba, neil-williamson, onorua, opdude, rallytime, sjorge, terminalmage, thatchi45, ticosax, tomlaredo, twangboy, zigarn)

Final Release of Debian 7 Packages

Regular security support for Debian 7 ended on April 25th, 2016. As a result, 2016.3.1 and 2015.8.10 will be the last Salt releases for which Debian 7 packages are created.

Changelog for v2016.3.0..v2016.3.1

Generated at: 2018-05-27 04:31:54 UTC

- PR #33883: (jfindlay) add 2016.3.1 release notes
- PR #33866: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-06-08 19:49:56 UTC
  - be20ce1bbf Merge pull request #33866 from rallytime/merge-2016.3
  - 595d4f2ac3 Fixup new groupadd tests for syntax change in 2016.3
- c5b4ec0b0f Merge branch '2015.8' into '2016.3'
  * ec09095c45 Merge pull request #33827 from cachedout/issue_33810
    - 9d36f1e474 Fix broken locate.locate function
  * f7b3d0eda0 Merge pull request #33839 from cachedout/fix_pkgresource_test_stacktrace
    - 435547a747 Fix another unit test stacktrace in pkg_resource
  * 5f081ef31c Merge pull request #33840 from cachedout/remove_matcher_unit_tests
    - 6297448377 Remove matcher tests
  * cda032dab2 Merge pull request #33836 from cachedout/fix_winserver_manager_test
    - 453fb1ac91 Fixing more stupid unit tests
  * 1db559afe9 Merge pull request #33805 from jfindlay/pkg_tests
    - 0c069ddc95 states.pkg int tests: skip if pkg mgr unavailable
  * 3984b65486 Merge pull request #33808 from jfindlay/gem_tests
    - f7c19a1a58 modules.gem int tests: relax version checks
    - 6af47d2ba7 modules.gem int tests: remove pkgs before testing install
  * c30d8a8c61 Merge pull request #33770 from jfindlay/service_tests
    - f13f914755 states.service: add integration tests
    - 90aee79c39 states.service.mod_watch: update unit test
    - d210a92f09 states.service.mod_watch: update sfun and force docs
  * 7fdbe9a28 Merge pull request #33691 from jtand/gem_integration_test
    - ff2dae103d ubuntu doesn't install default gems when ruby is installed
    - 504df9a65a Fixed lint error
    - 0cb1bfa0d3 Removed extra :
    - 86f59b3e80 Made more pythonic
    - 2f36f34981 Fixed salt.util import. Added status check to make sure external resource is available
    - 400a71ec33 Removed redundancies
    - 91db411bea A couple lint fixes
    - c97f3319b9 Add check for gem binary
    - 210aceb402 Refactored tests to not use return messages
    - 9d437bd45d Removed artifact from testing
    - 134e1fa888 Fixed typos, and added destructiveTest decorator
    - 37bc3ad8fd Fixed typo, uninstalled to uninstall
    - 5b23b91ac6 Integration test for gem module
  * bb4194bb79 Merge pull request #33777 from sodium-chloride/2015.8-2016-0604-1939
    - c1fd830a1a Fix minor docstring issue of arg being missing
  * c749aea409 Merge pull request #33759 from cachedout/issue_31219
Salt Documentation, Release 3002.5

- 15a39f8646 Catch no minions exception in batch mode
- 47d668e071 Merge pull request #33719 from cachedout/fixup_33653
  - 635efa248b Change to just surround the mkdir
  - 21b7123a60 Catch oserror for race condition
- 11e39e7203 Merge pull request #33712 from meaksh/fix-for-groupadd-module-failures-in-SLE11-2015.8
  - ab738416ba pylint fix
  - bf27e5d36e test_members cleanup
  - ba815dbf76 improvements on groupadd unit tests
  - 3bbc5ae0d9 one line is better
  - a53dc192e9 fix groupadd module for sles11 systems
- 2c450a7494 Merge pull request #33718 from rallytime/bp-33700
  - a6a446121a Fix speed issue
  - a41146730a Fix incorrect args passed to timezone.set_hwclock
- b0770f0a0 Merge pull request #33727 from terminalimage/issue33725
  - d8ba7ed5a5 Fix git_pillar edge case for remote repos without a master branch
- 015e50ecce8 Merge pull request #33728 from jfindlay/test_state_test
  - 87e018af2a states.test.configurable_test_state: add unit tests
  - c2d0679c4b states.test.configurable_test_state: refactor change_data
  - f06f1af1f states.test.configurable_test_state test mode
- 1cf8fe3f1d Merge pull request #33729 from twangboy/fix_win_servermanager
  - 2de91d166f Fix docstring
  - 9870479d99 Add exclude option to state
  - 50bd76e206 Add exclude option
- 6c150d840d Merge pull request #33743 from vutny/drop-debian-community-repo-doc
  - 8621f5be54 Debian installation docs: drop section about community-maintained repository
- 56c0a42e12 Create missing jid dir if it doesn't exist (#33653)
- 8a566ff4b9 Merge pull request #33654 from twangboy/fix_win_servermanager
  - 6c7b21676a Fix lint and tests
  - 4775e6dbf0 Add additional params to state
  - b0af32346d Add additional params to install and remove
- 996ff56dd4 Merge pull request #33679 from terminalimage/issue33424
  - 9da40c4437 Append empty dictionaries for saltenvs with no top file
  - 5eb1b3ca62 Only compile the template contents if they evaluate to True

- **ISSUE #33843:** (richardscollin) 2016.3 Test Suite TCP Error (refs: #33860)
- **PR #33860:** (cachedout) Allow socket closes when the socket is disconnected @ 2016-06-08 18:26:16 UTC
- 669aa92d59 Merge pull request #33860 from cachedout/issue_33843
- 2c88e22c07 Use errno
- e7de99dd0e Correct silly mistake
- 7a46360a13 Allow socket closes when the socket is disconnected

- **ISSUE #33818**: (saltuser) 2016.3.0 minion default log level INFO (refs: #33821, #33861)
  - **PR #33861**: (cachedout) Set master and cloud to log level warning
  - **PR #33821**: (cachedout) Restore deafault log level to warning (refs: #33861)

- **PR #33698**: (opdude) Vsphere fixes @ 2016-06-08 14:12:17 UTC
  - a3202f1ad6 Merge pull request #33698 from Unity-Technologies/vsphere-fixes
  - 8ff5906fad Revert "Fix a bug when creating a new VM and changing the network info"
  - 636fe00f0 Make sure we only use GetConnection if we are using a proxy salt minion
  - 64e9334d56 Fix a bug with self signed certificates and creating a new VM
  - 7834a6a7df Fix a bug when creating a new VM and changing the network info

- **PR #33771**: (twangboy) Additional functionality to win_dism.py @ 2016-06-08 13:58:20 UTC
  - 01aaf3e2a9 Merge pull request #33771 from twangboy/win_dism
  - 9be459f37a Fix some more lint
  - 421de97957 Fix/add unit tests for state
  - 8d66f9e74c Add missing unit tests
  - 60f85f73d Fix unit tests for module
  - b574947afe Fix some lint errors
  - a32774c07a Add salt.utils.compare_lists
  - 7ff7050705 Fix incorrect parameters in the state
  - b8ee89f18e Fix typos
  - 10458d8a70 Remove multiple lookups, faster
  - d9b848c0d9 Change to dict instead of error
  - 6510e0a5b0 Add restart option
  - da8562d0c8 Add quiet and norestart options
  - 946371b1f1 Handle errors, ensure add/remove
  - 7e6382a8b2 Use list instead of string for cmd
  - fbdd28f144 Add state functions
  - 90a4ee3d96 Merge branch '2016.3' of https://github.com/saltstack/salt into win_dism
  - 00c24abe1f Add get functions
  - c6621053fd Add additional functions
  - 36507845b6 Update documentation

- **ISSUE #33649**: (tyhunt99) 2016.3.0 dockerenv state fails comparing cmd configuration (refs: #33851)
- **PR #33851**: (ticosax) [dockerng] Add support for edge case when *Cmd* and *Entrypoint* can't be blanked @ 2016-06-08 13:52:40 UTC
  - f546e47552 Merge pull request #33851 from ticosax/fix-entrypoint-support
  - 0d40e14f3 Add support for edge case when Cmd and Entrypoint can't be blanked

- **ISSUE #33818**: (saltuser) 2016.3.0 minion default log level INFO (refs: #33821, #33861)

- **PR #33821**: (cachedout) Restore deafault log level to warning (refs: #33861) @ 2016-06-07 16:51:46 UTC
  - 3f6d06a060 Merge pull request #33821 from cachedout/issue_33818
  - 52f1f7a38 Restore deafault log level to warning

- **ISSUE #33806**: (cachedout) Work around upstream cherrypy bug @ 2016-06-07 14:39:57 UTC
  - a8458c788 Merge pull request #33806 from cachedout/cherrypy_1444
  - 1b537d41b6 Work around upstream cherrypy bug

- **ISSUE #33741**: (jopohl) pkg.install: ERROR: Zypper command failure: Unknown option '--no-refresh' (refs: #33763)

- **PR #33763**: (abednarik) Insert --no-refresh before install in Zypper. @ 2016-06-06 10:53:27 UTC
  - a92e155a04 Merge pull request #33763 from abednarik/abednarik_zypper_no_refresh_fix
  - 7c909a1d7f Insert --no-refresh before install in Zypper.

- **ISSUE #33647**: (closepin) Pillars passed from command-line override pillar subtrees instead of merging (refs: #33764)

- **PR #33764**: (terminalmage) Merge instead of update pillar overrides @ 2016-06-06 10:52:22 UTC
  - 30684a2d7 Merge pull request #33764 from terminalmage/issue33647
  - 91400c995 Merge instead of update pillar overrides

- **PR #33772**: (danslimmon) Fixed spelling of "through" @ 2016-06-06 10:50:54 UTC
  - b37a862b70 Merge pull request #33772 from danslimmon/trough-through
  - ea3498aedc Fixed spelling of "through"

- **ISSUE #33614**: (knuta) grains.has_key() always returns false in 2016.3.0 (refs: #33651)

- **PR #33651**: (cachedout) Restore grains context to renderers @ 2016-06-03 20:48:44 UTC
- a8d9221631 Merge pull request #33651 from cachedout/issue_33614
- 5518e1dd14 Fix whitespace
- 7b50e1766e Better fix
- 4e18f7000 Restore grains context to renderers

- PR #33757: (cachedout) Reminder not to return non-serializable data from states @ 2016-06-03 19:23:54 UTC
  - daf462e430 Merge pull request #33757 from cachedout/state_set_doc
  - 500d4cecc2 Reminder not to return non-serializable data from states

- ISSUE #33605: (morganwillcock) win_pkg: UnicodeEncodeError where DisplayName includes "Español" (refs: #33670)

- PR #33670: (rallytime) Handle non-ascii package names in state.format_log @ 2016-06-03 16:16:53 UTC
  - a5684ed123 Merge pull request #33670 from rallytime/fix-33605
  - 59bd51f4c8 Update test to correct iteration
  - a580d1e6e0 Add unit test for format_log change
  - e6809745c6 Revert "Track down more unicode instances and add a test"
  - 9729aed2e2 Track down more unicode instances and add a test
  - ae332df88 Handle non-ascii package names in state.format_log

- ISSUE #33588: (whytwelv) rabbitmq_user.present error (refs: #33641)

- PR #33723: (rallytime) Back-port #33641 to 2016.3 @ 2016-06-03 16:07:53 UTC
  - PR #33641: (glomium) check rabbitmq version and use different api to validate a user's password... (refs: #33723)
  - 56e0b363f8 Merge pull request #33723 from rallytime/bp-33641
  - 77a51a00a3 pylint W0141, W0702
  - f8518939e7 check rabbitmq version and use different api to validate a user's password

- ISSUE #32059: (fuzzy-id) dockereng fails with: create_container() got an unexpected keyword argument 'binds'
  (refs: #33748)

- PR #33748: (ticosax) HostConfig has been introduced by docker api version 1.15 @ 2016-06-03 15:28:40 UTC
  - c2b970789c Merge pull request #33748 from ticosax/adjust-api-version-host-config
  - 134e4a9abf HostConfig has been introduced by docker api version 1.15

- PR #33745: (eliasp) Typos (privileges → privileges) @ 2016-06-03 15:14:37 UTC
  - e08c68a6c Merge pull request #33745 from eliasp/2016.3-typo-privileges-privileges
  - 646bc426c6 Typos (privileges → privileges)

- ISSUE #33537: (anlutro) apache_module state functions changed names with no deprecation warning or backward compatibility (refs: #33562)

- PR #33562: (jfindlay) states.apache_*: readd and deprecate enable and disable @ 2016-06-02 19:51:37 UTC
  - PR #29651: (zigarn) Deb apache fixes (refs: #33562)
  - 5f1c6902aa Merge pull request #33562 from jfindlay/apache_funs
  - 9b0eb858a6 add note and workaround to release notes
- 17306bf6c69 states.apache_*: read and deprecate enable and disable

- **ISSUE #33632**: (rbjorklin) dockerng.volume_present: Dryrun isn’t dry (refs: #33659)
- **PR #33659**: (danslimmon) Added test mode to states.dockerng. Resolves #33632. @ 2016-06-02 17:45:49 UTC
  - d3253effe9 Merge pull request #33659 from danslimmon/dockerng-dryrun-33632
  - ef885c1b7e Added test mode to dockerng.volume_present. Resolves #33632.
- **PR #33696**: (clburlison) Update mac native package for upcoming release @ 2016-06-02 17:44:01 UTC
  - 1d6582b659 Merge pull request #33696 from clburlison/2016.3-pkg-fix
  - b483d1d8a6 Update mac native package for upcoming release
- **PR #33710**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-06-02 16:19:00 UTC
  - 789665f30 Merge pull request #33710 from rallytime/merge-2016.3
  - b7accb0b3b Merge branch '2015.8' into '2016.3'
  - c8dc70b96a Merge pull request #33685 from jfindlay/get_url_test
    - 2b5035fde0 modules.cp.get_url: add test for https://
  - 5e022ff29c Merge pull request #33581 from dincamihai/2015.8
    - 788730ea72 DRY test
    - 1d3769ccfa Improve zypper_patch_config looks
    - 42d8d4195c Assert only gpgautoimport: True works
    - ced75e8e62 Reverse if conditions and rename variable
    - 80fbe5c52 Reduce dicts and lists to one line where possible
    - 1d56d7d60 Update test method names to pass pylint
    - c7ae5907ee Call zypper refresh after adding/modifying a repository
  - 069ee15b7c Merge pull request #33681 from rallytime/bp-33599
    - 45143a599b use requests streaming for uploads/downloads to file (return_bin unchanged) allows downloading files larger than amount of memory (non-stream reads into memory before writing to disk or uploading)
    - 4a923f03f first go at having requests use streaming for get/put requests
  - 13537c4891 Merge pull request #33396 from babilen/issue-33393
    - 57e0475cd4 Make pip InstallationError import more robust
    - 291a3e21fa Remove duplicated code.
  - 7bc4e4ce1a Merge pull request #33652 from terminalimage/zh723
    - 411841603a Lower the log level for failed auths
  - 504989388a Merge pull request #33615 from danslimmon/mysql-traceback-33582
    - 180099ae9f Wrote test for broken server connection
    - c6c3ff02e3 Added some error checking to resolve #33582.
- **ISSUE #32916**: (giannello) file.managed memory usage with s3 sources (refs: #33599, #33682)
  - **PR #33682**: (lomeroe) backport #33599 to 2016.3
  - **PR #33599**: (lomeroe) Fix s3 large file download (refs: #33681, #33682)
• ISSUE #33532: (Routhinator) 2016.3 breaks existing formulas that work on 2015.8 (refs: #33688)
  - PR #33688: (terminalmage) Undo __repr__() and __str__() parts of d5a7dcc

• ISSUE #29265: (mbochenk) mysql_user.present does not work with MySQL 5.7 (refs: #33690, #32440, #30603)
  - PR #33690: (neil-williamson) Remove explicit PW column default from mysql_user
  - PR #32440: (neil-williamson) Automatically detect correct MySQL password column for 5.7 and fix setting passwords (refs: #33690)
  - PR #30603: (michalsuba) addressing #29265 (refs: #32440)

• PR #33680: (rallytime) Back-port #32942 to 2016.3 @ 2016-06-01 22:14:20 UTC
  - PR #32942: (onorua) Make tornado raise error configurable (refs: #33680)
  - c725854596 Merge pull request #33680 from rallytime/bp-32942
  - d566ec4b31 Make tornado raise error configurable (#32942)

• PR #33677: (twangboy) Pass kwargs to cmd.run @ 2016-06-01 20:20:08 UTC
  - 9571dad678 Merge pull request #33677 from twangboy/fix_runas
  - 4272afe0d5 Pass kwargs to cmd.run

• ISSUE #33529: (djneades) pkg.latest completely broken on FreeBSD in salt-ssh 2016.3 (refs: #33648)

• PR #33648: (terminalmage) salt.modules.pkgng: Fix incorrect usage of _pkg() @ 2016-06-01 16:37:46 UTC
  - d566ec4b31 Merge pull request #33648 from terminalmage/issue33529
  - 4ad80d29b6 salt.modules.pkgng: Fix incorrect usage of _pkg()

• PR #33646: (jfindlay) Fix more tmp paths on MacOS @ 2016-06-01 16:36:33 UTC
  - e92d6e214f Merge pull request #33646 from jfindlay/mac_tests
  - c53a727ce18 tests.runtests: use globally-determined temppdir
  - 8295b48459 test.integration: use hard /tmp on MacOS

• PR #33656: (cachedout) Fix indentation error in minion.py @ 2016-06-01 16:23:20 UTC
  - PR #33076: (cachedout) Avoid second grains load on windows multiprocessing (refs: #33656)
  - 9603cd3c0d Merge pull request #33656 from cachedout/fix_33076
  - 825944091f Fix indentation error in minion.py

• PR #33637: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-05-31 18:43:17 UTC
  - b379dc57fd Merge pull request #33637 from rallytime/merge-2016.3
  - cd05d2bed1 Fix zypper test
  - 74a7b78e00 Merge branch '2015.8' into '2016.3'
    * b47182e47c Merge pull request #33558 from twangboy/fix_win_servermanager
      * 62a6bd0e0a Fix comment when already installed
      * 79bc7195dc Fix unit tests
      * 56a6f8bb83 Fix changes
      * 8ebf99ec5e Fix restart_needed
      * 6e478cbda0 Add restart needed
• 72ebf26616 Add missing import
• 193583be96 Use dictionary compare for changes in remove
• 1ae7dd76c1 Use dictionary compare for changes
• 58d89d66e3 Merge pull request #33555 from cachedout/issue_33544
  • fe7ee7a470 Fix crashing Maintenence process
• d052908729 Merge pull request #33501 from meaksh/zypper-download-check-signature-2015.8
  • eaaef25c79 lint issue fixed
  • 6b6febb211 unit tests for rpm.checksum() and zypper.download()
• e2d0c4abb1 Merge pull request #33513 from rallytime/fixed-33319
  • 81c1471209 Add a section to the jinja docs about escaping jinja
• fabc15e616 Merge pull request #33520 from jacobhammons/release-notes.8
  • 42e358af7d Updated version numbers in the docs for the 2016.3.0 release
  
  – PR #33638: (rallytime) Back-port #33613 to 2016.3
  – PR #33613: (abednarik) Updated apache_module for backward compatible. (refs: #33638)

• ISSUE #33590: (morganwillcock) ini_manage.options_absent: only works in test mode (TypeError: unhashable type: 'list') (refs: #33606)

• PR #33606: (danslimmon) Fixed ini.options_absent. Resolves #33590. @ 2016-05-31 15:51:35 UTC
  • 23506f8279 Merge pull request #33606 from danslimmon/ini-optionsabsent-33590
  • fb13852102 Fixed ini.options_absent. Resolves #33590.

• ISSUE #33578: (ohauer) 2016.3.0 FreeBSD Failed to load grains defined in grain file disks.disks in function <function disks at 0x80cff9320>, error: (refs: #33604, #33767)

• PR #33604: (kev009) Fix #33578 disks grain (refs: #33767) @ 2016-05-31 15:17:37 UTC
  • 44e8c9e720 Merge pull request #33604 from kev009/fixed-33578
  • e452ec514e Ignore cdroms in disks grain
  • 8bf0290024 Make disks grain datatyper more resilient
  – PR #33631: (babilen) Fix 'virt' state names in cloud controller tutorial

• PR #33603: (sjorge) allow esky packages to be build on base64 2015Q4 @ 2016-05-29 00:36:02 UTC
  • e9a0c9304a Merge pull request #33603 from sjorge/2016.3-smartos-esky
  • 1064102394 add no-wheel, instructions were failing for someone testing due to wheel being used nog producing an egg
  • c85e03ecf7 allow for newer pyzmq in esky packages
  • 1620b8c0fa allow esky packages to be build on base64 2015Q4

• ISSUE #33565: (jamesp9) Typo in states/virtualenv_mod.py (refs: #33576)

• PR #33576: (tomlaredo) Fix #33565 (typo causes invalid syntax) @ 2016-05-27 16:46:35 UTC
  • afd3c1b9bd Merge pull request #33576 from rodacom/2016.3
  • 9f7d81e0cc Fix #33565

• ISSUE #33530: (kluoto) Centos7 pkg.upgrade failure on 2016.3 (refs: #33549)
Chapter 30. Release Notes

- **PR #33549**: (thatch45) Fix for #33530 @ 2016-05-26 19:26:01 UTC
  - 71145ddd7 Merge pull request #33549 from thatch45/33530
  - b906859f6e Fix for #33530

- **PR #33538**: (anlutro) Fix a KeyError if group is provided but not user in cmd states @ 2016-05-26 17:58:05 UTC
  - 4831c6a353 Merge pull request #33538 from alprs/fix-cmd_user_runas_deprecation_bug
  - c738a0dc76 fix a KeyError if group is provided but not user

- **ISSUE #33543**: (arthurlogilab) Thorium documentation is incorrectly formatted and appears partially on docs.saltstack.com (refs: #33550)

- **PR #33550**: (jacobhammons) Fixes display of thorium docs @ 2016-05-26 17:57:05 UTC
  - 5287a1b8c8 Merge pull request #33550 from saltstack/jacobhammons-patch-1
  - 65df3a6fa2 Refs #33543

- **PR #33509**: (twangboy) Detect System Architecture for Mac Build @ 2016-05-26 14:40:54 UTC
  - 3a95f8a977 Merge pull request #33509 from twangboy/fixed_arch
  - 7844059dfc Handle system architecture

- **PR #33522**: (jfindlay) rework modules.mac_brew.latest_version to work around brew version inconsistency @ 2016-05-26 14:19:25 UTC
  - 0bc881b4da Merge pull request #33522 from jfindlay/mac_pkg
  - 2781377b17 modules.mac_brew: update unit tests
  - 0ed3598fc9 modules.mac_brew int tests: add latest_version test
  - 8789c2d06d modules.mac_brew int tests: add list_upgrades,info_installed
  - be381e0fc9 modules.mac_brew int tests: move decorators to class
  - fa3ec8a2bf modules.mac_brew.latest_version: refactor to use standard methods
  - 58492c29cf modules.mac_brew: add info_installed function
  - 9abf8f4832 modules.mac_brew.list_upgrades: use brew's json output
  - 77a4f5b01e modules.mac_brew: move retcode check to _call_brew

- **PR #33519**: (jacobhammons) New doc site layout, 2016.3.0 release note known issue additions @ 2016-05-26 13:53:21 UTC
  - 518713f5e5 Merge pull request #33519 from jacobhammons/2016.3.0rel
  - a424e38f5d New doc site layout, 2016.3.0 release note known issue additions

- **PR #33508**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-05-25 20:34:49 UTC
  - 9199101ef2 Merge pull request #33508 from rallytime/merge-2016.3
  - a5e0141eda Merge branch '2015.8' into '2106.3'
  - 5a6b037cbd Merge pull request #33507 from rallytime/merge-2015.8
  - 03b0c97520 Merge branch '2015.5' into '2015.8'
  - 6f7faa0354 Merge pull request #33486 from jtnand/2015.5
    - d1e210ff8 Merge branch '2015.5' of https://github.com/saltstack/salt into 2015.5
    - ee2ae0ea8a Added docstring examples to glance.image_schema and schema_get
· 59e90064e6 modules.swift.head does not have a body. Should not be checked for a docstring right now.

· f72ec1479b Merge pull request #33482 from rallytime/pillar-opt-docs
  087564528d Add pillar_opts docs to master.rst

· dc644b145d Merge pull request #33488 from rallytime/fix-18752
  · b0a9f4181f Add docs for the syndic_finger config

· a4e84aa7d2 Merge pull request #33454 from scubahub/2015.5
  · df3c0b8e78 Correct (and make consistent) determination of the test flag.

· 3a52ace673 manage account information for pam (#33473)

- ee76be3b0b Merge pull request #33503 from rallytime/fix-15252
  · cfc07f7641 Add docs about minion config file in standalone minion docs

- e9b648e461 Merge pull request #33474 from cachedout/issue_29451
  · aa2bac3a0d Remove debugging
  · 68d8050cb8 Fix diskusage beacon

- 3bfb6bf719 Merge pull request #33465 from meaksh/check-if-job-returns-successfully-2015.8
  · 9deb70fd8e jobs.exit_success() now works parsing the results of jobs.lookup_id()
  · 7ba40c4f31 jobs.exit_success allow to check if a job has executed and exit successfully

- 70eb7b66f3 Merge pull request #33487 from jtrand/glance_doc_fixes
  · 0b1cae05d9 Added docstring examples to glance methods and nova.list
  · ebf1256545 Don't need to check swift.head due to it having no body

- 56ea97991e Merge pull request #33481 from rallytime/fix-33423
  · 7fd3e8f361 Fix docs about etcd config options and add pillar_opts doc

· 2394dc4bf Merge pull request #33490 from rallytime/fix-16319
  · 0c5548f9d1 Document the postgres.psql_query function

· ede232f0f1 Merge pull request #33480 from jfindlay/service_doc
  · 29c00a11b1 states.service: clarify function description language
  · 6a9ae09e79 states.service.__virtual__: add load fail reason

- 4f96cc1f54 Return full pending computer name (#33483)

- a89be5e9d4 Use six.string_types in jobs runner (#33499)

- 2e24a04565 Merge pull request #33491 from BlaineAtAffirm/2015.8
  · 7599b18995 fix jobs.list_jobs failing with search_target

- 1861af427e Merge pull request #33478 from rallytime/bp-32484
  · 042f17ef44 Only unsub if we have a jid

- b8154b678e Merge pull request #33457 from rallytime/doc-formatting
  · 82f8f3efff Make doc formatting consistent and use correct versionadded

- 1dfa95651c Don't allow a "repo" kwarg for pkgrepo.managed (#33477)
Salt Documentation, Release 3002.5

− b4071b07f1 Allow for config entry to be a list in a dict for beacons (#33476)
− 9f56ab4c45 Merge pull request #33469 from meaksh/zypper-download-check-signature-2015.8
  * a65071a6d1 simpler rpm.checksum function
  * 80fe303e38 Renamed check_sig to checksum and some refactoring
  * d56e3f4258 bugfix: showing errors when a package download fails using zypper pkg.download
  * 8a21b9149e check the signature of downloaded RPM files
− 00f9090928 Add docs about PyYAML’s 1024 character limitations for simple keys (#33459)
− 3b12f396b4 Prevent several minion processes on the same machine (#33464)
− c8b4f338d8 Make --gpg-auto-import-keys a global param when calling zypper (#33432)
− 0c4e38ced4 Fix the saltutil.wheel function and add integration tests (#33414)

• PR #33505: (twangboy) Fix build script where pip didn’t work @ 2016-05-25 18:15:27 UTC
  − a43ffadcb7 Merge pull request #33505 from twangboy/fix_build_script
  − 7d78e5d612 Fix build script where pip wouldn’t work

• PR #33076: (cachedout) Avoid second grains load on windows multiprocessing (refs: #33656) @ 2016-05-25 17:16:06 UTC
  − 4cf40da7d7 Merge pull request #33076 from cachedout/win_grains
  − dab9825c88 Fix indentation error
  − b14e2cee9e Avoid second grains load on windows multiprocessing

30.2.64 Salt 2016.3.2 Release Notes

Version 2016.3.2 is a bugfix release for 2016.3.0.

Statistics

• Total Merges: 200
• Total Issue References: 66
• Total PR References: 177
• Contributors: 52 (Ch3LL, DarkKnightCZ, DmitryKuzmenko, Inveracity, abalashov, abednarik, adelcast, aja-coutot, amendlik, anlutro, aphor, artxki, bbinet, bensherman, cachedout, christoe, clinta, cro, dmurphy18, dongweiming, eliasp, eradman, farcaller, garethgreenaway, glomium, gtmanfred, isbm, jacobhammons, jacob-weinstock, jfindlay, jmaecfar, jhmcknight, justinta, l2o33rt, lomeroe, meaksh, nulfox, opdude, peterdemin, rallytime, s0undt3ch, secumod, sjmh, sjorge, terminalmage, thatch45, themalkolm, ticosax, tmehlinger, twangboy, vutny, whiteinge)
Returner Changes

- Any returner which implements a `save_load` function is now required to accept a `minions` keyword argument. All returners which ship with Salt have been modified to do so.

Changelog for v2016.3.1..v2016.3.2

Generated at: 2018-05-27 04:37:58 UTC

- PR #34988: (rallytime) Update release notes with new changes @ 2016-07-27 15:54:16 UTC
  - 7216dce8 Merge pull request #34988 from rallytime/release-notes-update
  - a2aae987a6 Update release notes with new changes
- PR #34946: (anlutro) Fix virtualenv behavior when requirements files are in subdirectories @ 2016-07-27 14:43:27 UTC
  - d63ac1671c Merge pull request #34946 from alprs/fix-venv_reqs_subdir
  - f773d63cbf normalize requirements path to be absolute
  - bdec73bb03 remove unnecessary os.path.basename logic
- PR #34957: (sjmh) Don’t fall through to checking auth entries @ 2016-07-26 22:16:17 UTC
  - f765f4a3aa Merge pull request #34957 from sjmh/2016.3
  - 0095dbe530 Don’t fall through to checking auth entries
- PR #34971: (cachedout) Increase timeout for grains test @ 2016-07-26 22:11:29 UTC
  - 2d3b95dec9 Merge pull request #34971 from cachedout/increase_timeout_grains_test
  - 82d271b43a Increase timeout for grains test
- ISSUE saltstack/salt#34873: (Cashwini) Scheduler on master does not recognize the date strings supported by python dateutil (refs: #34951)
- ISSUE #34873: (Cashwini) Scheduler on master does not recognize the date strings supported by python dateutil (refs: #34951)
- PR #34951: (vutny) Fix #34873 @ 2016-07-26 17:07:48 UTC
  - f23e8c525e Merge pull request #34951 from vutny/fix-schedule-dateutil
  - 0f9490991 Fix job scheduling using when parameter (by python-dateutil)
- PR #34935: (rallytime) Avoid UnboundLocalError in beacons module @ 2016-07-26 17:01:23 UTC
  - PR #34894: (rallytime) [develop] Merge forward from 2016.3 to develop (refs: #34935)
  - deb1331601 Merge pull request #34935 from rallytime/beacons-mod-cleanup
  - 97a36f367 Avoid UnboundLocalError in beacons module
  - PR #34956: (cachedout) Increase all run_script timeouts to 30s
- PR #34933: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-25 22:09:05 UTC
  - 5d194f2d17 Merge pull request #34933 from rallytime/merge-2016.3
  - 8b295fe4ea Merge branch '2015.8' into '2016.3'
  - ec86c556d8 Master performance improvement (#34916)
  - 34dc2fd792 Merge pull request #34911 from cachedout/backport_34906
• 8beec2f4f Backport #34906
  - 6ccc27f697 Merge pull request #34898 from hrumph/list_upgrades_refresh
    • ac4db1a23b Fixes #33620
  - 5c13ee0e72 Merge pull request #34606 from isbm/isbm-config-reading-exit-2015.8
    • 5f5b802c0c Add option to master config reader on ignoring system exit for wrong configuration
    • 6fc677f177 Ignore minion config errors everywhere but the minion itself
    • 8699194647 Remove deprecation: BaseException.message deprecated as of 2.6
    • 0e65cfec91 Fix lint: E8302
    • 67faa56bf1 Use Salt default exit codes instead of hard-coded values
    • a84556e596 Exit immediately on configuration error
    • 43d965907c Raise an exception on any found wrong configuration file
    • 30ed728d05 Cover exception handling in the utils.parsers
    • 5e8c06c6db Introduce configuration error exception
  • ISSUE #34760: (nate-byrnes) XenServer 7 needs correct provider setup for services. (refs: #34915)
    • PR #34915: (abednarik) Update service_rh provider to exclude XenServer >= 7.
  • PR #34926: (rallytime) Lint #34923 @ 2016-07-25 14:53:42 UTC
    • PR #34923: (eliasp) Handle exception when no Slack API key was provided (refs: #34926)
    • a7e7ec6d25 Merge pull request #34926 from rallytime/lint-34923
    • b3514abf1b Lint fixes for #34923
    • 69afcc4060 Handle exception when no Slack API key was provided
  • ISSUE saltstack/salt#34908: (Ch3LL) Cannot start proxy minion due to keyerror in grains (refs: #34910)
  • PR #34910: (cachedout) Fix grains error on proxy minions @ 2016-07-22 23:05:46 UTC
    • c663c8bb5b Merge pull request #34910 from cachedout/proxy_grains
    • 0970ebace8 Fix grains error on proxy minions
    • PR #34864: (jmacfar) Check for version in list of installed versions
  • ISSUE saltstack/salt#34816: (msdogado) VirtuozzoLinux not realized as RedHat by pkg (refs: #’salt-stack/salt #34878’_‘_’ #34878)
    • PR saltstack/salt#34878: (abednarik) Add VirtuozzoLinux is yumpkg enable list. (refs: #34902)
    • PR #34902: (rallytime) Back-port #34878 to 2016.3
    • PR #34878: (abednarik) Add VirtuozzoLinux is yumpkg enable list. (refs: #34902)
  • ISSUE saltstack/salt#34893: (msdogado) rpm VirtuozzoLinux not working (refs: #34901)
  • PR #34901: (rallytime) Add VirtuozzoLinux to the list of enabled distros for rpm.py @ 2016-07-22 22:23:48 UTC
    • ad640cc046 Merge pull request #34901 from rallytime/fixed-34893
    • 45e2ce10a4 Add VirtuozzoLinux to the list of enabled distros for rpm.py
  • ISSUE saltstack/salt#34890: (msdogado) VirtuozzoLinux enabling services not working (refs: #34900)
  • PR #34900: (rallytime) Add VirtuozzoLinux to enabled platforms list in rh_service.py @ 2016-07-22 22:21:20 UTC
- 5aa532f98b Merge pull request #34900 from rallytime/fix-34890
- 12824487cc Add VirtuozzoLinux to enabled platforms list in rh_service.py

- **PR #34887**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-22 18:04:47 UTC
  - eebfa64f7 Merge pull request #34887 from rallytime/merge-2016.3
  - 109b368d19 Merge branch '2015.8' into '2016.3'
    - fb223ebd4 Invalidate the target cache very quickly (#34862)
    - 1ca1367289 Fail git.latest states with uncommitted changes when force_reset=False (#34869)
    - 4f4381e5b9 Merge pull request #34859 from cachedout/fix_wheel_test
      - b4be66def Fix wheel test

- **PR #34632**: (eliasp) Try to create the log directory when not present yet @ 2016-07-22 17:34:31 UTC
  - eba34f7f4c Merge pull request #34632 from eliasp/2016.3-create-logdir-when-needed
  - 9c89470661 Try to create the log directory when not present yet

- **PR #34854**: (rallytime) Remove string_types import from state compiler @ 2016-07-22 17:20:15 UTC
  - 965f517889 Merge pull request #34854 from rallytime/cleanup-state-imports
  - 73d3075ce9 Remove string_types import from state compiler

- **ISSUE saltstack/salt#26171**: (HG00) salt-ssh from python2.6 master to python2.7 minion fails on "from _elementtree import *" (refs: #34865)

- **PR #34865**: (thatch45) This needs discussion, since this breaks SUSE @ 2016-07-22 17:19:34 UTC
  - 584d7606d4 Merge pull request #34865 from thatch45/break_suse
  - 6c5f363921 This needs discussion, since this breaks SUSE

- **PR #34858**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-21 21:01:17 UTC
  - aaede31f66 Merge pull request #34858 from rallytime/merge-2016.3
  - 9227c3dd26 Merge branch '2015.8' into '2016.3'
  - acc9e31c02 Merge pull request #34822 from thatch45/ssh_fixes
    - b5de492143 fix #34798
    - 5ad6bd7307 fix #34796
  - 5d91139bc9 Merge pull request #34847 from cachedout/pwall
    - 2c8298dc6e Profile logging
    - 3affafa2e9 Add an option to skip the verification of client_acl users
  - 07d1d36653 Merge pull request #34827 from thatch45/34691
    - 1ccf35eca4 fix beacon list to include all beacons being processed
  - b375720251 Merge pull request #34833 from rallytime/bp-28521
    - e50a6783ce SPM: packaging doesn't work in Python 2.6. Fixed.
  - 042646582f Merge pull request #34823 from rallytime/bp-25276
    - a028796eff copy spm.1 man page during setup Refs #25213
  - 6c35d88268 Fix #34648 (#34828)
• **PR #34852**: (rallytime) Skip GCE unit tests - causes test suite to hang @ 2016-07-21 17:52:31 UTC
  - b3d8143d36 Merge pull request #34852 from rallytime/skip-gce-tests
  - 15b4f5a8b3 Skip GCE unit tests - causes test suite to hang
  - PR #34850: (rallytime) Update 2016.3.2 release notes

• **ISSUE #34215**: (rvora) salt-master crashes every few days (refs: #34683)

• **PR #34844**: (vutny) Fix getting total available memory without psutil installed @ 2016-07-21 17:12:38 UTC
  - PR #34683: (cachedout) Fix publisher leak (refs: #34844)
  - 650674d14a Merge pull request #34844 from vutny/fix-grains-load-in-config-init
  - 4dc7827020 Fix comment in master config, prevents the service from starting
  - b4cefeb107 Fix Salt failure after merge of #34683

• **PR #34848**: (rallytime) Update release notes for 2016.3.2

• **ISSUE saltstack/salt#34345**: (edgan) Salt master mode's and salt-ssh mode's top.sls processing aren't the same (refs: #34837)

• **ISSUE #34345**: (edgan) Salt master mode's and salt-ssh mode's top.sls processing aren't the same (refs: #34837)

• **PR #34837**: (thatch45) Fix #34345 @ 2016-07-21 14:36:15 UTC
  - 52a95b2ea3 Merge pull request #34837 from thatch45/34345
  - 1e8c585cd3 Fix #34345

• **ISSUE saltstack/salt#32591**: (AndrewPashkin) "RuntimeError: maximum recursion depth exceeded" in salt/utils/lazy.py, using Salt-SSH (refs: #34838)

• **PR #34838**: (thatch45) Check if a valid value is passed to unlyif/unless @ 2016-07-21 14:34:29 UTC
  - 96450ac74d Merge pull request #34838 from thatch45/unless_valid
  - 1f34299a84 Check if a valid value is passed to unlyif/unless

• **ISSUE saltstack/salt#32525**: (anlutro) state.show_low_sls not working in salt-ssh (refs: #34840)

• **PR #34840**: (thatch45) update the state wrapper to include show_low_sls @ 2016-07-21 14:34:02 UTC
  - 3a5e86d58 Merge pull request #34840 from thatch45/state_update_ssh
  - 77dce3920c update the state wrapper to include show_low_sls

• **ISSUE #34762**: (aphor) zpool state module needs support for disk vdev (refs: #34791, #34770)

• **PR #34842**: (sjorge) 2016.3 zpool cleanup and fixes @ 2016-07-21 14:32:56 UTC
  - PR #34770: (aphor) zpool state module needs support for disk vdev #34762 (refs: #34842)
  - 5f67318fd7 Merge pull request #34842 from sjorge/2016.3-zpool-simplifaction
  - a7f9524b0 drop parsing of vdevs, error passthrough from zpool cli
  - 25d6c8139b eliminate hardcoded vdev type from zpool state
  - 47b8dc946c salt.states.zpool - work with updates exec module
  - a5a98845c7 salt.module.zpool - fix bug with properties on/off being parsed as true/false
  - dd64494a19 salt.modules.zpool - drop vdev types to make it more future proof, fallback to zpool cli error messages
  - PR #34825: (thatch45) keep this beacon from stack tracing at the loader
- **PR #34824**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-20 20:54:35 UTC
  - b9db0b0036 Merge pull request #34824 from rallytime/merge-2016.3
  - 094731f4b6 Merge branch '2015.8' into '2016.3'
  - 98fa4a404e Merge pull request #34818 from jtan/my_sql_state_integration_test_cleanup
    - 9ab6f91bb Skip mysql state test if mysqladmin is not available
  - 6636f2b449 Merge pull request #34803 from junovitch/issue_24744
    - 64c850410f salt/state.py: set 'chunk['order'] = 0' with 'order: first'; fixes #24744

- **PR #34670**: (isbm) Add "osmajorrelease" grain (2016.3) @ 2016-07-20 14:39:38 UTC
  - 62ef8f9335 Merge pull request #34670 from isbm/isbm-osmajorrelease-grain-suse
  - a6cb6d615f Lintfix PEP8: E262
  - 110a422d5a Keep osmajorrelease as a string type for 2016.3 release
  - 208fd33b48 Add unit test for osmajorrelease grain
  - 9a6b2175c6 Implement "osmajorrelease" by killing spaghetti

- **ISSUE #34215**: (rvora) salt-master crashes every few days (refs: #34683)

- **PR #34683**: (cachedout) Fix publisher leak (refs: #34844) @ 2016-07-20 13:57:10 UTC
  - 6ca9fa7c7 Merge pull request #34683 from cachedout/issue_34215
  - ccd53e9214 Lint
  - 76eb46fb08 Document master setting
  - 0dfe3aaaf31 Set up dynamic config
  - 3cfb82cdd4 Fix silly error
  - 35a845ff5 Only set IPC with write buffer if set
  - b2d636017d Add IPC to minion opts
  - 2c1c92c48e Lint
  - c4395ae84e Dial down default buffer and apply to just write buffer
  - 3e3e2a997e Typo
  - 7f8f6251c909 Correct issues with config
  - c138cc03e3 Configuration settings for IPC buffers

- **ISSUE #34762**: (aphor) zpool state module needs support for disk vdev (refs: #34791, #34770)

- **PR #34791**: (sjorge) salt.state.zpool tweaks @ 2016-07-19 20:56:47 UTC
  - 49ab3fd2b5 Merge pull request #34791 from sjorge/zpool-state-tweaks
  - d48c6d2dcb accomidate use of "fake" vdev type disk, this behavior may be broken later if a disk vdev ever gets added to the cli tools. improve documentation explaining how to create a striped pool without the "fake" vdev type

- **PR #34784**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-19 16:30:18 UTC
  - 1617a7058a Merge pull request #34784 from rallytime/merge-2016.3
  - 3e032dc397 Merge branch '2015.8' into '2016.3'
  - 58021035a9 Merge pull request #34773 from randomed/mysql-returner-startup/2015.8
* 0cd55eb7d7 Add jid=req handling for mysql returner. It should also store the return jid into the jid list table.
  - 10a1af9949 Remove unneded config test (#34751)
  - f19caac8e4 Merge pull request #34754 from cachedout/disable_mid_test
    * 46901c6e65 Disable test
  - 81f29006f2 Merge pull request #34741 from rallytime.bp-34726
    * d949110993 Loop over updated keys in non recursive update

• ISSUE saltstack/salt#34630: (bdrung) Spelling errors (refs: #34756, #34722)

• ISSUE saltstack/salt#33923: (pavankumar2203) Salt module certutil install doesn't work (refs: #34756)
  - PR #34756: (jacobhammons) Rebuild man pages

• ISSUE saltstack/salt#27980: (rayba) salt-cloud 2015.5.0 azure provider could not be loaded (refs: #34746)

• PR #34746: (rallytime) Update azure lib dep to match the one in cloud.clouds.msazure @ 2016-07-18 18:54:40 UTC
  - 2a9738f00d Merge pull request #34746 from rallytime/azure-version
  - ead3eb1606 Update azure lib dep to match the one in cloud.clouds.msazure

• PR #34744: (justinta) Test valid docs fix @ 2016-07-18 18:22:47 UTC
  - c0e2657c8e Merge pull request #34744 from jtid/test_valid_docs_fix
  - 4fe33a7695 add directives example to ldap3.modify
  - 6fa40a0d46 Add cli examples for ldap3 module
  - b94e0dd95a ipset.long_range doesn't need a docstring

• PR #34740: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-18 16:28:56 UTC
  - d4adfb85 Merge pull request #34740 from rallytime/merge-2016.3
  - 7d106c78f0 Merge branch '2015.8' into '2016.3'
    * e9e5bbe38b Merge pull request #34721 from rallytime/fix-34703
      * 9c803d05a5 Add output_file option to master config docs

• PR #34607: (isbm) Bugfix: Exit on configuration read (backport) @ 2016-07-18 15:15:21 UTC
  - efc7599f85 Merge pull request #34607 from isbm/isbm-config-reading-exit-2016.3
  - fb7542f920 Add option to master config reader on ignoring system exit for wrong configuration
  - abd10b5782 Ignore minion config errors everywhere but the minion itself
  - e5f43e6711 Remove deprecation: BaseException.message deprecated as of 2.6
  - 23d1031a09 Fix lint: E8302
  - 6b660678fa Use Salt default exit codes instead of hard-coded values
  - 0c2d3511c9 Exit immediately on configuration error
  - c5de68c4a Raise an exception on any found wrong configuration file
  - 575767022b Cover exception handling in the utils.parsers
  - 2cf696671f Introduce configuration error exception

  - PR saltstack/salt#34607: (isbm) Bugfix: Exit on configuration read (backport) (refs: #34739)
• PR #34739: (cachedout) Remove unneded config test @ 2016-07-18 15:15:15 UTC
  - d0e0c0186b Merge pull request #34739 from cachedout/remove_config_test
  - 4625ee65b8 Remove unneded config test
• ISSUE saltstack/salt#34630: (bdrung) Spelling errors (refs: #34756, #34722)
• PR #34722: (rallytime) Various spelling fixes @ 2016-07-16 19:49:54 UTC
  - abf5b976ed Merge pull request #34722 from rallytime/fixed-34630
  - cca944c37 Various spelling fixes
• PR #34714: (sjmh) Fix ldap auth for function matches @ 2016-07-16 19:49:12 UTC
  - 922cc5a8a7 Merge pull request #34714 from sjmh/fix/ldap_auth
  - d4144039bc Fix ldap auth for function matches
• PR #34720: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-16 19:22:28 UTC
  - 40626d786a Merge pull request #34720 from rallytime/merge-2016.3
  - c2130d5a04 Merge branch '2015.8' into '2016.3'
  - 08d00f3a61 Merge pull request #34689 from Azidburn/fix_pkg_sources
    * 2c0fc919b3 fix second run problems with pkg.installed using sources
  - 4cb1ded520 Merge pull request #34695 from isbm/ismb-zypper-product-boolean-values
    * 5ed5142bc Update test data for 'registerrelease' and 'productline' fields
    * 21444ee240 Bugfix: return boolean only for 'isbase' and 'installed' attributes
  - aaa6fd80a update 2015.8.11 release notes (#34682)
• ISSUE #34661: (chrimi) Cron State documentation lacks information of "New in" for special parameter in 
cron.present (refs: #34707)
  - PR #34707: (rallytime) Add versionadded to "special" option in cron.present state
• PR #34696: (ismb) Bugfix: Zypper pkg.list_products returns False on some empty values (2016.3) @ 2016-07-15
  21:18:21 UTC
  - 51fcf770a5 Merge pull request #34696 from isbm/ismb-zypper-product-boolean-values-2016.3
  - 96021e25c Update test data for 'registerrelease' and 'productline' fields
  - 337eee33ac Bugfix: return boolean only for 'isbase' and 'installed' attributes
• PR #34702: (farcaller) Fixed dockerng.list_tags @ 2016-07-15 20:50:35 UTC
  - 4504f6900 Merge pull request #34702 from farcaller/fixed_tags
  - 032e35a28e Fixed dockerng.list_tags
• ISSUE saltstack/salt#34548: (Inveracity) win_dsc.set_lcm_config does not set multiple values, missing semi-
colon (refs: #34549, #saltstack/salt#34549"
  - PR saltstack/salt#34549: (Inveracity) fixes multiple values in mof configuration (refs: #34681)
  - PR #34681: (rallytime) Back-port #34549 to 2016.3
  - PR #34549: (Inveracity) fixes multiple values in mof configuration (refs: #34681)
• PR #34679: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-14 20:59:45 UTC
  - d5750d9d88 Merge pull request #34679 from rallytime/merge-2016.3

30.2. Previous Releases
Chapter 30. Release Notes

- 0c566dce89 Merge branch '2015.8' into '2016.3'
- 3192e1674b Merge pull request #34676 from cachedout/partial_revert_34644
  - 64a154826a Revert "Modify lodaer global test to use populated dunders"
- 3b6f1089b2 Merge pull request #34601 from lorengordon/clarify-doc
  - bfe0dd0b8a Clarifies the proper way to reference states
- bc63f25a6f Lint 34644 (#34651)
- 5036026e0c Adjust the mine test a little bit to give it a better chance of success (#34647)
- 8a0209101e Merge pull request #34642 from jtan/mysql_integration_cleanup
  - dd1559a599 Check that mysqladmin exists before running mysql integration tests.
- 3e612c3794 Merge pull request #34618 from jtan/network_integration_fix
  - 34bcf9ccfc Changed network state test to use test=True
  - h2616833b0 Some small changes
  - ed59113e94 Change network state integration test to use test=True
- ISSUE saltstack/salt#33452: (Ch3LL) Digital Ocean does not return anything on deletion (refs: #34605)
- PR #34605: (gtmanfred) catch error if no dns domains exist @ 2016-07-14 15:20:46 UTC
  - b88c39e1d2 Merge pull request #34605 from gtmanfred/2016.3
  - 37b0943539 catch error if no dns domains exist
- PR #34557: (jacobweinstock) handle jboss cli expression type in the parsing of output @ 2016-07-14 15:09:49 UTC
  - b3dc6031fe Merge pull request #34557 from jacobweinstock/jboss7_cli-handle-expression-type
  - 1945153399 handle jboss cli expression type in the parsing of the output
  - PR #34652: (rallytime) Spelling fixes found in sqlite3 pillar docs
- ISSUE saltstack/salt#34382: (amontalban) Exception: unsupported operand type(s) for -: 'str' and 'int' (refs: #34565)
- ISSUE #34554: (stjack99) num_cpus grain missing with Salt 2016.3.1 on FreeBSD 10.x (refs: #34565)
  - PR #34565: (Ch3LL) add num_cpus grain to freebsd
  - PR #34621: (justinta) Suse Leap doesn’t have ‘man’
- PR #34619: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-12 21:52:01 UTC
  - 61f5045a0d Merge pull request #34619 from rallytime/merge-2016.3
  - f734af9d0b0 Merge branch '2015.8' into '2016.3'
  - 9f123543e5 Merge pull request #34617 from rallytime/merge-2015.8
    - 3026df346f Merge branch '2015.5' into '2015.8'
    - 57df38e685 Update github IP for ssh state integration tests (#34592)
    - 2e10072534 Avoid circular imports when calling salt.utils functions (#34584)
  - b90ae407f9 Add support for edge case when Cmd and Entrypoint can’t be blanked (#34593)
  - 12b579e4e3 When sorting list actual_data, make it a list (#34590)
  - 7dd8035c62 Gate docker unit test to check for docker (#34591)
– ae38c874da Add a bunch of documentation on getting files from other environments (#34560)
– 91e0656d44 Merge pull request #34531 from terminalmage/issue34397
  * d0fec1b8f6 salt/modules/zypper.py: accept ignore_epoch argument
  * 5ae9463c1f salt/modules/yumpkg.py: accept ignore_epoch argument
  * c2791117af salt/modules/rpm.py: accept ignore_epoch argument
  * c5de8b880d salt/modules/ebuild.py: accept ignore_epoch argument
  * 4ee8e8037 salt/modules/aptpkg.py: accept ignore_epoch argument
  * 5b123b403c Pass ignore_epoch to salt.utils.compare_versions()
  * 07368fac40 Accept ignore_epoch argument for salt.utils.compare_versions()
– e99befad47 Merge pull request #34545 from terminalmage/docker-exec-driver
  * dd5838e242 Handle cases where Docker Remote API returns an empty ExecutionDriver
– PR #34585: (rallytime) [2016.3] Avoid salt.utils circular imports when using "from"
  • PR #34616: (jacobhammons) Adds a mock required for the network settings beacon @ 2016-07-12 19:09:30 UTC
    – c8bdfb272d Merge pull request #34616 from jacobhammons/network-settings-mock
    – 5e2dd5eb0 Adds a mock required for the network settings beacon
  • PR #34553: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-11 19:36:26 UTC
    – d8c8b4ac6f Merge pull request #34553 from rallytime/mmerge-2016.3
    – 815c8b38d5 Merge branch '2015.8' into '2016.3'
      * 7120d43df0 Merge pull request #34546 from rallytime/rename-boto-secgroupt-test
        * f8a3622be7 Rename unit.states.boto_secgroupt to unit.states.boto_secgroupt_test
      * ca92061821 Merge pull request #34537 from rallytime/rename-simple-test
        * cefb6e34c Rename tests.unit.simple to tests.unit.simple_test
      * fbab28c2b [2015.8] Update bootstrap script to latest stable (#34527)
      * 6b8c76af83 Prevent many errors in the test suite in loader tests (#34521)
      * c2f92c95b Fix wrong order of retention_policy_exists (#34507)
      * 685df80929 Merge pull request #34518 from terminalmage/fpx-pkg.latest-test
        * 4ae44f7d6f Fix pkg.latest integration test for non-LTS ubuntu
  • PR #34569: (eliasp) Minor doc fixes for PostgreSQL states @ 2016-07-11 14:02:13 UTC
    – 5b002e11b4 Merge pull request #34569 from eliasp/2016.3-postgres-doc
    – 221da29e5f Typo (default → default)
    – ba3d7c624b Add code formatting
    – b3409c97a2 Fix typo (seens → seen)
  • PR #34524: (terminalmage) yumpkg: Avoid spurious logging in pkg.upgrade @ 2016-07-07 22:06:01 UTC
    – 7e1ad077ba Merge pull request #34524 from terminalmage/yumpkg-upgrade-logging
    – 40992f0790 yumpkg: Avoid spurious logging in pkg.upgrade
  • ISSUE #34439: (edgan) Fast memory leak on ctrl-c out of salt "" state.highstate (refs: #34490)
- PR #34490: (cachedout) Fix master crash on ctl-c for long-running job

- PR #34520: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-07 19:22:40 UTC
  - b9e87620f5 Merge pull request #34520 from rallytime/merge-2016.3
  - 279888de48 Merge branch '2015.8' into '2016.3'
  - a516f116d1 Merge pull request #34513 from cachedout/lower_loader_log
    - 733c5d00c0 Lower the log level for modules which cannot be loaded to trace
  - 63f0451041 Merge pull request #34498 from rallytime/bootstrap-tutorial-doc-fix
    - 23c5739c3b Use -O in wget develop example in bootstrap tutorial
  - 3ebba02b6 Rename some unit test files by adding _test (#34503)
  - 8722257b82 Improve top file merging documentation (#34505)
  - 6ce7cb9616 Gracefully handle non-XML output in GlusterFS execution module. (#34492)
  - 75299456be Use skipTest for network state integration test (#34489)
  - 0f3f8f7ac5 Update dnsmasq.get_config docs to use correct config_file param. (#34488)

- ISSUE #34224: (tehsu) salt-cloud to rackspace uses public ip instead of private (refs: #34499)

- PR #34499: (gtmanfred) remove unnecessary block parsing ip addr for nova @ 2016-07-07 16:23:46 UTC
  - 58f46eeae15 Merge pull request #34499 from gtmanfred/2016.3
  - 019671d4c2 remove unnecessary block parsing ip addr for nova
  - PR #34468: (twangboy) Use Python 2.7.12 for Windows Build
  - PR #34493: (twangboy) Use Python 2.7.12 for Mac Build

- PR #34486: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-06 17:28:31 UTC
  - 95094c73ff Merge pull request #34486 from rallytime/merge-2016.3
  - 2b307b7ea1 Merge branch '2015.8' into '2016.3'
  - e2f576847 Merge pull request #34462 from terminalmage/git-describe-always
    - 6ef7ee198e Restrict use of --always to git 1.5.6 and newer
    - c554b22f8c modules/git: added --always parameter for git.describe().
  - 85f1f18239 Merge pull request #34467 from rallytime/bp-34457
    - 746883741f Only access key metadata if we found key metadata
  - 9e15337b74 Merge pull request #34432 from twangboy/fix_file.append
    - 13f11fddce Remove refactoring code
    - 78f7c530bb Remove unit tests, integration tests written
    - b83392dea Remove len() in favor of boolean test
    - 4373408163 Fix line error
    - 2479b53e2f Fix erroneous report on newline code
    - 75b6ed1fd5 Change back to binary read
    - 65753c9f6d Use os.linesep instead of 
    - a55d63f086 Fix object names
• 3e2fe12e5e Add new line if missing
• 0b7821c8db Fix file.append state
  – 91e095bb41 Merge pull request #34429 from terminalmage/pkg-latest-versioncheck
  – 667f31a72a Skip version checking for targeted packages in pkg.latest state
  – 0a264597ca Forgot reference to inotify (#34455)

• ISSUE #33915: (mattglv) Orchestration runner output on Success vs Failures in 2016.3.0 (refs: #34459)

• PR #34459: (terminalmage) Ignore retcode when formatting highstate output @ 2016-07-06 03:59:23 UTC
  – 7867d49193 Merge pull request #34459 from terminalmage/issue33915
  – 82a7e015f Ignore retcode when formatting highstate output

• ISSUE #34371: (erikgrinaker) git.detached does not work with commit ID as ref (refs: #34463)

• PR #34463: (terminalmage) states/git: pass required cwd parameter to git.describe. @ 2016-07-06 03:59:05 UTC
  – ae6902290a Merge pull request #34463 from terminalmage/issue34371
  – f981a5646a states/git: pass required cwd parameter to git.describe.

• ISSUE #34395: (artxki) Nonfunctioning default_password in states.postgres_user.present (refs: #34436)

• PR #34466: (rallytime) Back-port #34436 to 2016.3 @ 2016-07-06 03:57:15 UTC
  – PR #34436: (artxki) Fix #34395 Nonfunctioning default_password in states.postgres_user.present (refs: #34466)
  – 8f8a6d2f68 Merge pull request #34466 from rallytime/bp-34436
  – e97c00b018 Fix #34395 Nonfunctional default_password in states.postgres_user.present
  – PR #34453: (justinta) Arch linux does not have osrelease or osmajorrelease grains

• ISSUE #33697: (asloboda-cisco) Client clash with Tornado IOLoop (refs: #34456)

• PR #34456: (thatch45) Be more careful when making the SMinion @ 2016-07-05 18:41:57 UTC
  – fc67a4e216 Merge pull request #34456 from thatch45/2016.3
  – 91b089e5c0 we need to be more careful when making the SMinion

• PR #34452: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-05 17:49:19 UTC
  – 91120dba01 Merge branch '2015.8' into '2016.3'
  – 7bb0868c66 Merge pull request #34451 from rallytime/merge-2015.8
    – 55a91e22be Merge branch '2015.5' into '2015.8'
    – e88529015c Merge pull request from cachedout/backport_config_dir_integration
    – 0e2c71a537 Backport change to integraiton test suite
  – e65d1ae374 Merge pull request #34401 from terminalmage/rpm-version_cmp
    – 7cefd4182d Use rpmdev-vercmp as a fallback for version comparison on RHEL5
  – 5ddf417432 Merge pull request #34366 from steverweber/fix_servicerestart
    – 7b4e56f64 Merge pull request #34356 from rallytime/merge-2016.3

30.2. Previous Releases 2611
- 54a0f25ba Document that inotify is Linux only

- **PR #34427**: (twangboy) Automated signing fixes for Ubuntu 16.04, 14.04, 12.04 (for dmurphy) @ 2016-07-05 15:18:46 UTC
  - 7508d291d2 Merge pull request #34427 from twangboy/sign_fx
  - e804480982 Add changes suggested by @cachedout
  - 494deda074 Automated signing fixes for Ubuntu 16.04, 14.04, 12.04

- **ISSUE #34379**: (UtahDave) variable referenced before assignment (refs: #34400)

- **PR #34400**: (cachedout) Fix uninitialized value @ 2016-07-01 17:42:55 UTC
  - b3875f397d Merge pull request #34400 from cachedout/issue_34379
  - b413f05a4f Fix uninitialized value

- **PR #34404**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-01 15:02:09 UTC
  - d1cd36ab2b Merge pull request #34404 from rallytime/merge-2016.3
  - 8398de0ba3 Merge branch '2015.8' into '2016.3'
  - fe18bb527 Merge pull request #34392 from cro/salt-cloud-doc-clarify
    - 6c2e575d40 Clarify that salt-cloud doesn't get installed by bootstrap
  - 45b8fb10d7 Merge pull request #34373 from jtan/network_state_integration_test
    - 1d24053e36 network.system.sls file
    - 4a9e6af542 network.routes.sls file
    - 76c90b2ef6 network.managed.sls file
    - 84a36369fa Added network state integration test
  - d6af1de0b7 Optimize pkg integration tests and add a couple new tests (#34377)

- **PR #34292**: (twangboy) Fix runas function for System Account @ 2016-06-30 15:25:09 UTC
  - ad63b1d3d3 Merge pull request #34292 from twangboy/fix_runas
  - 433f300eba Enable all privileges
  - 5584cc2c6f Handle users that aren't admin
  - e9d2402c0b Fix runas function for System Account

- **PR #34388**: (rallytime) Back-port #34378 to 2016.3 @ 2016-06-30 17:50:48 UTC
  - PR #34378: (adelcast) network_settings.py: fix documentation (refs: #34388)
  - be9a831ef6 Merge pull request #34388 from rallytime/bp-34378
  - 2040dbca5 network_settings.py: fix documentation
  - PR #34352: (cro) Esxi dvs
  - PR #34386: (rallytime) Beacon network docs

- **PR #34376**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-06-30 14:31:28 UTC
  - 5a44b077a0 Merge pull request #34376 from rallytime/merge-2016.3
  - 3149da1bca Merge branch '2015.8' into '2016.3'
  - af8ef1e461 Merge pull request #34368 from rallytime/merge-2015.8
- 3bce0cb510 Merge branch '2015.5' into '2015.8'
- 970aaa46d4 Merge pull request #34252 from gtmanfred/2015.5
  - 82183f1572 return list of nodes for lxc driver when called directly
  - 94e094652c Back-port #34344 to 2015.8
  - 11dc0203b0 Making salt-ssh pass proper return codes for jinja rendering errors (#34342)
- **PR #34356**: (sjorge) fixes computenode_* grains on SmartOS compute nodes @ 2016-06-29 17:55:24 UTC
  - 3808d849fe Merge pull request #34365 from sjorge/2016.3-fix-broken-smartos-grains
  - 3ff895ca2f fixes computenode_* grains on SmartOS compute nodes
- **PR #34353**: (cro) Remove proxy check and additional GetConnection--this makes the proxy... @ 2016-06-29 14:54:47 UTC
  - 65efb55917 Merge pull request #34353 from cro/pyvmomi-ssl-fail
  - 14ea29f4a6 Remove proxy check and additional GetConnection--this makes the proxy fail to start. Need to check to see if proxy memory leak is back.
- **PR #34348**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-06-28 23:28:45 UTC
  - c89d1ad27f Merge pull request #34348 from rallytime/merge-2016.3
  - c87a108a12 Don't forget the pylint disables for range
  - 359e8ca2ce Pylint fixes
  - f9ab8ba46d Merge branch '2015.8' into '2016.8'
    - f6bd1ad47e Revert py3modernize lint changes (#34339)
    - 046bda9f2 Merge pull request #34306 from ghedo/iptables_flush_table
      - 882c6c9c86 Do not force 'filter' table when flushing
    - 0c60feac02 Doc clarifications to file modules, addition of new profile log level to docs, fixed example in dnsmasq (#34323)
    - b793426c23 Remove unnecessarily-disabled sanity check (#34325)
    - c5890a0eca Merge pull request #34335 from rallytime/merge-2015.8
  - 2296587536 Merge branch '2015.5' into '2015.8'
  - 6c6545d92 Merge pull request #34313 from rallytime/bootstrap-2015.5
  - c7db73be92 [2015.5] Update to latest bootstrap script v2016.06.27
    - a6d3cc637b Typo in dockerio doc (#34319)
    - dd4e937099 Merge pull request #34312 from rallytime/bootstrap-2015.8
      - 944a393f89 [2015.8] Update to latest bootstrap script v2016.06.27
  - 91703d2dc4 Merge pull request #34307 from rallytime/fixed-test-example
    - f44a0543fe Fix test example in integration testing docs
- **ISSUE #34255**: (tmehlinger) fire_event requisite does not work in orchestration states (refs: #34256, #34343)
  - **PR #34343**: (rallytime) Back-port #34256 to 2016.3
  - **PR #34256**: (tmehlinger) detect running from master in State.event method (refs: #34343)
- **PR #34338**: (themalkolm) Add listen/listen_in support to stateconf.py @ 2016-06-28 21:50:14 UTC
- 0b9cb602fe Merge pull request #34338 from themalkolm/patch-2
- cd63541325 Add listen/listen_in support to stateconf.py

- **PR #34283:** (sjorge) 2016.3 mount vfstab support @ 2016-06-28 19:23:39 UTC
  - 80a659bb51 Merge pull request #34283 from sjorge/2016.3-mount-fstab
  - b8c6948cd5 fixes broken rm_fstab test due to missing __grain__.kernel
  - d633ec774ea actually do the cleanup, oops
  - 987c240850 minor cleanup
  - c3667203bf add test for vfstab
  - 80e9d1d278 set __grains__ for vfstab unit test
  - f0f5d449c3 mount.vfstab implemented on Solaris like platforms
  - 4398e8841b undo some changes to mount.fstab and mount.rm_fstab, create mount.vfstab and mount.rm_vfstab
  - 13d3bb2bb mount.set_fstab errors out on Solaris like platforms
  - c0863fb024 mount.rm_fstab works with Solaris like platforms
  - 151799ea74 initial vfstab support (Solaris like platforms)

- **ISSUE #34321:** (Ch3LL) Raspberry Pi salt-minion missing osmajorrelease grain (refs: #34322)

- **PR #34322:** (Ch3LL) add osmajorrelease grain for raspbian @ 2016-06-28 19:08:39 UTC
  - 75aad073a9 Merge pull request #34322 from Ch3LL/add_grains_majorrelease_test
  - 693cc61a4a add osmajorrelease to ubuntu and fix pylint
  - 2fc3e8a54b add osmajorrelease grain for raspbian

- **PR #34337:** (clinta) Change merge-if-exists logic to properly report changes @ 2016-06-28 18:41:56 UTC
  - 81547f413d Merge pull request #34337 from clinta/serialize-merge
  - ebe7de2f2b Change merge-if-exists logic to properly report changes

- **PR #34300:** (vutny) Make apache.configfile state handle the Options list correctly @ 2016-06-28 18:34:45 UTC
  - affc65dc79 Merge pull request #34300 from vutny/fix-apache-vhost-options
  - 52001afdde Fix apache.configfile state example
  - 64a9442e38 apache.config: correctly output a list of the Options

- **ISSUE #33588:** (whytewolf) rabbitmq_user.present error (refs: #34333)
  - PR #34333: (rallytime) Back-port #33734 to 2016.3
  - PR #34304: (rallytime) Back-port #33734 to 2016.3 (refs: #34333)
  - PR #33734: (glomium) modules/rabbitmq.py version checking had a logical error (refs: #34333, #34304)

- **ISSUE #34329:** (clinta) file.serialize merge_if_exists fails: 'function' object has no attribute 'deserialize' (refs: #34330)
  - PR #34330: (clinta) fix #34329

- **ISSUE #34170:** (rodoyle) ps.top raises ValueError "too many values to unpack" when psutil > 4.1.0 (refs: #34318)
  - PR #34318: (rallytime) Back-port #32182 to 2016.3
  - PR #32182: (dongweiming) Fix psutil.cpu_times unpack error (refs: #34318)
• PR #34311: (rallytime) [2016.3] Update to latest bootstrap script v2016.06.27 @ 2016-06-27 18:59:27 UTC
  - 1398b1e51e Merge pull request #34311 from rallytime/bootstrap-2016.3
  - 75a7047bc [2016.3] Update to latest bootstrap script v2016.06.27
• ISSUE #34129: (onorua) fqdn_ip4 and fqdn_ip6 are empty on 2016.3+ (refs: #34284)
• PR #34284: (rallytime) Don’t require 'domain' to be present before checking fqdn_ip* grains @ 2016-06-27 17:06:17 UTC
  - dc8462451d Merge pull request #34284 from rallytime/fix-34129
  - 5f45a8ff73 Don’t require 'domain' to be present before checking fqdn_ip* grains
• ISSUE #30493: (sjorge) salt.modules.status mostly broken on solaris like operating systems. (refs: #34296)
• PR #34296: (sjorge) 2016.3 status module now works on Solaris like platforms @ 2016-06-27 16:49:41 UTC
  - 259935d6d2 Merge pull request #34296 from sjorge/2016.3-module.status
  - a26340c555 make status.all_status work on Solaris like platforms
  - 33e24fa697 make status.cputstats work on Solaris like platforms
  - d214e9c776 correctly cast to int for status.netdevs on Solaris like platforms
  - b74761b52d make status.cputinfo support Solaris like platforms and OpenBSD
  - 2cd76d5ab5 make status.diskstats work on Solaris like platforms
  - 3211538830 make status.diskusage work on Solaris like platforms
  - a12b311a62 make status.netdev compatible with Solaris like platforms
  - 3bc01458aa make status.netstats compatible with Solaris like platforms
  - 25678901fa avoid KeyError in ping_master
  - 81d7fc98d8 make status.vmstats work on Solaris like platforms and OpenBSD
• PR #34281: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-06-27 21:51:43 UTC
  - 376bec0455 Merge pull request #34281 from rallytime/merge-2016.3
  - ae8ad9329 Merge branch '2015.8' into '2016.3'
  - d235b1245b Merge pull request #34233 from thegoodduke/for_2015.8_ipset
    * 4da5e35bf4 ipset: fix the comment containing blank
  - 65c567a53f Merge pull request #34257 from rallytime/fix-34037
    * d7a5e9b10e Remove test that doesn’t actually test anything
    * 54c037d600 Use ‘config_dir’ setting instead of CONFIG_DIR in gpg renderer
  - 203870f147 Merge pull request #34274 from clinta/2015.8
    * 6572454918 Don’t escape source before calling managed
  - a59dc85a15 Merge pull request #34258 from rallytime/merge-2015.8
    * ea914b67cd Merge branch ‘2015.5’ into ‘2015.8’
    * 8d5ed91980 Merge pull request #34225 from richardscollin/fix-win-set-datetime
      * 6286771ef7 Fix win_system.set_system_date_time
    * cb1e8bf082 Merge pull request #34232 from thegoodduke/for_2015.5_ipset
· 344eb60762 ipset: fix comment containing blank

· PR #34271: (opdude) Fixed symlinks on windows where the slashes don’t match @ 2016-06-24 17:05:25 UTC
  – 805171c949 Merge pull request #34271 from Unity-Technologies/hotfix/windows_symlinks
  – e0a155431 Fixed symlinks on windows where the slashes don’t match

· ISSUE #14915: (johngrasty) SmartOS/OmniOS - mount module fails. (refs: #34254)
  – PR #34254: (sjorge) Fix for #14915

· PR #34259: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-06-24 14:27:30 UTC
  – 39579ce5f6 Merge pull request #34259 from rallytime/merge-2016.3
  – eea3cc1e7 Merge branch '2015.8' into '2016.3'
  – 92962957c8 Merge pull request #34093 from terminalmage/issue33873
    - 5edb45d746 win_pkg: refresh pkg database if refresh=True passed to version() or list_pkgs()
    - 0078adee35 Catch CommandExecutionError in pkg states
  – cb5399787c Merge pull request #34136 from meaksh/salt-suse-os-detection-2015.8
    - 97f1958863 some cleanup and renaming
    - 72c8e5d78f better way to check for openSUSE Leap
    - 548971bdc9 Fix for SUSE OS grains in 2015.8

· PR #34134: (meaksh) Fixed behavior for SUSE OS grains in 2016.3 (refs: #34136) @ 2016-06-23 20:24:51 UTC
  – PR #33903: (meaksh) Fetching grains[‘os’] from /etc/os-release on SUSE systems if it is possible (refs: #34134)
  – 3acda896f2 Merge pull request #34134 from meaksh/salt-suse-os-detection
  – 23ce0b431b some cleanup and renaming
  – 516bb4c54d better way to check for openSUSE Leap
  – 44eda2ad9f Fix for openSUSE Tumbleweed
  – 0d4a710d86 fixes for fopen mock and some os_release_map for SLES11SP3
  – d6410a03b8 unit tests for SUSE os grains detection
  – 47ecb7013b Normalization of osfullname grain for openSUSE
  – 9c81f434fa one clause to set OS grain from CPE_NAME
  – d78d57b717 Test fixed: get OS grain from /etc/os-release if possible
  – d80ec532ff fix: osarch_mock
  – db00ec756d osarch mock for unit test
  – dabc5cab7e lint fix
  – 9ac514724b testing if SUSE os grain is set from /etc/os-release
  – bc671336a7 Getting the ‘os’ grain from CPE_NAME inside /etc/os-release for SUSE and openSUSE
  – 64af4d4145 Adding SLES_SAP to OS_FAMILY_MAP

· ISSUE #34137: (christoe) Win_task info function broken (refs: #34159)

· ISSUE #34135: (christoe) Arguments to Windows task creation module are not used (refs: #34159)
• **PR #34159**: (christoe) Fixes to the win_task module @ 2016-06-23 17:54:53 UTC
  - 5f42fd4486 Merge pull request #34159 from christoe/2016.3
  - f4143669db Fixes #34135, Fixes #34137
• **PR #34223**: (peterdemin) Fixed typo in filtering LDAP’s potential_ous @ 2016-06-23 17:26:31 UTC
  - 0a0267149f Merge pull request #34223 from peterdemin/bugfix-eauth-ldap-expanding
  - 88b03ec109 Fixed typo in filtering LDAP's potential_ous
• **PR #34239**: (vutny) file.find module: fix handling of broken symlinks @ 2016-06-23 17:25:17 UTC
  - f74f176bd5 Merge pull request #34239 from vutny/file-find-broken-symlinks
  - 7e164c4f86 file.find module: fix handling of broken symlinks
• **PR #34229**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-06-22 22:57:00 UTC
  - 4157f6fd39 Merge pull request #34229 from rallytime/merge-2016.3
  - 940ac86d4e Merge branch '2015.8' into '2016.3'
  - 56c7267631 fix regression from #33681 which causes pulling a list of s3 objects via s3.query to fail (#34208)
  - 02eb331494 Fix a pair of gitfs bugs (#34218)
  - 6d643cd52b Merge pull request #34182 from rallytime/fix-34043
    * b7d49c5052 Handle child PIDs differently depending on the availability of psutils
  - 5d3ec1564 Clarify pkg.list_repo_pkgs docstring for held packages (#34188)
  - 5bca5c42f1 Change target for dockerng assuming default status to Nitrogen release (#34206)
• **ISSUE #33879**: (Ch3LL) saltutil.wheel minions.connected does not return anything with remote minions (refs: #34214)
• **PR #34214**: (rallytime) Update saltutil.wheel docs to specify remote vs local minion behavior @ 2016-06-22 19:22:30 UTC
  - b5ea1495af Merge pull request #34214 from rallytime/fix-33879
  - 1be05f6a87 Update saltutil.wheel docs to specify remote vs local minion behavior
• **ISSUE #34074**: (fooka03) Unable to use S3 file backend with 2016.3.1 on Ubuntu 14.04 or 16.04 (refs: #34209, #34208)
• **ISSUE #32916**: (giannello) file.managed memory usage with s3 sources (refs: #33599, #33682)
• **PR #34209**: (lomeroe) fix regression in s3.query from #33682 @ 2016-06-22 18:50:19 UTC
  - **PR #33682**: (lomeroe) backport #33599 to 2016.3 (refs: #34209)
  - **PR #33599**: (lomeroe) Fix s3 large file download (refs: #33681, #33682)
  - 4205fd605c Merge pull request #34209 from lomeroe/fix_s3_utils_regression_33682
  - a2b99703b1 fix regression in s3.query from #33682
• **PR #34222**: (cachedout) Lint 34200 @ 2016-06-22 18:48:54 UTC
  - **PR #34200**: (secumod) Fix parted module set CLI example (refs: #34222)
  - 05a4785c8e Merge pull request #34222 from cachedout/lint_34200
  - ead80a56f Linted #34200
  - 2cd0433f8d Fix parted module set CLI example
• PR #34197: (eliasp) Make `module.ssh.recv_known_host()` more resilient against hosts not returning a key @ 2016-06-22 17:26:02 UTC
  - 0cbdb73fc5 Merge pull request #34197 from eliasp/2016.3-salt.modules.ssh.recv_known_host-empty_results
  - 82c4b1229e Make `module.ssh.recv_known_host()` more resilient against hosts not returning a key

• ISSUE #34199: (DarkKnightCZ) cmdmod.exec_all doesn't work with Windows PowerShell (refs: #34201)

• ISSUE #34196: (DarkKnightCZ) Salt call cmdmod.exec_code_all fails on Windows minion due to invalid file mode (refs: #34198)

• PR #34201: (DarkKnightCZ) Suffix temp file with .sr1 and add mandatory argument when executing PowerShell script @ 2016-06-22 17:21:24 UTC
  - PR #34198: (DarkKnightCZ) Don’t use binary mode for cmdmod.exec_code (refs: #34201)
  - 606ae3c886 Merge pull request #34201 from DarkKnightCZ/cmdmod-34199
  - 05748743bc Suffix temp file with .sr1 and add -File argument when executing PowerShell code via cmdmod.exec_code

• ISSUE #34196: (DarkKnightCZ) Salt call cmdmod.exec_code_all fails on Windows minion due to invalid file mode (refs: #34198)

• PR #34198: (DarkKnightCZ) Don’t use binary mode for cmdmod.exec_code (refs: #34201) @ 2016-06-22 17:14:06 UTC
  - cb704b780b Merge pull request #34198 from DarkKnightCZ/cmdmod-34196
  - 04553cd3de Don’t use binary mode for cmdmod.exec_code

• PR #34172: (dmurphy18) Support for building with local packages on Debian and Ubuntu @ 2016-06-22 16:36:44 UTC
  - 0578a2f87d Merge pull request #34172 from dmurphy18/debbuild_deps
  - f7f8a5d33f Fixed pylint issues
  - 82fa276141 Support for building with local packages on Debian and Ubuntu
  - PR #34194: (vutny) Correct the docstrings formatting in pkgbuild modules and state
  - PR #34056: (vutny) Make rpmbuild module work on non-RPM based GNU/Linux systems (refs: #34194)

• PR #34186: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-06-21 23:26:34 UTC
  - a8429c2595 Merge pull request #34186 from rallytime/merge-2016.3
  - 318c2ed6a1 Merge branch '2015.8' into '2016.3'
  - 1c4369d093 Merge pull request #34184 from rallytime/merge-2015.8
    * 8e36e90966 Merge branch '2015.5' into '2015.8'
    * 5411ebb3b4 Merge pull request #34141 from jtan/boto_vpc_test_fix
      - b7ac6c735a Moved imports to top, out of _get_moto_version function
      - 02fb9ba99ba Updated version check. Moved check into its own function
      - d445026c56 Updated test to work with new moto version. Changed strings to unicode
  - c059d6c08c Merge pull request #34176 from rallytime/bp-34103
    * 2e5e7ed03c Fix diskusage beacon
  - 5cb9aaed167 Merge pull request #34179 from terminalmage/issue34114
• 86d1b8e864 Raise the correct exception when gitfs lockfile is empty
  – 67deded119 Merge pull request #34178 from terminalmage/remove-comment
    • 4965be72b1 Remove unnecessary comment
  – 6387d163ee fix salt --summary to count not responding minions correctly (#34165)
  – e5949ea6f1 doc: adding missing dot (#34175)
  – 47595d6795 Typo fix (#34174)
  – 3669048654 Merge pull request #34077 from rallytime/grains-tests
    • 2199bb8a78 Add integration tests for grains.append
    • 37cfe70724 Add some grains targeting tests
• ISSUE #34162: (ryanwalder) salt-call default loglevel regression (refs: #34173)
• PR #34173: (rallytime) Update docs to match log_level default @ 2016-06-21 17:15:53 UTC
  – 3413c494bd Merge pull request #34173 from rallytime/fix-34162
  – f577681f0b Update docs to match log_level warning default
• ISSUE #34094: (avandendorpe) cron.file is broken (refs: #34095)
• PR #34095: (rallytime) Back-port #32396 to 2016.3 @ 2016-06-21 16:12:39 UTC
  – PR #32396: (eradman) Unbreak cron.file (refs: #34095)
  – c596bf5744 Merge pull request #34095 from rallytime/bp-32396
  – 074b6ab5ec Correct pylint error
  – 20ff5c879a Unbreak cron.file
• PR #34108: (l2ol33rt) Make dockerng.absent state honor test=true @ 2016-06-21 15:55:29 UTC
  – b98687875f Merge pull request #34108 from l2ol33rt/docker_absent_dryrun
  – 5598cb4a21 Make docker.absent honor test=true
• ISSUE #34012: (viq) States mount.* fail on OpenBSD’s tmpfs (refs: #34133)
• PR #34133: (rallytime) Back-port #34057 to 2016.3 @ 2016-06-21 15:53:46 UTC
  – PR #34057: (ajacoutot) _active_mounts_openbsd: unbreak output for special filesystems (refs: #34133)
  – a75386a669 Merge pull request #34133 from rallytime/bp-34057
  – f7be5e182b _active_mounts_openbsd: unbreak output for special filesystems
• PR #34156: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-06-21 15:52:59 UTC
  – dd989dac78 Merge pull request #34156 from rallytime/merge-2016.3
  – b506fb86946 Merge branch '2015.8' into '2016.3'
    • 65fba5bf09 Merge pull request #34142 from isbm/isbm-getid-loglevel-shift
    • 236a67b702 Move log message from INFO to DEBUG.
    • 79a719b719 Update documentation on "refresh" behavior in pkg states (#34100)
    • 6d0d524a86 modules.pkg.int tests: skip refresh_db upon error (#34072)
• PR #34110: (garethgreenaway) Fixes to git module & state module related to identity file @ 2016-06-21 15:52:17 UTC
- b302cb03ef Merge pull request #34110 from garethgreenaway/git_needs_saltenv_for_identity
- 68092dc8c When specifying the SSH identity to use with Git as a salt URL, eg. salt://files/identity, if that file exists outside of the default base environment the file won’t be accessible so we need to include the saltenv.

**ISSUE #34120**: (rmohta) Correct package name to systemd-python for RHEL 7 in docs.saltstack.com (refs: #34138)

**ISSUE #31402**: (vutny) [repo] systemd-python required package is missing from RHEL7 archive (refs: #34138)

**PR #34138**: (rallytime) Update package dep note to systemd-python for RHEL7 install @ 2016-06-21 15:51:24 UTC

- 6c3405755a Merge pull request #34138 from rallytime/fix-34120
- 73f3e12ce6 Update package dep note to systemd-python for RHEL7 install
- **PR #34166**: (vutny) Fix YAML indentation in Apache state docstrings
- **PR #34098**: (terminalmage) Restore old refresh logic
- **PR #34087**: (bbinet) Encourage to report issues to upstream PillarStack project

**PR #34075**: (jfjndlay) modules.inspectlib.kiwiproc: import gate lxml @ 2016-06-17 15:36:08 UTC

- 9da592a297 Merge pull request #34075 from jfjndlay/import_xml
- f882a72348 modules.inspectlib.kiwiproc: import gate lxml

**PR #34056**: (vutny) Make rpmbuild module work on non-RPM based GNU/Linux systems (refs: #34194) @ 2016-06-17 15:14:51 UTC

- 52b852216a Merge pull request #34056 from vutny/rpmbuild-support-debian
- 8ff36d4f2b Expose virtual pkgbuild module as rpmbuild on non-RPM based systems if all required utilities are in place
- 758f5cd77c Make rpmbuild module work on Debian GNU/Linux and derivatives

**PR #34073**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-06-16 23:02:32 UTC

- f2a2c2bf53 Merge pull request #34073 from rallytime/merge-2016.3
- f6bfaede21 Merge branch '2015.8' into '2016.3'
- 1b76de1557 Merge pull request #34069 from rallytime/test-minion-return-message
  * 60561ac6fc Add a test to check for disconnected minion messaging
  * 3119693dac Merge pull request #34048 from terminalmage/issue30100
  * 715e7af8a4 Ensure only one fileserver update in a masterless run
- dd03024931 Merge pull request #34011 from rallytime/bp-33948-2015.8
  * a4660d1ff7 Warn when custom returners don’t have minions kwarg in save_load
  * 78bede626f Add note to release notes about returner minions kwarg change
  * 4e7f35fa36 Fix loop over cache in auth checking!
  * 06963e0505 Save an entire minion cache traversal on each master pub
- bca437128e Fixed a bug in the consul.py module that was preventing services (#34051)
- 8ba117c7f6 Merge pull request #34045 from jacobhammons/release-prev
  * 43b4a12aa2 Updated latest release version
- f9bfcde61f Always make changes to minion config if set (#34020)
- e25dba49e2 More YAML indentation fixes in state module examples (#34030)
- 5b5eae4ca9 Merge pull request #34018 from rallytime/merge-2015.8
  * 77f4f3087 Merge branch '2015.5' into '2015.8'
  * 871f7966ce Lint fix for #34000 (#34005)
  * f758e42172 Fix incorrectly written test (#34000)
  * cf6281b4cf Add loader.utils() example to calling minion_mods (#33953)
- 6b98e8a9ea Merge pull request #33880 from terminalmage/zh744
  * ea726d11c8 pkg.uptodate: Pass kwargs to pkg.list_upgrades
  * de90b35d2b salt/modules/zypper.py: add fromrepo support to list_upgrades
  * 35fbb06df5 salt/modules/win_pkg.py: add kwargs to list_upgrades
  * bf5505f425 salt/modules/solarisips.py: add kwargs to list_upgrades
  * 6e89a8eb98 salt/modules/pkgutil.py: add kwargs to list_upgrades
  * 5179dbec4 salt/modules/pacman.py: add kwargs to list_upgrades
  * 46e5a52784 salt/modules/macports.py: add kwargs to list_upgrades
  * 76143b76ca salt/modules/ebuild.py: add kwargs to list_upgrades
  * b40fc9bc62 salt/modules/brew.py: add kwargs to list_upgrades
  * 4f11c16d86 salt/modules/aptpkg.py: add fromrepo support to list_upgrades
- cb88960ed1 Merge pull request #33904 from rallytime/bp-33806
  * 638ccf501d Work around upstream cherrypy bug
- 7d940aed1f states.file: fix indentation in YAML examples (#34003)
- 4c7fa00aa Remove loader test for pam module (#34002)
- c4dab6a074 Merge pull request #33990 from jacobhammons/community-projects
  * b20213fd79 Adds links to several current Salt-related projects Removes the salt_projects.rst file which hasn’t been updated in a long time, this is replaced by the updated topics/projects/index.rst file Adds a note about Salt Pack to the installation doc
- 444c15792c Merge pull request #33983 from twangboy/fix_docs_join_domain
  * b057be04b4 Fix typo, more documentation
  * d8c2f3e57a Clarify the account_exists parameter
- 9bd2317992 Merge pull request #33951 from jfindlay/gem_tests
  * 2eb633ccad modules.gem int tests: only check known installed gems
  * 9f3e18b037 modules.gem int tests: (un)install a non-core gem
- 53baae6eb1 Merge pull request #33984 from jfindlay/disk_capacity
  * 6cbe31e6c2 states.disk: rewrite unit tests
  * 82c77b533f states.disk.status: validate percent values
  * aedc4e15e5 states.disk: add documentation
- fa5efb6a69 Merge pull request #33985 from rallytime/more-batch-tests
• 3e7ab8c7b3 Write some more simple batch command tests
  – 608084c6ce acl.ClientACL: add unit tests (#33684)
• ISSUE #33831: (astehlik) file.managed state should not download a file if the checksum did not change (refs: #34010)
• PR #34010: (terminalmage) Do not cache remote files if they are already cached @ 2016-06-16 21:03:47 UTC
  – 790384f413 Merge pull request #34010 from terminalmage/issue33831
  – 636d081ae0 Do not cache remote files if they are already cached
• PR #34009: (rallytime) Back-port #33948 to 2016.3 + add log message (refs: #34011) @ 2016-06-16 21:01:09 UTC
  – PR #33948: (cachedout) Save an entire minion cache traversal on each master pub (refs: #34011, #34009)
  – dd26d6fd74 Merge pull request #34009 from rallytime/bp-33948
  – 239af9ae5e Warn when custom returners don’t have minions kwarg in save_load
  – c776d2795 Add note to release notes about returner minions kwarg change
  – 5f696082e3 Fix loop over cache in auth checking!
  – 180c312715 Save an entire minion cache traversal on each master pub
• ISSUE #33927: (phil123456) Salt - windows minion cannot do anything (refs: #33941)
• PR #33941: (cachedout) Don’t call os.getppid() on Windows @ 2016-06-16 20:56:17 UTC
  – 5f4ef46df Merge pull request #33941 from cachedout/issue_33927
  – 5fe889c7f1 Don’t call os.getppid() on Windows
• PR #34067: (jacobhammons) Fixes doc refresh bug on chrome mobile. @ 2016-06-16 18:44:12 UTC
  – fa253aa62b Merge pull request #34067 from jacobhammons/mobile-fix
  – ce027fd769 Fixes doc refresh bug on chrome mobile.
  – PR #34050: (rallytime) Back-port #34026 to 2016.3
  – PR #34026: (bensherman) removed method that doesn’t exist (refs: #34050)
• PR #33987: (isbm) inspectlib cleanup @ 2016-06-15 22:09:31 UTC
  – 73ff11585e Merge pull request #33987 from isbm/isbm-inspectlib-clean-up
  – c36821510F Fix documentation: add an example how to export system to the Kiwi
  – fe300ccf73 Lintfix
  – 96423076b1 Add unit test for file tree
  – 8975036b27 Add get_unmanaged_files test
  – be5f12fca9 Add initial unit test for inspectlib.collectorInspector
  – 652c96d7e Stop build (not implemented yet)
  – 58ee85ea0ab Refactor class caller
  – 878f67674a Sort package names
  – c31818b4aa Fix lint: PEP8 multiplication of 4.
  – c87ff3680 Add root-only warning when exporting system with Kiwi
  – 9bd80f02fc Implement users Kiwi export

2622 Chapter 30. Release Notes
- e191f338c7 Cleanup code
- 80f45defae Implement packages and patterns gathering
- ad45a265f5 Add Debian support for the repo generator
- 6280ad137e Semifix: sometimes SQLite3 is locked. TODO: a proper handling required.
- 51567ab61d Implement SUSE repositories export
- e4ac113927 Add Kiwi support to the collector/inspector
- eceeb4ec7f Add ability to specify an additional PID file
- f522a91ac6 Add ISO/image build (stub) and export to the Kiwi
- bb19684606 Add Kiwi processor exception
- 805e2ce204 Add Kiwi exported (initial)
- a529f7107 Add default configuration

- ISSUE #34038: (Ch3LL) user.list_users does not work on smartos (refs: #34042)
- PR #34042: (sjorge) fix #34038

- PR #34025: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-06-15 19:41:00 UTC
  - f546a00dc9 Merge pull request #34025 from rallytime/merge-2016.3

- PR #34044: (jacobhammons) Updated latest release to 2016.3.1 @ 2016-06-15 19:20:28 UTC
  - 3055520594 Merge pull request #34044 from jacobhammons/3.1
  - a4b67fd1e9 Updated latest release to 2016.3.1 Clean up installation instructions code-block type updates
  - Add link to jinja tutorial
  - PR #34014: (jhmcknight) fix launch config creation params
  - PR #34021: (twangboy) Always make changes to minion config if set (2016.3)

- PR #34031: (eliasp) states.postgres_privileges expects a real list, not a comma-separated string @ 2016-06-15 16:34:04 UTC
  - 5f90717fd3 Merge pull request #34031 from eliasp/2016.3-salt.states.postgres_privileges-doc-priv-list
  - d3198ea538 states.postgres_privileges expects a real list, not a comma-separated string for privileges

- ISSUE #33023: (cmclaughlin) rest_cherrypy eauth can't handle some characters (refs: #33995)
- ISSUE #23522: (nbirnel) Update the best practices documentation to include simpler examples of of jinja dictionaries (refs: #33995)
- ISSUE #12470: (whiteinge) Document how to (and not NOT to) use Jinja in states (refs: #33995)

- ISSUE #10480: (gravyboat) Create documentation that talks about using Jinja specifically for Salt. (refs: #33995)
- ISSUE #10206: (rabits) Jinja import: Jinja variable 'salt' is undefined (refs: #33995)
- PR #33995: (jacobhammons) Understanding Jinja topic, Jinja doc issues. @ 2016-06-14 02:00:29 UTC
  - 1132b5cd0b Merge pull request #33995 from jacobhammons/doc-fixes
  - 887a415138 Adds new Understanding Jinja topic, and fixes several Jinja doc issues. Removes the "Full list of builtin ..." from each module reference list, leaving just the module type for scanability.
- PR #33900: (amendlik) Document sudo policy for gitfs post-recieve hook @ 2016-06-14 01:04:35 UTC
  - a400f6a6c3 Merge pull request #33900 from amendlik/gitfs-hook-doc
Salt Documentation, Release 3002.5

- b4a28e2684 Add clarifying documentation about the need for sudo in the git hook
- 1046279cb7 Document sudo policy for gitfs post-receive hook

**PR #33980**: (twangboy) Use full path to python.exe @ 2016-06-14 00:46:14 UTC
- 28c886ed00 Merge pull request #33980 from twangboy/fix_build
- dd7d55ab9 Use full path to python.exe

**PR #33993**: (s0undt3ch) Call sys.exit() instead of exit() @ 2016-06-14 00:30:46 UTC
- 26fee377ec Merge pull request #33993 from s0undt3ch/2016.3
- 34f7d90d9f Call sys.exit() instead of exit()

**PR #33976**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-06-13 19:29:40 UTC
- 2e934cfef Merge pull request #33976 from rallytime/merge-2016.3
- 19d49d94f2 Merge branch '2015.8' into '2016.3'
  * a74f1b8077 ZD 762 (#33942)
  * 28b1d4916 Merge pull request #33946 from rallytime/bp-33698
    - 5fd4ed1cb9 Make sure we only use GetConnection if we are using a proxy salt minion
    - 1505e5724a Fix a bug with self signed certificates and creating a new VM
  * dff3f1595f Merge pull request #33952 from rallytime/fix-33911
    - 03b7cbdb2c Add base argument to salt-ssh grains wrapper for filter_by func
  * 4a8064918a Adds a "Generated on -timestamp:" line to the footer of each doc html page in the doc (#33962)

**ISSUE #33868**: (abalashov) Returner configuration override options don't work for scheduled jobs (schedule module) (refs: #33912)

**PR #33912**: (abalashov) utils/schedule.py:handle_func() - Fix for accessing returner configur... @ 2016-06-13 17:18:04 UTC
- 8d8ed59bb5 Merge pull request #33912 from abalashov/abalashov/fix-schedule-returner-config
- b5a4f8b313 utils/schedule.py:handle_func() - Fix for accessing returner configuration attributes 'return_config' and 'return_kwargs'.

**PR #33945**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-06-13 15:44:30 UTC
- 81e16bb93f Merge pull request #33945 from rallytime/merge-2016.3
- b4ab322ce1 Merge branch '2015.8' into '2016.3'
  * b3ec39d644 Correct issue with ping on rotate with minion cache (#33765)
  * 378dd7ca06 Merge pull request #33888 from jfindlay/random_check
    - 6acee3cc30 modules.random_org._query: only return text if present
    - 82f95429db modules.random_org unit tests: skip if random.org down
    - 1f94d2f0ed utils.http.query: also except gaierror with tornado
  * 2dc1914e7c Add connecting_settings to boto_elb state attributes list (#33936)
  * 91a2184f2d Wait for up to a minute for sync_after_install (#33917)
  * ef6da0be5d Merge pull request #33877 from rallytime/merge-2015.8
• 398534a9e7 Fix ret return from merge-conflict resolution
• b8e4706074 Merge branch '2015.5' into '2015.8'
• cdda593c50 Merge pull request #33829 from terminalmage/update-versionchanged
  · f7028eb1c6 Update versionchanged directive
• b86c144d8 Merge pull request #33833 from terminalmage/issue33645
  · 91745c2a67 Support syncing pillar modules to masterless minions
• e061788e81 Merge pull request #33814 from terminalmage/archive-extracted-xz
  · 897a716df2 Support extraction of XZ archives in archive.extracted state
• fa983e91cf Merge pull request #33778 from sodium-chloride/2015.5-2016-0604-1938
  · a5f6d7a69 Fix minor docstring issues
• b9133326c8 Merge pull request #33726 from jtand/sysmod_skip_valid_docs_glance
  · ebee8a89af glance.warn_until shouldn't be checked for a doc string
  · 137f0b19f3 Merge pull request #33611 from TargetHolding/2015.5
• 1dd15a603b solve 'TypeError: expected string or buffer' in json/decoder.py
• ISSUE #33575: (anlutro) File states seem slower in 2016.3, especially on first cache retrieval (refs: #33896)
• ISSUE #29643: (matthayes) Can't get batch mode and --failhard to work as expected (refs: #31164)
• ISSUE #28569: (andrehanss) Reactor alert on highstate fail (refs: #31164)
• PR #33908: (nicosas) Don't deep copy context dict values. @ 2016-06-13 15:37:46 UTC
  · 68d261fe5b Merge pull request #33906 from mecarus/2016.3
  · d622133a49 The jid load comes in directly, not as 'load' key. Should return the mongo record directly without accessing keys
• PR #33961: (jacobhammons) 2016.3.0 known issues update @ 2016-06-13 02:59:21 UTC
  · 8f56a06507 Merge pull request #33961 from jacobhammons/release
  · 2cf787d4ba 2016.3.0 known issues update
  · PR #33908: (nicosas) Don't deep copy context dict values.
• ISSUE #33575: (anlutro) File states seem slower in 2016.3, especially on first cache retrieval (refs: #33896)
• ISSUE #29643: (matthayes) Can't get batch mode and --failhard to work as expected (refs: #31164)
• ISSUE #28569: (andrehanss) Reactor alert on highstate fail (refs: #31164)
• PR #33896: (DmitryKuzmenko) Don't deep copy context dict values. @ 2016-06-10 15:32:54 UTC
  · PR #31164: (DmitryKuzmenko) Issues/29643 fix invalid retcode (refs: #33896)
  · 16b5e9ddc1 Merge pull request #33896 from DSRCompany/issues/33575_do_not_deep_copy_context
  · 8e34d0a9c3 Don't deep copy context dict values.
• ISSUE #3077: (torhve) Client ACL and external auth system should have support for limiting functions to certain arguments (refs: #29153)
• PR #33905: (rallytime) Back-port #33847 to 2016.3 @ 2016-06-10 15:22:34 UTC
  · PR #33847: (whiteinge) Add docs for arg/kwarg eauth matching (refs: #33905)
  · PR #29153: (DmitryKuzmenko) ACL limit args (refs: #33847)
  · 01323322b0 Merge pull request #33905 from rallytime/bp-33847

30.2. Previous Releases
30.2.65 Salt 2016.3.3 Release Notes

Version 2016.3.3 is a bugfix release for 2016.3.0.

Statistics

- Total Merges: 108
- Total Issue References: 26
- Total PR References: 115
- Contributors: 36 (The-Loeki, abednarik, cachedout, cro, deniszh, dkruger, dmurphy18, eliasp, farcaller, galet, gtmanfred, hu-dabao, isbm, jacobhammons, jacobweinstock, jfindlay, justinta, kstreee, lubyou, markuskramerlgitt, meaksh, mihael, nzupan, nishigori, rallytime, s0undt3ch, skizunov, tankywoo, termimalmage, thatch45, theredcat, ticosax, tonybaloney, twangboy, vutny, whiteinge)

Known Issues

issue #36055: Salt Cloud events (salt/cloud) are not generated on the master event bus when provisioning cloud systems.

Bootstrap Issue #973: python-futures is not installed when installing from a git tag on RedHat-based distributions. Python futures is needed when running Salt with the TCP transport. This is fixed on the develop branch of the salt-bootstrap repo and the fix will be included in the upcoming release of salt-bootstrap, but is a bug in the bootstrap release that ships with this version of Salt. Please see the salt-bootstrap repo for more information on how to update your bootstrap version.

Changelog for v2016.3.2..v2016.3.3

Generated at: 2018-05-27 04:47:36 UTC

- PR #35603: (rallytime) Make sure version label is correct in header
- PR #35602: (rallytime) Update release notes for 2016.3.3
- ISSUE #35102: (TheBigBear) Exception raised when processing __virtual__ function for mac_system - (mac os x installation relies on un-installed 'mac_service_helper.sh') (refs: #35580)
- PR #35580: (twangboy) Fix mac_service attempts to parse non-plist files @ 2016-08-19 09:24:38 UTC
  - 9683bb3c58 Merge pull request #35580 from twangboy/fix_35102
  - 412266ed5 Handle malformed plist files
  - 52feff9309 Fix mac_service attempts to parse non-plist files
- PR #35586: (hu-dabao) Fix 35420, add run_on_start in build_schedule_item @ 2016-08-19 09:23:32 UTC
  - c4ec94d6e8 Merge pull request #35586 from hu-dabao/fix-35420
  - 2d3a882cc2 fix 35420, add run_on_start in build_schedule_item, remove redundancy of enabled
PR #35583: (terminalmage) Fix localemod tests

PR #35579: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-18 22:00:41 UTC
  - d13396d9f5 Merge pull request #35579 from rallytime/merge-2016.3
  - 00df9dcbb Merge branch '2015.8' into '2016.3'
  - 26a7f7d9f7 Merge pull request #35577 from terminalmage/unit-file-changes
    * 6cb0f47f3 pkg/salt-syndic.service: change Type to notify
    * 175ba99e0e pkg/salt-minion.service: remove KillMode, change Type to notify
    * 540ec28954 pkg/salt-master.service: remove KillMode
    * 69fad464ab pkg/salt-api.service: change Type to notify

PR #35571: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-18 19:50:03 UTC
  - f7a18234db Merge pull request #35571 from rallytime/merge-2016.3
  - 2930df924e Update localemod_test systemd.sd_booted mock to use salt.utils.systemd.booted
  - e61b04a707 Merge branch '2015.8' into '2016.3'
    * 2a5d1a00ee fix-35384, fix the logic caused by wrong indent (#35566)
    * feb852f8c0 Clarify config.get docstring (#35492)
    * 205d8e2e7b Merge pull request #35483 from gtmanfred/2015.8
      * 2d8ec1e9db use __opts__ in salt.utils.cloud for cache functions
    * 70fa2d0901 Merge pull request #35546 from whiteinge/salt-api-eauth-fail-gracefully
      * eb3574adae Don't fail hard if the user's permissions cannot be found
      * ec597bd54c Change groups check in token to look for truthy values
    * 61fe6c5aa9 add missing glob import (#35525)
    * 0e3f26c6cb Whitespace fix for 2015.8 (#35540)
  - fd3274c800 Merge pull request #35518 from terminalmage/issue33516
    * 5b5f19d269 Update zypper unit test to reflect call to config.get
    * 2730deb516 Add note about systemd-run usage in package states
    * e2d9e87e10 salt/modules/systemd.py: Use systemd-run --scope where needed
    * 22919a25bc Notify systemd on salt-api start
    * a40b3f8a08 Notify systemd on syndic start
    * e847d3af30 Notify systemd on minion start
    * d648887af8 salt/modules/zypper.py: Use systemd-run --scope where needed
    * 2e17976722 salt/modules/yumpkg.py: Use systemd-run --scope where needed
    * 86b59ce174 salt/modules/pacman.py: Use systemd-run --scope where needed
    * e32d926d5 salt/modules/ebuild.py: Use systemd-run --scope where needed
    * c7d21d3ae3 salt/modules/aptpkg.py: Use systemd-run --scope where needed
    * f83e0ef242 Add unit tests for salt.utils.systemd
    * 5b12f030c6 Add func to salt.utils.systemd to tell if scopes are available
Salt Documentation, Release 3002.5

- PR #35573: (rallytime) Back-port #33337 to 2016.3
- PR #33337: (mzupan) adding the () to make changes work (refs: #35573)

• PR #35572: (terminalmage) Fix poor formatting in pkg state docs @ 2016-08-18 18:15:52 UTC
  - 73b549ed00 Merge pull request #35572 from terminalmage/docs
  - 7d7a7de96 Fix poor formatting in pkg state docs
  - PR #35545: (hu-dabao) fix-35384, fix cmd.run unless (refs: #35566)
  - PR saltstack/salt#35463: (skizunov) Make auth_timeout user configurable again (refs: #35489)

• PR #35489: (rallytime) Back-port #35463 to 2016.3 @ 2016-08-18 07:16:03 UTC
  - PR #35463: (skizunov) Make auth_timeout user configurable again (refs: #35489)
  - f2eb3dc105 Merge pull request #35489 from rallytime/bp-35463
  - bbf7ce121b Remove final self.MINION_CONNECT_TIMEOUT ref
  - cf2e2daab9 Make auth_timeout user configurable again
  - PR #35538: (thatch45) Treat python XML as an optdep

• PR #35526: (thatch45) Always deploy the thin to /var/tmp @ 2016-08-17 19:44:26 UTC
  - e2bd575461 Merge pull request #35526 from thatch45/ssh_W_tmp
  - a381f02ce Always deploy the thin to /var/tmp

• PR #35522: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-17 18:07:16 UTC
  - 8b770869e4 Merge pull request #35522 from rallytime/merge-2016.3
  - ff21d8976 Whitespace fix
  - c305d8d99b Merge branch '2015.8' into '2016.3'
  - b3b28cb760 Might be a good idea to be able to download the software we make (#35513)
  - 9fb7081cef Merge pull request #35302 from Ch3LL/add_job_cache_test
      - ccb2a5cadf remove unused imports
      - 512ae81dfd remove TMP and add integrationTMP
      - c9b7c3c80 need to add returners option in other places
      - 7316df7a02 fix pylint
      - 50a4f0fe6a fix comment
      - 6b37ac7f42 add job cache integration tests
  - 1c82c6bee5 Merge pull request #35512 from cachedout/fixup_35419
      - 253662541a Fix import
      - f16a30786b Fixes consul.agent_service_register which was broken for registering service checks.
  - e1a373fa4c Merge pull request #35497 from deepakhj/2015.8
      - 685db4ab88 Fix spacing
  - 4048255ed6 Merge pull request #35508 from terminalmage/update-docstring
      - 67c945fcee0 Add Carbon to versionadded for git.diff

• PR #35516: (rallytime) Back-port #34441 to 2016.3 @ 2016-08-17 15:47:23 UTC
- PR #34441: (markuskramerIgitt) Copy and delete silently, do not list each file (refs: #35516)
- e86a39a115 Merge pull request #35516 from rallytime/bp-34441
- e47c661cb0 Copy and delete silently, do not list each file
- PR saltstack/salt#34502: (markuskramerIgitt) Windows installer build scripts will exit on error (refs: #35517)

- PR #35517: (rallytime) Back-port #34502 to 2016.3 @ 2016-08-17 15:47:10 UTC
  - PR #34502: (markuskramerIgitt) Windows installer build scripts will exit on error (refs: #35517)
  - 45080d9860 Merge pull request #35517 from rallytime/bp-34502
  - 32da48d08 setup.py will not print each individual file
  - 698a076a39 Completely remove Python and verify
  - 7406bd22a6 Errors will stop the scripts

- PR #35429: (tankywoo) Fix iptables target options with no arguments @ 2016-08-17 10:05:17 UTC
  - c1deb945d7 Merge pull request #35429 from tankywoo/fix-iptables-target-options
  - 914eb60d51 Fix iptables target options with no arguments

- ISSUE #35458: (iggy) SALT.STATES.APACHE_MODULE needs version annotations (refs: #35495)

- PR #35495: (rallytime) Use correct deprecated notation instead of a warning for apache_module.enable state function. @ 2016-08-17 09:36:40 UTC
  - 678759ba6c Merge pull request #35495 from rallytime/fixed deprecated notation
  - 9bae3d09a6 Use correct deprecated notation instead of a warning.

- ISSUE #35336: (Sylvain303) documentation state.file.managed parameter template not reflecting TEMPLATE_REGISTRY (refs: #35360, #35498, #35406, saltstack/salt `#35360` _)
  - PR saltstack/salt#35360: (rallytime) Add all template registry templates to file.managed docs (refs: #35406)

- PR #35498: (rallytime) Add supported templates list to all template doc references in file state @ 2016-08-17 09:33:36 UTC
  - PR #35406: (rallytime) Provide links to the renderers in the template docs (refs: #35498)
  - PR #35560: (rallytime) Add all template registry templates to file.managed docs (refs: #35498)
  - 5bd44b10a7 Merge pull request #35498 from rallytime/file-state-docs
  - 6190b2d738 Add supported templates list to all template doc references in file state

- PR #35487: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-16 18:36:21 UTC
  - 6df4648765 Merge pull request #35487 from rallytime/merge-2016.3
  - c6c82be1de Merge branch `2015.8` into `2016.3`
  - bfc7107a87 Update bootstrap script to latest stable (2016.08.16) (#35486)
  - 240fc12863 Merge pull request #35413 from cachedout/issue_35296
    * fb8a12d677 Fix silly error
    * 3646cf1afa Additional checks on master and integration test
    * 09efde7634 Splat the list into os.path.join
    * fc0d5878bc Set file_recv on test master
2630 Chapter 30. Release Notes

- 81c4d136c5 Transition file push paths to lists
  - c3319b2a8b Merge pull request #35476 from cachedout/issue_35380
    - c05fcf33d1 Fixup SSH bug where sudo without sudo user would break
  - 004778c966 Merge pull request #35471 from terminalmage/issue34479
    - e243c63e43 win_pkg: Fix traceback when package is not installed
  - 5c9428c32d Merge pull request #35448 from isbm/isbm-zypper-106-fix
    - dd826a8448 Add ignore_repo_failure option to suppress zypper's exit code 106 on unavailable repos
  - 1473474b04 Merge pull request #35451 from isbm/isbm-zypper-mod_repo-unchanged
    - 8790197d86 Fix Unit test for suppressing the exception removal on non-modified repos
    - 3f00c6997a Remove zypper's raise exception if mod_repo has no arguments and/or no changes
  - a8c4f1f7f0 Merge pull request #35453 from theothergraham/fixed.CacheDisk
    - ae5b233d51 fixes #34279
  - d8c35b5260 Merge pull request #35459 from thatch45/shim_fix
    - 10037b00cb Some environments refuse to return the command output
  - 38b60a32e5 [2015.8] Update bootstrap script to latest stable (2016.08.15) (#35460)

- ISSUE #34161: (bobrik) Salt command can hang forever because of one broken minion (refs: #35446)
  - PR #35446: (cachedout) Make salt-client aware of edge-case where saltutil might be broken

- ISSUE #35422: (ViaviSolutions) aptpkg.py: install_recommends: True does not force "--install-recommends" (refs: #35449)

- PR #35449: (dkruger) aptpkg will specify --install-recommends if enabled by the SLS @ 2016-08-16 01:38:56 UTC
  - f90ecbb15e Merge pull request #35449 from dkruger/fix-35422
  - f54b445b5 aptpkg will specify --install-recommends if enabled by the SLS

- ISSUE #33367: (supertom) [salt-cloud] libcloud >= 1.0.0 incompatible regarding node_state (refs: #35318)

- PR #35467: (rallytime) Back-port #33518 to 2016.3 @ 2016-08-16 01:17:01 UTC
  - PR #35235: (rallytime) Back-port #33518 to 2016.3 (refs: #35467)
  - PR #33518: (tonybaloney) Fix libcloud bug #33367 (refs: #35235, #35467)
  - d2dd78e25b Merge pull request #35467 from rallytime/bp-33518
    - 427815caf fix crlf
  - be41a400fa commit fix
  - 06530b5461 add a test to check existing functionality is broken
  - PR #35461: (rallytime) [2016.3] Update bootstrap script to latest stable (2016.08.15)

- PR #35456: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-15 19:16:23 UTC
  - 9b2c075611 Merge pull request #35456 from rallytime/merge-2016.3
  - 6a86a12294 Merge branch '2015.8' into '2016.3'
  - d75005c519 Fix cp.push_dir pushing empty dirs (#35442)
- 09925ba353 Minor doc fixup (#35436)
- a0b128a85a Merge pull request #35132 from sjorge/2015.8-35121
  - 5cb38c8ae0 switch to fspread().splitlines(), as per @lorencegordon suggestion
  - 63af1d6d5 fixes #35121, causing lots of mayhem (onchange) with 2016.3.2 for me
- PR saltstack/salt#35308: (farcaller) Actually fixed dockerng.list_tags (refs: #35447)
- PR saltstack/salt#34702: (farcaller) Fixed dockerng.list_tags (refs: #35447)
- PR #35447: (ticosax) [dockerng] RepoTags can be also be None with docker 1.12
- PR #34702: (farcaller) Fixed dockerng.list_tags (refs: #saltstack/salt#35308)
- ISSUE saltstack/salt#35403: (randomed) Setting ext_job_cache breaks on salt-master (refs: #35427)
  - PR #35427: (cachedout) Correct errant call to argspec from master. Fix ext_job_cache.
- ISSUE #35423: (Ch3LL) Stacktrace when running state.sls against an sls does not exist (refs: #35428)
  - PR #35428: (cachedout) Resolve stacktrace logged by highstate outputter if sls cannot be found
- PR #35412: (s0undt3ch) Only allow one sync read to happen at a time. @ 2016-08-12 23:57:29 UTC
  - 607169a01b Merge pull request #35412 from s0undt3ch/2016.3
  - f54b3cc514 Only allow one sync read to happen at a time.
- ISSUE #35336: (Sylvain303) documentation state.file.managed parameter template not reflecting TEM-PLATE_REGISTRY (refs: #35360, #35498, #35406, #saltstack/salt#35360)
  - PR saltstack/salt#35360: (rallytime) Add all template registry templates to file.managed docs (refs: #35406)
  - PR #35406: (rallytime) Provide links to the renderers in the template docs (refs: #35498)
- PR #35393: (deniszh) No need to run ddns update every time @ 2016-08-12 12:40:36 UTC
  - b3e9e9b40 Merge pull request #35393 from deniszh/2016.3_fix35350
  - 6f2f08f4a No need to run dns update every time
- PR #35407: (hu-dabao) [Fix-35094] None will not be added to grains which generate [none] @ 2016-08-12 12:34:05 UTC
  - a5f6b7b9 Merge pull request #35407 from hu-dabao/fixed-35094
  - a23108f795 None will not be added to grains which generate [none]
- PR #35411: (eliasp) modules.event.send(): Prevent backtrace for masterless Minions @ 2016-08-12 12:29:02 UTC
  - 4dc776f6b Merge pull request #35411 from eliasp/2016.3-modules.event-handle-file_client-opt
  - 8d724bd9 modules.event.send(): Also check for file_client and use_master_when_local opts
- PR #35395: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-11 20:59:37 UTC
  - c03506ed6 Merge pull request #35395 from rallytime/merge-2016.3
  - 0d0aa630f1 Lint fix
  - c03506ed6 Merge branch '2015.8' into '2016.3'
  - d9c20c0456 Update freebsd.rst (#35394)
  - a375dd7e1f Clean up open filehandles (#35359)
  - 9ea7a34c3a Merge pull request #35339 from isbm/isbm-2015.8-minion-importerror-fix
• 12af60b7be Fix continuous minion restart if a dependency wasn’t installed
  – fd9b05ace4 Merge pull request #35357 from twangboy/file.recurse.clean.2015.8
  – d328ec0157 Fix file.recurse with clean: True

• ISSUE #35226: (mathieubouchard) Do not throw an exception when an invalid requisite is set (refs: #35373)
  – PR #35373: (cachedout) Raise SaltRenderError on bad requisite

• PR #35352: (twangboy) Fix file.recurse with clean: True on Windows (2016.3) @ 2016-08-11 00:46:11 UTC
  – 72f3548671 Merge pull request #35352 from twangboy/file.recurse.clean
  – ecad61d08 Fix file.recurse with clean: True

• PR #35356: (jfindlay) document log levels and warn on all logging below info @ 2016-08-11 00:45:56 UTC
  – 0fc70cc8 Merge pull request #35356 from jfindlay/log_levels
  – 2fc3a55338 utils.verify.verify_log: warn at all levels less than info
  – 72a3f18ae2 log.setup: minor optimization
  – 6632510c6 doc.ref.configuration.logging: document log levels
  – 93616eff3e doc.ref.configuration.logging: fix formatting
  – 472a2d31de doc.ref.configuration.logging: cleanup formatting

• PR #35358: (twangboy) Update libsodium deps @ 2016-08-11 00:36:30 UTC
  – 2f7be03053 Merge pull request #35358 from twangboy/update_libsodiumdeps
  – d120a8906f Add vcredist 14 dlls

• ISSUE #35336: (Sylvain303) documentation state.file.managed parameter template not reflecting TEM-PLATE_REGISTRY (refs: #35360, #35498, #35406, #saltstack/salt`#35360`_)

• PR #35360: (rallytime) Add all template registry templates to file.managed docs (refs: #35498) @ 2016-08-11 00:35:20 UTC
  – f9e03b9c59 Merge pull request #35360 from rallytime/fix-35336
  – 30badb5402 Add all template registry templates to file.managed docs

• ISSUE #24745: (The-Loeki) RFC: disk versus blockdev (refs: #24893)
  – PR saltstack/salt#25267: (jfindlay) Disk module improvements (refs: #35361)

• PR #35362: (rallytime) Correct deprecation version tags @ 2016-08-11 00:34:38 UTC
  – PR #35361: (rallytime) Blockdev deprecations (refs: #35362)
  – PR #25267: (jfindlay) Disk module improvements (refs: #35362)
  – PR #24893: (The-Loeki) Contribution: Disk module improvements (refs: #saltstack/salt`#25267`_`_, #25267)
  – 3c628d3cb0 Merge pull request #35362 from rallytime/correct-deprecated-tag
  – 50782a014 Correct deprecation version tags

• PR #35347: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-10 20:07:42 UTC
  – 87e2918cc0 Merge pull request #35347 from rallytime/merge-2016.3
  – a651962e95 Merge branch '2015.8' into '2016.3'
  – 4618b433e9 Merge pull request #35323 from thatch45/ssh_crazy
• 8a5b47b5d7 Collect all error data from the wfuncs call
• 11864c31b7 supress a stack trace to show clean ssh error
• 9fbfa282fa wow this solves an issue!
  – cfae862972 Merge pull request #35325 from kev009/fbsd-netstat-route
    • 0d49dd3c29 Fix fsdb netstat route on fbsd 10+
  – 244c3bd495 Pass port to ssh.check_known_host, closes #35264 (#35301)
  – 243909f39d file.recurse: Do not convert octal mode string to int (#35309)
  – PR #35334: (cachedout) Restore random_master functionality
• PR #35331: (hu-dabao) fix 35165, salt-run jobs.exit_success jid is broken @ 2016-08-10 11:50:10 UTC
  – 78dfd18ec6 Merge pull request #35331 from hu-dabao/fix-35165
  – 4dcece18d01 fix 35165, salt-run jobs.exit_success jid is broken
• PR #35318: (rallytime) Remove legacy compat docs in mysql pillar since the code was removed already @ 2016-08-10 11:34:48 UTC
  – PR #30913: (justinta) Deprecated code removed. (refs: #35318)
  – fcca0b9333 Merge pull request #35318 from rallytime/remove-deprecation-docs
  – 75f205e485 Remove legacy compat docs in mysql pillar since the code was removed already
• PR #35329: (hu-dabao) sys.doc will skip all not connected minions @ 2016-08-10 11:18:22 UTC
  – 3446dc9ec6 Merge pull request #35329 from hu-dabao/fix-tiny-salt-cli
  – 4b806a70ea sys.doc will skip all not connected minions
• PR #35306: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-09 18:50:44 UTC
  – 31f7d307a7 Merge pull request #35306 from rallytime/merge-2016.3
  – 2d3eadfe49 Merge branch '2015.8' into '2016.3'
  – 2efc1b333b Merge pull request #35290 from terminalmage/issue35051
    • d621aa7b61 Update runner/wheel unit tests to reflect new key in ret dict
    • 90c12a9c7b Add __orchestration__key to orch returns for runner/wheel funcs
    • 7b8c3b86e7 Suppress error about invalid changes data for orchestration jobs
    • 54a1704d6c Suppress event for wheel/runner funcs executed from orchestration
    • f409f62bf2 Accept print_event option in WheelClient.cmd()
    • b42b25c0ce Add cmd func for RunnerClient
    • 480065fe00 Add print_event option to client mixins
• PR #35229: (lubyou) Ignore import error for pwd module in mac_shadow @ 2016-08-09 15:48:16 UTC
  – 94529d0578 Merge pull request #35229 from lubyou/fixed-mac_shadow
  – b4503c240 Do not blindly ignore import failures
  – c1d5670b79 Ignore import error for pwd module
• PR #35227: (isbm) Isbm osfinger ubuntu fix @ 2016-08-09 15:38:31 UTC
  – ce7aeb6ca4 Merge pull request #35227 from isbm/isbm-osfinger-ubuntu-fix
Salt Documentation, Release 3002.5

- fe5da97283 Lintfix: E8303
- 6eea62d4ec Add a deprecation warning
- 4dc4f2509 Add grains unit test for Ubuntu systems
- 3904e4b81c Bugfix: Ubuntu osfinger should contain also minor version
- a69f97f9ad Bugfix: use oscodename if lsb_distrib_codename key exists empty.

- **PR #35286** (hu-dabao) fix 34425, a bug that sys.doc cannot output format @ 2016-08-09 09:50:12 UTC
  - 47e328f755 Merge pull request #35286 from hu-dabao/fix-34425
  - 86fb35f58 fix 34425, a bug that sys.doc cannot output format

- **ISSUE #27294** (stenstad) salt-cloud should support Openstack Identity v3 for authentication (refs: #35213)

- **PR #35275** (rallytime) Back-port #35213 to 2016.3 @ 2016-08-09 00:02:43 UTC
  - **PR #35213** (gtmanfred) add identity v3 support to openstack driver (refs: #35275)
  - d79cb1b4ec Merge pull request #35275 from rallytime/bp-35213
  - 9b9fc508cc add identity v3 support to openstack driver
  - **PR #35278** (dmurphy18) Increase timeout for signing to 10 seconds when signing rpm packages

- **PR #35276** (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-08 18:20:29 UTC
  - 959a004b7 Merge pull request #35276 from rallytime/merge-2016.3
  - 2b4c156df1 Merge branch '2015.8' into '2016.3'
  - f8158124d5 Merge pull request #35211 from cachedout/issue_31074
    - 6f53232ed6 Better error handling and a workaround for group mismatch.
    - 5b56a4af7 Docs
    - ae04e7aaeb Initial POC
  - 3e4eb13daa Merge pull request #35271 from bobrik/default-output-profile
    - 6cdee21036 Default state_output_profile to True everywhere, closes #35166
  - 673e1aa1aa Merge pull request #35233 from terminalmage/issue32719
    - 730a077041 Do not attempt to get fqdn_ip{4,6} grains when ipv{4,6} grains are empty
  - cdf3c0fe73 Merge pull request #35202 from multani/fix/test-doc
    - 1642dba5d1 doc: fix broken links in the test documentation page
  - e1331cd2a3 Merge pull request #35236 from rallytime/bp-35119
    - 9ade78de7b Revise unnecessary code duplication
    - 7c15f5b20a Fix formatting
    - 64f93f8938 Assume two EVRs are equal if E and V are equal but one R is missing.
  - 4f2b8aa5b6 Merge pull request #35240 from derekmaciel/bp-35225
    - 9ed47f713a Add missing documentation for pkg.installed
  - 4bcfaa97d0 Merge pull request #35241 from terminalmage/gitfs-fixes
    - e05648cc2d Break from loop when file is found
    - 6764a88601 Ensure that failed recursion results in no blob object being returned
Salt Documentation, Release 3002.5

- f6d7360e0b Merge pull request #35245 from rallytime/bp-35039
  - 51ab9cd6d4 Add saltenv support to module.run
- d65ac7134 Merge pull request #35249 from terminalmage/issue35214
  - bcd5129e9f Fix regression in git.latest when update is fast-forward
  - e2e8bbf6de Add integration test for #35214

- ISSUE #35003: (edgan) rabbitmq_user.present broken on Ubuntu 16.04 Xenial (refs: #35232)
- ISSUE #34481: (L4rS6) rabbitmq_user.present with password keyword throws exception (refs: #35232)
- ISSUE #33588: (whytewolf) rabbitmq_user.present error (refs: #35232)
- PR #35274: (rallytime) Lint fixes for 2016.3 branch @ 2016-08-08 16:45:41 UTC
  - PR #35232: (theredcat) fix rabbitmq version detection using a package-agnostic version (refs: #35274)
  - 15799d5b0 Merge pull request #35274 from rallytime/lint-2016.3
  - 0d3d711e9c Merge pull request #35274 from rallytime/bp-35039
  - 51ab9cd6d4 Add saltenv support to module.run
- PR #35269: (meaksh) Checksum validation for zypper pkg.download in 2016.3 and develop @ 2016-08-08 14:45:16 UTC
  - c58bb18624 Merge pull request #35269 from meaksh/checksum-during-zypper-pkg-download-for-2016.3-and-develop
  - 18700e821e unit tests for rpm.checksum() and zypper.download()
  - c3f29ab205 checksum validation during zypper pkg.download
- PR #35197: (vutny) Make pkgbuild.repo state recognize createrepo command return code @ 2016-08-06 23:20:47 UTC
  - d3f2ce2a1a Merge pull request #35197 from vutny/pkgbuild-repo-failure-detection
  - a5f6630e97 Make pkgbuild.repo state recognize createrepo command return code
- ISSUE #34446: (mirceaulinic) Proxy minions & straight minion using the same caching directory (refs: #35178)
- PR #35178: (cro) Add append_minionid_config_dirs option @ 2016-08-06 22:21:14 UTC
  - f096e741e Merge pull request #35178 from cro/proxy_cache_fix2
  - 84cc7d67c0 Add documentation for append_minionid_config_dirs.
  - f004b831d2 Merge pull request #35178 from cro/append_minionid_config_dirs
- ISSUE #35234: (Sylvain303) Bug: module disk.wipe dont wipe the filesystem information (refs: #35253)
- PR #35259: (cachedout) Fixup 35253 @ 2016-08-06 21:59:48 UTC
  - PR #35253: (abednarik) Fix disk.wipe missing option. (refs: #35259)
  - 6eb1c48469 Merge pull request #35259 from cachedout/fixedup_35253
  - 104116f464 Add release notes and include entry about disk.wipe fix
  - 0e6ba9e386 Fix mock call in disk wipe test
- ISSUE #35234: (Sylvain303) Bug: module disk.wipe dont wipe the filesystem information (refs: #35253)
- PR #35253: (abednarik) Fix disk.wipe missing option. (refs: #35259) @ 2016-08-06 21:55:01 UTC
  - 4e7d78e4c Merge pull request #35253 from abednarik/disk_wipe_fix
  - ff33df4ba1 Fix disk.wipe missing option.
• **PR #35206**: (hu-dabao) Make the log level back to warning for unclassified exc @ 2016-08-06 21:40:38 UTC
  - eeeed82109 Merge pull request #35206 from hu-dabao/fix-exc-log
  - 676be7d711 Make the log level back to warning for unclassified exc

• **PR #35196**: (isbm) Deprecate status.uptime one version later @ 2016-08-06 08:39:40 UTC
  - 21808e27d5 Merge pull request #35196 from isbm/isbm-too-fast-uptime-deprecation
  - 6f3a32dace Deprecate status.uptime one version later

• **PR #35207**: (eliasp) Handle exceptions in _get_virtual() and in _get_virtual() consumers @ 2016-08-06 08:29:08 UTC
  - 100645e557 Merge pull request #35207 from eliasp/2016.3-modules.aptpkg-handle-exceptions
  - 2f11df98ca Handle exceptions in _get_virtual() and in _get_virtual() consumers

• **ISSUE #35003**: (edgan) rabbitmq_user.present broken on Ubuntu 16.04 Xenial (refs: #35232)

• **ISSUE #34481**: (L4rS6) rabbitmq_user.present with password keyword throws exception (refs: #35232)

• **ISSUE #33588**: (whytwolf) rabbitmq_user.present error (refs: #35232)

• **PR #35232**: (theredcat) fix rabbitmq version detection using a package-agnostic version (refs: #35274) @ 2016-08-06 08:13:02 UTC
  - 7302a8a6e5 Merge pull request #35232 from theredcat/fix-rabbitmq-version-detection
  - f75eb2ecc7 Fix runas in code order and make the check_password work with the new >3.5.7 version
  - 4d8119b88b fix rabbitmq version detection using a package-agnostic version

• **PR #35244**: (rallytime) Back-port #31677 to 2016.3 @ 2016-08-06 07:53:28 UTC
  - **PR #31677**: (miihael) Return correct value for services that must be enabled in Systemd (refs: #35244)
  - 2e9fa3799c Merge pull request #35244 from rallytime/bp-31677
  - 45d563d5ac Return correct value for services that must be enabled in Systemd, not in SysV

• **PR #35182**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-03 20:57:29 UTC
  - bd0496ef5 Merge pull request #35182 from rallytime/merge-2016.3
  - c53974f78f Merge branch '2015.8' into '2016.3'
  - 67d8dd0f0 Don't discard running beacons config when listing becaons (#35174)
  - 3754550dd2 Add missing CLI Examples to aws_sqs module funcs (#35173)
  - 4967ed275f doc version update to 2015.8.11, updates to release notes (#35145)

• **PR #35150**: (rallytime) Start release notes for 2016.3.3 @ 2016-08-03 13:46:31 UTC
  - f9f92ad326 Merge pull request #35150 from rallytime/2016.3.3-release-notes
  - a64026fc99 Start release notes for 2016.3.3

• **PR #35157**: (hu-dabao) master returned from func should be a string as designed so far @ 2016-08-03 13:29:16 UTC
  - 518ecf897a Merge pull request #35157 from hu-dabao/func-return-string
  - a7506a64e9 master returned from func should be a string as designed so far
  - **PR #35147**: (jacobbhammons) doc version updated to 2016.3.2
• **PR #35136:** (s0undt3ch) Don't restart processes if the manager is not set to restart them @ 2016-08-02 18:40:05 UTC
  - dc7d7db3d5 Merge pull request #35136 from s0undt3ch/2016.3
  - 7b8bf2d2b4 Don't restart processes if the manager is not set to restart them

• **PR #35133:** (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-02 18:06:18 UTC
  - bf04bd3316 Merge pull request #35133 from rallytime/merge-2016.3
  - 0d5f0b6016 Merge branch '2015.8' into '2016.3'
  - 81845ee31d Merge pull request #35114 from terminalmage/git_pillar-env-remap-docs
    * 5951554e9f Add clarification docs on a common git_pillar misconfiguration
  - 88a9fb13b1 Merge pull request #34768 from hrumph/bad-installed-state
    * e1fcb8311d Put pkg.latest_version in try/except structure Move refreshed or refresh to different spot (just for code tidyness)
    * e0b6261659 changed name of variable refreshed' to 'was_refreshed'
    * 340110b4b4 Move check for rtag to outermost-nesting in function
    * ac676b493 Lint fix
    * 0435a1375e Get rid of repetition in code by using new "refreshed" variable instead
    * 3b1dc978e2 Lint fix
    * a9bd1b92b9 lint fixes
    * 71d693eef6 Fixes #34767
  - 343576408f Merge pull request #35043 from rallytime/new-release-notes
    * bdc81a384 Start release notes file for 2015.8.12

• **PR #35120:** (kstreee) The `_handle_event_socket_recv` function in Salt Api is missing first data of stream. @ 2016-08-02 16:22:50 UTC
  - dd91006e7 Merge pull request #35120 from kstreee/fix-missing-first-stream-data
  - 28f793caac Fix missing first data in stream when subscribing stream using a function 'read_async'.

  - **PR saltstack/salt#35011:** (nishigori) Fix docstring for code-block of rst (refs: #35131)

  - **PR #35131:** (rallytime) Back-port #35011 to 2016.3
  - **PR #35011:** (nishigori) Fix docstring for code-block of rst (refs: #35131)

• **PR #35110:** (hu-dabao) Do not return job status back to master for master_alive and master_failback schedules @ 2016-08-02 07:49:46 UTC
  - 77bf143b0d Merge pull request #35110 from hu-dabao/master-check-lighter
  - 3a366627d dont return job status back to master for master_alive and master_failback schedules

• **PR #35104:** (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-01 18:56:43 UTC
  - 94a983f129 Merge pull request #35104 from rallytime/merge-2016.3
  - dda2c32325 Merge branch '2015.8' into '2016.3'
    * 848bf0272f Merge pull request #35050 from terminalmage/fix-saltdev-arg
      * 40cfa7cf17 Avoid needlessly running 2 argspecs in salt.utils.format_call()
- fd186b7e4c Pass environment as 'saltdev' if runner/wheel func accepts a saltdev argument
- 951b52ab93 Pass __env__ from saltmod orch states to to saltutil.[runner,wheel]
- 2144178ae0 Merge pull request #35066 from jfindlay/postgres_log
  - c2c442234f returners.postgres_local_cache: do not log in __virtual__
- 7121618142 Merge pull request #35024 from bobrik/daemon-reload-fix
  - c300615e9d Cache systemd unit update check per unit, closes #34927
- 865c29f126 Expressly deny a minion if a key cannot be found instead of raising stacktrace (#35026)

- ISSUE #32761: (notpeter) Ubuntu 16.04 Xenial Xerus Support (refs: #saltstack/salt#33870`_)
  - PR saltstack/salt#33870: (rallytime) Add note about Xenial packages to 2016.3.0 release notes (refs: #35105)

- PR #35105: (rallytime) Update 2016.3.0 release notes with repo.saltstack.com Xenial pkg availability @ 2016-08-01 17:26:55 UTC
  - 6c056a829e Merge pull request #35105 from rallytime/update-2016.3.0-release-notes
  - fbaff3e98e Update 2016.3.0 release notes with repo.saltstack.com Xenial pkg availability

- PR #35059: (vutny) Add fun_args field to events generated by execution of Master modules @ 2016-08-01 13:01:42 UTC
  - 1f8a0fd1e7 Merge pull request #35059 from vutny/event-function-args
  - 19d080445b Add fun_args field to events generated by execution of Master modules

- PR #34955: (lubyou) force dism to always output english text @ 2016-08-01 12:54:03 UTC
  - d137c4b986 Merge pull request #34955 from lubyou/fix-dism-on-non-english-systems
  - 63c974a3d0 add missing comma
  - 775ea73578 fix unit tests
  - 51869807f1 force dism to always output english text

- PR #35078: (jacobweinstock) added missing non-keyword argument skip_verify to __get_artifact func... @ 2016-08-01 12:22:47 UTC
  - ff7ddff0b68 Merge pull request #35078 from jacobweinstock/fix-missing-non-keyword-argument
  - c40314ba80 added missing non-keyword argument skip_verify to __get_artifact function

- PR #35008: (hu-dabao) Fix multimaster failover on more than two masters and failback behaviour @ 2016-07-29 16:34:37 UTC
  - 878e200cd9 Merge pull request #35008 from hu-dabao/fix-multimaster
  - 12da890910 Fix multimaster failover on more than two masters and failback behaviour

- ISSUE saltstack/salt#33536: (murzick) pkgrepo.managed does not disable a yum repo with "disabled: True" (refs: #35055)

- ISSUE #33536: (murzick) pkgrepo.managed does not disable a yum repo with "disabled: True" (refs: #35055)
- PR #35055: (galet) #33536 pkgrepo.managed does not disable a yum repo with "disabled: True" @ 2016-07-29 15:40:15 UTC
  - 11ed147448 Merge pull request #35055 from galet/2016.3
  - d70796bbfe #33536 pkgrepo.managed does not disable a yum repo with "disabled: True"
• PR #35039: (whiteinge) Add saltenv support to module.run (refs: #35245) @ 2016-07-29 14:01:03 UTC
  - ebaee39b2b Merge pull request #35039 from whiteinge/module-run-saltenv
  - 7ef28e09e Add saltenv support to module.run
• PR #35046: (eliasp) Prevent backtrace in salt.states.network @ 2016-07-29 13:59:09 UTC
  - 32ed78a399 Merge pull request #35046 from eliasp/2016.3-salt.states.network-prevent-backtrace
  - 1542cd5124 Prevent backtrace in salt.states.network
• PR #35054: (lubyou) Only fail user lookup is the user parameter is required @ 2016-07-29 13:58:41 UTC
  - f34bb7a8de Merge pull request #35054 from lubyou/fix-win_dacl-disable_inheritance
  - 1e4e856fb2 Only fail user lookup is the user parameter is required
• PR #35029: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-29 18:01:35 UTC
  - beec03db51 Merge pull request #35029 from rallytime/merge-2016.3
  - 65f9365ee0 Merge branch '2015.8' into '2016.3'
  - 2b511f3013 Merge pull request #35000 from rallytime/bp-33875
    * 35696ad637 Pylint fix
    * f9fd6dd8a Fixup #33875
    * 56b1f6c651 Fix naive fileservers map diff algorithm
  - 837bc60a7d Merge pull request #34994 from rallytime/bp-34835
    * 9268a793de same thing for the mine in salt-ssh
    * 3e11f19714 Fix the mine in salt ssh
  - PR #35021: (terminalmage) Don't add '.' to string when passed string ends in ? or !
  - PR #34983: (eliasp) modules.slack.post_message: Allow sending messages to direct-message ...
• PR #34996: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-07-27 19:03:04 UTC
  - 05cfb1ecfe Merge pull request #34996 from rallytime/merge-2016.3
  - a7d4f93697 Merge branch '2015.8' into '2016.3'
    * b58e663d8d Merge pull request #34991 from cachedout/ssh_timeout
      * 39cd8da399 Lint diff against salt-testing
      * 443e5cdde2 Add timeout to ssh tests
    * 5f8370ae8d Refine errors in client (#34976)
    * a83cf9339 Merge pull request #34831 from thatch45/recoverssh
    * fa73041a49 If the thin does not match, then redeploy, don't error
  - PR #34987: (eliasp) salt.states.slack: check correct result attribute
• ISSUE saltstack/salt#34526: (danielmotaleite) salt-ssh + mine = weird error (refs: #34835, #salt-stack/salt#34835)`
• PR #34835: (thatch45) Make the mine and publish combine minion and master opts in salt-ssh (refs: #34994) @ 2016-07-27 17:25:26 UTC
  - edeb0eda36 Merge pull request #34835 from thatch45/34526_`
  - 1d2477df05 same thing for the mine in salt-ssh
Salt Documentation, Release 3002.5

- 6b6c5ff278 Fix the mine in salt ssh

30.2.66 Salt 2016.3.4 Release Notes

Version 2016.3.4 is a bugfix release for 2016.3.0.

Statistics

- Total Merges: 275
- Total Issue References: 119
- Total PR References: 374
- Contributors: 80 (BenoitKnecht, Ch3LL, DavidWittman, DmitryKuzmenko, Jlin317, Kimamisa, UtahDave, aaronm-cloudtek, abednarik, ahammond, alertedsnake, alexander-bauer, amontalban, basepi, bl4ckcontact, bx2, cachedout, clarkperkins, clinta, cro, damon-atkins, danlsgiga, darkalia, dmurphy18, do3meli, edhgoose, efficks, eliasp, eradam, fix7, galet, goestin, gtmanfred, hrumph, hu-dabao, isbm, jackywu, jacobhammons, jbonachera, jf, jfindlay, jzhilong, justinta, kstreee, l2ol33rt, lomeroe, lorengordon, maximeguillet, meaksh, mkaedamz, mirceaulinic, morganwillcock, mproper, multani, nvtkaspir, oba11, onorua, opdude, orymate, oz123, pass-by-value, pbduchler, rallytime, roosri, silenius, skizunov, slinn0, stanislavb, swiftgist, techhat, terminalmage, thatch45, theredcat, ticosax, twangboy, vutny, whiteinge, xbglowx, xiaoanyunfei, yhekma)

Known Issues

The Salt Minion does not clean up files in /tmp when rendering templates. This potentially results in either running out of disk space or running out of inodes. Please see issue #37541 for more information. This bug was fixed with PR #37540, which will be available in the 2016.3.5 release of Salt.

The release of the bootstrap-salt.sh script that is included with 2016.3.4 release has a bug in it that fails to install salt correctly for git installs using tags in the 2015.5 branch. This bug has not been fixed in the salt-bootstrap repository yet, but the previous bootstrap release (v2016.08.16) does not contain this bug.

Changes

- The disk.wipe execution module function has been modified so that it correctly wipes a disk.
- Add ability to clone from a snapshot to the VMWare salt-cloud driver.
- Add ability to specify disk backing mode in the VMWare salt cloud profile.

Changelog for v2016.3.3..v2016.3.4

Generated at: 2018-05-27 04:56:54 UTC

- PR #37285: (rallytime) Update 2016.3.4 release notes
- ISSUE #37281: (frogunder) 2016.3.4: Raet Transport not working (refs: #37282)
- PR #37282: (thatch45) add cpub to raet event for compat @ 2016-10-27 21:33:48 UTC
  - 3b62a89e45 Merge pull request #37282 from thatch45/raet_cpub
  - 90f778dbc1 Add func for compat with main event system
  - 8e52f425e4 add cpub to raet event for compat
- **PR #37278**: (jfindlay) update 2016.3.4 release notes

- **PR #37252**: (vutny) Set logging level to 'info' for message about init system detection @ 2016-10-27 06:15:01 UTC
  - d0ce3de50c Merge pull request #37252 from vutny/suppress-init-grain-error
  - 3f20c01ed Set logging level to 'info' for message about init system detection
  - **PR #37259**: (rallytime) [2016.3] Update man pages for the 2016.3 branch

- **PR #37257**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-10-26 17:32:36 UTC
  - 2087fcce90 Merge pull request #37257 from rallytime/merge-2016.3
  - 2066f10d7b Merge branch '2015.8' into '2016.3'
  - f49ccdf30f Merge pull request #37234 from rallytime/bp-37167
    - a7dbb5bfc9 fixes pkgrepo for fedora>22 saltstack/salt#31240

- **ISSUE #37238**: (cmclaughlin) Restarting master causes minion to hang (refs: #37254)

- **ISSUE #37192**: (Ch3LL) 2016.3.4: Windows minion does not kill process running in foreground (refs: #37254)

- **ISSUE #37191**: (Ch3LL) 2016.3.4: Multi-Master Failover minion hangs when masters not running (refs: #37254)

- **ISSUE #35480**: (jelenak) 200 processes of salt-master (2016.3.2) (refs: #36184, #36555, #37254)

- **PR #37254**: (DmitryKuzmenko) Bugs/37191 minion hangs @ 2016-10-26 16:28:41 UTC
  - ea6155c3f4 Merge pull request #37254 from DSRCorporation/bugs/37191_minion_hangs
  - 9ee24b2d70 Revert "Don't set the daemon flag for LoggingQueue process."

- **ISSUE #37187**: (darkalia) Supervisord is considered as "systemd" in grains (refs: #37218)

- **PR #37218**: (darkalia) Issue #37187 Do not parse first /proc/1/cmdline binary if it's not b... @ 2016-10-26 01:41:03 UTC
  - d1a6bb72ac Merge pull request #37218 from darkalia/37187_supervisor_2016.3
  - a8df6bb96 Issue #37187 Do not parse first /proc/1/cmdline binary if it's not *bin/init and set supervisord

- **PR #37239**: (Ch3LL) Fix cloud tests timeout @ 2016-10-26 01:11:52 UTC
  - 760ed956d Merge pull request #37239 from Ch3LL/fix_cloud_timeout
  - 394fccf556 fix run_cloud timeout
  - 23947c5944 change timeout for cloud tests

- **PR #37244**: (rallytime) Update bootstrap release to 2016.10.25 @ 2016-10-26 00:46:29 UTC
  - 6c5f619398 Merge pull request #37244 from rallytime/update-bootstrap
  - f728a5bc7b Update bootstrap release to 2016.10.25
  - **PR saltstack/salt#36334**: (pass-by-value) Add ability to specify disk backing mode for VMware cloud profile (refs: #37245)

- **PR #37245**: (rallytime) Back-port #36334 to 2016.3 @ 2016-10-26 00:41:00 UTC
  - **PR #36334**: (pass-by-value) Add ability to specify disk backing mode for VMware cloud profile (refs: #37245)
  - bb7ca884c2 Merge pull request #37245 from rallytime/bp-36334
  - f64ca3c442 Update release notes and version added
- 0a3d266d6b Add ability to specify disk backing mode for VMware cloud profile

- **ISSUE #37132**: (bl4ckcontact) Incorrect flag defined for disabling AD computer account in win_system.py (refs: #37154)

- **PR #37233**: (rallytime) Back-port #37154 to 2016.3 @ 2016-10-25 18:32:56 UTC
  - PR #37154: (bl4ckcontact) modules.win_system.py: Fix flag disabling AD Computer objects (refs: #37233)
  - 3c94315d35 Merge pull request #37233 from rallytime/bp-37154
  - 849af162f1 modules.win_system.py: Fix flag disabling AD Computer objects

- **PR #37323**: (rallytime) Back-port #37153 to 2016.3 @ 2016-10-25 18:32:41 UTC
  - PR #37153: (eradman) Update configuration examples for Joyent (refs: #37232)
  - 94852f2eb1 Merge pull request #37323 from rallytime/bp-37153
  - 382987592f Update configuration examples for Joyent

- **PR #37228**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-10-25 18:22:57 UTC
  - a913eed92a Merge pull request #37228 from rallytime/merge-2016.3
  - b99d6733b6 Merge branch '2015.8' into '2016.3'
  - d608a65d77 Merge pull request #37178 from isbm/isbm-fix-saltapi-ssh-crash
    - 44da411c3a Do not prematurely raise an exception, let the main loop take care of it instead
    - ee48deeed Do not restart the whole thing if roster is not around
    - b8f4e46920 Fix PEP8

- **PR #37213**: (cachedout) More salttesting fixes @ 2016-10-25 07:53:33 UTC
  - 6aaf6bf399 Merge pull request #37213 from cachedout/more_salttesting_fixes
  - 0bfb06bd86 Lint fix
  - f609917760 Workaround for utils
  - a6a24c2b3b Workaround for tornado test startup error
  - 88bcfa2c0a Fix TCP test

- **ISSUE #37194**: (sjorge) function_cache in modules.mine docs? (refs: #37207)

- **PR #37207**: (cachedout) Correct documentation for mine_functions @ 2016-10-25 07:25:09 UTC
  - b448455c31 Merge pull request #37207 from cachedout/issue_37194
  - 9fcd6fda94 Correct documentation for mine_functions

- **ISSUE #37182**: (Ch3LL) 2016.3.4: multi-master minion stack trace when killed with ctrl+c (refs: #37208)

- **PR #37208**: (cachedout) Give multiminion a process manager and its own destroy method @ 2016-10-25 07:24:52 UTC
  - a5e1c041cc Merge pull request #37208 from cachedout/issue_37182
  - 1449770b0b Give multiminion a process manager and its own destroy method

- **PR #37206**: (cachedout) Address transport test hang @ 2016-10-25 05:25:55 UTC
  - e19ee88b6b Merge pull request #37206 from cachedout/transport_test_hang
  - c4393d5e9e Address transport test hang
30.2. Previous Releases

- **PR #37179**: (isbm) Fix Salt-API ssh crash (2016.3) @ 2016-10-25 04:52:19 UTC
  - 6737fd3ad9 Merge pull request #37179 from isbm/isbm-fix-saltapi-ssh-crash-2016-3
  - 28edda457e Do not prematurely raise an exception, let the main loop take care of it instead
  - 372f2b9bd9 Do not restart the whole thing if roster is not around
  - 8d1450cc47 Fix PEP8

- **ISSUE saltstack/salt#37176**: (guettli) docs for "load tags" explains "import_yaml" (refs: #37183)

- **PR #37183**: (gtmanfred) load tags should reference the actual load tags @ 2016-10-25 04:38:00 UTC
  - 815df1c04 Merge pull request #37183 from gtmanfred/2016.3
  - 1b7b4b1a0c load tags should reference the actual load tags

- **PR #37188**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-10-25 04:37:26 UTC
  - ca63376c97 Merge pull request #37188 from rallytime/merge-2016.3
  - ccb664050d Merge branch '2015.8' into '2016.3'
  - b3e79dcd51 Merge pull request #37139 from awerner/fix-spm-download-remote-download
    - a606a42575 Minor style change
    - e3916813bb Download spm package from remote repository and save it to cache directory
  - 35b4494157 Merge pull request #37162 from rallytime/bp-36823
    - 3032a542d9 Use NotifyAccess=all in all unit files
    - 482e995973 Remove EnvironmentFile and Restart lines from unit files
    - 3be15694d2 Use Type=notify for debian systemd units
    - d58fda6f67 Use control-group default for killmode

- **PR #37186**: (rallytime) Pylint fix for 2016.3

- **PR #37175**: (cachedout) Fix test hang (refs: #37186) @ 2016-10-25 04:37:26 UTC
  - 0d7af935e5 Merge pull request #37175 from cachedout/fix_test_hange
  - 0fecb5ff2e Remove sleep. Thanks @s0undt3ch
  - cedc609503 Fix test suite hang on salt testing

- **ISSUE #36866**: (sjorge) [2016.11.0rc1] salt-master <-> salt-minion communication borken due to master_alive_interval (refs: #37144, #37117, #37142)

- **PR #37144**: (DmitryKuzmenko) Bugs/36866 salt minion communication broken 2016.3 @ 2016-10-24 03:19:06 UTC
  - **PR #37142**: (DmitryKuzmenko) status.master: don't fail if host_to_ips returns None (refs: #37144)
  - **PR #37117**: (DmitryKuzmenko) Updated host_to_ip to return all the IPs instead of the first one. (refs: #37144, #37142)
  - 334313ec64 Merge pull request #37144 from DSRCorporation/bugs/36866_salt-minion_communication_broken_2016.3
  - 87ce93e40 Don't fail if host_to_ips returns None.
  - f625e6d3a9 Updated host_to_ip to return all the IPs instead of the first one.
- PR #37158: (jfindlay) add mock for status.uptime unit test (refs: #37157) @ 2016-10-24 03:13:53 UTC
  - PR #37157: (jfindlay) Implement status.uptime on macOS (refs: #37158)
  - c5d81a8ade Merge pull request #37158 from jfindlay/mac_skip_uptime
  - 094ea06eb modules.status.uptime unit test: mock on linux
- ISSUE #37037: (mikeadamz) schedule state always reports changed when running in highstate (refs: #37098)
- PR #37161: (rallytime) Back-port #37098 to 2016.3 @ 2016-10-24 03:13:14 UTC
  - PR #37098: (mikeadamz) Add run_on_start to SCHEDULE_CONF (refs: #37161)
  - e51f90b459 Merge pull request #37161 from rallytime/bp-37098
  - 36bc2a1ded Add run_on_start to SCHEDULE_CONF
- PR #37159: (rallytime) Back-port #37107 to 2016.3 @ 2016-10-22 13:55:47 UTC
  - PR #37107: (do3meli) use versionadded and deprecated warnings in apache_module (refs: #37159)
  - b5025c044e Merge pull request #37107 from rallytime/bp-37107
  - c63126a2f0 removed trailing whitespaces in apache_module.py
  - a812cbfeaf use versionadded and deprecated warnings in apache_module
- PR #37163: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-10-22 13:52:37 UTC
  - 1e520b3f48 Merge pull request #37163 from rallytime/merge-2016.3
  - 8ff95b3b4 Merge branch '2015.8' into '2016.3'
  - a5335a2f15 Merge pull request #37137 from awerner/fxspm-msgpack
    - 52d47cece9 SPM-METADATA are now loaded as yaml from remote URLs
  - 8c46d69251 Merge pull request #37109 from meaksh/zypper-distupgrade-support-2015.8
    - 330f830c9b Enables 'novendorchange' for old SLEs versions
    - 01b0a6917c Minor pylint fixes
    - 7dbb0hd252 Unit tests fixes
    - e89982b6d2 Improves 'dryrun' outputting. Setting 'novendorchange' as not supported for SLE11
    - c5a34cbadf Adds multiple repositories support to 'fromrepo' parameter
  - 38fdd28962 Merge pull request #37087 from vutny/gpg-fix-short-keyid
    - c589cb8a9 salt.modules.gpg: allow getting keys by short key ID
  - 3a37a22366 Merge pull request #37088 from meaksh/zypper-distupgrade-support-2015.8
    - c664a14027 Fix in log message
    - a092a974da Refactor: Cleanup and pylint fixes
    - 1331e5c72 Unit tests for zypper upgrade and dist-upgrade
    - 4bcfef2ba2 Adding 'dist-upgrade' support to zypper module
  - 2f29e9e956 Merge pull request #37090 from zer0def/silence-prereq-supervisord-warnings
    - 6a4bbf485 Silence warnings about "__prerequired__" being an invalid kwarg when using prereq.
      (no refs)
  - PR #37150: (rallytime) Allow the minion test daemons a couple of tries to connect to the master
- **PR #37152**: (rallytime) Add note about salt-bootstrap known issue for 2016.3.4

- **PR #37135**: (aaronm-cloudtek) Fix example signing policy in salt.states.x509 docs @ 2016-10-21 11:45:24 UTC
  - 8de7b39b5e Merge pull request #37135 from Cloudtek/x509-docs-fix
  - ce87f7311b Fix example signing policy in salt.states.x509 docs

- **PR #37140**: (vutny) pkgbuilder: fix GPG signing with use_passphrase=False @ 2016-10-21 09:37:54 UTC
  - 41ae90d3c3 Merge pull request #37140 from vutny/pkgbuilder-repo-sign-with-no-passphrase
  - 409a3100a7 pkgbuilder: fix GPG signing with use_passphrase=False

- **PR #37071**: (vutny) pkgbuilder: add timeout parameter for waiting passphrase prompt @ 2016-10-21 05:20:26 UTC
  - 96a1292a7e Merge pull request #37071 from vutny/pkgbuilder-repo-gpg-sign-timeout
  - cfc3ad6792 pkgbuilder: add timeout parameter for waiting passphrase prompt

- **ISSUE saltstack/salt#31454**: (johje349) Salt Mine memory leak (refs: #36024)

- **ISSUE #37018**: (tsaridas) get events from python (refs: #37115)

- **ISSUE #31454**: (johje349) Salt Mine memory leak (refs: #36720)

- **PR #37115**: (DmitryKuzmenko) Backport/36720 fix race condition @ 2016-10-21 05:16:15 UTC
  - PR #36720: (skizunov) Fix race condition when returning events from commands (refs: #37115)
  - PR #36024: (DmitryKuzmenko) Don't subscribe to events if not sure it would read them. (refs: #36720)
  - 274120300d Merge pull request #37115 from DSRCorporation/backport/36720_fix_race_condition
  - d7e3c29e13 For IPCClient, remove entry from instance map on close
  - 82e27634a7 Merge pull request #37119 from jfindlay/log_proc_user

- **PR #37119**: (jfindlay) log.setup: only assign user if defined @ 2016-10-21 05:14:55 UTC
  - PR #36203: (xiaoanyunfei) fix owner of MultiprocessingLoggingQueue (refs: #37119)
  - 16982e62bb Merge pull request #37119 from jfindlay/log_proc_user
  - 8c299949a0e log.setup: only assign user if defined
  - 1d503f032c tests.integration: pass opts as a dict
  - PR #37126: (Ch3LL) fix digital ocean image name in profile
  - PR #37125: (jfindlay) add 2016.3.4 release notes

- **PR #37120**: (rallytime) Back-port #36246 to 2016.3 @ 2016-10-20 19:38:32 UTC
  - PR #36418: (rallytime) Back-port #36246 to 2016.3 (refs: #37120)
  - PR #36246: (twangboy) Fix test_issue_6833_pip_upgrade_pip test on OS X (refs: #36418, #37120)
  - 2a35f5febe8 Merge pull request #37120 from rallytime/bp-36246
  - f1e8d98119 Skip weird_install test on Mac OS X
  - 90de749209 Fix test_issue_6833_pip_upgrade_pip test on OSX

- **PR #37103**: (cachedout) Remove unnecessary sleep from unit.utils.process_test.TestProcessManager.test_restarting @ 2016-10-20 08:45:07 UTC
  - 0b87e7890a Merge pull request #37103 from cachedout/fixed_est_process
  - d7aebd1877 Remove unnecessary sleep from unit.utils.process_test.TestProcessManager.test_restarting

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### 30.2. Previous Releases

2645
• PR #36823: (terminalmage) Update debian systemd unit files to use default KillMode, Type=notify (refs: #37162) @ 2016-10-20 05:54:42 UTC
  - PR #36806: (l2ol33rt) Deb systemd should use control-group default for killmode (refs: #36823)
  - 326bbd5e30 Merge pull request #36823 from terminalmage/pr-36806
  - fb6e454f78 Use NotifyAccess=all in all unit files
  - 0ccf789172 Remove EnvironmentFile and Restart lines from unit files
  - ddd44e9b13 Use Type=notify for debian systemd units
  - 036d73f31b Use control-group default for killmode
• PR #37030: (isbm) Fix status.uptime for Solaris 9, 10 and 11. @ 2016-10-20 05:52:53 UTC
  - 0c40e71e17 Merge pull request #37030 from isbm/isbm-solaris-status-fix
  - 7d7b5ef9a9 Lintfix: E8303 too many blank lines
  - c11940d14c Fix status.uptime for Solaris 9, 10 and 11.
• PR #37101: (rallytime) [2016.3] Merge forward from 2016.3 to carbon @ 2016-10-20 05:39:24 UTC
  - eb88c7322 Merge pull request #37101 from rallytime/merge-2016.3
  - b445a5e579 Merge branch '2015.8' into '2016.3'
  - 68eeb29783 Add warning about GitPython 2.0.9 incompatibility with Python 2.6 (#37099)
  - 39d59ab0df Merge pull request #36880 from vutny/cp-get-salt-url
    - d1ab98b459 cp.get_url: update usage doc and add tests for file:// URL with dest=None
    - c7cf79e959 cp.get_url: add note and test for https:// URL with dest=None
    - ff5f77179 cp.get_url: write more verbose docstring
    - 94a34a08ba cp.get_url: add integration tests
    - 983f82fcf4 cp.get_url: fix variable type check
    - b33f4d7b93 cp.get_url: log error message if no file could be fetched from salt:// URL
    - 99cf3038cc cp.get_url: fix dest=None behaviour with salt:// URL
• PR #36958: (twangboy) Fix bug where cmd.powershell fails to return @ 2016-10-19 16:03:58 UTC
  - 8d44fed78 Merge pull request #36958 from twangboy/fix_cmd_powershell
  - 427be7b422 Add versionadded
  - d8e0e0e482 Fix missing comma
  - 7b46d04a84 Add note about increased completion times
  - 9365581a36 Clarify docs, add depth option
• PR #37086: (cachedout) Make salt-call a first-class citizen for multi-master @ 2016-10-19 15:19:09 UTC
  - beb54b3fffa Merge pull request #37086 from cachedout/mm_req
  - 7dc15c1a48 Lint utils
  - 9bbe3c998b Lint error in publish
  - e22a3d2be6 Add multi-master support to publish.publish
  - 7f141ba38c Add function to search for substr in list
- 007ee84d7 Extend support to event.fire_master
- 8171c73b00 Multi-master support for salt-call

**ISSUE #36814**: (martin-helmich) x509.create_csr creates invalid CSR (refs: #36898)

**PR #36898**: (clinta) X509 fixes @ 2016-10-19 03:03:43 UTC
- 6b94153e6a Merge pull request #36898 from clinta/x509-fixes
- e732fe7725 fix docs on CSR state
- 96b6f1a336c fix quotes and remove dependency on pkg_resources
- eb4433d1ae return early if there are no requested extensions in the csr
- d00cf8ef87 allow specifying digest for crl
- dd50705e58 fix #36814

**ISSUE #34872**: (cbuechler) "Minion did not return" executing state with long running command, 2016.3 regression (refs: #37025)

**PR #37025**: (cro) Make salt.utils.minion._check_cmdline work on OSes without /proc. @ 2016-10-19 03:00:10 UTC
- a32b8cd741 Merge pull request #37025 from cro/freebsd_no Proc
- 1ac87e0ef9 Make salt.utils.minion._check_cmdline work on OSes without /proc.

**PR #37050**: (twangboy) Fix service state for Windows (DO NOT MERGE FORWARD) @ 2016-10-19 02:46:27 UTC
- PR #36923: (twangboy) Fix service state for Windows (refs: #37050)
- 09d0f85c5e Merge pull request #37050 from twangboy/fix_win_service_state
- b3b688e298 Fix tests
- 1ee18786c9 Set service to manual if disabled on start
- PR saltstack/salt#29322: (mrproper) add http proxy support for tornado (refs: #37076)

**PR #37076**: (jfindlay) Document proxy settings @ 2016-10-19 02:30:27 UTC
- 5e998638a4 Merge pull request #37076 from jfindlay/proxy_doc
- 7328f685f5 doc.topic.tutorials.http.query: add proxy section
- 331072b35d doc.topic.tutorials.http.query: add subheadings
- 478def1923 doc.ref.configuration.minion: add proxy vars

**ISSUE #37001**: (phil123456) URGENT : archive.extracted does not work anymore (refs: #37081)

**PR #37081**: (terminalmage) Fix archive.extracted remote source_hash verification @ 2016-10-19 02:22:22 UTC
- 9ec366833e Merge pull request #37081 from terminalmage/issue37001
- a3c4deeb82 Fix archive.extracted remote source_hash verification

**ISSUE #35097**: (jwhite530) Minions die with "un-handled exception from the multiprocessing process" (refs: #37064)

**PR #37064**: (cachedout) Unify job check in scheduler @ 2016-10-19 02:08:06 UTC
- 67faee1f94 Merge pull request #37064 from cachedout/issue_35097
- 980ba892c9 Unify job check in scheduler
• **PR #37072**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-10-18 15:23:17 UTC
  - 7ef10f6de6 Merge pull request #37072 from rallytime/merge-2016.3
  - 78a144f19a Merge branch '2015.8' into '2016.3'
  - 7dd91c2880 Merge pull request #37053 from rallytime/update-fedora-install-docs
    * 24e0f5e024 Update the Fedora installation docs
    * 4eb0a89b7c remove options from pylint (#37054)

• **PR #37049**: (terminalmage) Further clarification on new grains docs from #37028 @ 2016-10-18 01:47:57 UTC
  - **PR #37028**: (damon-atkins) Update topics/grains doco, about considerations before adding a Grain (refs: #37049)
  - 71fd01ab8d Merge pull request #37049 from terminalmage/grains-docs
  - 854586c6a4 Add one more paragraph
  - a0502a7b90 Restructure grain writing docs
  - 4e419e90ac Further clarification on new grains docs from #37028

• **ISSUE saltstack/salt#18419**: (jasonrm) salt-cloud fails to run as non-root user (refs: #35483)

• **ISSUE #34806**: (jerrykan) salt-cloud ignores sock_dir when firing event (refs: #35483)

• **PR #37057**: (rallytime) [2016.3] Update salt.utils.cloud references to __utils__ for cache funcs @ 2016-10-18 01:31:43 UTC
  - **PR #35483**: (gtmanfred) use __utils__ in salt.cloud (refs: #35855, #37057, #36070)
  - 9a6671ce69 Merge pull request #37057 from rallytime/cloud-utils-cleanup
  - d0dc7d4e55 [2016.3] Update salt.utils.cloud references to __utils__ for cache funcs

• **PR #36977**: (twangboy) Remove whitespace from string commands @ 2016-10-17 22:32:03 UTC
  - f8cd7b7b28 Merge pull request #36977 from twangboy/fix_cmd_run
  - 6586050736 Move strip to powershell block, add -NoProfile

• **PR #37048**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-10-17 16:05:48 UTC
  - 9378b22d80 Merge pull request #37048 from rallytime/merge-2016.3
  - 5ef6dd3df9 Merge branch '2015.8' into '2016.3'
  - 7f5aced50e Merge pull request #36972 from zer0def/supervisor-state-fixes
    * 53801c6e80 Mitigates failure reports when making sure an existing supervisor process group is running, despite success.
    * 4e2ad07b0f Prevent source files in /tmp from being deleted by file.managed states (#37023)
    * 4e9824a65e args does not always exist (#37019)

• **PR #37028**: (damon-atkins) Update topics/grains doco, about considerations before adding a Grain (refs: #37049) @ 2016-10-17 09:54:21 UTC
  - 104a153a1f Merge pull request #37028 from damon-atkins/update_topics_grains_doco
  - 01e83a715e doc/topics/grains Update doco on when a grain should be created
  - a0e1fcc951 Add information to consider before adding a Grain to doco's for Grains

• **PR #37012**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-10-14 18:07:03 UTC
- c30656814d Merge pull request #37012 from rallytime/merge-2016.3
- a7c9a72104 Merge branch '2015.8' into '2016.3'
- c625d459fd Merge pull request #36807 from terminalmage/issue36723
  * 7d60e73308 Fix pillar merging when ext_pillar_first is enabled
  - e2be94b029 cp.get_file_str: do not fail if file not found (#36936)
- ISSUE #34397: (jaredhanson11) ignore_epoch needs to be passed through to version_cmp functions (refs: #34531)
  - PR #37007: (skizinov) opkg: Support ignore_epoch argument in version comparisons
  - PR #34531: (terminalmage) Support ignore_epoch argument in version comparisons (refs: #37007)
- PR #36808: (gtmanfred) allow for closing stuff in beacons (refs: #36835) @ 2016-10-14 15:50:09 UTC
  - 8b3e65448d Merge pull request #36808 from gtmanfred/beacons
  - 727df309a allow for closing stuff in beacons
  - PR #36993: (terminalmage) Make helper funcs private
- ISSUE #27316: (efficks) Extracted state with zip format failed on Windows (refs: #27317)
- ISSUE #27207: (PredatorVI) archive.extracted state not preserving file permissions (refs: #33906)
- ISSUE #26569: (ssgward) Add support for password-protected zip files in archive.extracted on Windows (refs: #31116)
- ISSUE #23822: (sidcarter) Zip file extracted permissions are incorrect (refs: #25128)
  - PR saltstack/salt#36539: (jfindlay) Prefer archive.cmd_unzip (refs: #36986)
    - PR #36422: (rippiedoos) No error Reporting for (yum)pkg.upgrade (refs: #36450)
      - PR saltstack/salt#36980: (rallytime) Skip pkg.upgrade test if pkg install/upgrade has problems (refs: #36981)
      - saltstack/salt#36450: (terminalmage) Normalize pkg.upgrade and raise CommandExecutionError on failure (refs: #36981, #saltstack/salt#36980)
- PR #36981: (rallytime) Skip pkg.upgrades test on distros other that Suse in 2016.3 @ 2016-10-13 21:29:36 UTC
  - c795b84a7 Merge pull request #36981 from rallytime/upgrades-test-fix
  - a5ae737057 Skip pkg.upgrades test on distros other that Suse in 2016.3
- **ISSUE #36671**: (wrigtim) systemd.py available() breaks on latest LSB-compliant versions of systemd (refs: #36755)
- **PR #36755**: (terminalmage) systemd.py: check retcode for service availability in systemd >= 231 @ 2016-10-13 19:41:50 UTC
  - 6782c15 Merge pull request #36755 from terminalmage/issue36671
  - d916c2b Handle cases where retcode/output feature is backported
  - 85d6464ad Update systemd module unit tests
  - a2439abc9 systemd.py: check retcode for service availability in systemd >= 231
- **ISSUE #36746**: (Ch3LL) Carbon: When killing a job jid output missing (refs: #36750)
- **PR #36750**: (terminalmage) Add the CLI client and pub_data as class attributes @ 2016-10-13 19:38:33 UTC
  - d9e2d Merge pull request #36750 from terminalmage/issue36746
  - f4f6f Only display Ctrl-c message on SIGINT
  - 9025be4 Include the jid (when available) in SystemExit message on Ctrl-c
  - 9c9f862 Add the CLI client and pub_data as class attributes
- **ISSUE #36240**: (hrumph) win_certutil add_store state not installing certificates (refs: #36241)
- **PR #36241**: (hrumph) Fixes #36240 @ 2016-10-12 23:28:35 UTC
  - 3ac9ced Merge pull request #36241 from hrumph/cert_problem
  - 51230fc Merge pull request #1 from rallytime/pr-36241
    - 3284794c8 Update mocks for failing tests in win_certutil_test
  - b26578d Fixes #36240
- **PR #36950**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-10-12 20:57:41 UTC
  - c1f8438 Merge pull request #36950 from rallytime/merge-2016.3
  - 1d3ce45 Merge branch '2015.8' into '2016.3'
    - 2ccc4f3 Merge pull request #36914 from rallytime/suse_show_link
      - 68fd9f3 Allow alternatives.show_link function to work on Suse distros
  - 5362e51 Merge branch '2015.8' into '2016.3'
  - 7838d83 Remove "Targeting with Executions" section from docs (#36925)
  - 1b568b9 Update references to future default value change that was reverted (#36924)
- **PR #36948**: (rallytime) Back-port #36943 to 2016.3 @ 2016-10-12 18:33:02 UTC
  - PR #36943: (orymate) doc: document what the argument of salt --subset means (refs: #36948)
  - 7e2128c Merge pull request #36948 from rallytime/bp-36943
  - d2f8f1840 doc: document what the argument of salt --subset means
- **PR #36946**: (rallytime) Back-port #36892 to 2016.3 @ 2016-10-12 18:32:35 UTC
  - PR #36892: (nvtkaszpir) Update tutorial.rst (refs: #36946)
  - f43a102 Merge pull request #36946 from rallytime/bp-36892
- 94c97ee726 Update tutorial.rst

**ISSUE #35198** (goestin) beacons modules: service fails (refs: #35199)

**PR #36945** (rallytime) Back-port #35199 to 2016.3 @ 2016-10-12 18:31:16 UTC
  - PR #35199: (goestin) fix for issue #35198 (refs: #36945)
  - 5c70669ac0 Merge pull request #36945 from rallytime/bp-35199
  - 390b906c2f adhere pep8 e713
  - 79c9905fc5 Re-added accidentally removed line 85
  - 8bba13896a Fixed issue #35198 now without deprecated code.
  - 1241d87f1d fix for issue #35198
  - PR #36949: (terminalmage) Fix versionadded
  - PR #36930: (jfindlay) return opennebula errors to user

**PR #36929** (rallytime) [yumpkg] Skip test_pkg_upgrade_has_pending_upgrades if there are no upgrades @ 2016-10-11 22:55:49 UTC
  - 6ea1f59058 Merge pull request #36929 from rallytime/fx-pending-upgrade-test
  - 32829b9474 [yumpkg] Skip test_pkg_upgrade_has_pending_upgrades if there are no upgrades

**ISSUE #36906** (sjorge) [docs] comments about targetting execution still correct? (refs: #36926, #salt-stack/salt#36925)
  - PR saltstack/salt#36925: (rallytime) Remove "Targeting with Executions" section from docs (refs: #36926)
  - PR #36926: (rallytime) [2016.3] Remove "Targeting with Executions" section from docs

**PR #36915** (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-10-11 19:49:42 UTC
  - b7f87e0aed Merge pull request #36915 from rallytime/merge-2016.3
  - 971c27cb2 Merge branch '2015.8' into '2016.3'
  - f3443fb992 Properly handle "shared" arg in git.init when it is a bool (#36912)
  - bdbf1619cb Check for test=True in salt.wait_for_event orchestration events (#36897)
  - PR #36820: (BenoitKnecht) Fix diff output of test runs for Debian slave interfaces

**ISSUE #36855** (edwardsdaniel) Issue with setting up schedule job via state.apply (refs: #36894)
  - PR #36894: (jfindlay) states.schedule: splay is not ordereddict

**PR #36885** (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-10-10 19:30:25 UTC
  - 86ac88d680 Merge pull request #36885 from rallytime/merge-2016.3
  - c09b9d6e6a Merge branch '2015.8' into '2016.3'
    * 3ce4897b97 Merge pull request #36857 from terminalmage/systemd-unit-tests
    - 7c78d6f419 Add unit tests for systemd scope usage
  - PR #36889: (terminalmage) salt-ssh: Try "command -v" before falling back to "which"

**ISSUE #36804** (Ch3LL) CARBON: error when using pkg.installed with url source (refs: #36830)
  - PR #36830: (terminalmage) fileclient: Change queryarg comparison from None to simple boolean check

**PR #36853** (rallytime) Back-port #33939 to 2016.3 @ 2016-10-07 21:44:33 UTC

30.2. Previous Releases 2651
- PR #33939: (bx2) Removed !-password check for salt-cloud vultr provider (refs: #36853)
  - 6a6bd3e3f Merge pull request #36853 from rallytime/bp-33939
  - e8b09c1a6 Removed !-password check

- PR #36852: (rallytime) Back-port #36743 to 2016.3 @ 2016-10-07 21:35:43 UTC
  - PR #36743: (do3meli) corrected OS Name in openbsd_sysctl module load error message (refs: #36852)
  - 01348bde18 Merge pull request #36852 from rallytime/bp-36743
  - 899130d11f corrected OS Name in module load error message

- PR #36844: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-10-07 19:20:31 UTC
  - 0b7661244d Merge pull request #36844 from rallytime/merge-2016.3
  - 1c3a9a3ee9 Merge branch '2015.8' into '2016.3'
    - 3e6b16de2b Merge pull request #36786 from cachedout/fixup_36676
      - 3c93134e57 Typo
      - 13eb463bd9 Fixup alternatives module
    - c126f2e132 Merge pull request #36757 from cachedout/issue_33841
      - 4bce452500 Resolve issue with minion failing to restart on failure
    - 89f9f8c0d Merge pull request #36749 from jacobhammons/file-dict
      - 71f91b3a50 Fixes the cli examples to reference the correct function
    - 804a2a1ab0 Merge pull request #36730 from rallytime/bp-36028
      - 4be4f900ee Back-port #36028 to 2015.8

- PR #36835: (jfindlay) unify and expand beacon documentation @ 2016-10-07 15:59:34 UTC
  - PR #36808: (gtmanfred) allow for closing stuff in beacons (refs: #36835)
  - dc5d821be6 Merge pull request #36835 from jfindlay/beacon_doc
  - b2eccdfed5 doc.topics.beacons: reflow text at 80 chars
  - b181f9890d doc.topics.{reactor|beacons}: unify examples, many minor edits
  - 28b4e30009 doc.glossary: use parenthesis
  - 82cf39db00 doc.glossary: add JID
  - cc071b75cb doc.glossary: add idempotent

- ISSUE #36787: (maximeguillet) postgres.* calls fail with postgresql 9.6 and .psqlrc custom file (refs: #36789)
- PR #36789: (maximeguillet) Fix behavior of psql -c option with postgresql 9.6 @ 2016-10-06 11:24:51 UTC
  - 1284de27fc Merge pull request #36789 from maximeguillet/fix-psqlrc-pg9.6
  - b59c23bef1 Fix one remaining postgresql tests linked to #36787.
  - 8b92a2061 Fix postgresql tests using position in the argument list of psql.
  - 21f2a17a07 Fix postgresql tests by adding --no-psqlrc option introduced by #36787.
  - 574e30e915 Fix behavior of psql -c option with postgresql 9.6

- ISSUE #36579: (scubahub) No error generated when reactor file does not exist. (refs: #36797)
- PR #36797: (cachedout) Error on reaction with missing SLS file @ 2016-10-06 11:19:27 UTC
- a1d59f4d2f Merge pull request #36797 from cachedout/issue_36579
- 6ce453fa3 Error on reaction with missing SLS file

**ISSUE saltstack/salt#36788**: (damon-atkins) pillar/libvirt.py assume certtool is available and works everytime (refs: #36803)

**PR #36803**: (gtmanfred) do not load libvirt pillar if certtool is unavailable @ 2016-10-06 11:15:14 UTC
- b75130be2d Merge pull request #36803 from gtmanfred/2016.3
- 2183730785 do not load libvirt pillar if certtool is unavailable

**PR #36815**: (BenoitKnecht) Fix glance.image_present state @ 2016-10-06 10:29:44 UTC
- 39148dc711 Merge pull request #36815 from BenoitKnecht/fix-glance-image-present-state-2016.3
- 342eee444d states: glance: handle image list instead of dict
- 02b91e9f15 states: glance: import keystone exceptions from new location

**ISSUE #36738**: (edhgoose) rpmdev-vercmp throws lots of warnings on Amazon Linux (refs: #36739)

**PR #36754**: (terminalmage) Base rpmdev-vercmp comparison result on retcode @ 2016-10-05 12:50:23 UTC
- PR #36739: (edhgoose) Add support for rpmdevtools returning < / > / == (refs: #36754)
- 81c935f210 Merge pull request #36754 from terminalmage/issue36738
- 928e99d2f7 Base rpmdev-vercmp comparison result on retcode
- PR saltstack/salt#36728: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 (refs: #36785)

**PR #36785**: (cachedout) Fixup merge forward #36728 @ 2016-10-05 11:02:16 UTC
- PR #36728: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 (refs: #36785)
- 4adb997dae Merge pull request #36785 from cachedout/pr-36728
- 118ba8a772 Update alternatives module to strip newline chars
- 24b88ba145 Merge branch '2015.8' into '2016.3'
  * a01a68d4be Merge pull request #36676 from vutny/redhat-alternatives-detect-fail
    - bba9d0d105 alternatives.install state: detect alternatives command failed
  * eab4fd563a Merge pull request #36700 from terminalmage/update-faq
    - 3d15eedf0 Add additional information about onchanges/onchanges_in
    - 57e58e6c53 Update minion restart example to use onchanges instead of cmd.wait

**ISSUE #36766**: (bx2) salt-cloud (vultr) throws NameError: global name '__opts__' is not defined (refs: #36768)

**PR #36768**: (gtmanfred) add __utils__ to vultr cloud provider @ 2016-10-05 06:59:27 UTC
- 90ca6b135 Merge pull request #36768 from gtmanfred/2016.3
- 9df2f1d11dd add __utils__ to vultr cloud provider

**PR #36764**: (cachedout) Another bit of detection for failed pip tests @ 2016-10-04 13:05:29 UTC
- 8f69bfc7 Merge pull request #36764 from cachedout/more_pip_test_fixing
- b9f5343449 Another bit of detection for failed pip tests

**ISSUE #27316**: (efficks) Extracted state with zip format failed on Windows (refs: #27317)

**ISSUE #27207**: (PredatorVI) archive.extracted state not preserving file permissions (refs: #33906)
• **ISSUE #26569**: (ssgward) Add support for password-protected zip files in archive.extracted on Windows (refs: #31116)
  
• **ISSUE #23822**: (sidcarter) Zip file extracted permissions are incorrect (refs: #25128)
  
• **ISSUE #26569**: (ssgward) Add support for password-protected zip files in archive.extracted on Windows (refs: #31116)
  
• **ISSUE #23822**: (sidcarter) Zip file extracted permissions are incorrect (refs: #25128)
  
• **PR saltstack/salt#36722**: (rallytime) Skip cmd_unzip test if salt.utils.which('zip') isn’t available (refs: #36747)
  
• **PR saltstack/salt#36648**: (jfindlay) Integration tests for archive execution module (refs: #36747)
  
• **PR saltstack/salt#36539**: (jfindlay) Prefer archive.cmd_unzip (refs: #saltstack/salt’#36648’_, #36648)
  
• **PR #36747**: (jfindlay) modules.archive integration tests: check for gzip, rar @ 2016-10-04 11:47:32 UTC
  
• **PR #33906**: (lomeroe) Archive unzip permissions (refs: #36539, #saltstack/salt’#36539’_)
  
• **PR #31116**: (UtahDave) Add password support for zip files in archive module and state (refs: #36539, #saltstack/salt’#36539’_)
  
• **PR #27764**: (basepi) Merge forward from 2015.8 to develop (refs: #36539, #saltstack/salt’#36539’_)
  
• **PR #27317**: (efficks) State unzip should use unzip command instead of unzip_cmd. (refs: #36539, #saltstack/salt’#36539’_)
  
• **PR #25128**: (stanislavb) Use cmd_unzip to preserve permissions (refs: #36539, #saltstack/salt’#36539’_)
  
• **PR #36744**: (cachedout) Fix issue where test suite could hang on shutdown @ 2016-10-03 15:37:00 UTC
  
• **PR #36696**: (cro) pass __proxy__ in state.sls_id @ 2016-10-01 09:37:50 UTC
  
• **ISSUE saltstack/salt#32490**: (davegiles) __proxy__ not available when called from state.sls_id, fine from state.highstate (refs: #36696)
  
• **PR #36696**: (cro) pass __proxy__ in state.sls_id @ 2016-10-01 09:37:50 UTC
  
• **PR #36696**: (cro) pass __proxy__ in state.sls_id @ 2016-10-01 09:37:50 UTC
  
• **ISSUE saltstack/salt#32490**: (davegiles) __proxy__ not available when called from state.sls_id, fine from state.highstate (refs: #36696)
  
• **PR #36716**: (vimt) Fix creating options in empty file @ 2016-10-01 09:35:11 UTC
  
• **ISSUE #29421**: (scbunn) pillar data leaks through environments (refs: #36435, #saltstack/salt’#36435’_)
  
• **PR saltstack/salt#36628**: (yhekma) Update doc to reflect the version where ‘none’ was added as a pillar_... (refs: #36724)
  
• **PR saltstack/salt#36435**: (yhekma) Add "none" as a pillar merging strategy (refs: #saltstack/salt’#36628’_, #36628)
  
• **PR #36724**: (rallytime) Back-port #36628 to 2016.3 @ 2016-10-01 09:33:43 UTC
  
• **PR #36628**: (yhekma) Update doc to reflect the version where ‘none’ was added as a pillar_... (refs: #36724)
  
• **PR #36724**: (rallytime) Back-port #36628 to 2016.3 @ 2016-10-01 09:33:43 UTC
  
• **PR #36628**: (yhekma) Update doc to reflect the version where ‘none’ was added as a pillar_... (refs: #36724)
  
• **PR #36724**: (rallytime) Back-port #36628 to 2016.3 @ 2016-10-01 09:33:43 UTC
  
• **PR #36628**: (yhekma) Update doc to reflect the version where ‘none’ was added as a pillar_... (refs: #36724)
- 3bb2cb6379 Update doc to reflect the version where ‘none’ was added as a pillar_source_merging_strategy
- PR saltstack/salt#36643: (roosri) a small, and unfortunate error (refs: #36725)

**PR #36725: (rallytime) Back-port #36643 to 2016.3 @ 2016-10-01 09:33:13 UTC**
- PR #36643: (roosri) a small, and unfortunate error (refs: #36725)
- c5b8e442f9 Merge pull request #36725 from rallytime/bp-36643

**PR #36726: (rallytime) Back-port #36722 to 2016.3 @ 2016-10-01 09:32:53 UTC**
- PR #36722: (rallytime) Skip cmd_unzip test if salt.utils.which('zip') isn’t available (refs: #36726)
- 5904c046c0 Merge pull request #36726 from rallytime/bp-36722

**PR saltstack/salt#36718: (Ch3LL) Error when using archive.zip on python2.6 (refs: #36719)**
- PR #36719: (Ch3LL) fix python26 archive zip module
- PR saltstack/salt#36616: (cro) Zypper fix test (refs: #36699)

**ISSUE #36699: (cachedout) Fix error in test @ 2016-09-30 11:28:18 UTC**
- 7d022a3f39 Merge pull request #36699 from cachedout/fixup_36616
- 16f5bb70ec Remove line that checks against unordered keys
- 0e9148293a Fix error in test

**PR #36669: (jackywuu) fix bug of including loopback addr will never work (refs: #36670)**
- PR #36670: (jackywuu) fix bug for including loopback addr @ 2016-09-30 10:21:53 UTC
- 5904c046c0 Merge pull request #36670 from jackywuu/2016.3
- 48d2d512d8 fix bug for including loopback addr

**ISSUE #36692: (loregordon) Expose ignore_if_missing param to the file.replace state (refs: #36694)**
- PR #36694: (loregordon) Exposes ignore_if_missing to file.replace state module @ 2016-09-30 10:12:27 UTC
- 0e8c9abe8d Merge pull request #36694 from lorengrordon/issue-36692
- 35f3bb3a8a Exposes ignore_if_missing to file.replace state module
- PR saltstack/salt#35356: (jfindlay) document log levels and warn on all logging below info (refs: #36686)

**PR #36686: (jfindlay) log levels doc: try long form table @ 2016-09-29 18:21:47 UTC**
- c089ac6c67 Merge pull request #36686 from jfindlay/log_levels
- 4d44fc94dc log levels doc: try long form table

**PR #36690: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-29 17:46:24 UTC**
- e0a851b2f1 Merge pull request #36690 from rallytime/merge-2016.3
- 7e838c9aca Merge branch '2015.8' into '2016.3'
- 7d1972bd5c Merge pull request #36684 from rallytime/merge-2015.8
  * 838722d225 Merge branch '2015.5' into '2015.8'
  * 8f1ba2fa26 Merge pull request #36678 from rallytime/merge-2015.5
- 51240ecb13 Merge branch '2014.7' into '2015.5'
- 86dc3dc9f7 Merge pull request #36641 from fuzzy-id/fix-lvm-thin-argument
- 740516aace fix thin argument for 'lvm.lv_create'

• PR #36680: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-29 16:49:16 UTC
  - f95dd696e5 Merge pull request #36680 from rallytime/merge-2016.3
  - 3e4ac617d3 Merge branch '2015.8' into '2016.3'
  - e4c5d0bf67 Merge pull request #36664 from cachedout/remove_useless_size_check
    - 3d098c64ef Remove possible race between grains dumps in test
  - 8cf8e371a5a Merge pull request #36663 from cachedout/skip_pip_tests_on_download_fail
    - e3f8618982 Merge pull request #36662 from cachedout/skip_pip_tests_on_download_fail
      - 0bc60cdd7 Skip over tests where upstream pip isn't there
  - 3249a11e71 Merge pull request #36661 from cachedout/fixed_grain_test_race
    - 2dc92134d Fix race between minion job timeout and cli test timeout
    - b0190f248e Merge pull request #36660 from cachedout/fixed_2068_issue_test
      - f4906fe771 Fix test not to rely on external resources

• ISSUE #28125: (peter-slovak) [2015.8] support for __env__ in Git external pillar (refs: #36659)

• PR #36659: (terminalmage) Support dynamic env in new-style git_pillar @ 2016-09-29 05:04:38 UTC
  - eab1680f3f Merge pull request #36659 from terminalmage/issue28125
  - 45352b36bd Support dynamic env in new-style git_pillar

• ISSUE #34927: (bobrik) Salt does not run "systemd daemon-reload" on unit override (refs: #36538)

• PR #36538: (clinta) daemon-reload on call to service.avaliable @ 2016-09-29 02:28:00 UTC
  - 0c2bd4b66b Merge pull request #36538 from clinta/daemon-reload
  - 833be9b36 Merge pull request #1 from terminalmage/pr-36538
    - c4060ba2c1 Move check for service availability to a helper function
      - 20c2e91baa daemon-reload on call to service.avaliable

• PR #36616: (cro) Zypper fix test @ 2016-09-29 02:26:22 UTC
  - d8a61eb9f6 Merge pull request #36616 from cro/zypper_fix_test
  - b618a507d Remove debugging
  - 3870589462 Test for pkg.upgrade. Most robust on Suse but better than nothing elsewhere
  - 867638ff48 Test for pkg.upgrade. Most robust on Suse but better than nothing elsewhere

• PR #36621: (terminalmage) Fix shadowed builtins @ 2016-09-29 02:25:54 UTC
  - ccd92d22d2 Merge pull request #36621 from terminalmage/fix-shadowed-builtins
  - 62729eff8d Update tests to include fix for renamed function
  - 283aca8f2a Update test to reflect new function signature
  - 0f158b5edd Fix shadowed builtins
- **PR** saltstack/salt#36618: (onorua) Fix memory leak for 0mq transport in case of TCP DDOS (refs: #36636)
- **PR** #36636: (rallytime) Back-port #36618 to 2016.3 @ 2016-09-29 02:23:09 UTC
  - **PR** #36618: (onorua) Fix memory leak for 0mq transport in case of TCP DDOS (refs: #36636)
  - 24f82b2809 Merge pull request #36636 from rallytime/bp-36618
  - 275845c3d2 Fix memory leak for 0mq transport
- **ISSUE** #27316: (efficks) Extracted state with zip format failed on Windows (refs: #27317)
- **ISSUE** #27207: (PredatorVI) archive.extracted state not preserving file permissions (refs: #33906)
- **ISSUE** #26569: (ssgward) Add support for password-protected zip files in archive.extracted on Windows (refs: #31116)
- **ISSUE** #23822: (sidcarter) Zip file extracted permissions are incorrect (refs: #25128)
  - **PR** saltstack/salt#36539: (jfindlay) Prefer archive.cmd_unzip (refs: #saltstack/salt#36648, #36648)
- **PR** #36648: (jfindlay) Integration tests for archive execution module (refs: #36986) @ 2016-09-29 02:16:54 UTC
  - **PR** #33906: (lomeroe) Archive unzip permissions (refs: #36539, saltstack/salt`#36539`)
  - **PR** #31116: (UtahDave) Add password support for zip files in archive module and state (refs: #36539, saltstack/salt`#36539`)
  - **PR** #27764: (basepi) Merge forward from 2015.8 to develop (refs: #36539, saltstack/salt`#36539`)
  - **PR** #27317: (efficks) State unzip should use unzip command instead of unzip_cmd. (refs: #36539, saltstack/salt`#36539`)
  - **PR** #25128: (stanislavb) Use cmd_unzip to preserve permissions (refs: #36539, saltstack/salt`#36539`)
    - 750ff8220c Merge pull request #36468 from jfindlay/arch_test
    - ccd958557 modules.archive: add integration tests
    - 99bf89447b modules.archive: add opts arg to g(un)zip
    - c1219e68c5 modules.archive.unzip: depend on zipfile module
    - 315b031de9 modules.archive: use less redundant message
    - **PR** saltstack/salt#36389: (cachedout) Pr 36386 (refs: #36650)
  - **PR** #36650: (rallytime) Revert "Pr 36386" @ 2016-09-29 02:11:15 UTC
    - **PR** #36386: (xiaoanyunfei) fix salt-api's default opts were covered by salt-master #35734 (refs: #36389, #36650, saltstack/salt`#36389`)
    - **PR** #35734: (xiaoanyunfei) fix salt-api's default opts were covered by salt-master (refs: #36386)
      - 91aad464d5d Merge pull request #36650 from saltstack/revert-36389-pr-36386
      - 33ef5bfe6 Revert "Pr 36386"
  - **ISSUE** #36304: (Ch3LL) stack trace when transport is not a currently supported transport (refs: #36646)
  - **PR** #36646: (rallytime) Provide an error message when invalid transport is set @ 2016-09-28 02:11:15 UTC
    - ab5c0e9e65 Merge pull request #36646 from rallytime/fix-36304
    - ae021d66c Provide an error message when invalid transport is set
  - **PR** #36635: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-28 21:10:25 UTC
    - 6d9b28506c Merge pull request #36635 from rallytime/merge-2016.3
- 787c1f557e Pylint fix
- da574e5b03 Merge branch '2015.8' into '2016.3'
- f0d561a229 Merge pull request #36632 from isbm/isbm-thin-modules-config-15.8
  - 975f8bb27d Add extra-mods options to the Salt-Thin via SSH CLI
  - a441b35588 Add documentation about Salt Thin configuration
  - 3fbf17ee62 Add a description of the thin/min parameters to the master config
  - 3d878f9da5 Get the thin Salt with configured extra modules on SSH
  - 2be9330be6 Add thin options to the master config.
  - 58577d342e Generate thin with configured extra modules

- **ISSUE #36553:** (nulliams) states.hg.latest claims to succeed despite errors (refs: #36620)
- **PR #36620:** (rallytime) Don't allow mercurial states to return True with errors @ 2016-09-28 05:50:50 UTC
  - 83da81cd6d Merge pull request #36620 from rallytime/fix-36553
  - a828bd0b8 Update test mocks for cmd.run_all dicts
  - 3904dfc5a8 Don't allow mercurial states to return True with errors
- **PR #36622:** (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-28 05:39:43 UTC
  - 1c001d0ee1 Merge pull request #36622 from rallytime/merge-2016.3
  - 90c66e756 Merge branch '2015.8' into '2016.3'
  - 9b9e167b47 Merge pull request #36562 from kioroky/s2015.8
    - 47c3d03035 Fix pkg.latest_version using localized output
  - 4ab52ae0f6 Merge pull request #36607 from vutny/detect-service-fail
    - c4f899b3b3 salt.states.service: detect that service failed to start/stop
  - 5de036b56c Merge pull request #36611 from multani/2015.8
    - 79f6d12395 jinja: fix YAML terminator removal in Jinja's "yaml" filter
  - 6e3e619fc4 Fix trust key 2015.8 (#36540)
- **PR #36520:** (twangboy) Fix cmd.script runas for Windows @ 2016-09-28 04:07:00 UTC
  - e7def534b1 Merge pull request #36520 from twangboy/fix_cmd.script_runas
  - 377ced5c24 Remove directory in Windows with runas
  - 25d52eafac Fix mkdir
  - 18d41f7711 Add mkdir
  - 9d55bff914 Use cachedir for Windows
- **ISSUE saltstack/salt#32368:** (vitaliyf) Low timeout values causes duplicate commands to execute (refs: #36564)
- **PR #36564:** (DmitryKuzmenko) Improve and fix _check_cache_minions @ 2016-09-28 02:50:54 UTC
  - 798bf3086b Merge pull request #36564 from DSRCorporation/bugs/32368_grains_match_bug
  - be61f97db3 Minor: syntax error fixes.
  - 29660ed672 Improve and fix _check_cache_minions
- PR #36606: (danlsgiga) Add support for ACL Tokens in consul_pillar with the option consul.token @ 2016-09-28 02:46:03 UTC
  - 133705d567 Merge pull request #36606 from danlsgiga/consul_pillar_token
  - a5907ce989 Add support for ACL Tokens in consul_pillar with the option consul.token
- PR #36613: (slinn0) Remove file.check_managed_changes when not needed (backport of PR #36589 to 2016.3) @ 2016-09-28 02:35:56 UTC
  - PR #36589: (slinn0) Do not generate pchanges in file.managed unless test=True (refs: #36613)
  - b365f1e34d Merge pull request #36613 from slinn0/2016.3_36588_fixes
  - d9da5cb2d4 Backport of PR #36589 / Issue #36588 to 2016.3 branch.
- PR #36609: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-27 18:34:22 UTC
  - e23a98d97 Merge pull request #36609 from rallytime/merge-2016.3
  - f15d4a38bd Merge branch '2015.8' into '2016.3'
  - 57ec792f6b Merge pull request #36550 from rickyninja/2015.8
  - f9ef30aabe Add version_cmp for FreeBSD pkg.
- PR #36595: (cachedout) Remove tests which no longer apply @ 2016-09-27 07:38:15 UTC
  - 25fa754d94 Merge pull request #36595 from cachedout/issue_7754_fix
  - 3a83b0bd16 Remove tests which no longer apply
- ISSUE #36586: (gehzumteufel) Documentation update (refs: #36594)
- PR #36594: (cachedout) Update bootstrap docs to recent versions of Ubuntu @ 2016-09-27 06:18:49 UTC
  - aed98f47de Merge pull request #36594 from cachedout/issue_36586
  - 1e6a60ab01 Update bootstrap docs to recent versions of Ubuntu
- PR #36585: (twangboy) Add pyOpenSSL to req file for Windows @ 2016-09-27 05:49:42 UTC
  - c79f525863 Merge pull request #36585 from twangboy/add_pyopenssl
  - 5fc63a1054 Add pyOpenSSL to req file for Windows
- ISSUE #36568: (lkx007) cp.push remove_source problem (refs: #36572)
  - PR #36572: (cachedout) Fix salt.utils.rm_rf to delete files too
- ISSUE #36491: (cro) pkg.upgrade does not upgrade on Leap 42.1 or Tumbleweed (refs: #36495)
- PR #36495: (cro) Fix pkg.upgrade for zypper @ 2016-09-26 10:02:39 UTC
  - d0dd92b037 Merge pull request #36495 from cro/zypper_fix
  - 6e5807c4be Fix pkg.upgrade for zypper
- ISSUE #27316: (efficks) Extracted state with zip format failed on Windows (refs: #27317)
- ISSUE #27207: (PredatorVI) archive.extracted state not preserving file permissions (refs: #33906)
- ISSUE #26569: (ssgward) Add support for password-protected zip files in archive.extracted on Windows (refs: #31116)
- ISSUE #23822: (sidcarter) Zip file extracted permissions are incorrect (refs: #25128)
- PR #36539: (jfindlay) Prefer archive.cmd_unzip @ 2016-09-26 10:02:11 UTC
  - PR #33906: (lomeroe) Archive unzip permissions (refs: #36539, #saltstack/salt`#36539`_)

30.2. Previous Releases
- **PR #31116**: (UtahDave) Add password support for zip files in archive module and state (refs: #36539, saltstack/salt#36539)
- **PR #27764**: (basepi) Merge forward from 2015.8 to develop (refs: #36539, saltstack/salt#36539)
- **PR #27317**: (efficks) State unzip should use unzip command instead of unzip_cmd. (refs: #36539, saltstack/salt#36539)
- **PR #25128**: (staniavlbe) Use cmd_unzip to preserve permissions (refs: #36539, saltstack/salt#36539)

- **ISSUE #36514**: (nilliams) salt.stages.hg errors when -identity option is used (refs: #36546)
- **PR #36546**: (rallytime) Mercurial Module: Pass the identity_path portion as own arg @ 2016-09-26 09:44:30 UTC
  - ab50cde391 Merge pull request #36546 from rallytime/fix-36514
  - 9afe76759e Mercurial Module: Pass the identity_path portion as own arg

- **ISSUE #35480**: (jelenak) 200 processes of salt-master (2016.3.2) (refs: #36184, #36555, #37254)
- **PR #36555**: (DmitryKuzmenko) Bugs/35480 master shutdown @ 2016-09-26 09:25:43 UTC
  - aea55f6e61 Merge pull request #36555 from DSRCorporation/bugs/35480_master_shutdown
  - 6ad2998715 Wait for kill in ProcessManager should be greater in main process than in subprocess.
  - c9c45a5d79 Don’t set the daemon flag for LoggingQueue process.

- **PR #36542**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-23 22:47:26 UTC
  - 1a90afe1c7 Merge pull request #36542 from rallytime/merge-2016.3
  - 861a001749 Merge branch ‘2015.8’ into ’2016.3’
  - 07c9d040c0 Fixup the rabbitmq_user state test failure (#36541)

- **ISSUE #29421**: (scbunn) pillar data leaks through environments (refs: #36435, saltstack/salt#36435)
  - **PR #36532**: (rallytime) Back-port #36435 to 2016.3
  - **PR #36435**: (yhekma) Add ”none” as a pillar merging strategy (refs: #36532)
  - **PR #36535**: (rallytime) Be explicit about the salt.utils.templates import
  - **PR #36537**: (rallytime) Wrap the entire GrainsAppendTestCase class with destructiveTest

- **PR #36529**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-23 16:42:42 UTC
  - 55cf4d6a04 Merge pull request #36529 from rallytime/merge-2016.3
  - 52cf4d08c Merge branch ‘2015.8’ into ’2016.3’
  - 1c3758544c Merge pull request #36441 from twangboy/update_setup
    - fc4a03a75d Check for existing library on Windows

- **PR #36483**: (dmurphy18) Isolate sun IPv6 fix to Sun OS only @ 2016-09-23 09:24:54 UTC
  - 03491634ff Merge pull request #36483 from dmurphy18/aix_fix_ipv6
  - b68f982c6a Updated check as per code review
  - cbcd47fe Isolate SUN IPv6 fix to Sun Os only
• **ISSUE #36279:** (alertedsnake) state.postgres_privileges should allow grants to ALL tables/sequences. (refs: #36280)

• **PR #36280:** (alertedsnake) Feature/2016.3 better postgresql grants @ 2016-09-23 07:55:32 UTC
  - **PR #36249:** (alertedsnake) Quote postgres privilege target names (refs: #36280)
  - 654fa8d770 Merge pull request #36280 from jwplayer/feature/2016.3-better-postgresql-grants
  - e7a597da00 Bugfix: don't concatenate when not needed
  - ba60b7972a Additional documentation.
  - 8b877f014d 'All' grants for PostgreSQL.

• **PR #36508:** (twangboy) Fix chocolatey @ 2016-09-23 07:36:03 UTC
  - 8104d5c92a Merge pull request #36508 from twangboy/fix_chocolatey
  - a7c858d9ab Fix retcodes
  - feadd827a7 Add additional functionality to upgrade
  - fb5eb4dc03 Fix retcodes, add upgrade function

• **PR #36519:** (terminalmage) Rewrite minionfs walkthrough @ 2016-09-23 05:19:59 UTC
  - 364f74dfc9 Merge pull request #36519 from terminalmage/docs
  - 2d51ce3e9 Rewrite minionfs walkthrough
  - cc9d41fb0c Change items in minionfs blacklist/whitelist example

• **PR #36505:** (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-22 17:37:33 UTC
  - 6f54e16cdf Merge pull request #36505 from rallytime/merge-2016.3
  - 5bd4d630b Merge branch '2015.8' into '2016.3'
  - bf6195b9a6 postgres_extension state: small corrections in docstrings (#36500)
  - b021ea5d40 Merge pull request #36464 from vutny/postgres-tablespace-options
    * 580aed87b9 Fix options parameter processing in postgres_tablespace.present

• **ISSUE #35813:** (UtahCampusD) Empty dictionary returned from grains.items command within local client (refs: #36496)

• **PR #36496:** (cachedout) Add repr to namespacedict @ 2016-09-22 04:34:11 UTC
  - 464c4305f9 Merge pull request #36496 from cachedout/namespacedict
  - 333842c319 Add repr to namespacedict

• **PR #36474:** (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-22 04:16:58 UTC
  - a0f838af36 Merge pull request #36474 from rallytime/merge-2016.3
  - 8805b57a1e Merge branch '2015.8' into '2016.3'
    * 41d3c09857 Merge pull request #35433 from terminalmage/issue34790
      * 71b51f49ba Add integration tests for PR #35433
      * 82515ecccde Add an additional hint for cases where rev == 'HEAD'
      * 4b7c2f9475 git.latest: Add a hint for possible rev changes resulting in non-fast-forward failures
    * 87263b9387 Merge pull request #36445 from notpeter/salt_cloud_iam_role
- 469d1a61fe Remove (required).
- 98449e66f5 Better docs for use-instance-role-credentials.

- **ISSUE #36475**: (amendlik) GitFS online documentation is missing a section present in the code (refs: #36478)

- **PR #36478**: (rallytime) Add the "bash" option to the "code-block"directive. @ 2016-09-22 04:15:14 UTC
  - ec4f4f49ca Merge pull request #36478 from rallytime/fix-36475
  - 7be7d5832f Add the "bash" option to the "code-block"directive.

- **PR #36482**: (clarkperkins) Have salt-cloud clean up tmp files (refs: #36484)
  - 4c6e7bf873 Merge pull request #36484 from terminalmage/salt-cloud-tmp-files
  - 0b520e089 Ensure temp file is actually removed
  - 072fd823f7 Use os.write() on file descriptor instead of opening a filehandle
  - 61e8d6366 Fix for temp files being left over by salt-cloud execution

- **PR #36484**: (terminalmage) Fix for temp files being left over by salt-cloud execution @ 2016-09-22 04:11:58 UTC
  - PR #3642: (clarkperkins) Have salt-cloud clean up tmp files (refs: #36484)
  - 4c6e7bf873 Merge pull request #36484 from terminalmage/salt-cloud-tmp-files
  - 0b520e089 Ensure temp file is actually removed
  - 072fd823f7 Use os.write() on file descriptor instead of opening a filehandle
  - 61e8d6366 Fix for temp files being left over by salt-cloud execution

- **PR #36486**: (terminalmage) Improve the rebase docs in contributing guidelines @ 2016-09-21 19:21:10 UTC
  - 9005a87635 Merge pull request #36486 from terminalmage/rebase-docs
  - 4839c325ae Improve the rebase docs in contributing guidelines

- **PR #36455**: (twangboy) Update docs for Windows @ 2016-09-21 14:28:28 UTC
  - bc5ac97adae Merge pull request #36455 from twangboy/windows_installation_docs
  - ec67a9bb2f Add cachedout's recommendations
  - 26a40dadbe Update docs for Windows

- **PR #36459**: (cachedout) Pr 36426 @ 2016-09-21 06:34:29 UTC
  - 3d23371ca2 Merge pull request #36459 from cachedout/pr-36426
  - bb5c01ae9d Lint
  - 85d2068326 Refactor for testing and adding related engine tests
  - 266adae2fd Make sqs_events engine support owner_acct_id

- **PR #36442**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-20 23:16:30 UTC
  - c8e15dc6ca Merge pull request #36442 from rallytime/merge-2016.3
  - 2740f87b8d Merge branch '2015.8' into '2016.3'
  - 266dd7c00a Merge pull request #36379 from twangboy/windows_grains
    - 6138390da7 Fix typo
    - cf045e5c03 Remove comment
    - ddb6e1bcb Remove refactoring
    - 45dc920db0 Clarify comments
    - 211fd3b47e Improve version checking
    - 88be5a3761 Check for Python 2.7.12 and 3.5.2
    - 6f80f062a Add osservicepack grain
    - 04c4ecf81 Fix lint
∗ 5789ea99cf Force string
∗ 6e5bd7664b Fix join syntax
∗ ac8610d523 Add ServicePack to osrelease
∗ 92034936c1 Fix windows grains for os

− 5625827ee2 Merge pull request #36378 from terminalmage/issue36321
− 7b1f621206 Fix git.latest test with local changes to reflect changes in state
− 0364fedb76 Use a single conditional
− 0dd1e7b53e git.latest Treat an up-to-date checkout with local changes as up-to-date

• PR #36310: (thatch45) Fix bug where the client will destroy the loop @ 2016-09-20 13:14:23 UTC
  − d0a495f08b Merge pull request #36310 from thatch45/keep_loop
  − a3c0d4a0ab Add docstring
  − 083f1d998a Fix bug where the client will destroy the loop

• PR #36394: (oba11) fix accound_id in boto_iam and get_region in boto_sns @ 2016-09-20 13:11:28 UTC
  − 6e16ca46ed Merge pull request #36394 from oba11/module-fixes
  − 966685020c fix accound_id in boto_iam and get_region in boto_sns

• PR #36424: (jfindlay) skip some mac_timezone tests @ 2016-09-20 06:43:47 UTC
  − PR #36194: (jfindlay) skip some mac_timezone tests (refs: #36424)
  − ae1fc430c2 Merge pull request #36424 from jfindlay/bp-36194
  − a20a2148bf skip some mac_timezone tests

• ISSUE #36388: (qurczak) pkg.list_upgrades return debug information rather than packages list (refs: #36428)

• PR #36428: (terminalmage) A couple fixes for Antergos Linux @ 2016-09-20 06:42:16 UTC
  − 6319e3419a Merge pull request #36428 from terminalmage/issue36388
  − b0069ad0d8 pacman.py: use os_family grain to assign as pkg virtual module
  − 5d632dbfca Properly set os grain for Antergos
  − 0ae8dca2d0 pkg.list_upgrades: Ignore "downloading" lines in pacman output

• ISSUE #36373: (frioux) Salt-API does not validate input properly (refs: #36425)

• PR #36425: (whiteinge) Check for dictionary explicitly since we're accessing it as one @ 2016-09-20 06:41:40 UTC
  − 155bd14b5e Merge pull request #36425 from whiteinge/salt-api-dict-payload
  − 0b63ed258f Check for dictionary explicitly since we're accessing it as one

• ISSUE saltstack/salt#18341: (falzm) Dry-running state.highstate only returns the first change (refs: #36199)

• PR #36199: (thatch45) skip all failhards if test=True @ 2016-09-20 05:38:32 UTC
  − 420be364ee Merge pull request #36199 from thatch45/fix_18341
  − e13d61f06a skip all failhards if test=True

• PR #36418: (rallytime) Back-port #36246 to 2016.3 (refs: #37120) @ 2016-09-19 21:56:52 UTC
  − PR #36246: (twangboy) Fix test_issue_6833_pip_upgrade_pip test on OS X (refs: #36418, #37120)
- b2365f553e Merge pull request #36418 from rallytime/bp-36246
- aab02f28b4 Ensure we have a test venv created using virtualenv < 13.0

- **PR #36419:** (rallytime) Back-port #36329 to 2016.3 @ 2016-09-19 21:56:33 UTC
  - PR #36329: (oz123) Fix a minor typo in docs (refs: #36419)
  - bc703e2062 Merge pull request #36419 from rallytime/bp-36329
  - ffdeb7a25 Fix a minor typo in docs

- **PR #36420:** (rallytime) Back-port #36365 to 2016.3 @ 2016-09-19 21:56:17 UTC
  - PR #36365: (Kimamisa) Fix a minor typo in docs (refs: #36420)
  - fbfa0657fc Merge pull request #36420 from rallytime/bp-36365
  - 864e513fca Fix a minor typo in docs

- **PR #36413:** (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-19 18:59:31 UTC
  - 3dd2590e28 Merge pull request #36413 from rallytime/merge-2016.3
  - c64e489f6f Merge branch '2015.8' into '2016.3'
    - 9bc4eeb71e Fix typo (#36409)
    - ac5c812e4b Fix OS identification for CloudLinux (#36408)
    - bb4d69f58a git.latest: fail gracefully for misconfigured remote repo (#36391)
    - ad7045ad3b Merge pull request #36315 from puneetk/patch-6
      - 3ac308ac76 Update aptpkg.py
      - 892cc4cd48 Update aptpkg.py
      - cbe98d9a3 Fix pylint whitespace errors
      - e5371ac720 No force_yes parameter to pkg.upgrade #21248
    - 2aa6df859a Merge pull request #36381 from twangboy/fx_win_service
      - 04edea5c59 Add `/y` switch to the net stop and start commands
    - 373c5db180 Merge pull request #36384 from twangboy/update_setup_req
      - a817aef1c2 Add windows requirements file

- **ISSUE #36371:** (nasenbaer13) `_extern_path` in fileclient is broken (refs: #36305)

- **PR #36305:** (gtmanfred) cache query args with url as well @ 2016-09-19 18:30:51 UTC
  - a8a3a9f021 Merge pull request #36305 from gtmanfred/2016.3
  - 70e7f6d58b cache query args with url as well

- **PR #36389:** (cachedout) Pr 36386 @ 2016-09-17 11:54:37 UTC
  - PR #36386: (xiaoanyunfei) fix salt-api's default opts were covered by salt-master #35734 (refs: #36389, #36650, #saltstack/salt`#36389`_)
  - PR #35734: (xiaoanyunfei) fix salt-api's default opts were covered by salt-master (refs: #36386)
  - 602bd2d1ef Merge pull request #36389 from cachedout/pr-36386
  - f5d63d93ce Lint
  - 93269cfb65 fix salt-api log and pid
Salt Documentation, Release 3002.5

30.2. Previous Releases

- **PR #36352**: (pass-by-value) Update versionadded and release notes

- **PR #36369**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-16 16:31:14 UTC
  - 495d365e54 Merge pull request #36369 from rallytime/merge-2016.3
  - 37aea4188 Merge branch '2015.8' into '2016.3'
  - 40b2e3d189 Merge pull request #36353 from rallytime/refresh-db-clean-up
    * 275319193a Check for Ign/Hit membership instead of == in aptpkg.refresh_db
  - df9db3624 Merge pull request #36355 from rallytime/bp-36288
    * 70fdafbf0 Schema test requires jsonschema 2.5.0 or above
  - 3f308d7694 postgres_extension: report changes when an extension was installed (#36335)
  - d2a583bc22 Merge pull request #36337 from cachedout/conduct
    * 2fb61b9c9f SaltStack's code of conduct

- * 275319193a Check for Ign/Hit membership instead of == in aptpkg.refresh_db

- **PR #36369**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-16 16:31:14 UTC
  - 495d365e54 Merge pull request #36369 from rallytime/merge-2016.3
  - 37aea4188 Merge branch '2015.8' into '2016.3'
  - 40b2e3d189 Merge pull request #36353 from rallytime/refresh-db-clean-up
    * 275319193a Check for Ign/Hit membership instead of == in aptpkg.refresh_db
  - df9db3624 Merge pull request #36355 from rallytime/bp-36288
    * 70fdafbf0 Schema test requires jsonschema 2.5.0 or above
  - 3f308d7694 postgres_extension: report changes when an extension was installed (#36335)
  - d2a583bc22 Merge pull request #36337 from cachedout/conduct
    * 2fb61b9c9f SaltStack's code of conduct

- **PR #36369**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-16 16:31:14 UTC
  - 495d365e54 Merge pull request #36369 from rallytime/merge-2016.3
  - 37aea4188 Merge branch '2015.8' into '2016.3'
  - 40b2e3d189 Merge pull request #36353 from rallytime/refresh-db-clean-up
    * 275319193a Check for Ign/Hit membership instead of == in aptpkg.refresh_db
  - df9db3624 Merge pull request #36355 from rallytime/bp-36288
    * 70fdafbf0 Schema test requires jsonschema 2.5.0 or above
  - 3f308d7694 postgres_extension: report changes when an extension was installed (#36335)
  - d2a583bc22 Merge pull request #36337 from cachedout/conduct
    * 2fb61b9c9f SaltStack's code of conduct

- **ISSUE #36338**: (jbonachera) infoblox.present state does not use "infoblox_server", "infoblox_user" or "infoblox_password" arguments (refs: #36339)
  - **PR #36339**: (jbonachera) Use infoblox_* values if present in arguments
  - **PR #36345**: (gtmanfred) remove help message from glance module
  - **PR #36346**: (rallytime) Add resize2fs unit test from blockdev_test to disk_test
  - **PR #36344**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 (refs: #36346)

- **ISSUE #36292**: (lorendordon) pkg.check_db is not available in salt 2016.3? (refs: #36350)

- **PR #36350**: (terminalmage) Add note about yumpkg.check_db removal in Boron @ 2016-09-15 20:32:32 UTC
  - f09c3e499f Merge pull request #36350 from terminalmage/docs
  - b815c88577 Add note about yumpkg.check_db removal in Boron

- **PR #36344**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 (refs: #36346)
  - a33da842c0 Merge pull request #36344 from rallytime/merge-2016.3
  - d1f560147d Merge branch '2015.8' into '2016.3'
  - dc518e5340 Skip test_resize2fs if resize2fs does not exists (#36325)

- **ISSUE #36308**: (ahammond) salt-cloud defaults to IPv6 rather than IPv6 (refs: #36312)
  - **PR #36312**: (ahammond) merge error overwrites correct ssh_host with stale data in ip_address

- **ISSUE #35819**: (cable2999) pkg.group_installed doesn’t handle missing package group (refs: #salt-stack/salt #35907 _ _ #35907)
  - **PR saltstack/salt#35907**: (rallytime) Catch CommandExecutionError when the group in group_installed doesn’t exist (refs: #36299)

- **PR #36299**: (rallytime) Gate the pkg.group_installed state test: not all pkg modules have group_install @ 2016-09-14 19:04:26 UTC
  - 6a3019bbf1 Merge pull request #36299 from rallytime/gate-pkg-group-installed-test
- 9e15df9b23 Switch the order of the decorator
- ee997be6d8 Fix pkg group test by passing a list instead of str
- c7d8867096 Gate the pkg.group_installed state test: not all pkg modules have group_install

• ISSUE #33686: (BretFisher) blockreplace marker_end isn't applied with newline (refs: `salt-stack/salt#36273`)

  - PR saltstack/salt#36273: (techhat) Add append_newline flag for #33686 (refs: #36295)
  - PR #36295: (rallytime) Back-port #36273 to 2016.3
  - PR #36273: (techhat) Add append_newline flag for #33686 (refs: #36295)
  - PR #36296: (rallytime) Back-port #36124 to 2016.3
  - PR #36124: (twangboy) Skip test on all OS's but linux (refs: #36296)

• PR #36297: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-14 16:07:30 UTC

  - a8a72e985f Merge pull request #36297 from rallytime/merge-2016.3
  - e2f1cf6025 Merge branch '2015.8' into '2016.3'
    * b9b8e45362 Merge pull request #36272 from terminalmage/improved-gitfs-logging
      - 223a20e987 Improved gitfs/git_pillar error logging
    * abb6aabc4b Merge pull request #36277 from terminalmage/gitfs-check-key-path
      - 4fee18c820 salt.utils.gitfs: Check for existence of ssh keys
    * ed22dbd331 Integration tests fixes for 2015.8 (#36262)
    * 297a12c387 Fix misspelling of "occurred" in log messages/exceptions (#36270)
  - PR #36178: (cachedout) Filter out pub kwargs from cloud runner

• PR #36238: (pass-by-value) Add ability to clone from a snapshot to salt-cloud vmware driver @ 2016-09-14 05:31:51 UTC

  - fc7a1d536f Merge pull request #36238 from pass-by-value/vmware_clone_from_snapshot
  - dd670bd18f Fix lint error and add try except
  - d96981639b Add ability to clone from a snapshot to salt-cloud vmware driver
  - PR #36263: (meaksh) Integration tests fixes for 2016.3

• PR #36264: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-13 18:25:41 UTC

  - d634fd8628 Merge pull request #36264 from rallytime/merge-2016.3
  - f603757b55 Merge branch '2015.8' into '2016.3'
  - 931486ba35 Merge pull request #36096 from twangboy/update_setup
    * dc1988add5 fix download when requests not present
    * b4479b55f Add additional required dll's
  - b0ddff5c8 Merge pull request #36244 from terminalmage/gen-back-bug
    * 36b21f9b9 salt.fileservers.Fileserver: Don't try to split a list in _gen_back
  - dcc380996 Merge pull request #36245 from terminalmage/roots-bug
    * 75d4997b70 roots backend: Don't include '.' or '..' in empty_dirs
  - fdf4090b77 Some unit tests fixes (#36227)
• ISSUE #33525: (anlutro) file.serialize no longer indents/pretty-prints in 2016.3 (refs: #35688)
• PR #35688: (cachedout) Splat serializer default configs into the serializer kwargs @ 2016-09-13 09:21:46 UTC
  – de06116075 Merge pull request #35688 from cachedout/issue_33525
  – 4910e8191c Provide fallback for serializers without opts
  – a238666aba Add serializer test
  – 345fd2a9e5 Splat serializer default configs into the serializer kwargs
• ISSUE #36021: (mirceaaulinic) Scheduled runners not executed (for proxy minions, at least) (refs: #36025)
• PR #36025: (mirceaaulinic) Potential fix for #36021 @ 2016-09-13 07:46:41 UTC
  – d9d477ed45 Merge pull request #36025 from cloudflare/CF-FIX-36021
  – 03007be6b1 Potential fix for #36021
  – PR #36183: (opdude) Fix timezones states on OS X
• PR #36235: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-12 17:40:42 UTC
  – fcbebb40c3 Merge pull request #36235 from rallytime/merge-2016.3
  – 99dcf84b62 Merge branch '2015.8' into '2016.3'
    • 4e9490eebe Merge pull request #36214 from vutny/postgres-extension-doc
      – 5fe548f043 postgres_extension state module: fix docstrings
    • 5b7b96c0b7 Merge pull request #36205 from vutny/postgres-tablespace-doc
      – 78296b90d8 Add missing maintenance_db kwarg to postgres_tablespace.present docstring
    • 6a5f7cb346 Ignore states that do not have a numeric jid, i.e. 'req' (#36185)
• ISSUE #35423: (Ch3LL) Stacktrace when running state.sls against an sls does not exist (refs: #36137)
• ISSUE #33915: (mattglv) Orchestration runner output on Success vs Failures in 2016.3.0 (refs: #36137)
• ISSUE #25664: (xdm24) 2015.5.2 MySQL Returner: salt-run jobs.lookup_jid doesn't return full result for high-state output (refs: #35559)
• PR #36137: (cachedout) Allow highstate outputter to show all results @ 2016-09-12 16:37:49 UTC
  – PR #35559: (Jlin317) Fix highstate outputter when it's given multiple results (refs: #36137)
  – 7b96197c5e Merge pull request #36137 from cachedout/issue_35423
  – 1e8431f2b8 Allow highstate outputter to show all results
• ISSUE #35340: (dqminh) Custom modules are only resynced to minions at highstate (refs: #36217)
  – PR #36217: (cachedout) Docs clarification for module sync and state.apply
• ISSUE #35480: (jelenak) 200 processes of salt-master (2016.3.2) (refs: #36184, #36555, #37254)
• PR #36184: (DmitryKuzmenko) Disable signal handling while handling signal @ 2016-09-11 22:59:08 UTC
  – 6ebe655e17 Merge pull request #36184 from DSRCorporation/bugs/35480_master_shutdown
  – 229504efef Removed unused import.
  – ca8eb7e076 Don't run the same signal handler twice. Catch os.kill errors.
• PR #36203: (xiaoanyunfei) fix owner of MultiprocessingLoggingQueue (refs: #37119) @ 2016-09-11 09:15:15 UTC
  – f11f09f8c Merge pull request #36203 from xiaoanyunfei/logowner
- 74dc90c7bb cancel pr last
- 90e4a25dd0 Merge branch 'logowner' of https://github.com/xiaoanyunfei/salt into logowner
  * bd61b88fc8 fix log owner
  * 58160ed6c0 Merge branch '2016.3' of github.com:saltstack/salt into 2016.3
  * f2de71782b move back
  * b8214824fd add simplify code
  * aee93856c0 Merge branch '2016.3' of github.com:saltstack/salt into 2016.3
  * 1074b3355d Merge branch '2016.3' of github.com:saltstack/salt into 2016.3
  * ea0d74cd27 fix salt-api opts
- ffd87b2f2f fix logqueue owner
- PR #36193: (thatch45) Fix stack trace in salt-ssh gitfs

- **PR #36188**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-09 18:59:20 UTC
  - f035121291 Merge pull request #36188 from rallytime/merge-2016.3
  - 521a7b2470 Merge branch '2015.8' into '2016.3'
  - d4628f3c6b Allow additional kwargs in states.dockerng.image_present (#36156)
  - 24b0387b92 Back-port #36070 to 2015.8 (#36169)
  - 116d7ac3e5 If windows pkg db hasn't been created yet, refresh the db instead of stacktracing (#36008)

- **ISSUE #35819**: (cable2999) pkg.group_installed doesn't handle missing package group (refs: #salt-stack/salt`#35907`, #35907)

- **PR #35907**: (rallytime) Catch CommandExecutionError when the group in group_installed doesn't exist @ 2016-09-09 10:14:16 UTC
  - 1d5f7d36b Merge pull request #35907 from rallytime/fix-35819
  - d7380d83be requires_system_grains decorator needs a grains=None kwarg
  - b20f6b9384 Catch CommandExecutionError when group_installed doesn't exist

- **ISSUE saltstack/salt#35972**: (tjyang) DeprecationWarning: The "osmajorrelease" will be a type of an integer. (refs: #36068)
  - PR saltstack/salt#35637: (cachedout) Add Nitrogen release notes (refs: #36068)

- **PR #36068**: (rallytime) Remove grains type deprecation warning from 2016.3 @ 2016-09-09 10:00:50 UTC
  - 401276b6f3 Merge pull request #36068 from rallytime/fix-35972
  - 2b7679e9f6 Remove grains type deprecation warning from 2016.3

- **ISSUE #36094**: (UtahDave) Windows stacktraces on msgpack on Carbon (refs: #36152)

- **PR #36152**: (cachedout) Remove unnecessary unpack @ 2016-09-09 09:13:47 UTC
  - 24bd03734d Merge pull request #36152 from cachedout/issue_36094
  - 95eb95a0f8 Remove unnecessary unpack

- **PR #36158**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-08 21:53:50 UTC
  - dc3e68d8e Merge pull request #36158 from rallytime/merge-2016.3
  - 7f955bda0a Merge branch '2015.8' into '2016.3'
* 6242702288 Fix issue with cp.push (#36136)
* 0e13118f6e Document owner kwarg for postgres_schema.present state function (#36147)
* 4cc8ea9577 Merge pull request #36146 from meaksh/tests-fixes-for-2015.8
  - 9f9aa4779c rename darwin_sysctl.py to mac_sysctl.py
  - 2c6f36d89 modules.darwin_sysctl: __virtual__ return err msg.
  - f74ca15f50 Remove test for file dir behavior
  - c65aefee20 Fix tests that assert CommandExecutionError (#32485)
  - f8c04b39b8 Fixed more lint
  - 63ff731009 Fixed tests
  - 04b1a4a9ca Fixed use of assert_has_calls in tests.
  - 46e4bb58e5 Fixed LoadAuthTestCase
  - 4e9733ad6d Rename dockerio.py unit tests to dockerio_test.py
  - e09c943e0 Make sure spm tests are picked up by runtests.
  - 2605f34849 Fix missing first data in stream when subscribing stream using a function 'read_async'.
  - 305bab8be0 Fixed _interfaces_ifconfig output for SunOS test
  - b5ca02c867 Fix tests that assert CommandExecutionError (#32485)
  - 1fb6340f6 Fix tests (#35693)
  - 5977f1f54c Skip utils_test if timelib is not installed (#32699)
  - d19b4061e Fixing skipped boto tests to prevent errors if boto3 does not exists.
* c4ddfe3887 Merge pull request #35954 from morganwillcock/upgrade-on-batteries
  - 108f9470f2 win_pkg: report failure for failed launch of Scheduled Task
  - e0978220f7 win_pkg: allow minion upgrade when using batteries
* 94b7659304 Merge pull request #36129 from terminalmage/pygit2-ssl_verify
  - 640f0c17c6 pygit2: Prevent traceback on initial gitsfs setup
* 7edbc546f1 Back-port #36062 to 2015.8 (#36118)
  - PR #36170: (rallytime) Back-port #36154 to 2016.3
  - PR #36154: (DavidWittman) Remove unclosed backticks in walkthrough doc (refs: #36170)
• ISSUE #36055: (gladiatr72) 2016.3.3 -- missing salt-cloud events on the master event bus (refs: #36161)
• PR #36161: (jacobhammons) Adds #36055 to release notes @ 2016-09-08 17:11:36 UTC
  - 4ccf8a841f Merge pull request #36161 from jacobhammons/relnotes
  - 1fc0979be7 Adds #36055 to release notes
• PR #36139: (meaksh) Fixing unit tests for 2016.3 @ 2016-09-08 13:20:21 UTC
  - 1f900938f0 Merge pull request #36139 from meaksh/tests-fixes-for-2016.3
  - 52a7ed605e Fixed _interfaces_ifconfig output for SunOS test
  - 158bcbff56 Fix tests that assert CommandExecutionError (#32485)
- 8b480167e1 Fix tests (#35693)
- 29814f9d43 Skip utils_test if timelib is not installed (#32699)
- d1d806f893 Fix PortageConfigTestCase in case of portage is not present
- 1c260e4bd0 Fix tests to prevent errors when libcloud is not present
- 71ebf2c8cd Fixing skipped boto tests to prevent errors if boto3 does not exists.

- **PR #36143**: (multani) doc: fix doc formatting for salt.states.mount @ 2016-09-08 13:11:03 UTC
  - 3eb3df55ad Merge pull request #36143 from multani/fix-doc-state-mount
  - 035a212a9b doc: fix doc formatting for salt.states.mount

- **ISSUE** saltstack/salt#18419: (jasonrm) salt-cloud fails to run as non-root user (refs: #35483)

- **ISSUE #36057**: (Inveracity) Regression in opennebula cloud provider (refs: #36070)

- **ISSUE #34806**: (jerrykan) salt-cloud ignores sock_dir when firing event (refs: #35483)

- **PR #36070**: (rallytime) Use __utils__ instead of salt.utils.cloud in opennebula driver (refs: #36169) @ 2016-09-08 01:18:45 UTC
  - **PR #35483**: (gtmanfred) use __utils__ in salt.cloud (refs: #35855, #37057, #36070)
  - 70da628018 Merge pull request #36070 from rallytime/fixed-36057
  - de4f77cb68 Fix up failing test: need to mock __utils__ instead of salt.utils.cloud call
  - 25e3f2b4b8 Use __utils__ instead of salt.utils.cloud in opennebula driver

- **PR #36089**: (terminalmage) Support running git states / remote exec funcs as a different user in Windows @ 2016-09-08 01:17:23 UTC
  - b7556a2aeb Merge pull request #36089 from terminalmage/issue35565
  - 796156c5f5 Add attribution
  - 2e56527ead Move command logging to before win_runs
  - 91eafddda6 Pass the "password" param to git module functions
  - 7871065d32 Use "user" instead of "runas" in _git_run() helper
  - 5943b4662c Add "password" param to funcs which support the user parameter
  - 5c7b9f0341 Make "password" an explicit argument, not a kwarg

- **PR #35923**: (kstreee) Fixes a bug that Ctrl-c not working on Salt CLI. @ 2016-09-07 11:47:50 UTC
  - 45ba2e806b Merge pull request #35923 from kstreee/fixed-cli-stalling
  - 659267af6c Fixes a bug that Ctrl-c not working on Salt CLI

- **ISSUE #18341**: (falzm) Dry-running state.highstate only returns the first change (refs: #36078)

- **PR #36078**: (thatch45) Failhard test=True fix @ 2016-09-07 05:10:35 UTC
  - 48dc5a41ee Merge pull request #36078 from thatch45/failhard_test
  - 9b36904149 Fix failhard causing test=True to failhard too soon

- **ISSUE #34515**: (vernondcole) Please actually implement skip_verify for archive.extracted (refs: #34529)

- **PR #34529**: (Ch3LL) Add skip_verify for archive.extracted @ 2016-09-06 21:05:31 UTC
  - 40081176af Merge pull request #34529 from Ch3LL/add_skip_verify_archive
  - 38203e3d2c add tornado web app to serve up static file for test
- 617f5680e4 add windows path and add custom tar
- c5035118bf add skip_verify option to archive.extracted

• PR #36073: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-06 19:45:48 UTC
  - fc41c744a0 Merge pull request #36073 from rallytime/merge-2016.3
  - e9c634685b Merge branch '2015.8' into '2016.3'
  - fa09050150 consul: fix formatting of consul.agent_join (#36061)
  - PR saltstack/salt#36030: (whiteinge) Add include_* kwargs to the *_dict key functions (refs: #36040)
  - PR #36040: (rallytime) Add docs for new kwargs added to the wheel key module
  - PR #36047: (whiteinge) Doc cherrypy deemphasize urlencoded

• PR #36039: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-02 21:50:47 UTC
  - 74143999d3 Merge pull request #36039 from rallytime/merge-2016.3
  - 5f499cf4d1 Merge branch '2015.8' into '2016.3'
  - 1b39c7ed48 Merge pull request #35978 from DSRCorporation/bugs/28462_update_auth_data_on_reauth
    - 778ae9a9ff Update auth data on reauth.
  - b652271ddc Fix type error in networkfbsd osmajorrelease compare (#36016)
  - bc81818075 Merge pull request #36018 from meaksh/bp-36000-to-2015.8
    - 8c05d2aac5 Lint for #35916
    - b5fe6100ee Check for single quote before splitting on single quote

• ISSUE saltstack/salt#35683: (JensRantil) Salt wheel key documentation improvements (refs: #35824, #saltstack/salt#35824)
  - PR saltstack/salt#35824: (rallytime) Add more documentation to the wheel key module (refs: #36038)
  - PR #36038: (rallytime) Back-port #35824 to 2016.3
  - PR #35824: (rallytime) Add more documentation to the wheel key module (refs: #36038)
  - PR #36033: (gtmanfred) catch unicode encoding errors in json outputter
  - PR #36010: (eliasp) modules.service: Do not default to OpenRC on Gentoo, also allow systemd

• ISSUE #33969: (Inveracity) Redis returner stacktrace in clean_old_jobs 2016.3.0 (refs: #33998)
  - PR #33998: (rallytime) Back-port #33998 to 2016.3
  - PR #33998: (jizhilong) fix redis_return's clean_old_jobs. (refs: #36014)

• ISSUE #35618: (komljen) [salt-cloud] With make_master: True minions are configured with the masters public IP address on AWS (refs: #35919, #saltstack/salt#35919)
  - PR saltstack/salt#35919: (rallytime) Add documentation about salt_interface to EC2 docs (refs: #36015)
  - PR #36015: (rallytime) Back-port #35919 to 2016.3
  - PR #35919: (rallytime) Add documentation about salt_interface to EC2 docs (refs: #36015)
  - PR saltstack/salt#36000: (rallytime) Lint #35916 (refs: #36019, #36018)
  - PR saltstack/salt#35916: (swiftgist) Check for single quote before splitting on single quote (refs: #36019, #36018)

• PR #36019: (meaksh) Back-port #36000 to 2016.3 @ 2016-09-02 20:34:30 UTC
- PR #36000: (rallytime) Lint #35916 (refs: #36019, #36018)
- PR #35916: (swiftgist) Check for single quote before splitting on single quote (refs: `salt-stack/salt` #36000, #36000)
- e88df5845d Merge pull request #36019 from meaksh/bp-36000-to-2016.3
- 1b2aebad1 Lint for #35916
- 8bf4f6fd0 Check for single quote before splitting on single quote
- PR #36028: (thatch45) Fix error when profiling is turned on and minions don't return (refs: #36730)
- PR #36030: (whiteinge) Add include_* kwargs to the *_dict key functions

- ISSUE saltstack/salt#31454: (johje349) Salt Mine memory leak (refs: #36024)

- PR #36024: (DmitryKuzmenko) Don't subscribe to events if not sure it would read them. (refs: #36720) @ 2016-09-02 15:41:01 UTC
  - cd60ec5d57 Merge pull request #36024 from DSRCorporation/bugs/31454_local_client_memleak
  - 01911c53e0 Don't subscribe to events if not sure it would read them.

- PR #36023: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-02 15:37:59 UTC
  - 32d5f896d4 Merge pull request #36023 from rallytime/merge-2016.3
  - a63c9dfc6a Merge branch '2015.8' into '2016.3'
  - e6b93c2380 Merge pull request #36022 from saltstack/revert-33770-service_tests
    - 6cf56843d4 Revert "service state integration tests"

- PR #36004: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-09-01 21:11:06 UTC
  - d248ab0120 Merge pull request #36004 from rallytime/merge-2016.3
  - 318b8ed1d Merge branch '2015.8' into '2016.3'
  - 67bf10b8b Avoid traceback in mac_user.py when user.chhome is invoked from a user state (#35901)
  - 2da501071e Merge pull request #35967 from twangboy/improve_show_sls_2015.8
    - 2ed9a82e8 Allow full path to be passed to show_sls
  - d86ba15b3 Merge pull request #35981 from cachedout/cptestcase_license
    - dd562dd200 Update Salt's licensing information to include cptestcase

- PR #35952: (twangboy) Load UserProfile when using RunAs (2016.3) @ 2016-09-01 15:18:15 UTC
  - f7b8e8c70b Merge pull request #35952 from twangboy/fix_win_runas_2016.3
  - 3721a09ea3 Load UserProfile on RunAs

- PR #35959: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-31 22:14:54 UTC
  - b8aca3fe4d Merge pull request #35959 from rallytime/merge-2016.3
  - bb4605ff8 Merge branch '2015.8' into '2016.3'
  - 0f0f15d048 Merge pull request #35956 from jacobhammons/dot12
    - 3e21e35933 Version docs to 2015.8.12
  - d2db4ea7a2 cachedir should be /cloud not /master (#35897)
  - f4edcc0d66 Better logging when file_recv_max_size is exceeded (#35914)

- PR #35955: (jacobhammons) Version docs to 2016.3.3 @ 2016-08-31 20:35:55 UTC
ISSUE #875: (dhoffutt) state pkg won't install package nscd (refs: #35865)
  - PR #35865: (jacobhammons) Fix incremental doc builds - OS X, postgres returner, tcp transport doc updates

ISSUE #35829: (amontalban) FreeBSD pkg.latest speed improvement (refs: #35904)
  - PR #35904: (amontalban) Fixes #35829 for branch 2016.3
  - PR #35931: (vutny) Salt Cloud: add centos default user for official CentOS AMIs
  - PR saltstack/salt#35892: (cachedout) Fixup Docker test (refs: #35926)
  - PR saltstack/salt#35881: (pbdeuchler) Correctly check if image is in current tags (refs: #35926)
  - PR #35926: (ticosax) [dockerng] Mention that docker image names must be given with repository
  - PR #35981: (pbdeuchler) Correctly check if image is in current tags (refs: #35926)

ISSUE #35825: (tjyang) "drac" __virtual__ returned False" from salt-run drac.version host (refs: #35868)
  - PR #35868: (rallytime) Add more helpful return messages for drac runner @ 2016-08-31 01:33:27 UTC
    - ca06c62900 Merge pull request #35868 from rallytime/fixed-35825
    - 00ae17248e Update error message to be more helpful and fix doc formatting
    - 30a42bfe0 Add more helpful return messages for drac runner

ISSUE #35925: (tjyang) "drac" __virtual__ returned False" from salt-run drac.version host (refs: #35868)
  - PR #35903: (rallytime) [2016.3] Merge forward from 2015.8 into 2016.3 @ 2016-08-30 17:15:36 UTC
    - 95b89dbce9 Merge pull request #35903 from rallytime/merge-2016.3
    - 9e55be5d5 Merge branch '2015.8' into '2016.3'
    - 08e10f69eb Clarifies how to create aliased functions (#35891)
    - 6dd5f68a08 Merge pull request #35856 from vutny/2015.8
      - ecedadfa5 salt-cloud: fix path to Salt Master socket dir
    - 336d1a700d Merge pull request #35880 from terminalimage/issue35747
      - 123a611066 pacman.py: Fix incorrect return in pkg.latest_version
    - 6383451c99 Merge pull request #35884 from terminalimage/clarify-pkg-latest-logic
      - b0b419d1d8 Fix condition for Gentoo USE flag update
      - 1542fd4716 Add clarifying comments to the pkg.latest state

ISSUE saltstack/salt#18419: (jasonrm) salt-cloud fails to run as non-root user (refs: #35483)

ISSUE #34806: (jerrykan) salt-cloud ignores sock_dir when firing event (refs: #35483)

PR #35855: (vutny) [REGRESSION] salt-cloud: fix path to Salt Master socket dir (refs: #35856) @ 2016-08-30 07:09:04 UTC
  - PR #35483: (gtmanfred) use __utils__ in salt.cloud (refs: #35855, #37057, #36070)
  - cf8f81401 Merge pull request #35855 from vutny/salt-cloud-fix-sock_dir
  - a662ea5337 salt-cloud: fix path to Salt Master socket dir

PR #35881: (whiteinge) Add fail-safe in case Salt gives us data we can't serialize @ 2016-08-30 06:43:11 UTC
  - f0987cf27a Merge pull request #35881 from whiteinge/salt-api-catch-serializer-error
• 6e27fad21f Add fail-safe in case Salt gives us data we can't serialize

- ISSUE #35837: (JensRantil) Doc improvement: Mention engine under extension modules (refs: #35864)
  - PR #35864: (rallytime) Add engines to list of extension module options in master config docs

- ISSUE #35835: (JensRantil) Incorrect SQS config documentation statement (refs: #35861)
  - PR #35861: (rallytime) Fix IAM roles statement to be boto version specific in sqs_events

- ISSUE #35834: (JensRantil) Incorrect SQS engine config (refs: #35860)
  - PR #35860: (rallytime) Fix doc formatting for sqs_events engine example config

- PR #35859: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-29 18:21:04 UTC
  - 96747be3bb Merge pull request #35859 from rallytime/merge-2016.3
  - 5f93d682aa Merge branch '2015.8' into '2016.3'
  - eda2ae0add Merge pull request #35781 from thatch45/ssh_deploy_more
    * 2558dccc100 follow up on the re-deploy if there is a checksum mismatch
  - 165237412c Merge pull request #35815 from gtmmanfred/2015.8
    * 805d43598e list_nodes_min should return a minimum dictionary
  - b12c6577d2 Merge pull request #35833 from terminalmage/2015.8-top-file-merging-docs
  * c534d88280 More clarification/correction in minion docs
  * e96ea8485 One more tweak to top file merging docs

- ISSUE #34478: (hujunya) makedir bug in the file module (refs: #35849)

- PR #35849: (theredcat) Fix potential infinite loop with no error when using recursive makedirs @ 2016-08-29 11:37:19 UTC
  - dc705ff675 Merge pull request #35849 from theredcat/fix_file_makedirs_infinite_loop
  - 86d539b28 Fix potential infinite loop with no error when using recursive makedirs

- PR #35682: (vutny) [BACKPORT] Fix empty fun_agrs field in Reactor generated events @ 2016-08-29 04:11:06 UTC
  - PR #35659: (vutny) Fix empty fun_agrs field in Reactor generated events (refs: #35682)
  - PR #35509: (vutny) Add fun_agrs field to events generated by execution of Master modules (refs: #35659, #35682)
  - 433743f609 Merge pull request #35682 from vutny/backport-35659
  - 78d16a8057 [BACKPORT] Fix empty fun_agrs field in Reactor generated events

- ISSUE #34973: (szjur) Syndic stops forwarding job results if the local salt-master is restarted (refs: #35792)

- PR #35792: (DmitryKuzmenko) Reconnect syndic to event bus if master disappeared. @ 2016-08-29 02:13:19 UTC
  - 30c2db7b09 Merge pull request #35792 from DSRCorporation/bugs/34973_syndic_reconnect_master_2016.3
  - 9a9f8b09e97 Reconnect syndic to master event bus if master disappears.
  - ab1af002f Fixed syndic event bus connection.
  - e9e6ea485 One more tweak to top file merging docs

- PR #35817: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-26 20:44:18 UTC
- 43c08ae431 Merge pull request #35817 from rallytime/merge-2016.3
- e8e73b55ac Merge branch '2015.8' into '2016.3'
- d285fe64b7 Merge pull request #35811 from rallytime/bp-35576
  - 04c063b315 Updated user.py to redact password when test=true
- e212c55b7a Schedule documentation update (#35745)
- eb4d2f299b Better unicode handling in gitfs (#35802)
- 0ee237a9cb Remove extra "to" in top.rst docs (#35808)
- 2fc61763d8 Correct the top_file_merging_strategy documentation (#35774)
- PR #35788: (hu-dabao) fix 34241, webutil.useradd_all is deprecated

- ISSUE saltstack/salt#35356: (murzick) pkgrepo.managed does not disable a yum repo with "disabled: True" (refs: #35055)
  - ISSUE #35356: (murzick) pkgrepo.managed does not disable a yum repo with "disabled: True" (refs: #35055, #35806)
    - PR #35810: (rallytime) Back-port #35806 to 2016.3
    - PR #35806: (rallytime) Bump the deprecation warning in pkgrepo state to Nitrogen (refs: #35810)
    - PR #35055: (galet) #35356 pkgrepo.managed does not disable a yum repo with "disabled: True" (refs: #35806)
- ISSUE #35741: (fix7) modjk: use of auth credentials to access jk-status broken (refs: #35796)
  - PR #35796: (fix7) Fix #35741
  - PR #35807: (jacobhammons) Adds mock for tornado.locks
  - PR #35800: (alexander-bauer) Trivial documentation spelling fix
- PR #35763: (isbm) Sphinx crash: documentation config fix @ 2016-08-25 21:12:39 UTC
  - 9b5ee2155e Merge pull request #35763 from isbm/isbm-doc-conf-sphinx-crashfix
  - a56ae4e8f5 Configure importing Mock to handle 'total' method from psutils properly
  - 9c057d0266 Return psutil back to the list of mocked imports
  - 3d7f846e1f Improve Mock to be flexible and able to mock methods from the mocked modules
- ISSUE #35771: (bdrung) Spelling errors in salt 2016.3.2 (refs: #35773)
  - PR #35773: (rallytime) Documentation spelling fixes
- PR #35767: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-25 16:09:37 UTC
  - e355c190 Merge pull request #35767 from rallytime/merge-2016.3
  - 8ad6a12c80 Merge branch '2015.8' into '2016.3'
  - 2a12795bac Fixes Windows download paths (#35742)
- ISSUE #20575: (starchy) "salt --subset=n" appears to always choose the same nodes (refs: #35753)
- PR #35753: (rallytime) Fixup the unit.client_test.LocalClientTestCase.test_cmd_subset from #35720 @ 2016-08-25 15:55:23 UTC
  - PR #35720: (hu-dabao) fix 20575, make subset really return random subset (refs: #35753)
  - b3f6367621 Merge pull request #35753 from rallytime/fx-client-unit-test

30.2. Previous Releases 2675
ISSUE #35458: (igg) SALT.STATES.APACHE_MODULE needs version annotations (refs: #35732)
• PR #35732: (rallytime) Add versionadded for enabled function in apache_module state

PR #35737: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-24 19:48:45 UTC
• bab0e3d449 Merge pull request #35737 from rallytime/merge-2016.3
• 61e37d5956 Merge branch '2015.8' into '2106.3'
• 06a75be8bd Merge pull request #35701 from gtmanfred/2015.8
  * 2d2bc1ffe8a use aws.get_location in s3 modules
• 79bc01b88c Make test runs behave better (#35708)

PR #35729: (cachedout) Remove docs mocks for msgpack and psutils @ 2016-08-24 14:42:06 UTC
• 7877ff1d5e Merge pull request #35729 from cachedout/fix_docs_build
• fdbf01d5ad Remove docs mocks for msgpack and psutils

PR #35628: (jf) Fix user.present state reporting for groups when remove_groups=false @ 2016-08-24 08:15:31 UTC
• 962e493304 Merge pull request #35628 from jf/fix_user.present_reporting_when_remove_groups=false
• 1f818c83e2 Fix user.present state reporting for groups when remove_groups=false

PR #35696: (xiaoanyunfei) fix maximum recursion depth bug @ 2016-08-24 08:01:16 UTC
• 02d866c6550 Merge pull request #35696 from xiaoanyunfei/2016.3
• 5db9255926 fix maximum recursion depth

PR #35720: (hu-dabao) fix 20575, make subset really return random subset (refs: #35753) @ 2016-08-24 07:03:58 UTC
• 79d10aea2d Merge pull request #35720 from hu-dabao/fiX-20575
• 70af980c01 fix 20575, make subset really return random subset

PR #35700: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-23 19:03:43 UTC
• 5d0b9a248e Merge pull request #35700 from rallytime/merge-2016.3
• 9e9923c3f4 Merge branch '2015.8' into '2016.3'
• aee5b62542 Merge pull request #35680 from terminalmage/issue35630
  * d76659a63a Don't use six.text_type() in salt.utils.gitfs
• 7467923b8 Fixup doc formatting for the sqs_events engine (#35663)

PR #35634: (hu-dabao) fix 34922, StopIteration should not throw exception out @ 2016-08-23 08:13:08 UTC
• f305389172 Merge pull request #35634 from hu-dabao/fiX-34922
• fe338f41f fix 34922, StopIteration should not throw exception out

PR #35679: (twangboy) Revert to vcredist 12 (2013) @ 2016-08-23 08:05:40 UTC
• e45aa55d79 Merge pull request #35679 from twangboy/change.vcredist.version.2016.3
• 3dd6d47d48 Revert to vcredist 12 (2013)

PR #35662: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-22 19:03:43 UTC
- 9fe0972761 Merge pull request #35662 from rallytime/merge-2016.3
- 1d819d7cc2 Merge branch '2015.8' into '2016.3'
  * 399e9f57cc Update release notes for 2015.8.12 (#35614)
  * f7f8221169 Everything in the sample master config file should be commented out (#35611)
  * c9070c212f Merge pull request #35569 from rallytime/test-for-35384
    - 30f42d5352 Write test for multiple unless commands where 1st cmd passes and 2nd fails
- PR #35661: (justinta) Backport #35627 to 2016.3
- PR #35627: (cachedout) Comment boto lambda test (refs: #35661)

- PR #35615: (hu-dabao) fix 35591, verify the acl file exist before proceed @ 2016-08-21 04:41:32 UTC
  - 67692f868c Merge pull request #35615 from hu-dabao/fix-35591
  - 402b834d3 change file verification to exist
  - 7355eb4ecd move python lib import after absolute_import
  - 69a2427670 fix 35591, verify the acl file exist before proceed

- PR #35485: (cro) Cassandra returner bugfixes and documentation. @ 2016-08-20 02:42:28 UTC
  - de6ca3909 Merge pull request #35485 from cro/jpmc_cass_return
  - 0b01a7a266 Six import for range.
  - 7e87d4170d Fix Py3 lint?
  - d4336do11c [1,2,3] -> range(1,4)
  - ccc7f6a7ec remove unneeded import
  - e31555345f Add timeout documentation.
  - 901ab8b74c Remove unnecessary log statements
  - 1954c1a3f3 Update cassandra returner for JPMC

- ISSUE #35519: (morganwillcock) win_dism state doesn’t handle all success return codes (refs: #35520)
- PR #35520: (morganwillcock) Check for all success return codes in win_dism state @ 2016-08-20 02:35:01 UTC
  - ede7ff51d4 Merge pull request #35520 from morganwillcock/dism-return-codes
  - 0b95b85e69 Check for all success return codes in dism state

- PR #35616: (xbglowx) Remove duplicate auth_tries in minion docs @ 2016-08-20 02:32:50 UTC
  - 27211bd6d6 Merge pull request #35616 from xbglowx/2016.3
  - 2801f0fdcc Remove duplicate auth_tries in minion docs

- ISSUE #34992: (szjur) Syndic strips vital parts of events (such as 'retcode' and 'success') (refs: #35552)
- PR #35552: (DmitryKuzmenko) Syndic fix: don’t strip 'retcode' and 'success' from events. @ 2016-08-20 02:00:40 UTC
  - 25ac9bac6 Merge pull request #35552 from DSRCorporation/bugs/34992_sydnic_strip_retcode
  - d036299f69 Syndic fix: don't strip 'retcode' and 'success' from events.

- ISSUE #25664: (sdm24) 2015.5.2 MySQL Returner: salt-run jobs.lookup_jid doesn’t return full result for high-state output (refs: #35559)
• **PR #35559**: (Jlin317) Fix highstate outputter when it’s given multiple results (refs: #36137) @ 2016-08-20 01:56:25 UTC
  
  - bec8322e13 Merge pull request #35559 from Jlin317/fixed_highstate_outputter
  
  - 27a038cc6 Fix highstate outputter when it’s given multiple results

• **ISSUE #32478**: (oliver-dungey) rsync.synchronized - user/group options required (refs: #32739)

• **PR #35605**: (rallytime) Back-port #32739 to 2016.3 @ 2016-08-20 01:39:38 UTC
  
  - PR #32739: (abednarik) Rsync synchronized updates. (refs: #35605)
  
  - 4153aeba29 Merge pull request #35605 from rallytime/bp-32739
  
  - 36d8b4a409 Rsync synchronized updates.

• **PR #35606**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-08-19 22:19:05 UTC
  
  - 6eabe635f6 Merge pull request #35606 from rallytime/merge-2016.3
  
  - f2eb625778 Merge branch '2015.8' into '2016.3'
  
  - 0c7aa802f5 Update release notes for 2015.8.12 (#35600)
  
  - dd12b48239 Update release notes for 2015.8.12 (#35599)
  
  - beb6c9ef9 Update linux_sysctl tests to reflect new context key (#35584)
  
  - fd08d33597 Add warning about AWS flagging of nmap usage (#35575)

### 30.2.67 Salt 2016.3.5 Release Notes

Version 2016.3.5 is a bugfix release for 2016.3.0.

#### Statistics

- Total Merges: 190
- Total Issue References: 112
- Total PR References: 281

- **Contributors**: 74 (Ch3LL, DmitryKuzmenko, Firewire2002, Mrten, Talkless, TronPaul, UtahDave, aaronmcloudtek, alex-zel, alexandr-orlov, alexbleotu, attiasr, basepi, bdrung, bshelfton229, cachedout, calve, clan, clinta, cro, dere, dereckson, dhaines, dincamihai, do3meli, dragon788, edgan, fedusia, fj40crawler, genuss, gtmanfred, haec, heewa, hu-dabao, jeanpralo, jfindlay, jinn, kevinquinmyo, kontrolld, laleocen, lorengordon, m03, mcalmer, mchugh19, meaksh, mikejford, moio, multani, nevins-b, pass-by-value, rallytime, rbjorklin, siccrusher, silenius, sjmh, sjorge, skizunov, slinn0, sofixa, techhat, tedski, terminalmage, thatch45, thusoy, toanju, tobithiel, twangboy, tyhunt99, vutny, wanparo, whiteinge, xiaoanyunfei, yhekma, zwo-bot)
Security Fixes

CVE-2017-5192 local_batch client external authentication not respected

The LocalClient.cmd_batch() method client does not accept external_auth credentials and so access to it from salt-api has been removed for now. This vulnerability allows code execution for already-authenticated users and is only in effect when running salt-api as the root user.

CVE-2017-5200 Salt-api allows arbitrary command execution on a salt-master via Salt's ssh_client

Users of Salt-API and salt-ssh could execute a command on the salt master via a hole when both systems were enabled.

We recommend everyone on the 2016.3 branch upgrade to a patched release as soon as possible.

Improved Checksum Handling in file.managed, archive.extracted States

When the source_hash argument for these states refers to a file containing checksums, Salt now looks for checksums matching the name of the source URI, as well as the file being managed. Prior releases only looked for checksums matching the filename being managed. Additionally, a new argument (source_hash_name) has been added, which allows the user to disambiguate ambiguous matches when more than one matching checksum is found in the source_hash file.

A more detailed explanation of this functionality can be found in the file.managed documentation, in the section for the new source_hash_name argument.

Changelog for v2016.3.4..v2016.3.5

Generated at: 2018-05-27 05:09:33 UTC

- **PR #38833**: (Ch3LL) add 2016.3.5 changelog to release notes @ 2017-01-19 23:27:26 UTC
  - a04ab86da1 Merge pull request #38833 from Ch3LL/add_release_notes_2016.3.5
  - 374dc1ab88 skip 2016.3.5 due to :doc: references
  - 31f324c4ff add 2016.3.5 changelog to release notes
- **PR #38812**: (rallytime) Update pyobjects test to be a list @ 2017-01-18 21:06:01 UTC
  - d140f64eb Merge pull request #38812 from rallytime/pyobjects-test
  - f3e84c1ab7 Update pyobjects test to be a list
- **ISSUE #36598**: (ikkaro) CloudClient vmware driver reusing SI bug (refs: #38813)
- **PR #38813**: (gtmanfred) catch SIGPIPE in vmware connection @ 2017-01-18 21:05:42 UTC
  - 50f03f8057 Merge pull request #38813 from gtmanfred/2016.3
  - ce3472cec2 catch SIGPIPE in vmware connection
- **PR #38809**: (twangboy) Fix get_hostname to handle longer computer names @ 2017-01-18 19:32:00 UTC
  - 23b8b47258 Merge pull request #38809 from twangboy/fix_hostname_2016.3
  - d57a51f9f9 Fix tests for get_hostname
  - 7ca3fd7484 Fix get_hostname to handle longer computer names
- **ISSUE #38388**: (johje349) No INFO logs in minion log file (refs: #38808)
- **PR #38808**: (vutny) Fix #38388 @ 2017-01-18 18:19:36 UTC
- 1033bbdde8 Merge pull request #38808 from vutny/fix-38388
- 9bd203ffcc Fix #38388

**ISSUE #38604:** (jsandas) Using "batch" with saltmod errors with "ValueError: need more than 2 values to unpack" (refs: #38668)

**PR #38668:** (terminalmage) Fix proposal for #38604 @ 2017-01-18 17:53:09 UTC
- f3ae3cd5c8 Merge pull request #38668 from terminalmage/issue38604
- 0ea97cdad9 Merge pull request #10 from cachedout/pr-38668
  - db81af035 Munge retcode into return data for batching
- a642a995dc Return the ret data from batch execution instead of raw data

**ISSUE #38622:** (mikejford) Incorrect saltenv argument documentation in salt.modules.state (refs: #38789)

**PR #38789:** (rallytime) Update some saltenv refs to environment in salt.modules.state docs @ 2017-01-18 15:39:22 UTC
- c6a19a9e5a Merge pull request #38789 from rallytime/fix-38622
- af412e06ae Update some saltenv refs to environment in salt.modules.state docs

**PR #38790:** (cachedout) Fix typo in pyobjects test @ 2017-01-18 15:38:57 UTC
- e0bf700020 Merge pull request #38790 from cachedout/fix_pyobjects_test_typo
- a66ab5f0f Fix typo in pyobjects test

**ISSUE #38629:** (Arabus) Conflicting documentation about default value of pillar_opts (refs: #38792)

**PR #38792:** (rallytime) Update pillar tutorial language regarding pillar_opts settings @ 2017-01-18 15:38:19 UTC
- 6e9785dea Merge pull request #38792 from rallytime/fix-38629
- 1e125e2844 Update pillar tutorial language regarding pillar_opts settings

**PR saltstack/salt#38707:** (alexybleotu) Fixed prepending of root_dir override to the other paths (refs: #38796)

**PR #38796:** (cachedout) Revert "Fixed prepending of root_dir override to the other paths" @ 2017-01-17 23:18:18 UTC
- 3417adc617 Merge pull request #38796 from saltstack/revert-38707-root_dir_fix-gh
- cb080f3bb8 Revert "Fixed prepending of root_dir override to the other paths"

**ISSUE #38524:** (rbjorklin) salt-api seems to ignore rest_timeout since 2016.11.0 (refs: #38585, #38527)

**ISSUE #38479:** (tyeapple) api_logfile setting takes no effect (refs: #38585)

**PR #38585:** (rallytime) Follow up to PR #38527 @ 2017-01-17 18:40:01 UTC
- PR #38570: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 (refs: #38585)
- PR #38560: (Ch3LL) fix api logfile (refs: #38585)

**PR #38527:** (rbjorklin) salt-api no longer forces the default timeout (refs: #38585)
- bab3479a3c Merge pull request #38585 from rallytime/follow-up-38527
- 05587201b6 Pylint fix: add line at end of file
- fa01367599 Keep a copy of the DEFAULT_API_OPTS and restore them after the test run
- 2ad07634d9 Test clean up
- fd2ee7db30 Add some simple unit tests for salt.config.api_config function
- 3d2efc83b Make sure the pidfile and log_file values are overridden by api opts
- 1f6b540e46 Make sure the pidfile and log_file values are overridden by api opts
- 04d307f917 salt-api no longer forces the default timeout

PR #38707: (alexbleotu) Fixed prepending of root_dir override to the other paths @ 2017-01-17 15:40:13 UTC
- 0fbb6bb7b77 Merge pull request #38707 from alexbleotu/root_dir_fix-gh
- 0bac88be3 Fixed prepending of root_dir override to the other paths

PR #38774: (vutny) DOCS: add C++ compiler installation on RHEL required for bundled 0mq @ 2017-01-17 15:21:00 UTC
- 96c9dc10f7 Merge pull request #38774 from vutny/dev-test-docs
- 4620dc4afa DOCS: add C++ compiler installation on RHEL required for bundled 0mq

PR #38749: (vutny) pkg build modules throw better exception message if keyid wasn’t found @ 2017-01-17 02:13:08 UTC
- aedfbb7a43 Merge pull request #38749 from vutny/pkg-build-better-exception-msg
- 53f2be5b21 pkg build modules throw better exception message if keyid wasn’t found

PR #38743: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2017-01-17 01:46:01 UTC
- 8466b34e82 Merge pull request #38743 from rallytime/merge-2016.3
- d24776f5e9 Merge branch '2015.8' into '2016.3'
- 6869621ed1 Merge pull request #38731 from rallytime/merge-2015.8
  * 9eb191b6ac Pylint fix
  * b910499dbe Various follow up fixes
  * e8309a6bfbf Add release notes for 2015.8.13
  * f881f366b7 Merge pull request #20 from rallytime/2015.8.12_follow_up-batch-tests
    * 3428232c0 Clean up tests and docs for batch execution
  * c80b20b957 Merge pull request #19 from whiteinge/batchclient
    * 3d8f3d18f6 Remove batch execution from NetapiClient and Saltnado
  * 97b0f64923 Lintfix
  * d1516664f7 Add explanation comment
  * 62f2c87080 Add docstring
  * 9b0a786aeb Explain what it is about and how to configure that
  * 5ea3579e10 Pick up a specified roster file from the configured locations
  * 3a8614c5df Disable custom rosters in API
  * 62f2c87080 Add roster disable flag
- e9c59e9b8f Merge pull request #38602 from terminalmage/fix-boto-test
  * 3424a108ac Fix failing unit.states.boto_vpc_test.BotoVpcRouteTableTestCase.test_present_with_routes

ISSUE #38674: (jackywuy) There is no code to use parameter 'event_publisher_pub_hwm' in saltstack-2016.3 (refs: #38723)
• PR #38723: (rallytime) Remove "event_publisher_pub_hwm" and "salt_event_pub_hwm" from config/__init__.py @ 2017-01-15 18:36:14 UTC
  - PR #29294: (skizunov) ZeroMQ no longer required when transport is TCP (refs: #38723)
  - a642def79 Merge pull request #38723 from rallytime/fix-38674
  - 706c885f55 Remove "event_publisher_pub_hwm" and "salt_event_pub_hwm" from config/__init__.py
• PR #38669: (rallytime) Update bootstrap script version to latest release @ 2017-01-15 18:03:27 UTC
  - fc545af10b Merge pull request #38669 from rallytime/update-bootstrap-script
  - 78ba76e34c Update bootstrap script version to latest release
• PR #38693: (twangboy) Update jinja2 to 2.9.4 @ 2017-01-15 14:40:46 UTC
  - 50d417f267 Merge pull request #38693 from twangboy/update_jinja
  - e0c7e5549b Update jinja2 to 2.9.4
• PR #38739: (vutny) DOCS: correct examples of running test suite @ 2017-01-15 14:35:47 UTC
  - f4233b18d Merge pull request #38739 from vutny/fix-runtests-doc
  - b872666f6 DOCS: correct examples of running test suite
  - PR #38735: (vutny) DOCS: add links to File State Backups page where necessary
  - PR #38720: (dereckson) Proofread jinja to execution module tutorial
• ISSUE #36548: (abonillasuse) openstack auth with nova driver (refs: #38647)
• PR #38647: (gtmanfred) Allow novaclient to use keystoneauth1 sessions for authentication @ 2017-01-10 17:48:26 UTC
  - 7b850d472d Merge pull request #38647 from gtmanfred/nova
  - 5be9b60851 add documentation about using keystoneauth for v3
  - 7b657ca4ae add the ability to use keystone v2 and v3
  - 5646ae1b34 add ability to use keystoneauth to authenticate in nova driver
• ISSUE #38648: (ericuldall) No release file error from PPA on Ubuntu (refs: #38650)
• ISSUE #38572: (COLABORATI) ppa:saltstack/salt failure (refs: #38650)
• ISSUE #34504: (AvinashDeluxeVR) Installation documentation for Ubuntu server and Windows minion leads the user to use different salt versions. (refs: #38650)
• PR #38650: (rallytime) Remove the installation instructions for out-of-date community ppa @ 2017-01-10 17:47:45 UTC
  - 383768d38 Merge pull request #38650 from rallytime/remove-ubuntu-ppa-docs
  - 30429b2e44 Remove the installation instructions for out-of-date community ppa
• ISSUE #38087: (UtahDave) The 'data' field in the return from a minion below a syndic is wrapped in an extra 'data' field. (refs: #38657)
• PR #38657: (DmitryKuzmenko) Publish the 'data' field content for Syndic events @ 2017-01-10 16:59:33 UTC
  - 7d9f56e3b5 Merge pull request #38657 from DSRCorporation/bugs/38087_syndic_event_format_fix
  - 594c33f396 Publish the 'data' field content for Syndic evets
• PR #38649: (Ch3LL) fix unit.modules.file_test @ 2017-01-10 16:44:45 UTC
  - 83987511fd Merge pull request #38649 from Ch3LL/test_apply_template
- 47f8b68e0b fix unit.modules.file_test

- **ISSUE #37355**: (Firewire2002) salt-ssh - ImportError: No module named backports.ssl_match_hostname (refs: #38626, #saltstack/salt#37358)

- **ISSUE #34600**: (davidpsv17) Error trying a salt-ssh test.ping (refs: #saltstack/salt#37358, #37358)

- **ISSUE #27355**: (jerob) salt ssh error with debian 7 on target (refs: #saltstack/salt#37358, #37358)
  - **PR #37358**: (Firewire2002) Fix/workaround for issue #37355 (refs: #38626)

- **PR #38626**: (cachedout) Revert "Fix/workaround for issue #37355" @ 2017-01-06 21:28:09 UTC
  - 74dc71be3 Merge pull request #38626 from saltstack/revert-37358-2016.3.3_issue37355
  - e912ac99c2 Revert "Fix/workaround for issue #37355"

- **ISSUE #37355**: (Firewire2002) salt-ssh - ImportError: No module named backports.ssl_match_hostname (refs: #38626, #saltstack/salt#37358)

- **ISSUE #34600**: (davidpsv17) Error trying a salt-ssh test.ping (refs: #saltstack/salt#37358, #37358)

- **ISSUE #27355**: (jerob) salt ssh error with debian 7 on target (refs: #saltstack/salt#37358, #37358)
  - **PR #37358**: (Firewire2002) Fix/workaround for issue #37355 @ 2017-01-06 18:58:47 UTC

- **PR #35390**: (alexandr-orlov) Returns back missed proper grains dictionary for file module @ 2017-01-06 18:02:13 UTC
  - 6c2fe615aa Merge pull request #35390 from alexandr-orlov/2016.3.3_issue37355
  - cd5ae17e8d fxd missed proper grains dictionary

- **ISSUE #38558**: (multani) pillar.get("...", default=var, merge=true) updates default value (refs: #38579)
  - **PR #38618**: (rallytime) Back-port #38579 to 2016.3 @ 2017-01-06 17:37:56 UTC
    - PR #38579: (zwo-bot) Fix #38558 - pillar.get with default=...merge=true influence subsequent calls of pillar.get (refs: #38618)
    - 2579cfa42d Merge pull request #38618 from rallytime/bp-38579
    - 2052ceee2c Add copy import
    - 2c8845aa0 add test for pillar.get() + default value
    - c2f98d2f04 ticket 38558: add unit test, deepcopy() only if necessary
    - 30ae0a1958 added deepcopy of default if merge=True

- **PR #38601**: (terminalmage) pillar.get: Raise exception when merge=True and default is not a dict @ 2017-01-05 23:15:51 UTC
  - da676cebd6 Merge pull request #38601 from terminalmage/pillar-get
  - 8613d7254d pillar.get: Raise exception when merge=True and default is not a dict

- **PR #38600**: (terminalmage) Avoid errors when sudo_user is set (2016.3 branch) @ 2017-01-05 20:57:09 UTC
- **PR #38598**: (terminalmage) Avoid errors when sudo_user is set (refs: #38600)
  - 224fc7712a Merge pull request #38600 from terminalmage/issue38459-2016.3
  - 8a45b13e76 Avoid errors when sudo_user is set

- **PR #38589**: (tobithiel) State Gem: fix incorrect warning about missing rvm/rbenv @ 2017-01-05 20:12:15 UTC
  - a376970f88 Merge pull request #38589 from tobithiel/fix_rvm_rbenv_warning
  - 9ec470b4a5 State Gem: fix incorrect warning about missing rvm/rbenv

- **PR #38567**: (pass-by-value) Create queue if one doesn’t exist @ 2017-01-05 18:46:11 UTC
  - 02e6a78254 Merge pull request #38567 from pass-by-value/pgjsonb_queue_changes_2016.3
  - 67879ebe65 Create queue if one doesn’t exist

- **ISSUE #37498**: (githubcdr) service.restart salt-minion fails on Ubuntu 14.04.5 LTS (refs: #37748, #38587)

- **PR #38587**: (rallytime) Change daemontools __virtualname__ from service to daemontools @ 2017-01-05 18:06:01 UTC
  - 0889cbdb31 Merge pull request #38587 from rallytime/fix-37498
  - 2a588096df Change daemontools __virtualname__ from service to daemontools

- **PR #38562**: (rallytime) Update arch installation docs with correct package name @ 2017-01-04 20:04:28 UTC
  - 7b7443d13 Merge pull request #38562 from rallytime/arch-install-docs
  - 8b1897ace9 Update arch installation docs with correct package name

- **PR #38560**: (Ch3LL) fix api logfile (refs: #38585) @ 2017-01-04 19:03:17 UTC
  - 01860702cb Merge pull request #38560 from Ch3LL/fix_api_log
  - 1b45e9670b fix api logfile

- **PR #38531**: (rallytime) Back-port #33601 to 2016.3 @ 2017-01-04 16:56:53 UTC
  - **PR #33601**: (mchugh19) Fix slack engine to run on python2.6 (refs: #38531)
    - 0056620a53 Merge pull request #38531 from rallytime/bp-33601
    - c36cb39825 remove the unnecessary double trigger
    - 8c1defc710 Remove uncessary type from alias commands. Deduplicate alias handling to autodetect function selection. Add error reporting to slack connectivty problems. Cleanup slack’s unicode conversion
    - 2f23bc45e Fix slack engine to run on python2.6

- **ISSUE #38187**: (curiositycasualty) username/password saved as cleartext when using URIs with user:pass@ format (refs: #38541)

- **PR #38541**: (techhat) Strip user:pass from cached URLs @ 2017-01-04 15:39:57 UTC
  - 50242c7f17 Merge pull request #38541 from techhat/issue38187
  - 50242c7f17 Strip user:pass from cached URLs

- **ISSUE #30454**: (favoretti) Using yaml serializer inside jinja template results in unicode being prepended by 'python/unicode' (refs: #30481, #38554)

- **PR #38554**: (multani) Fix YAML deserialization of unicode @ 2017-01-04 15:31:16 UTC
  - **PR #30481**: (basepi) Add yaml_safe jinja filter (refs: #38554)
- 325dc56e59 Merge pull request #38554 from multani/fix/30454
- 2e7f743371 yaml: support unicode serialization/deserialization
- df76113c5e jinja: test the "yaml" filter with ordered dicts
- f7712d417f Revert "Add yaml_safe filter"
- PR #38356: (UtahDave) add note about pyVmoml locale workaround

- ISSUE #38353: (Ch3LL) salt-cloud gce specifying (refs: #38542)
  - PR #38542: (Ch3LL) fix gce image bug

- ISSUE #38449: (swalladge) Parsing issues in list_tab (salt/modules/cron.py) (refs: #38487)

- PR #38487: (gtmanfred) Fix crontab issues with spaces @ 2017-01-01 20:33:29 UTC
  - ec60f9c721 Merge pull request #38487 from gtmanfred/2016.3
  - 048b9f6b9d add test
  - c480c11528 allow spaces in cron env
  - c529ec8c34 allow crons to have multiple spaces

- ISSUE #37684: (thusoy) State execution duration is timezone-dependent (refs: #38491)

- PR #38491: (gtmanfred) Use UTC for timing in case timezone changes @ 2017-01-01 20:30:57 UTC
  - c5ba11b5e0 Merge pull request #38491 from gtmanfred/timing
  - 79368c7528 Use UTC for timing in case timezone changes

- ISSUE #38472: (jinm) file.managed Unable to manage file: 'hash_type' (2016.3.4) (refs: #38503)

- PR #38503: (jinm) Hash type fallback for file management @ 2017-01-01 17:36:51 UTC
  - 86f0aa0bb3 Merge pull request #38503 from jinm/issue_38472_jinm
  - 0cd9df299f Hash type fallback for file management

- PR #38457: (bshelton229) Stops git.latest checking for local changes in a bare repo @ 2016-12-30 14:28:47 UTC
  - ed2ba4bd1b Merge pull request #38457 from bshelton229/git-latest-head-bug
  - 558e7a771a Stops git.latest checking for local changes in a bare repo

- PR #38385: (dragon788) Use unambiguous long names with double dashes @ 2016-12-29 17:10:48 UTC
  - 36e21b22cb Merge pull request #38385 from dragon788/2016.3-double-dash
  - 86c4b56f47 Newline for lint compat
  - 9d9b686057 Address review comments, consistency of quotes
  - df9bd5e7f9 Use unambiguous long names with double dashes

- ISSUE #38209: (limited) Accepting a minion causes tornado to exit (refs: #38474)

- PR #38474: (cachedout) Allow an existing ioloop to be passed to salt-key @ 2016-12-29 16:28:51 UTC
  - 59f2560d88 Merge pull request #38474 from cachedout/key_loop
  - de504538e1 Allow an existing ioloop to be passed to salt-key

- ISSUE #38438: (jj) file.line with mode=delete breaks on empty file (refs: #38467)

- PR #38467: (gtmanfred) file.line fail with mode=delete @ 2016-12-28 20:00:33 UTC
  - 3d0c752acd Merge pull request #38467 from gtmanfred/2016.3
- `7b7c6b3878` file.name fail with mode=delete

**PR #38434**: (slinn0) Make sysctl.persist fail when failing to set a value into the running kernel @ 2016-12-27 15:37:53 UTC

- 940025d5c4 Merge pull request #38434 from slinn0/issue_38433_fixes
- 22a87a36fc Fixes for https://github.com/saltstack/salt/issues/38433
- **PR #38421**: (rallytime) Update deprecation notices to the correct version
- **PR #38420**: (rallytime) Removed various deprecation notices from salt/modules/* files (refs: #38421)

**ISSUE #38282**: (sash-kan) file.managed fails when file (which contains utf-characters in the name) exists (refs: #38415)

- **PR #38415**: (terminalmage) file.managed: Fix failure when filename contains unicode chars

**PR #38419**: (Ch3LL) fix scsci docs example @ 2016-12-22 18:57:51 UTC

- 2cdb59d055 Merge pull request #38419 from Ch3LL/fix_doc_scsi
- 234043b8bb fix scsci docs example
- **PR #38407**: (terminalmage) Improve pillar documentation

**ISSUE #38372**: (fanirama) Issue with cron.file. Source: salt://path/to/crontab_file not found (refs: #38398)

**PR #38398**: (terminalmage) Fix call to file.get_managed in cron.file state @ 2016-12-22 16:46:14 UTC

- 423b1fdddff Merge pull request #38398 from terminalmage/issue38372
- c80daba914 Fix call to file.get_managed in cron.file state
- **PR #38382**: (heewa) Fix http.query when result has no text

**PR #38390**: (meaksh) Add "try-restart" to fix autorestarting on SUSE systems @ 2016-12-21 16:06:24 UTC

- b74b5c7d38 Merge pull request #38390 from meaksh/2016.3-fix-try-restart-for-autorestarting-on-SUSE-systems
- de6ec05ec0 add try-restart to fix autorestarting on SUSE systems

**PR #38221**: (UtahDave) Fix default returner @ 2016-12-20 20:34:36 UTC

- 2ca3a9760a Merge pull request #38221 from UtahDave/fix_default_returner
- 3856d0765b remove a blank line to satisfy linter
- 9c248aa14c validate return opt, remove default.
- 8bb47f9fe7 specify allowed types and default for "returner"
- 11863a4bfe add examples of default minion returners
- e7c6012655 add support for default returners using `return`

**PR #38288**: (terminalmage) archive.extracted: don't try to cache local sources (2016.3 branch) @ 2016-12-18 13:07:11 UTC

- 09d9ccf992 Merge pull request #38288 from terminalmage/archive-extracted-local-source-2016.3
- 845e3d0e75 Update tests to reflect change in cache behavior
- 5a08d7c70a archive.extracted: don't try to cache local sources (2016.3 branch)

**PR #38312**: (cro) Backport feature allowing proxy config to live in pillar OR /etc/salt/proxy @ 2016-12-18 12:39:01 UTC

- bf37667f8a Merge pull request #38312 from cro/proxy_config_in_cfg
• ISSUE #12788: (whiteinge) Comb through docs to replace :doc: roles with :ref: (refs: #38320)
• PR #38320: (rallytime) Cleanup doc internal markup references @ 2016-12-18 12:31:28 UTC
  – c83db5a785 Merge pull request #38320 from rallytime/cleanup-doc-refs
  – 62978cb7a0 Don't check the doc/conf.py file for doc markup refs
  – 77e0732d76 Add a unit test to search for new doc markup refs
  – 5c42a361a0 Remove ":doc:” references from all doc/topics/installation/* files
  – 23bec1c929 Remove ":doc:” references from all doc/topics/releases/* files
  – 4aa4a41d22 Remove ":doc:” references from a bunch of doc/* files
  – 02bfe7912c Remove more "doc:” references from doc/* files
  – 6e32267d0c Remove ":doc:” references in salt/* files
  – PR #38281: (mikejford) Add nick to args for create_multi
• ISSUE #38290: (dragon788) Need to use machine automation friendly output (refs: #38313)
• PR #38313: (dragon788) 2016.3 chocolatey fix @ 2016-12-16 17:20:39 UTC
  – 235682b16 Merge pull request #38313 from dragon788/2016.3-chocolatey-fix
  – 1f5fc17551 Use machine readable output for list
  – cdbd2fe3c Added limit-output to eliminate false packages
• ISSUE #38174: (NickDubelman) [syndic] Why can’t a syndic node signal when all of its minions have returned? (refs: #38279)
• ISSUE #32400: (rallytime) Document Default Config Values (refs: #38279)
• PR #38279: (rallytime) Add docs for syndic_wait setting @ 2016-12-15 18:30:31 UTC
  – 9e78dda80 Merge pull request #38279 from rallytime/fix-38174
  – 4a62d01577 Add docs for syndic_wait setting
• PR #38248: (meaksh) Successfully exit of salt-api child processes when SIGTERM is received @ 2016-12-15 09:16:27 UTC
  – fc9e1d935 Merge pull request #38248 from meaksh/salt-api-successfully-close-child-processes
  – ee66ae9855 Successfully exit of salt-api child processes when SIGTERM.
• PR #38254: (terminalmage) Also check if pillarenv is in opts @ 2016-12-15 09:10:24 UTC
  – 3c718ed35e Merge pull request #38254 from terminalmage/check-pillarenv
  – fa9ad311c6 Also check if pillarenv is in opts
  – PR #38256: (rallytime) [2016.3] Bump latest release version to 2016.11.1
• PR #38198: (vutny) Add missing requirements for running unit tests: libcloud and boto3 @ 2016-12-13 14:12:20 UTC
  – 004e4afe7 Merge pull request #38198 from vutny/unit-tests-require-libcloud-boto3
  – a6098bac1a Remove note about SaltTesting installation, now it is in the requirements
  – 004b8113e Add missing requirements for running unit tests: libcloud and boto3
• PR #38213: (rallytime) Skip test_cert_info tls unit test on pyOpenSSL upstream errors @ 2016-12-13 12:05:01 UTC
  - 9d497bc74c Merge pull request #38213 from rallytime/skip-tls-test
  - bdb807fc7c Skip test_cert_info tls unit test on pyOpenSSL upstream errors
• PR #38224: (whiteinge) Allow CORS OPTIONS requests to be unauthenticated @ 2016-12-13 12:02:30 UTC
  - 203109dd17 Merge pull request #38224 from whiteinge/cors-options-unauthed
  - de4d3227ab Allow CORS OPTIONS requests to be unauthenticated
• PR #38223: (whiteinge) Add root_dir to salt-api file paths @ 2016-12-13 07:44:19 UTC
  - PR #37272: (vutny) Get default logging level and log file from default opts dict (refs: #38223)
  - 721a5feccd Merge pull request #38223 from whiteinge/salt-api-root_dirs
  - bfbf390c0e Add root_dir to salt-api file paths
• ISSUE #38162: (747project) git_pillar does not detect changes to remote repository when told to update (refs: #38191)
• PR #38191: (terminalmage) Clarify the fact that git_pillar.update does not fast-forward @ 2016-12-12 09:45:48 UTC
  - 70f7d22ad6 Merge pull request #38191 from terminalmage/issue38162
  - 1ac543a98a Clarify the fact that git_pillar.update does not fast-forward
• PR #38194: (vutny) Document the requirements for running ZeroMQ-based integration tests @ 2016-12-12 09:42:11 UTC
  - 28171cbfc5 Merge pull request #38194 from vutny/integration-test-requirements-doc
  - e9f41ff64 Document the requirements for running ZeroMQ-based integration tests
• PR #38185: (rallytime) Back-port #38181 to 2016.3 @ 2016-12-09 22:27:44 UTC
  - PR #38181: (rallytime) Reset socket default timeout to None (fixes daemons_tests failures) (refs: #38185)
  - a4ef037ab1 Merge pull request #38185 from rallytime/bp-38181
  - 609f814454 Reset socket default timeout to None (fixes daemons_tests failures)
• PR #38163: (Ch3LL) enabled ec2 cloud tests @ 2016-12-09 18:01:57 UTC
  - 65b2ad7b14 Merge pull request #38163 from Ch3LL/enabled_ec2_cloud
  - be74c45463 enabled ec2 cloud tests
• PR #38177: (vutny) Correct cp.get_file_str docstring and add integration tests @ 2016-12-09 16:55:35 UTC
  - b63f74e034 Merge pull request #38177 from vutny/fix-cp-get-file-str
  - a449980672 Correct cp.get_file_str docstring and add integration tests
• PR #38153: (rallytime) Master config includes may contain errors and be safely skipped @ 2016-12-08 17:43:34 UTC
  - c05e613b00 Merge pull request #38153 from vutny/master-includes-error-tolerance
  - c05e613b00 Master config includes may contain errors and be safely skipped
  - PR #38134: (rallytime) Skip daemon unit tests when running on Python 2.6
• ISSUE #38091: (tjyang) [WARNING ] salt.loaded.int.module.zenoss.__virtual__() is wrongly returning None. (refs: #38102)
- **PR #38102**: (rallytime) Add False + msg tuple return if requests is missing for zenoss module @ 2016-12-07 13:24:37 UTC
  - d3d98d4eb Merge pull request #38102 from rallytime/fix-38091
  - 4f79d5a0d1 Add False + msg tuple return if requests is missing for zenoss module
- **ISSUE #36707**: (do3meli) slow FreeBSD sysctl module with test=true (refs: #36794)
- **PR #38104**: (rallytime) Back-port #36794 to 2016.3 @ 2016-12-07 13:23:48 UTC
  - **PR #36794**: (do3meli) FreeBSD sysctl module now handles config_file parameter in show method (refs: #38104)
  - 8c8bc2734 Merge pull request #38104 from rallytime/bp-36794
  - c906c8a0d5 Pylint fixes
  - da3ebf83e6 FreeBSD sysctl module now handles config_file parameter in show method
- **ISSUE #35342**: (morganwillcock) win_pkg: refresh_db doesn’t remove cached items which have been renamed or removed (refs: #38083)
- **PR #38083**: (twangboy) Only delete .sls files from winrepo-ng [DO NOT MERGE FORWARD] @ 2016-12-06 14:13:35 UTC
  - fbc87769b9 Merge pull request #38083 from twangboy/fix_refresh_db
  - 978af6d83c Remove only .sls files from the cached winrepo-ng
- **PR #38059**: (rallytime) Call exec_test for the Syndic daemon in tests.unit.daemons_test.py @ 2016-12-04 04:18:41 UTC
  - **PR #38057**: (rallytime) [2016.11] Merge forward from 2016.3 to 2016.11 (refs: #38059)
  - **PR #38034**: (cachedout) Modify daemons test to use multiprocessing (refs: #38059)
  - 9dcfdeef6b Merge pull request #38059 from rallytime/daemons-test-fix
  - eb372b27d8 Add missing ”not” statement: The last syndic test should assertFalse()
  - 8a685b1820 Check to see if a line is already commented before moving on
  - 4e10f8e018 Call exec_test for the Syndic daemon in tests.unit.daemons_test.py
- **ISSUE #37939**: (Talkless) file.comment always report changes in test=True mode (refs: #38039)
- **PR #38039**: (rallytime) Check to see if a line is already commented before moving on @ 2016-12-02 20:08:35 UTC
  - 9cd42b93f Merge pull request #38039 from rallytime/fix-37939
  - 1da7aacfbf Update unit tests to account for additional file.search call
  - 8a685b1820 Check to see if a line is already commented before moving on
  - f2c045520d Write an integration test demonstrating the issue
- **ISSUE #38037**: (dmurphy18) pkg.latest and yumpkg.latest_version return incorrect package versions 2016.3 and 2016.11 (refs: #38045)
- **PR #38045**: (terminalmage) yumpkg.py: don’t include non-upgrade versions found by ”yum list available” @ 2016-12-02 00:07:38 UTC
  - a34a763984 Merge pull request #38045 from terminalmage/issue38037
  - 65289503d9 Simplify logic for matching desired pkg arch with actual pkg arch
  - 3babddca94 yumpkg.py: don’t include non-upgrade versions found by ”yum list available”
  - **PR #38034**: (cachedout) Modify daemons test to use multiprocessing (refs: #38059)
• PR #37995: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-11-30 20:12:55 UTC
  - 6942d5d95b Merge pull request #37995 from rallytime/merge-2016.3
  - b44e17921c Merge branch '2015.8' into '2016.3'
    * 7a7e36728f Merge pull request #37978 from terminalmage/ext_pillar_first-docs
      * 61ed9a8657 Add clarifying language to ext_pillar_first docs
  - PR #38002: (laleocen) fix broken yaml code block

• ISSUE #35088: (Modulus) salt/cloud/ec2.py encoding problems. (refs: #37912)
• PR #37912: (attiasr) fix encoding problem aws responses @ 2016-11-30 18:10:30 UTC
  - 3dd45fbedf Merge pull request #37912 from attiasr/fix_aws_response_encoding
  - ba4ec4e7f1 use Requests result encoding to encode the text
  - PR #37964: (terminalmage) Add clarification on expr_form usage and future deprecation

• PR #37950: (vutny) Set default Salt Master address for a Syndic (like for a Minion) @ 2016-11-30 18:09:04 UTC
  - 69a744d22d Merge pull request #37950 from vutny/fix-starting-up-syndic
  - 7d9be9abce syndic_master: correct default value, documentation and example config
  - 92a7c7ed1b Set default Salt Master address for a Syndic (like for a Minion)
  - PR #37964: (terminalmage) Add clarification on expr_form usage and future deprecation

• ISSUE #37867: (tobiasBora) Bug into lsb_release that crash salt (refs: #37962)
  - PR #37962: (cachedout) Catch possible exception from lsb_release

• ISSUE #37945: (gstachowiak) Missing exception handling in salt.master.Maintenance. Process never completes. (refs: #37961)
  - PR #37961: (cachedout) Handle empty tokens safely

• PR #37272: (vutny) Get default logging level and log file from default opts dict (refs: #38223) @ 2016-11-28 23:04:20 UTC
  - ea46639ce7 Merge pull request #37272 from vutny/fix-getting-default-logging-opts
  - e5ce52388a Fix description in the Salt Syndic usage info
  - 518a3d7ee Add unit tests for Salt parsers processing logging options
  - 83d6a44254 Add ssh_log_file option to master config and documentation
  - c8a0915460 Fix configuration example and documentation for syndic_log_file option
  - e64dd3ed6b Correct default attributes for various parser classes
  - 82a2e216b3 Fix default usage string for Salt command line programs
  - 45dffa29f2 Fix readding and updating logfile and pidfile config options for Salt API
  - f47253c21b Fix reading and applying Salt Cloud default configuration
  - fad5bec936 Work with a copy of default opts dictionaries
  - b7c24811e5 Fix log_level_logfile config value type
  - 1bd761d9d6 Fix setting temporary log level if CLI option omitted
  - 121848cc77 Fix obtaining log_granular_levels config setting
  - 44cf07fec2 Make CLI options take precedence for setting up logfile_logger
- 61afaf1792 Fix setting option attributes when processing log_level and log_file
- 3c60e2388e Fix processing of log_level_logfile config setting
- 55a0af5bbd Use attribute functions for getting/setting options and config values
- c2f52d091e Fix getting Salt API default logfile option
- f2422373c1 Remove processing of unused and undocumented cli_*__log_* config options
- 2065e8311c Get default logging level and file from default opts dict

• **PR #37925**: (kontrolld) Fix missing ipv6 options centos network @ 2016-11-28 22:38:43 UTC
  - f2f957da6c Merge pull request #37925 from kontrolld/add-ipv6-centos-network
  - ac2b477412 Adding IPv6 functionality for CentOS /etc/sysconfig/network

• **ISSUE #37059**: (basepi) Beacon fileserver operations cause scheduled jobs with fileserver operations to hang (refs: #37899)

• **PR #37899**: (DmitryKuzmenko) Clear functions context in schedule tasks for ZeroMQ @ 2016-11-28 22:23:45 UTC
  - c07ad11279 Merge pull request #37899 from DSRCorporation/bugs/37059_schedule_task_hang
  - 9497748546 Clear functions context in schedule tasks for ZeroMQ.

• **ISSUE #37737**: (b-harper) python client api CloudClient multiple calls needed (refs: #37928)

• **PR #37928**: (techhat) Don’t modify self.opts directly @ 2016-11-28 21:07:40 UTC
  - a5519db40 Merge pull request #37928 from techhat/issue37737
  - a09a60e89b Don’t modify self.opts directly

• **PR #37929**: (gtmanfred) add list_nodes_min to nova driver @ 2016-11-28 21:05:40 UTC
  - 9d17f1ce90 Merge pull request #37929 from gtmanfred/2016.3
  - c7d2c73503 add list_nodes_min to nova driver

• **PR #37926**: (kontrolld) Fixes no IPv6 functionality in /etc/sysconfig/network @ 2016-11-28 20:40:00 UTC
  - 3bb743b59f Merge pull request #37926 from kontrolld/fix-ipv6-centos-network
  - 3ed42e5b44 updated
  - 3b3bc4f239 Fixes no IPv6 functionality in /etc/sysconfig/network

• **PR #37921**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-11-28 19:54:40 UTC
  - 271170a9f3 Merge pull request #37921 from rallytime/merge-2016.3
  - 523a67c422 Merge branch '2015.8' into '2016.3'
    * 4cd6c5f5ec Update earlier release channels' docs with Carbon release notes (#37914)
    * d31491a7fe [2015.8] Update version numbers in doc config for 2016.11.0 release (#37918)

• **PR #37924**: (cachedout) Update test for new gem ver @ 2016-11-28 18:17:53 UTC
  - 6cd6429ac0 Merge pull request #37924 from cachedout/fix_gem_states
  - 894cca3427 Update test for new gem ver

• **PR #37916**: (rallytime) [2016.3] Update version numbers in doc config for 2016.11.0 release @ 2016-11-28 17:09:08 UTC
  - c35ba1f390 Merge pull request #37916 from rallytime/doc-update-2016.3
• ISSUE #37287: (aaronm-cloudtek) salt.states.ddns.present: 'NS' record type always returns as changed (refs: #37785)

• PR #37785: (aaronm-cloudtek) respect trailing dot in ddns name parameter @ 2016-11-28 14:02:10 UTC
  - e13a2488c8 Merge pull request #37785 from Cloudtek/ddns-respect-trailing-dot
  - 262e3b3697 respect trailing dot in ddns name parameter

• ISSUE #37870: (fj40crawler) salt.states.augeas.change returns None when test=True (refs: #37895)

• PR #37895: (fj40crawler) Change return value for salt/states/augeas.py to be True instead of N... @ 2016-11-28 13:49:27 UTC
  - c03b389422 Merge pull request #37895 from fj40crawler/fix-augeas-return-for-test
  - ddc238df36 Fixed augeas_test.py to match True v.s. None for test_change_in_test_mode
  - ef75c459c9 Merge branch '2016.3' of github.com:saltstack/salt into fix-augeas-return-for-test
  - b0fe0cd256 Change return value for salt/states/augeas.py to be True instead of None for cases where salt is run with test=True. Fixes #37870

• PR #37907: (Talkless) Fix server trust in test run of svn.latest @ 2016-11-28 13:47:39 UTC
  - fdbc31e8d8 Merge pull request #37907 from Talkless/patch-2
  - 072a319490 Fix server trust in test run of svn.latest

• PR #37896: (toanju) rh networking: add missing values @ 2016-11-27 10:30:35 UTC
  - f39f4f4f3f Merge pull request #37896 from toanju/2016.3
  - c95304188e rh networking: add missing values

• PR #37886: (bdrung) Fix various spelling mistakes @ 2016-11-25 02:59:36 UTC
  - ea935c5a91 Merge pull request #37886 from bdrung/fix-typos
  - 0a51ba5c5b Fix various spelling mistakes

• ISSUE #37732: (dhaines) list_semod() (from modules/selinux.py) incompatible with policycoreutils-2.5 (RHEL 7.3) (refs: #37736)

• PR #37736: (dhaines) handle semodule version >=2.4 (#37732) and fix typo @ 2016-11-24 01:44:20 UTC
  - 371b0a86d9 Merge pull request #37736 from dhaines/issue-37732
  - 7ef590a505 Update selinux.py
  - 516a67e6a3 fix indexing error
  - 4e49c1e991 fix typo
  - b16f2d8400 handle semodule version >=2.4 (#37732) and fix typo

• PR #37797: (clan) check count of columns after split @ 2016-11-24 01:28:59 UTC
  - 87ae866bf Merge pull request #37797 from clan/extfs
  - acfb0960ef check count of columns after split

• PR #37762: (twangboy) Add pre_versions to chocolatey.installed @ 2016-11-24 01:27:29 UTC
  - 07a7109152 Merge pull request #37762 from twangboy/fixed_chocolatey_state
  - 969b6d9a5 Use keyword args instead of relying on ordering
- 398eaa074d Add pre_versions to the available arguments

- **PR #37866**: (meksh) Backport #37149 #36938 and #36784 to 2016.3 @ 2016-11-23 21:54:17 UTC
  - **PR #37857**: (meksh) Backport #37149 and #36938 to 2015.8 (refs: #37866)
  - **PR #37856**: (meksh) Backport #36784 to 2015.8 (refs: #37866)
  - **PR #37149**: (dincamihai) Fix pkg.latest_version when latest already installed (refs: #37857, #37866)
  - **PR #36938**: (wanparo) acl.delfacl: fix position of -X option to setfacl (refs: #37857, #37866)
  - **PR #36784**: (moio) OS grains for SLES Expanded Support (refs: #37856, #37866)

- 56baa9d55 Merge pull request #37866 from meaksh/2016.3-bp-37149-36938-36784

- 9d8d578109 Fix pkg.latest_version when latest already installed
- ffca0d491c - acl.delfacl: fix position of -X option to setfacl
- 3dfed6b841 Adjust linux_acl unit test argument ordering
- f185ecdde1 core.py: quote style fixed
- 8404d13424 Setting up OS grains for SLES Expanded Support (SUSE’s Red Hat compatible platform)

- **PR #37863**: (rallytime) Back-port #36893 to 2016.3 @ 2016-11-23 17:09:09 UTC
  - **PR #36893**: (tyhunt99) add option to force a reauth for a docker registry (refs: #37863)
  - d0cc7f0d56 Merge pull request #37863 from rallytime/bp-36893
- 4c70534991 Add version added to reauth option in dockerng module
- 5ca2e388c2 added documentation for the new reauth option in docker registry configuration
- 5b0c11ab47 add option to force a reauth for a docker registry

- **PR #37847**: (laleocen) add multiline encryption documentation to nacl

- **ISSUE #32829**: (tyhunt99) Dockerng appears to not be using docker registries pillar data (refs: #36893)

- **PR #37863**: (rallytime) Back-port #36893 to 2016.3 @ 2016-11-23 17:09:09 UTC
  - **PR #36893**: (tyhunt99) add option to force a reauth for a docker registry (refs: #37863)
  - d0cc7f0d56 Merge pull request #37863 from rallytime/bp-36893
- 4c70534991 Add version added to reauth option in dockerng module
- 5ca2e388c2 added documentation for the new reauth option in docker registry configuration
- 5b0c11ab47 add option to force a reauth for a docker registry

- **ISSUE #19269**: (markuskramerIgitt) Undocumented feature names: of file.directory (refs: #37823)
  - **PR #37823**: (rallytime) Add "names" option to file state docs: point users to highstate doc examples

- **ISSUE #15697**: (arthurlogilab) keystone.user_present should not re-set the password when user exists (refs: #37821)
  - **PR #37821**: (rallytime) Clarify keystone.user_present password state docs with default behavior

- **ISSUE #5999**: (pille) libvirt.keys does not work (refs: #37820)
  - **PR #37820**: (rallytime) Add some dependency documentation to libvirt docs

- **PR #37772**: (bdrung) Support initializing OpenSSL 1.1 @ 2016-11-21 20:28:51 UTC
  - 485270f74e Merge pull request #37772 from bdrung/openssl1.1
  - 819c9658ed Support initializing OpenSSL 1.1

- **ISSUE #37383**: (edwardsdanielj) Orchestration arguments (kwarg) not being interpreted / How I learned to stop worrying about documentation and love experimenting (refs: #37817)
- PR #37817: (rallytime) Update orchestrate runner file.copy doc example

- ISSUE #37653: (gravyboat) Salt.cron docs don’t wrap @hourly and @daily correctly in quotes for the examples (refs: #37816)

- ISSUE #31953: (sjorge) Documentation for salt.states.cron is incorrect (refs: #32157)

- PR #37816: (rallytime) Back-port #32157 to 2016.3 @ 2016-11-21 20:22:27 UTC
  - PR #32157: (cachedout) Add quotes to cron doc (refs: #37816)
  - c5d3d8b66a Merge pull request #37816 from rallytime/bp-32157
  - d9c297119e Add quotes to cron doc

- PR #37812: (rallytime) Back-port #37790 to 2016.3 @ 2016-11-21 18:46:21 UTC
  - PR #37790: (sfoixa) Update cloud/proxmox.rst with more options and LXC (refs: #37812)
  - 97e6b6aabe Merge pull request #37812 from rallytime/bp-37790
  - ca3b6e7874 Update proxmox.rst with more options and LXC

- ISSUE #37751: (freach) Documentation salt.states.dockerng.running: "privileged" property undocumented (refs: #37789)

- PR #37811: (rallytime) Back-port #37789 to 2016.3 @ 2016-11-21 18:46:21 UTC
  - PR #37789: (fedusia) issue: 37751 (refs: #37811)
  - 27703c54bc Merge pull request #37811 from rallytime/bp-37789
  - ba3fe48e1 fix comment
  - a021f76a9b issue: 37751 Add documentation for option privileged

- PR #37810: (rallytime) Back-port #37775 to 2016.3 @ 2016-11-21 18:45:53 UTC
  - PR #37775: (calve) Document python argument in salt.states.virtualenv_mod (refs: #37810)
  - adac9d7c0c Merge pull request #37810 from rallytime/bp-37775
  - 2bed91437b Document python argument in salt.states.virtualenv_mod

- ISSUE #37742: (blaketmiller) Cannot match on nodegroup when checking minions (refs: #37763)
  - PR #37763: (cachedout) Add nodegroup check to ckminions

- ISSUE #37725: (secumod) salt-call incorrectly parses master hostname:port from minion config (refs: #37766)
  - PR #37766: (cachedout) Fix ip/port issue with salt-call

- ISSUE #33709: (msummers42) Any/All Salt-SSH invocations in 2016.3.0 Fails with AttributeError: 'module' object has no attribute 'BASE_THORIUM_ROOTS_DIR' (refs: #37767)
  - PR #37767: (cachedout) Add thorium path to syspaths

- PR #37760: (hu-dabao) Fix couchbase returner and add couple of more features @ 2016-11-18 00:28:23 UTC
  - bff949fe9 Merge pull request #37760 from hu-dabao/fx_cb_returner
  - de372f77e 1. returner no need to check whether the jid exists for external job cache setup 2. add full_ret to return doc so that the document will be informative 3. make ttl as a config attribute because salt-minion does not have keep_jobs attribute 4. add password into config attribute 5. update the documents accordingly

- ISSUE #36629: (yhekma) The pillar run module does not honor saltenv (refs: #37738)
• PR #37738: (terminalmage) Allow pillar.get to retrieve fresh pillar data when saltenv passed @ 2016-11-17 23:13:04 UTC
  - 1f976ac212 Merge pull request #37738 from terminalmage/issue36629
  - da46678c51 Allow pillar.get to retrieve fresh pillar data when saltenv passed
  - PR #37745: (cro) Switch default filter tag for ONE resources from user only to all resources
• ISSUE #37498: (githubcdr) service.restart salt-minion fails on Ubuntu 14.04.5 LTS (refs: #37748, #38587)
  - PR #37748: (silenius) check for SERVICE_DIR in __virtual__ in salt.modules.daemontools
• ISSUE #37734: (Ch3LL) Joyent Cloud Size Issue (refs: #37735)
  - PR #37735: (Ch3LL) change size and image of joyent profile @ 2016-11-16 21:07:52 UTC
  - fa7883115e Merge pull request #37735 from Ch3LL/fix_joyent_profile
  - 9ef41dcdcf change size and image of joyent profile
• PR #37731: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-11-16 17:13:02 UTC
  - 98e25c68aa Merge pull request #37731 from rallytime/merge-2016.3
  - ec1389711f Merge branch '2015.8' into '2016.3'
  - f417dbbe99 Merge pull request #37718 from terminalmage/docs
  - 23b8b2a3f4 Fix incorrectly-formatted RST
  - PR #37724: (cachedout) Warn on AES test for systems with > 1 core
• PR #37721: (terminalmage) Fix for pillar setting 'environment' key in __gen_opts() @ 2016-11-16 16:04:53 UTC
  - 35655d521f Merge pull request #37721 from terminalmage/zd909
  - acdd5513da Update git_pillar docs to reflect info from bugfix
  - 433737d2dc Fix for pillar setting 'environment' key in __gen_opts()
• PR #37719: (terminalmage) Fix incorrectly-formatted RST (2016.3 branch) @ 2016-11-16 08:20:53 UTC
  - 99ca7c003 Merge pull request #37719 from terminalmage/docs-2016.3
  - f163b4c724 Fix incorrectly-formatted RST
• PR #37694: (cachedout) Catch differences in git URLs in npm state @ 2016-11-16 01:56:18 UTC
  - 8dae695c7c Merge pull request #37694 from cachedout/npm.git
  - 0e3bc2366a Catch differences in git URLs in npm state
• ISSUE #37665: (kluoto) boto_elb state fails as key is overwritten by the code (refs: #37705)
• PR #37705: (rallytime) Don't overwrite the "key" variable passed in to _listeners_present func @ 2016-11-15 21:26:37 UTC
  - 329448c5d7 Merge pull request #37705 from rallytime/fix-37665
  - 3b7e9c5e3b Don't overwrite the "key" variable passed in to _listeners_present func
• PR #37707: (Ch3LL) add timeout increase on azure tests @ 2016-11-15 21:24:25 UTC
  - PR #37239: (Ch3LL) Fix cloud tests timeout (refs: #37707)
  - ac9a316b50 Merge pull request #37707 from Ch3LL/fix_timeout_azure
  - 363122c675 Add timeout increase on azure tests
• PR #37704: (twangboy) Fix test disabled 2016.3 [DO NOT MERGE FORWARD] @ 2016-11-15 16:48:52 UTC
- 1ece265354 Merge pull request #37704 from twangboy/fix_test_disabled_2016.3
- a0429cf839 Use nfsd instead of apsd for test_disabled

**PR #37690**: (twangboy) Update pyzmq to 15.3.0 for 2016.3 [DO NOT MERGE FORWARD] @ 2016-11-15 03:10:36 UTC
  - 44f05acbf Merge pull request #37690 from twangboy/update_pyzmq_2016.3
  - cf55342150 Update pyzmq to version 15.3.0

**PR #37680**: (rallytime) Back-port #32965 to 2016.3 @ 2016-11-15 02:56:46 UTC
  - PR #32965: (kevinquinnyo) Fix 'present' option when used without 'key_type' (refs: #37680)
  - a743d8b5e6 Merge pull request #37680 from rallytime/bp-32965
  - 1865b13645 Fix 'present' option when used without 'key_type'

**ISSUE #35964**: (edgan) salt-ssh doesn't set the return code to non-zero on highstate rendering error (refs: #35965)

**PR #37681**: (rallytime) Back-port #32965 to 2016.3 @ 2016-11-14 21:19:22 UTC
  - PR #35965: (edgan) Set the return code to 1 on salt-ssh highstate errors (refs: #37681)
  - 700f3fa57f Set the return code to 1 on salt-ssh highstate errors

**PR #37668**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-11-14 15:43:25 UTC
  - 1b456b55dc Merge pull request #37668 from rallytime/merge-2016.3
  - efe64c6b02 Merge branch '2015.8' into '2016.3'
  - a01b66556f Add docs for rotate_aes_key (#37641)

**ISSUE #37492**: (JensRantil) Failing salt-b 1 minion state.highstate has wrong exit code (refs: #37625)

**PR #37625**: (cachedout) Return with proper retcodes in batch mode @ 2016-11-12 20:29:09 UTC
  - 305e51d1c0 Merge pull request #37625 from cachedout/issue_37492
  - b6031524e5 Return with proper retcodes in batch mode

**ISSUE #34547**: (sebw) salt-cloud deployment fails when deploy: True (refs: #37607)

**PR #37639**: (rallytime) Back-port #37607 to 2016.3 @ 2016-11-11 20:29:20 UTC
  - PR #37607: (techhat) Try the connection again, in case it’s been reset (refs: #37639)
  - PR #35673: (cro) Proxies don’t handle reusing the SmartConnect instances very well. D… (refs: #37607)
  - PR #34059: (alexbleotu) Vmware common gh (refs: #37607)
  - 7510cd4da9 Merge pull request #37639 from rallytime/bp-37607
  - 9914e93bc4 Pylint: Remove kwargs that are not in the 2016.3 branch
  - d941e9354d Disable pylint warning
  - 940ee49a0b Lint fix
  - 69893f0e38 Try the connection again, in case it’s been reset

**ISSUE saltstack/salt#37118**: (gtmanfred) group in file.find module unable to be a list (refs: #37349)

**ISSUE #37118**: (gtmanfred) group in file.find module unable to be a list (refs: #37349)

**PR #37638**: (rallytime) Back-port #37349 to 2016.3 @ 2016-11-11 20:29:01 UTC
- PR #37349: (haeac) Pull request for Bug #37118 (refs: #37638)
  - 24ca96010d Merge pull request #37638 from rallytime/bp-37349
  - ba2105bc39 Fix for Bug #37118, the wrong parameter was being used to convert the group name to group id.
- ISSUE #37643: (Ch3LL) digital ocean list_keypairs limits to 20 keys (refs: #37644)
- PR #37644: (Ch3LL) digital ocean list_keypairs: increase limit for ssh keys parsed @ 2016-11-11 20:28:46 UTC
  - e1e8b81d16 Merge pull request #37644 from Ch3LL/fix_37643
  - c02961a2f5 list_keypairs: increase limit for ssh keys parsed
- ISSUE #37541: (yhekma) salt-minion does not clean up temp files for templates (refs: #37540, #37640)
- PR #37640: (rallytime) Add known issue #37643 to 2016.3.4 release notes @ 2016-11-11 20:28:12 UTC
  - a97c2ad34b Merge pull request #37640 from rallytime/update-release-notes
  - 6d6de12aff Grammatical fix
  - 24d7f20e16 Add known issue #37541 to 2016.3.4 release notes
- PR #37642: (cro) Forward-port change from 2015.8 adding release note for rotate_aes_key @ 2016-11-11 20:27:07 UTC
  - fab3eaa237 Merge pull request #37642 from cro/rotate_aes_doc
  - 1ca5b958c6 Forward-port change from 2015.8 adding release note for rotate_aes_key
- ISSUE #37628: (TronPaul) [git 2016.3] Refreshing of an s3 file server results in an exception (refs: #37629)
- PR #37629: (TronPaul) fix __opts__ and provider being None in salt.utils.aws:get_location @ 2016-11-11 09:49:47 UTC
  - 4c07b3534a Merge pull request #37629 from TronPaul/fix-s3fs-opts
  - a452ced20 fix __opts__ and provider being None issue
- PR #37481: (thatch45) Raet internal client reference fix @ 2016-11-11 04:39:41 UTC
  - 200d9fc6e Merge pull request #37481 from thatch45/raet_client
  - 50d911160b Attempted fix, needs user verification
- PR #37611: (jeanpralo) Fix cmd batch raw @ 2016-11-11 02:53:58 UTC
  - b14fa1c68 Merge pull request #37611 from jeanpralo/fix-cmd-batch-raw
  - 4f16840ef1 add integration test for salt.client.LocalClient.cmd_batch
  - ead47e4bb9 update ret dict to avoid hanging
  - 0a2f153b6e fix dict key for raw support to avoid exception
- PR #37614: (gtmanfred) remove redundant code @ 2016-11-11 02:49:13 UTC
  - 35c8333d04 Merge pull request #37614 from gtmanfred/2016.3
  - 71c2d89a9 remove redundant code
- PR #37627: (cachedout) Exempt pip.iteritems from test_valid_docs test @ 2016-11-11 02:48:37 UTC
  - 4fab707bdd Merge pull request #37627 from cachedout/pr-36706
  - 94df2f8e6f Exempt pip.iteritems from test_valid_docs test
ISSUE #36644: (b1naryth1ef) env_vars not properly validated/casted to strings w/ virtualenv/activate/pip.install (refs: #36706)

PR #36706: (siccrusher) Add basic sanity checks for env_vars in pip.install function @ 2016-11-11 02:47:16 UTC

- ee74f3116 Merge pull request #36706 from siccrusher/fix_env_var_validation
- fb27f8b69e Revert change
- 79f3e83f8d Use fully-qualified path for six
- 0ca1222833 Update pip.py
- b15de371c1 * Ensure src is python3 compatible
- 0976a2d1ae * Before passing on the env_vars dictionary ensure all values are strings. Fixes #36644

ISSUE #37491: (JensRantil) "Failed to authenticate! ..." error should exit non-zero (refs: #37626)

PR #37626: (cachedout) Exit with proper retcode on hard client failures @ 2016-11-11 02:38:47 UTC

- 902a97575e Merge pull request #37626 from cachedout/issue_37491
- bab9a729b1 Exit with proper retcode on hard client failures

PR #37617: (terminalmage) Clarify docs for git_pillar dynamic env feature @ 2016-11-11 01:52:52 UTC

- 845f835177 Merge pull request #37617 from terminalmage/git_pillar-docs
- 8cdf5dbb51 Clarify docs for git_pillar dynamic env feature

PR #36627: (sjmh) Skip rest of loop on failed func match @ 2016-11-10 23:47:12 UTC

- 3079d78332 Merge pull request #36627 from sjmh/fix_auth_skip_nomatch
- b3baa30d0 Skip rest of loop on failed func match

PR #37600: (mcalmer) change TIMEZONE on SUSE systems (bsc#1008933) @ 2016-11-10 21:54:04 UTC

- a71e7c77b3 Merge pull request #37600 from mcalmer/fix-timezone-on-SUSE
- 3530b5f700 change TIMEZONE on SUSE systems (bsc#1008933)

ISSUE #37238: (cmlaughlin) Restarting master causes minion to hang (refs: #37438, #37602)

ISSUE #37018: (tsaridas) get events from python (refs: #37438, #37602)

PR #37602: (DmitryKuzmenko) Handle master restart in appropriate places using salt.event listener. @ 2016-11-10 21:53:20 UTC

- PR #37438: (DmitryKuzmenko) Fix for #37238 salt hang on master restart (refs: #37602)
- 39b75878c9 Merge pull request #37602 from DSRCorporation/bugs/37238_salt_hang_on_master_restart
- d3d987b19c Handle master restart in appropriate places using salt.event listener.

PR #37608: (gtmanfred) allow multiline returns from docker for mac @ 2016-11-10 21:48:59 UTC

- 019e1a721b Merge pull request #37608 from gtmanfred/2016.3
- 74aee1e372 allow multiline returns from docker for mac

ISSUE #37592: (craigafinch) State git.latest does not work with SSH (refs: #37604)

ISSUE #37551: (vicit) git.latest "Not a valid commit name" (refs: #37604, #37571)

- PR #37604: (terminalmage) Documentation improvements and corrections
- PR #37579: (pass-by-value) Use existing VM's VDD size if not specified in the cloud profile

ISSUE #37541: (yhekma) salt-minion does not clean up temp files for templates (refs: #37540, #37640)
• **PR #37540**: (yhekma) Added prefix to tempfile for template @ 2016-11-10 00:37:18 UTC
  - fdd13b4145 Merge pull request #37540 from yhekma/2016.3
  - 93a59f8034 Added prefix to tempfile for template

• **ISSUE #37084**: (aaronm-cloudtek) x509.certificate_managed does not work with m2crypto >=0.25 (refs: #37578)
  - PR #37578: (clinta) Update for m2crypto changes removing lhash
  - PR #37584: (clinta) Fix eauth example for limiting args

• **ISSUE #37551**: (viict) git.latest "Not a valid commit name" (refs: #37604, #37571)
  - PR #37571: (terminalmage) Add a test to ensure we don't check for fast-forward before fetching

• **ISSUE #33645**: (ketzacoatl) saltutil.sync_all does not sync custom pillar modules to masterless minions (refs: #33833)

• **ISSUE #25297**: (Akilesh1597) perform 'refresh_pillar' as a part of 'sync_all' (refs: #25361, #37521)

• **PR #37553**: (rallytime) Back-port #37521 to 2016.3 @ 2016-11-08 23:11:07 UTC
  - PR #37521: (genuss) refresh_pillar() should be called always with refresh=True during saltutil.sync_all (refs: #37553)
  - PR #33833: (terminalmage) Support syncing pillar modules to masterless minions (refs: #37521)
  - PR #25561: (tedski) perform refresh_pillar as part of sync_all when refresh=True (refs: #37521)
    - b01c247ea9 Merge pull request #37553 from rallytime/bp-37521
    - 30f92b05f4 refresh_pillar() should be called always
  - PR saltstack/salt#37549: (Mrten) sqlite is not found in 2015.8 (refs: #37565)

• **PR #37565**: (rallytime) Back-port #37549 to 2016.3 @ 2016-11-08 23:10:25 UTC
  - PR #37549: (Mrten) sqlite is not found in 2015.8 (refs: #37565)
    - 694df30d40 Merge pull request #37549 from rallytime/bp-37549
    - c92a90b8e5 Update sqlite3.py
    - fb76557a2a sqlite is not found in 2015.8

• **ISSUE #37511**: (jdelic) service.dead now only operates if the service file exists (refs: #37562)
  - PR #37562: (terminalmage) Fix regression in service.dead state

• **ISSUE #37554**: (sjmh) salt-api doesn’t dynamically re-read nodegroups configuration (refs: #37560)
  - PR #37560: (whiteinge) Skip config type checking for sdb values
  - PR #37556: (rallytime) Don’t pass the vpc id to boto.vpc.create_internet_gateway func
  - PR #37543: (multani) Documentation rendering fixes

• **ISSUE saltstack/salt#31081**: (JensRantil) salt.modules.file.line documentation unclarities (refs: #37457)

• **PR #37457**: (rallytime) Fixup file.line docs to be more clear and consistent @ 2016-11-08 00:29:20 UTC
  - 96b8b9a849 Merge pull request #37457 from rallytime/fix-31081
  - 25821bb8db Clarify which modes use "before", "after", and "indent" options
  - 8b2d2b9e7b Clarify file.line state docs as well
  - b2615892eb Move note about using mode=insert with location options to mode section
- db0b0cefb8 Fixup file.line docs to be more clear and consistent

- **ISSUE #35799**: (davegiles) dsc.apply_config hangs (no error) on empty directory on target (refs: #37526)

- **PR #37526**: (twangboy) Remove loop from dsc.apply_config @ 2016-11-08 00:23:11 UTC
  - 7de790ffed Merge pull request #37526 from twangboy/fix_35799
  - fc4260911c Remove unnecessary format
  - c934a2bfa7 Remove the loop from apply_config
  - PR saltstack/salt#37515: (rallytime) [carbon] Merge forward from 2016.3 to carbon (refs: #37534)

- **PR #37534**: (rallytime) Back-port fix needed from #37515 @ 2016-11-08 00:14:46 UTC
  - **PR #37515**: (rallytime) [carbon] Merge forward from 2016.3 to carbon (refs: #37534)
  - 9481df2ea Merge pull request #37534 from rallytime/bp-merge-forward-fix
  - d1b2af1d69 Add missing source_hash_name args to a couple funcs

- **PR #37533**: (whiteinge) Return a 504 response instead of 500 for Salt timeouts @ 2016-11-08 00:14:15 UTC
  - 17adb0c09f Merge pull request #37533 from whiteinge/salt-api-504-timeouts
  - 63226aeda6 Return a 504 response instead of 500 for Salt timeouts

- **ISSUE saltstack/salt#36679**: (lorento) Command 'Import-Module ServerManager' failed with return code: 1 (refs: #saltstack/salt#37502, #37519, #37502)

  - PR saltstack/salt#37502: (cachedout) Log proper message on returners that cannot be loaded (refs: #37519)

- **ISSUE #37444**: (Tanoti) Returning False from __virtual__ in a returner does not return expected error (refs: #saltstack/salt #37502, #37519, #37502)

  - PR saltstack/salt#37502: (cachedout) Log proper message on returners that cannot be loaded (refs: #37519)

- **PR #37519**: (rallytime) Update returner __virtual__() return messages for loader @ 2016-11-07 23:06:23 UTC
  - 19475ada6 Merge pull request #37519 from lorengordon/returner-load-errors
  - fb2664b6a Update returner __virtual__() return messages for loader

- **ISSUE #35016**: (pingangit) TypeError: save_minions() got an unexpected keyword argument 'syndic_id' (refs: #37527)

- **PR #37527**: (rallytime) Add syndic_id=None kwarg to save_minions funcs in returners @ 2016-11-07 23:04:03 UTC
  - fefdfab850 Merge pull request #37527 from rallytime/fix-35016
  - 2944b244aa Add syndic_id=None kwarg to save_minions funcs in returners
  - PR #37530: (gtmanfred) fix Lithium to 2015.5.0

- **PR #37514**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-11-07 16:51:06 UTC
  - 743164844d Merge pull request #37514 from rallytime/merge-2016.3
  - 41166aedae4 Merge branch '2015.8' into '2016.3'
• ISSUE #36713: (Tanoti) ExtraData: unpack(b) received extra data after upgrading to 2016.3.3 (refs: #37503)
• PR #37503: (cachedout) Catch loader error on returners without save_load @ 2016-11-07 09:33:57 UTC
  – 2d924d0820 Merge pull request #37503 from cachedout/issue_36713
  – 5f7f971b2e Catch loader error on returners without save_load
• ISSUE #37448: (alisson276) In 'salt/key' events there are acts that never happen (refs: #37499)
• PR #37499: (cachedout) Clarify docs on salt-key events @ 2016-11-07 09:33:20 UTC
  – d95b59f97 Merge pull request #37499 from cachedout/key_docs_clarify
  – 2758e74785 Clarify docs on salt-key events
• PR #37500: (cachedout) Remove unused flag @ 2016-11-07 09:33:04 UTC
  – 1dd1408ae6 Merge pull request #37500 from cachedout/remove_include_errors
  – 6c705b11e0 Remove unused flag
• ISSUE #37444: (Tanoti) Returning False from __virtual__ in a returner does not return expected error (refs: #`saltstack/salt`#37502`_, #37519, #37502)
• PR #37502: (cachedout) Log proper message on returners that cannot be loaded @ 2016-11-07 09:32:45 UTC
  – 4b6f1ab1c4 Merge pull request #37502 from cachedout/issue_37444
  – 4c5ab057ce Remove debugging
  – 17d01e44fc Log proper message on returners that cannot be loaded
• ISSUE #37389: (d101nelson) Some core grains are inaccurate or incomplete for Solaris (refs: #37472)
• PR #37494: (sjorge) Forgot to update os_family map in #37472 @ 2016-11-06 22:18:54 UTC
  – PR #37472: (sjorge) 2016.3 solaris grains improvements (refs: #37494)
  – 2422dafd52 Merge pull request #37494 from sjorge/2016.3-osfam_map
  – 96ba54592e Forgot to update os_family map in #37472
• PR #37496: (mcalmer) fix status handling in sysv init scripts @ 2016-11-06 22:18:00 UTC
  – 41bd8e5f52 Merge pull request #37496 from mcalmer/fix-status-handling-in-sysv-init-scripts
  – 1fb2c4dfcf fix status handling in sysv init scripts
• PR #37497: (terminalmage) Update 2016.3.5 release notes with source_hash_name explanation @ 2016-11-06 22:17:40 UTC
  – e741a773a5 Merge pull request #37497 from terminalmage/release_notes
  – c08038d9ea Update 2016.3.5 release notes with source_hash_name explanation
• PR #37486: (twangboy) Add requirement for PowerShell 3 on Windows @ 2016-11-06 06:01:07 UTC
  – f4426c2233 Merge pull request #37486 from twangboy/fix_win_docs
  – 9e0631a1ae Add docs denoting the requirement for at least PowerShell 3
• PR #37493: (cachedout) Add sdb support to minion and master configs @ 2016-11-06 06:00:18 UTC
  – a1f355a569 Merge pull request #37493 from cachedout/minion_master_sdb
  – 9761a462c2 Add sdb support to minion and master configs
• ISSUE #31135: (jeffreyctang) file.line mode=replace breaks on empty file. (refs: #37452)
• PR #37452: (rallytime) file.line with mode=replace on an empty file should return False, not stacktrace @ 2016-11-06 01:55:11 UTC
  – be93710fee Merge pull request #37452 from rallytime/fix-31135
  – c792f76d2f Bump log level from debug to warning on empty file
  – 5f181cf00d file.line with mode=replace on an empty file should return False
  – 94a00c66eb Write a unit test demonstrating stack trace in #31135

• ISSUE #37001: (phil123456) URGENT : archive.extracted does not work anymore (refs: #37081, #salt-stack/salt#37081 _)

• ISSUE #29010: (The-Loeki) file.managed download failing checksum testing for Ubuntu initrd w/source_hash (refs: #37469)
  – PR saltstack/salt#37081: (terminalmage) Fix archive.extracted remote source_hash verification (refs: #37469)

• PR #37469: (terminalmage) Rewrite file.extract_hash to improve its matching ability @ 2016-11-06 01:50:01 UTC
  – PR #37081: (terminalmage) Fix archive.extracted remote source_hash verification (refs: #37469)
  – 129b0387e6 Merge pull request #37469 from terminalmage/issue29010
  – a3f38e5a9f Update file.extract_hash unit tests
  – b26b528f79 Add the source_hash_name param to file.managed states
  – 52fe72d402 Rewrite file.extract_hash

• ISSUE #37389: (d101nelson) Some core grains are inaccurate or incomplete for Solaris (refs: #37472)

• PR #37472: (sjorge) 2016.3 solaris grains improvements (refs: #37494) @ 2016-11-06 01:46:10 UTC
  – 9426b9d5c4 Merge pull request #37472 from sjorge/2016.3-solaris-grains
  – 2958f5c5e2 detect and properly handle OmniOS
  – 37c3a7f5ab handle Oracle Solaris better
  – 69706d32be parse minorrelease if it has a / in it
  – d1cf4a0e56 improve regex for parsing /etc/release using files from Solaris 8 SPARC and Solaris 10
  – 88eddef765 some more cleanup for smartos
  – d3ff39f9c improve smartos os version grains

• PR #37478: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-11-04 20:30:08 UTC
  – 4ba63aba48 Merge pull request #37478 from rallytime/merge-2016.3
  – 3483a445f2 Merge branch '2015.8' into '2016.3'
    * 35888c2e30 Merge pull request #37408 from terminalmage/issue37286
      * 4e4a05731e Strip slashes from gitfs mountpoints
    * b6c57c6c8d Merge pull request #37418 from terminalmage/issue36849
      * 740bc54239 Do not use compression in tornado httpclient requests
    * 7ba8aaa7e Merge pull request #37441 from rallytime/bp-37428
      * 6fe3ef49de Fix incorrect reference of __utils__ in salt.utils
  – PR #37485: (rallytime) Get release notes started for 2016.3.5
• PR #37483: (rallytime) [2016.3] Doc version updated to 2016.3.4

• ISSUE #37123: (nevins-b) file.recurse state doesn’t support pulling from other environments (refs: #37121)

• PR #37121: (nevins-b) allow the file.recurse state to support saltenv @ 2016-11-04 05:59:28 UTC
  - 580eca709b Merge pull request #37121 from nevins-b/2016.3
  - 99d2c360ed making messaging in tests match new return
  - bc4b0e7cdab adding test for saltenv in file.recurse source url
  - 3315b67075 fixing saltenv if not set in url
  - a9683cbdb8 allow the file.recurse state to support saltenv (salt://example/dir?saltenv=dev)

• PR #37426: (jfindlay) Wait for macOS to change system settings @ 2016-11-04 04:35:52 UTC
  - PR #37351: (jfindlay) modules.mac_power: give macOS time to change setting (refs: #37426)
  - 766b1437c2 Merge pull request #37426 from jfindlay/mac_sleep
  - 43a8e199bf modules.mac_power: wait for system to make change
  - feabca6e0b modules.mac_system: wait for system to make change
  - 0213eb9a07 utils.mac_utils: add confirm_updated

• ISSUE #37238: (cmclaughlin) Restarting master causes minion to hang (refs: #37438, #37602)

• ISSUE #37018: (tsaridas) get events from python (refs: #37438, #37602)

• PR #37438: (DmitryKuzmenko) Fix for #37238 salt hang on master restart (refs: #37602) @ 2016-11-04 04:10:51 UTC
  - 9eab5c8f71 Merge pull request #37438 from DSRCorporation/bugs/37238_salt_hang_on_master_restart
  - f253d3ce4a Auto reconnect salt to master if the connection was lost.
  - PR saltstack/salt#31207: (thusoy) Remove error logging of missing boto libraries (refs: #37440)

• PR #37440: (rallytime) Back-port #31207 to 2016.3 @ 2016-11-04 04:09:33 UTC
  - PR #31207: (thusoy) Remove error logging of missing boto libraries (refs: #37440)
  - 9aa7073f70 Merge pull request #37440 from rallytime/bp-31207
  - c71ae61271 Remove error logging of missing boto libraries

• PR #37442: (twangboy) Create paths.d directory @ 2016-11-04 04:07:19 UTC
  - edbfadca21 Merge pull request #37442 from twangboy/fix_osx_postinstall
  - 8091a3065e Create paths.d directory

• PR #37445: (twangboy) Check for Server os before checking [DO NOT MERGE FORWARD] @ 2016-11-04 04:04:49 UTC
  - ab91b3ce5 Merge pull request #37445 from twangboy/fix_import_error_2016.3
  - c6d5ebd88a Check for Server os before checking

• PR #37446: (twangboy) Detect VC++ for Python on Win32 @ 2016-11-04 04:04:02 UTC
  - 7a9f95ab3b Merge pull request #37446 from twangboy/fix_build_32
  - 2de69f48f8 Detect VC for Python correctly on 32bit Windows

• ISSUE saltstack/salt#36961: (nullify005) boto_secgroup assumes a string when checking ip_protocol validity when not tcp|udp|all|-1 (refs: #37447)
• PR #37447: (rallytime) Cast ip_protocol rule as a str() in boto_secgroup.present @ 2016-11-04 04:03:45 UTC
  - 651ef728f Merge pull request #37447 from rallytime/fix-36961
  - 6b930ac7aa Cast ip_protocol rule as a str() in boto_secgroup.present
• ISSUE #36446: (whiteinge) Custom salt-api config problem (refs: #37455)
  - PR saltstack/salt#36386: (xiaoanyunfei) fix salt-api's default opts were covered by salt-master #35734 (refs: #37455)
• PR #37455: (techhat) Make api opts respect correct root_dir @ 2016-11-04 03:25:40 UTC
  - PR #35734: (xiaoanyunfei) fix salt-api's default opts were covered by salt-master (refs: #37455)
  - a51d944c7c Merge pull request #37455 from techhat/issue36446
  - 7eff90d61d Make api opts respect correct root_dir
• PR #37459: (twangboy) Fix error message when ConvertTo-Json not supported [DO NOT MERGE FORWARD] @ 2016-11-04 03:22:31 UTC
  - 3591bf058 Merge pull request #37459 from twangboy/fix_dsc_json_msg_2016.3
  - 949b79013d Use cmd.run_all instead of cmd.shell
• PR #37430: (meaksh) Including resolution parameters in the Zypper debug-solver call during a dry-run dist-upgrade (2016.3) @ 2016-11-03 14:35:46 UTC
  - PR #37553: (meaksh) Including resolution parameters in the Zypper debug-solver call during a dry-run dist-upgrade (refs: #37430)
  - 80a99c4cc5 Merge pull request #37430 from meaksh/zypper-dist-upgrade-debug-solver-fix-2016.3
  - ff596f215 Including resolver params for Zypper debug-solver
• ISSUE #37388: (tyhunt99) [2016.3.4] Refreshing of an s3 file server results in an exception. (refs: #37428)
  - PR #37428: (cachedout) Fix incorrect reference of __utils__ in salt.utils (refs: #37441)
• PR #37419: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2016-11-02 21:40:04 UTC
  - 7864f9b79d Merge pull request #37419 from rallytime/merge-2016.3
  - bce47c9175 Merge branch '2015.8' into '2016.3'
    - 7b1d3b5562 Merge pull request #37392 from rallytime/bp-33190
    - 4063bae5de catch None cases for comments in jboss7 state module
  - PR #37416: (terminalmage) Fix regression in output for Ctrl-c'ed CLI jobs
  - PR #37414: (pass-by-value) Add unit tests for cloning from snapshot
  - PR #37350: (pass-by-value) Add handling for full and linked clone (refs: #37414)
  - PR saltstack/salt#37401: (cachedout) Bootstrap delay option for salt-cloud (refs: #37404)
• PR #37404: (cachedout) Revert "Bootstrap delay option for salt-cloud" @ 2016-11-02 09:48:53 UTC
  - ecd794a233 Merge pull request #37404 from saltstack/revert-37401-bootstrap_delay
  - e864de8f03 Revert "Bootstrap delay option for salt-cloud"
• PR #37401: (cachedout) Bootstrap delay option for salt-cloud @ 2016-11-02 09:02:13 UTC
  - 2eb44fbd11 Merge pull request #37401 from cachedout/bootstrap_delay
  - 6e42b0e157 Bootstrap delay option for salt-cloud
• PR #37350: (pass-by-value) Add handling for full and linked clone (refs: #37414) @ 2016-11-02 08:02:29 UTC
  - 9446e48da0 Merge pull request #37350 from pass-by-value/full_and_linked_clone_v1
  - d8b1c9c777 Add handling for full and linked clone and commit disk mode additions
• ISSUE #34841: (Ch3LL) Wrong return when using user.chgroups on windows (refs: #37386)
• PR #37386: (rallytime) Fix win_useradd.chgroups return when cmd.run_all retcode != 0 @ 2016-11-02 08:02:29 UTC
  - c7f4d7f76a Merge pull request #37386 from rallytime/fix-34841
  - c70492a1fe Fix win_useradd.chgroups return when cmd.run_all retcode != 0
• ISSUE #34263: (vermondcole) Use of dnsmasq.set_config injects unintentional text into the configuration file. (refs: #37390)
• PR #37390: (rallytime) Don't insert __pub* keys into dnsmasq config file with set_config function @ 2016-11-02 06:31:53 UTC
  - 34b6c6459a Merge pull request #37390 from rallytime/fix-34263
  - e082f538b Fix failing test now that we're raising a CommandExecutionError
  - c6a3476abb Filter out the __pub keys passed via **kwargs for dnsmasq.set_config
  - fd380c79b9 Add test case to reproduce dnsmasq.set_config failure in #34263
• ISSUE #35163: (SolarisYan) salt file.mkdir (refs: #35287, #35189)
• PR #37391: (rallytime) Back-port #35287 to 2016.3 @ 2016-11-02 06:18:26 UTC
  - PR #35287: (dere) 2016.3 (refs: #37391)
  - PR #35189: (dere) return value for file.mkdir instead of None (refs: #35287)
  - 798b2aceb3 Merge pull request #37391 from rallytime/bp-35287
  - 0e1ebea5a4 Simplify return value to "True".
  - 130225cc4 return value for mkdir instead of None
• ISSUE #37264: (junster1) Parsing __grains__ with json.dumps in a module is returning an empty dict in 2016.3.3 (refs: #37279)
• PR #37279: (gtmanfred) initialize super class of NamespacedDictWrapper @ 2016-11-01 15:12:49 UTC
  - 1a4833b3a1 Merge pull request #37279 from gtmanfred/2016.3
  - 597346d57 initialize super class of NamespacedDictWrapper
• PR #37351: (jfindlay) modules.mac_power: give macOS time to change setting (refs: #37426) @ 2016-10-31 19:15:40 UTC
  - 351175931c Merge pull request #37351 from jfindlay/mac_set
  - 0c58056d84 modules.mac_power: give macOS time to change setting
• PR #37340: (cachedout) SIGILL -> SIGKILL in process test @ 2016-10-31 08:50:10 UTC
  - 25c987e33a Merge pull request #37340 from cachedout/ill_kill_3
  - a6b7417fe9 SIGILL -> SIGKILL in process test
• ISSUE #35480: (jelenak) 200 processes of salt-master (2016.3.2) (refs: #37306)
• PR #37306: (DmitryKuzmenko) Don't use os.wait() on subprocesses managed by multiprocessing. @ 2016-10-31 06:55:30 UTC
30.2.68 Salt 2016.3.6 Release Notes

Version 2016.3.6 is a bugfix release for 2016.3.0.

Statistics

- Total Merges: 119
- Total Issue References: 52
- Total PR References: 163
- Contributors: 43 (Adaephon-GH, Ch3LL, DmitryKuzmenko, Foxlik, GideonRed-zz, The-Loeki, UtahDave, alexbleotu, anlutro, bobrik, cachedout, cro, dincamihai, drawsmcgraw, fboismenu, galet, garethgreenaway, grep4inux, gtmanfred, jacobhammons, jfindlay, joe-niland, lvgr01, mbom2004, mcalmer, mchugh19, meaksh, mirceaulinic, morganwilcock, narendraingale2, nasenbaer13, ni3mm4nd, rallytime, s0undt3ch, sergeizv, smarsching, techhat, terminalmage, thatch45, twangboy, velom, vutny, yue9944882)

Security Fix

CVE-2017-7893 Compromised salt-minions can impersonate the salt-master. (Discovery credit: Frank Spierings)

Changelog for v2016.3.5..v2016.3.6

Generated at: 2018-05-27 13:45:07 UTC

- PR #40232: (rallytime) Update release notes for 2016.3.6 @ 2017-03-22 21:09:35 UTC
  - 24e4ae9c21 Merge pull request #40232 from rallytime/update-release-notes
  - 2eadd188b4f Update release notes for 2016.3.6

- ISSUE #39854: (Foxlik) quoted space in authorized_keys confuses ssh.py (refs: #39855)

- PR #39855: (Foxlik) Use regular expression instead of split when replacing authorized_keys @ 2017-03-22 18:28:32 UTC
• PR #40221: (rallytime) Back-port #39179 to 2016.3 @ 2017-03-22 17:40:34 UTC
  - PR #39179: (mcalmer) fix error parsing (refs: #40221)
  - fd10430018 Merge pull request #40221 from rallytime/bp-39179
  - 07dc2de084 fix error parsing

• ISSUE #40203: (frogunder) 2016.3.6. Minion don’t connect to older master. (refs: #40206)

• PR #40206: (cro) Leave sign_pub_messages off by default. @ 2017-03-22 16:43:03 UTC
  - a27a2cc3bb Merge pull request #40206 from cro/sign_pub_take2
  - 01048de83f leave sign_pub_messages off on minion by default.
  - a82b005507 Leave sign_pub_messages off by default.

• PR #40193: (rallytime) Back-port #40117 to 2016.3 @ 2017-03-22 16:42:21 UTC
  - PR #40117: (narendraingale2) Fix force remove (refs: #40193)
  - d1abb4cbaa Merge pull request #40193 from rallytime/bp-40117
  - cf1857904b More optimization.
  - 5a08266814 Removed debug statement
  - f557f7c6bb Added fix for issue 39393
  - bb62787b73 Reverting changes.
  - a9107cde44 Added if condition for broken link.

• PR #40196: (twangboy) Update dependencies for PyOpenSSL @ 2017-03-22 16:40:46 UTC
  - 0f1f4d4a8 Merge pull request #40196 from twangboy/win_fix_deps
  - 6761527793 Update dependencies for PyOpenSSL

• PR #40184: (terminalmage) Link to minion start reactor example from FAQ. @ 2017-03-21 17:33:09 UTC
  - 0b50151cbb Merge pull request #40184 from terminalmage/link-reactor-example
  - a42be82993 Link to minion start reactor example from FAQ.

• PR #40182: (terminalmage) Add support for "stopped" state to dockerng's mod_watch @ 2017-03-21 15:40:29 UTC
  - d4e6c58526 Merge pull request #40182 from terminalmage/dockerng-mod_watch-stopped
  - 4629a26fb7 Add support for "stopped" state to dockerng's mod_watch

• PR #40171: (Ch3LL) additional PRs/issues for 2016.3.6 release notes @ 2017-03-20 22:14:17 UTC
  - a0b4082484 Merge pull request #40171 from Ch3LL/2016.3.6_release
  - 9c6dd8892f additional PRs/issues for 2016.3.6 release notes

• PR #40120: (sergeizv) gce: Exclude GCENodeDriver objects from _expand_node result @ 2017-03-20 21:44:42 UTC
  - 33ba7821f7 Merge pull request #40120 from sergeizv/gce-expand-node-fix
  - 9d0fe7e01 gce: Exclude GCENodeDriver objects from _expand_node result

30.2. Previous Releases
• **PR #40122**: (meaksh) Adding "pkg.install downloadonly=True" support to yum/dnf execution module @ 2017-03-20 21:44:15 UTC
  - 48843977c3 Merge pull request #40122 from meaksh/2016.3-yum-downloadonly-support
  - 067f3f77c2 Adding downloadonly support to yum/dnf module

• **PR #40159**: (cro) Turn on sign_pub_messages by default. @ 2017-03-20 21:00:49 UTC
  - 60e1d4e2f3 Merge pull request #40159 from cro/sign_pub
  - e663b7ef1fb Fix small syntax error
  - 0a0f6fb14 Turn on sign_pub_messages by default. Make sure messages with no 'sig' are dropped with error when sign_pub_messages is True.

• **PR #40123**: (twangboy) Adds support for inet_pton in Windows to network util @ 2017-03-20 16:25:47 UTC
  - 284fc176b6 Merge pull request #40123 from twangboy/win_fix_network
  - 06df55e9f9 Adds support for inet_pton in Windows to network util

• **ISSUE #39995**: (frogunder) Head of Develop - Multimaster error (refs: #40141)

• **ISSUE #39118**: (bobrik) Minion ipv6 option is not documented (refs: #39289, #39131)

• **PR #40141**: (bobrik) Use the first address if cannot connect to any @ 2017-03-20 15:06:57 UTC
  - PR #39289: (bobrik) Autodetect IPv6 connectivity from minion to master (refs: #39766, #40141)
  - 35db7f959 Merge pull request #40141 from bobrik/fallback-resolve
  - af15deedf8 Use the first address if cannot connect to any

• **PR #40059**: (terminalmage) Fix traceback when virtualenv.managed is invoked with nonexistant user @ 2017-03-16 20:46:43 UTC
  - 116201f345 Merge pull request #40059 from terminalmage/fix-virtualenv-traceback
  - e3<FieldCut9> Fix traceback when virtualenv.managed is invoked with nonexistant user

• **PR #40090**: (rallytime) Back-port #40056 to 2016.3 @ 2017-03-16 19:42:58 UTC
  - PR #40056: (thatch45) update mention bot blacklist (refs: #40090)
  - a0lb9b3a3 Merge pull request #40090 from rallytime/bp-40056
  - ae012db8a update mention bot blacklist

• **PR #40057**: (cachedout) More mentionbot blacklists @ 2017-03-16 18:10:11 UTC
  - d1570ba4c Merge pull request #40057 from cachedout/ollie_blacklist
  - 0ace283d37 Merge branch ‘2016.3’ into ollie_blacklist

• **PR #40070**: (Ch3LL) update 2016.3.6 release notes with additional PR's @ 2017-03-16 15:43:22 UTC
  - d36db1a6e Merge pull request #40070 from Ch3LL/2016.3.6_release
  - a1fbb59bd1 update 2016.3.6 release notes with additional PR's

• **PR #40058**: (meaksh) Allows overriding 'timeout' and 'gather_job_timeout' to 'manage.up' runner call @ 2017-03-15 19:43:01 UTC
  - 8dc2f77c51 Merge pull request #40018 from meaksh/2016.3-handling-timeouts-for-manage.up-runner
  - 95c377dcd Allows to set custom timeouts for 'manage.up' and 'manage.status'
  - 2102d9c75c Allows to set 'timeout' and 'gather_job_timeout' via kwargs
• **PR #40038** (velom) correctly parse "pkg_name===version" from pip freeze @ 2017-03-15 19:30:03 UTC
  - 22fc5299a2 Merge pull request #40038 from velom/fix-pip-freeze-parsing
  - 3fae91d879 correctly parse "pkg_name===version" from pip freeze

• **ISSUE #40036** (oogali) UnboundLocalError: local variable 'ifcfg' referenced before assignment (refs: #40053)

• **PR #40053** (gtmanfred) Update rh_ip.py @ 2017-03-15 18:57:32 UTC
  - 3584f935fa Merge pull request #40053 from saltstack/rh_ip_patch
  - 219947acb Update rh_ip.py

• **ISSUE #40011** (tsaridas) salt-minion does not shutdown properly 2016.11.3 rh6 (refs: #40041)

• **PR #40041** (terminalmage) Fix transposed lines in salt.utils.process @ 2017-03-15 17:58:24 UTC
  - 837432d3d2 Merge pull request #40041 from terminalmage/issue40011
  - 5b5d1b375c Fix transposed lines in salt.utils.process

• **PR #40021** (Ch3LL) 2016.3.6 release notes with change log @ 2017-03-14 21:06:18 UTC
  - ee7eb1200 Merge pull request #40021 from Ch3LL/2016.3.6_release
  - f3e7e4bf2a Add 2016.3.6 Release Notes

• **PR #40016** (terminalmage) Attempt to fix failing grains tests in 2016.3 @ 2017-03-14 18:34:32 UTC
  - 26895b7be2 Merge pull request #40016 from terminalmage/fix-grains-test
  - 0ec81a4cde Fix up a syntax error
  - 5d84b40bfd Attempt to fix failing grains tests in 2016.3

• **PR #39980** (vutny) [2016.3] Allow to use bg kwarg for cmd.run state function @ 2017-03-14 17:16:14 UTC
  - 0c61d064ad Merge pull request #39980 from vutny/cmd-run-state-bg
  - a81dc9dfc1 [2016.3] Allow to use bg kwarg for cmd.run state function

• **ISSUE #39942** (Foxlik) Web Documentation not in sync with release 2016.11.3 (refs: #39994)

• **PR #39994** (rallytime) Add a versionadded tag for dockerng ulimits addition @ 2017-03-13 20:58:02 UTC
  - b04248455 Merge pull request #39994 from rallytime/ulimits-dockerng-version
  - 37bd800fac Add a versionadded tag for dockerng ulimits addition

• **PR #39988** (terminalmage) Add comment explaining change from #39973 @ 2017-03-13 18:37:29 UTC
  - PR #39973: (terminalmage) Don't use docker.Client instance from context if missing attributes (refs: #39988)
  - e125c94ba5 Merge pull request #39988 from terminalmage/dockerng-timeout
  - bd2519ed1b Add comment explaining change from #39973

• **PR #39973** (terminalmage) Don't use docker.Client instance from context if missing attributes (refs: #39988) @ 2017-03-11 14:57:50 UTC
  - cd0336e868 Merge pull request #39973 from terminalmage/dockerng-timeout
  - 869416ed7b Don't use docker.Client instance from context if missing attributes

• **PR #39962** (cachedout) Disable mention bot delay on 2016.3 @ 2017-03-10 20:24:08 UTC
  - 282c607d26 Merge pull request #39962 from cachedout/disable_mentionbot_delay_3
  - 7a638f204b Disable mention bot delay on 2016.3

### 30.2. Previous Releases

2709
• 5592c680b5 More mentionbot blacklists

• **PR #39937**: (cachedout) Fix --non-gpg-checks in zypper module @ 2017-03-10 18:02:51 UTC
  - 1e0c88ae08 Merge pull request #39937 from cachedout/gpg_zypper
  - 13ed0d1209 Fix --non-gpg-checks in zypper module

• **PR #39929**: (terminalmage) Scrap event-based approach for refreshing grains (2016.3 branch) @ 2017-03-09 22:03:16 UTC
  - 4526fc6e08 Merge pull request #39929 from terminalmage/pr-39770-2016.3
  - cf0100dabe Scrap event-based approach for refreshing grains

• **ISSUE #22080**: (The-Loeki) CIDR matching for IPv6 / improve IPv6 support in utils.network (refs: #39919)

• **PR #39919**: (The-Loeki) CIDR matching supports IPv6, update docs @ 2017-03-09 16:03:00 UTC
  - 111110ca8 Merge pull request #39919 from The-Loeki/patch-1
  - 170cbadc54 CIDR matching supports IPv6, update docs

• **PR #39899**: (techhat) Update cleanup function for azure @ 2017-03-08 23:28:33 UTC
  - caf10e9988 Merge pull request #39899 from techhat/cleanupdisks
  - baf4579e63 Update cleanup function for azure

• **PR #39871**: (terminalmage) Squelch warning for pygit2 import @ 2017-03-07 20:40:18 UTC
  - fc9f3654 Merge pull request #39871 from terminalmage/squelch-import-warning
  - 2b2ec69d04 Squelch warning for pygit2 import

• **PR #39794**: (cachedout) Clean up errors which might be thrown when the monitor socket shuts down @ 2017-03-04 16:12:37 UTC
  - f223a8906 Merge pull request #39794 from cachedout/clean_monitor_socket_shutdown
  - 2e63e888b Clean up errors which might be thrown when the monitor socket shuts down

• **PR #39819**: (terminalmage) Improve the Top File matching docs @ 2017-03-04 16:06:40 UTC
  - 4002dc1947 Merge pull request #39819 from terminalmage/top-file-matching-docs
  - 7178ce774e Improve the Top File matching docs

• **PR #39820**: (ni3mm4nd) Add missing apostrophe in Beacons topic documentation @ 2017-03-04 16:05:29 UTC
  - c08aeb7fd Merge pull request #39820 from ni3mm4nd/beacons_topic_doc_typo
  - 804b12048c Add missing apostrophe

• **PR #39826**: (cachedout) Add group func to yubikey auth @ 2017-03-04 16:02:14 UTC
  - cbda24e3cc Merge pull request #39826 from cachedout/yubikey_fix
  - 6125ef02d Add group func to yubikey auth

• **ISSUE #39622**: (drawsmcgraw) boto_vpc.create_subnet does not properly assign tags (refs: #39624)

• **PR #39624**: (drawsmcgraw) Address issue #39622 @ 2017-03-03 15:59:04 UTC
  - f575ef459f Merge pull request #39624 from drawsmcgraw/39622
  - 13da50be33 Fix indentation lint errors
  - 545026352f Address issue 39622

• **ISSUE #39119**: (frogunder) Head of 2016.3 - Salt-Master uses 90 seconds to restart (refs: #39796)
• PR #39796: (cachedout) Stop the process manager when it no longer has processes to manage @ 2017-03-02 23:03:13 UTC
  - 1f3619c1e5 Merge pull request #39796 from cachedout/master_shutdown
  - e31d46c1b8 Stop the process manager when it no longer has processes to manage
• ISSUE #39333: (jagguli) Not Available error - Scheduling custom runner functions (refs: #39791)
• ISSUE #38514: (githubcdr) Unable to schedule runners (refs: #39791)
• PR #39791: (gtmanfred) load runners if role is master @ 2017-03-02 19:43:41 UTC
  - 53341cf152 Merge pull request #39791 from gtmanfred/2016.3
  - 3ab4f843bf load runners if role is master
• ISSUE #39782: (sergeizv) salt-cloud show_instance action fails on EC2 instances (refs: #39784)
• ISSUE #33162: (jfindlay) Key error with salt.utils.cloud.cache_node and EC2 (refs: #39784, #33164)
• PR #39784: (sergeizv) Fix 39782 @ 2017-03-02 16:08:51 UTC
  - PR #33164: (jfindlay) cloud.clouds.ec2: cache each named node (refs: #39784)
  - c254ce5092 Merge pull request #39784 from sergeizv/fix-39782
  - b71c3fe13c Revert "cloud.clouds.ec2: cache each named node (#33164)"
• ISSUE #39336: (GevatterGaul) salt-minion fails with IPv6 (refs: #39766)
• ISSUE #39118: (bobrik) Minion ipv6 option is not documented (refs: #39289, #39131)
• PR #39766: (rallytime) Restore ipv6 connectivity and "master: <ip>:<port>" support @ 2017-03-02 02:55:55 UTC
  - PR #39289: (bobrik) Autodetect IPv6 connectivity from minion to master (refs: #39766, #40141)
  - PR #25021: (GideonRed-zz) Introduce ip:port minion config (refs: #39766)
  - 4ee59be22c Merge pull request #39766 from rallytime/fixed-ipv6-connection
  - 65b239664e Revert "cloud.clouds.ec2: cache each named node (#33164)"
  - 692c456da3 Add a function to simply refresh the grains
• ISSUE #33187: (usbportnoy) Deploy to jboss TypeError at boss7.py:469 (refs: #39761, #39170)
• PR #39761: (cachedout) Properly display error in jboss7 state @ 2017-03-01 18:43:23 UTC
  - a24da31131 Merge pull request #39761 from cachedout/issue_33187
  - c2df9ed8b2 Properly display error in jboss7 state
• PR #39728: (rallytime) [2016.3] Bump latest release version to 2016.11.3 @ 2017-02-28 18:07:44 UTC
  - 0888bc32ef Merge pull request #39728 from rallytime/update-release-ver-2016.3
  - c9bc8af8f2 [2016.3] Bump latest release version to 2016.11.3
• PR #39619: (terminalmage) Add a function to simply refresh the grains @ 2017-02-28 00:20:27 UTC
  - b52dbee6c8 Merge pull request #39619 from terminalmage/zd1207
  - c7db494a6 Fix mocking for grains refresh
  - 7e0ced3b45 Properly hand proxy minions
  - 692c456da3 Add a function to simply refresh the grains
• ISSUE #39482: (bobrik) file.managed and file mode don’t mention default mode (refs: #39487)
• PR #39487: (bobrik) Document default permission modes for file module @ 2017-02-24 23:49:00 UTC
- 3f8b5e6733 Merge pull request #39487 from bobrik/mode-docs
- 41ef69b3ca Document default permission modes for file module

- **ISSUE #39169: (blueyed)** Using batch-mode with `salt.state` in orchestration runner considers all minions to have failed (refs: #39641)

- **PR #39641: (smarsching)** Return runner return code in a way compatible with `check_state_result` @ 2017-02-24 23:07:11 UTC
  - f7389bf1f5 Merge pull request #39641 from smarsching/issue-39169-2016.3
  - 88c2d9a540 Fix return data structure for runner (issue #39169).

- **PR #39633: (terminalmage)** Fix misspelled argument in `salt.modules.systemd.disable()` @ 2017-02-24 18:21:36 UTC
  - fc970b6a16 Merge pull request #39633 from terminalmage/fix-systemd-typo
  - ca54541abe Add missing unit test for disable func
  - 17109e1522 Fix misspelled argument in `salt.modules.systemd.disable()`

- **PR #39613: (terminalmage)** Fix inaccurate documentation @ 2017-02-24 06:07:35 UTC
  - 53e78d67f6 Merge pull request #39613 from terminalmage/fix-docs
  - 9342eda377 Fix inaccurate documentation

- **PR #39600: (vutny)** state.file: drop non-relevant examples for `source_hash` parameter @ 2017-02-23 16:55:27 UTC
  - 4e2b852f83 Merge pull request #39600 from vutny/state-file-docs
  - 9b0427c27a state.file: drop non-relevant examples for `source_hash` parameter

- **PR #39584: (cachedout)** A note in the docs about mentionbot @ 2017-02-23 15:12:13 UTC
  - ed83420417 Merge pull request #39584 from cachedout/mentionbot_docs
  - 652044b18f A note in the docs about mentionbot

- **PR #39583: (cachedout)** Add empty blacklist to mention bot @ 2017-02-23 02:22:57 UTC
  - d3e5b4f2f Merge pull request #39583 from cachedout/mentionbot_blacklist
  - 62491c900d Add empty blacklist to mention bot

- **PR #39579: (rallytime)** [2016.3] Pylint: Remove unused import @ 2017-02-22 23:46:33 UTC
  - 8352e6b44b Merge pull request #39579 from rallytime/fix-lint
  - 65889e1f30 [2016.3] Pylint: Remove unused import

- **PR #39578: (cachedout)** Add mention-bot configuration @ 2017-02-22 23:39:24 UTC
  - 43dba3254c Merge pull request #39578 from cachedout/2016.3
  - 344499ee7 Add mention-bot configuration

- **PR #39542: (twangboy)** Gate `ssh_known_hosts` state against Windows @ 2017-02-22 20:16:41 UTC
  - 8f7a0f9d96 Merge pull request #39542 from twangboy/gate_ssh_known_hosts
  - c90a52ef27 Remove expensive check
  - 6d645cae0e Add `__virtual__` function

- **ISSUE #39118: (bobrik)** Minion ipv6 option is not documented (refs: #39289, #39131)
• PR #39289: (bobrik) Autodetect IPv6 connectivity from minion to master (refs: #39766, #40141) @ 2017-02-22 19:05:32 UTC
  - c10965833a Merge pull request #39289 from bobrik/autodetect-ipv6
  - 2761a1b244 Move new kwargs to the end of argument list
  - 0df6b922e7 Narrow down connection exception to socket.error
  - e8a2e0488 Do no try to connect to salt master in syndic config test
  - af9578631e Properly log address that failed to resolve or pass connection check
  - 9a34fba9 Actually connect to master instead of checking route availability
  - c49839c65 Avoid bare exceptions in dns_check
  - 29f376676d Rewrite dns_check to try to connect to address
  - 55965ce505 Autodetect IPv6 connectivity from minion to master
• PR #39569: (s0undt3ch) Don't use our own six dictionary fixes in this branch @ 2017-02-22 18:59:49 UTC
  - 3fb928b63a Merge pull request #39569 from s0undt3ch/2016.3
  - 49da135abd Don't use our own six dictionary fixes in this branch
• PR #39508: (dincamihai) Openscap @ 2017-02-22 18:36:36 UTC
  - 91e3319df8 Merge pull request #39508 from dincamihai/openscap
  - 9fedb84607 Always return oscap's stderr
  - 0eced2cd02 Include oscap returncode in response
• ISSUE #30802: (kjelle) Missing ulimits on docker.running / dockerng.running (refs: #39562)
• PR #39562: (terminalmage) Add ulimits to dockerng state/exec module @ 2017-02-22 16:31:49 UTC
  - fbe2194a93 Merge pull request #39562 from terminalmage/issue30802
  - c50374041d Add ulimits to dockerng state/exec module
  - da42040c1a Try the docker-py 2.0 client name first
  - PR #39544: (terminalmage) dockerng.get_client_args: Fix path for endpoint config for some versions of docker-py
• ISSUE #39447: (Foxlik) dockerng keeps restarting privileged container (refs: #39483)
• PR #39498: (terminalmage) Resubmit PR #39483 against 2016.3 branch @ 2017-02-20 19:35:33 UTC
  - PR #39483: (Foxlik) dockerng: compare sets instead of lists of security_opt (refs: #39498)
  - dff35b58f8 Merge pull request #39498 from terminalmage/pr-39483
  - 20b997a745 dockerng: compare sets instead of lists of security_opt
• PR #39497: (terminalmage) Two dockerng compatibility fixes @ 2017-02-19 17:43:36 UTC
  - 6418e725ed Merge pull request #39497 from terminalmage/docker-compat-fixes
  - cbd0270bac dockern: make docker-exec the default execution driver
  - a6a17d58aa Handle docker-py 2.0's new host_config path
• PR #39423: (dincamihai) Openscap module @ 2017-02-17 18:31:04 UTC
  - 9c429f6b4e Merge pull request #39423 from dincamihai/openscap
  - 9d1342ac1 OpenSCAP module

30.2. Previous Releases
• ISSUE #3944: (clem-compilatio) salt-cloud - IPv6 and IPv4 private_ips - preferred_ip sends False to is_public_ip (refs: #39464)

• PR #39464: (gtmanfred) skip false values from preferred_ip @ 2017-02-16 22:48:32 UTC
  - 7dd2502360 Merge pull request #39464 from gtmanfred/2016.3
  - f829d6f9fc skip false values from preferred_ip

• PR #39460: (cachedout) Fix mocks in win_disim tests @ 2017-02-16 19:27:48 UTC
  - db359ff2e3 Merge pull request #39460 from cachedout/win_dism_test_fix
  - e652a45592 Fix mocks in win_disim tests

• PR #39426: (morganwillcock) win_dism: Return failure when package path does not exist @ 2017-02-16 00:09:22 UTC
  - 9dbba9b57 Merge pull request #39426 from morganwillcock/dism
  - a7d5118262 Return failure when package path does not exist

• PR #39431: (UtahDave) Fix grains.setval performance @ 2017-02-15 23:56:30 UTC
  - 56162706e3 Merge pull request #39431 from UtahDave/fixed_grains.setval_performance
  - 391bced90 add docs
  - 709c197f84 allow sync_grains to be disabled on grains.setval

• ISSUE #39304: (Auha) boto_s3_bucket documentation dependency clarification (refs: #39405)

• PR #39405: (rallytime) Update :depends: docs for boto states and modules @ 2017-02-15 17:32:08 UTC
  - 239e16e612 Merge pull request #39405 from rallytime/fixed-39304
  - bd1fe03ce7 Update :depends: docs for boto states and modules

• ISSUE #38762: (oz123) Configuration information for custom returners (refs: #39411)

• PR #39411: (rallytime) Update external_cache docs with other configuration options @ 2017-02-15 17:30:40 UTC
  - 415102f346 Merge pull request #39411 from rallytime/fixed-38762
  - e13febe58d Update external_cache docs with other configuration options

• PR #39421: (terminalmage) Update docs on upstream EPEL7 pygit2/libgit2 issues

• PR #39409: (terminalmage) salt.filesserver.roots: Fix regression in symlink_list

• PR #39337: (terminalmage) Don't re-walk the roots filesserver in symlink_list() (refs: #39409)

• PR #39362: (dincamihai) Add cp.push test @ 2017-02-14 18:42:11 UTC
  - 8b8ab8ef8e Merge pull request #39362 from dincamihai/cp-push-test-2016.3
  - 91383c5a19 Add cp.push test

• PR #39380: (joe-niland) Quote numeric user names so pwd.getpwnam handles them properly @ 2017-02-14 18:33:33 UTC
  - 4b726f955b Merge pull request #39380 from joe-niland/quote-numeric-usernames
  - c2edfdd464 Quote numeric user names so pwd.getpwnam handles them properly

• PR #39400: (meaksh) Prevents 'OSError' exception in case certain job cache path doesn't exist @ 2017-02-14 18:27:04 UTC
  - 1116d32df9 Merge pull request #39400 from meaksh/2016.3-fix-local-cache-issue
- e7e559ef5c Prevents 'OSErr' exception in case path doesn't exist

- **PR #39300**: (terminalmage) Replace more usage of str.format in the loader @ 2017-02-13 19:01:19 UTC
  - **PR #39227**: (terminalmage) Loader optimization (refs: #39300)
  - 6c854dda1d4 Merge pull request #39300 from terminalmage/loader-optimization
  - d3e5d1525e Replace more usage of str.format in the loader

- **PR #39337**: (terminalmage) Don't re-walk the roots fileserver in symlink_list() (refs: #39409) @ 2017-02-13 18:41:17 UTC
  - 5286b5ff1b Merge pull request #39337 from terminalmage/issue34428
  - a7d2135dc2 Don't re-walk the roots fileserver in symlink_list()

- **PR #39339**: (cro) Add link to external pillar documentation for clarification. @ 2017-02-13 18:40:13 UTC
  - ce781dee65 Merge pull request #39339 from cro/pillar_filetree_doc
  - 410810ceea2 Clarification on external pillar usage.
  - **PR #39316**: (terminalmage) Document the upstream RedHat bug with their pygit2 package

- **PR #39313**: (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2017-02-10 16:23:23 UTC
  - 9de559ff4e Merge pull request #39313 from rallytime/merge-2016.3
  - 0b8dddf12b Merge branch '2015.8' into '2016.3'
  - fc551bc5f5 Merge pull request #39293 from sergeizv/grammar-fix
    - 70f2b586d3 Rewrap paragraph
    - e6ab5178ea Grammar fix
  - 8a1b45632a Merge pull request #39295 from sergeizv/typo-fix
    - 5d9f36d58d Fix typo
  - cfaafec3e4 Merge pull request #39296 from sergeizv/whitespace-fix
    - 14d41c140 Whitespace fix in docs Makefile
  - 0b4df4a47 Merge pull request #39294 from sergeizv/fix-link
    - 04bde6eed2 Fix link in proxyminion guide

- **ISSUE #38595**: (yue9944882) Redis ext job cache occurred error (refs: #38610)
  - **PR #39299**: (rallytime) Back-port #38610 to 2016.3
  - **PR #38610**: (yue9944882) Fix #38595 - Unexpected error log from redis retuner in master's log (refs: #39299)

- **PR #39297**: (cro) Add doc to recommend pgjsonb for master job caches @ 2017-02-09 22:49:59 UTC
  - f16027d30e Merge pull request #39297 from cro/pg_returner_docs
  - 28bac649ae Typo
  - 19fedcdd23 Add doc to recommend pgjsonb for master job caches

- **PR #39286**: (terminalmage) Allow minion/CLI saltenv/pillarenv to override master when compiling pillar @ 2017-02-09 21:22:46 UTC
  - 77e50ed98b Merge pull request #39286 from terminalmage/fix-pillarenv-precedence
  - 3cb9833e57 Allow minion/CLI saltenv/pillarenv to override master when compiling pillar

30.2. Previous Releases
• ISSUE #39220: (lvg01) state file.line skips leading spaces in content with mode:ensure and indent:False (refs: #39221)

• PR #39221: (lvg01) Fix bug 39220 @ 2017-02-09 18:12:29 UTC
  - 52440416ca Merge pull request #39221 from lvg01/fix-bug-39220
  - e8a41d6341 Removes to early content stripping (stripping is allready done when needed with ident:true), fixes #39220
  - a4b169e0bd Fixed wrong logic, fixes #39220

• ISSUE #39210: (lvg01) Support custom refs specs in GitFS (refs: #39210)

• PR #39280: (terminalmage) Add warning for Dulwich removal

• PR #39210: (terminalmage) salt.utils.gitfs: remove dulwich support, make refs specs configurable (refs: #39280)

• PR #39260: (terminalmage) Update jsonschema tests to reflect change in jsonschema 2.6.0

• ISSUE saltstack/salt#33536: (muzrick) pkgrepo.managed does not disable a yum repo with "disabled: True" (refs: #35055)

• ISSUE #33536: (muzrick) pkgrepo.managed does not disable a yum repo with "disabled: True" (refs: #35055)
  - PR #39251: (terminalmage) Better handling of enabled/disabled arguments in pkgrepo.managed
  - PR #35055: (galet) #33536 pkgrepo.managed does not disable a yum repo with "disabled: True" (refs: #39251)

• PR #39227: (terminalmage) Loader optimization (refs: #39300) @ 2017-02-08 19:38:21 UTC
  - 8e88f71dd9 Merge pull request #39227 from terminalmage/loader-optimization
  - c750662946 Loader optimization

• ISSUE #38856: (haynes) salt-cloud throws an exception when ec2 does not return encoding (refs: #39228)

• PR #39228: (gtmanfred) default to utf8 encoding if not specified @ 2017-02-08 19:36:57 UTC
  - bc89b297f8 Merge pull request #39228 from gtmanfred/2016.3
  - afee047b08 default to utf8 encoding if not specified

• PR #39231: (terminalmage) Add clarification for jenkins execution module @ 2017-02-08 19:34:45 UTC
  - d9b0671dbd Merge pull request #39231 from terminalmage/clarify-jenkins-depends
  - ad1b255f2 Add clarification for jenkins execution module

• PR #39232: (terminalmage) Avoid recursion in s3/svn ext_pillars @ 2017-02-08 19:33:28 UTC
  - ddcff89a84 Merge pull request #39232 from terminalmage/issue21342
  - c88896e277 Avoid recursion in s3/svn ext_pillars

• ISSUE #38697: (fboismenu) On Windows, ip.get_all_interfaces returns at most 2 DNS/WINS Servers (refs: #38793)
  - PR #39230: (rallytime) Fix the win_ip_test failures
  - PR #38793: (fboismenu) Fix for #38697 (refs: #39197, #39230)

• ISSUE #33187: (usbportnoy) Deploy to jboss TypeError at boss7.py:469 (refs: #39761, #39170)

• PR #39199: (rallytime) Back-port #39170 to 2016.3 @ 2017-02-07 16:19:32 UTC
- **PR #39170**: (grep4linux) Added missing source_hash_name argument in get_managed function (refs: #39199)
- df5f934e34 Merge pull request #39199 from rallytime/bp-39170
- c129905310 Added missing source_hash_name argument in get_managed function Additional fix to #33187 Customer was still seeing errors, this should now work. Tested with 2015.8.13 and 2016.11.2

  - **ISSUE #37174**: (mikeadamz) The State execution failed to record the order in which all states were executed spam while running pkg.upgrade from orchestration runner (refs: #39206)
  
  - **PR #39206**: (cachedout) Ignore empty dicts in highstate outputter @ 2017-02-07 16:11:36 UTC
    - 2621c119fd Merge pull request #39206 from cachedout/issue_issue_37174
    - be31e0559c Ignore empty dicts in highstate outputter
  
  - **PR #39209**: (terminalmage) Sort the return list from the fileserver.envs runner @ 2017-02-07 16:07:08 UTC
    - dd440452ea Merge pull request #39209 from terminalmage/sorted-envs
    - e6dda4a625 Sort the return list from the fileserver.envs runner
    - **PR #39202**: (rallytime) [2016.3] Pylint fix

  - **ISSUE #38697**: (fboismenu) On Windows, ip.get_all_interfaces returns at most 2 DNS/WINS Servers (refs: #39230)

  - **PR #39197**: (cachedout) Pr 38793 @ 2017-02-06 19:23:12 UTC
    - **PR #38793**: (fboismenu) Fix for #38697 (refs: #39197, #39230)
    - ab76054127 Merge pull request #39197 from cachedout/pr-38793
    - f3d35fb5c6 Lint fixes
    - 624f25b78d Fix for #38697

  - **PR #39166**: (Ch3LL) fix boto ec2 module create_image doc @ 2017-02-06 18:27:17 UTC
    - fa45c8c359 Merge pull request #39166 from Ch3LL/fix_boto_ec2_docs
    - 90af696331 fix boto ec2 module create_image doc

  - **PR #39173**: (rallytime) Restore "Salt Community" doc section @ 2017-02-06 18:19:11 UTC
    - **PR #30770**: (jacobhammons) Doc restructuring, organization, and cleanup (refs: #39173)
    - **PR #10792**: (cachedout) Documentation overhaul (refs: #39173)
    - a40cb46249 Merge pull request #39173 from rallytime/restore-community-docs
    - 4aedd42a0 Restore "Salt Community" doc section

  - **ISSUE #38704**: (nasenbaer13) Archive extracted fails when another state run is queued (refs: #38705)
    - **PR #39077**: (terminalmage) Apply fix from #38705 to 2016.3 branch
    - **PR #38705**: (nasenbaer13) Fix for #38704 archive extracted and dockerio states (refs: #39077)
    - **PR #39146**: (gtmanfred) update vmware getting started doc
    - **PR #39145**: (garethgreenaway) [2016.3] Fix when targeting via pillar with Salt syndic

  - **PR #38804**: (alexbleotu) Second attempt to fix prepending of root_dir to paths @ 2017-02-02 16:10:37 UTC
    - cd8077ab81 Merge pull request #38804 from alexbleotu/root_dir_fix-2016.3-gh
    - b3bdd3b04a Add missing whiteline
- c7715acd53 Merge pull request #3 from cro/ab_rootdirfix
  - e8cbafaa1f When running testsuite, salt.syspaths.ROOT_DIR is often empty.
- b12dd44a26 Merge pull request #1 from cro/ab_rootdirfix
  - bfc537aca Remove extra if statements (rstrip will check for the presence anyway).
- 97521b3468 Second attempt to fix prepending of root_dir to paths

**ISSUE #39118:** (bobrik) Minion ipv6 option is not documented (refs: #39289, #39131)
  - PR #39131: (bobrik) Clarify ipv6 option for minion and interface for master, closes #39118
  - PR #39116: (terminalmage) Don’t abort pillar.get with merge=True if default is None

**PR #39091:** (terminalmage) Run test_valid_docs in batches @ 2017-02-01 19:09:05 UTC
  - cc9b69b6bc Merge pull request #39091 from terminalmage/update-test-valid-docs
  - d760380d00 add debug logging for batch vars
  - b4afea2a25 Don’t fail test if data is empty
  - b3a5d549c1 Account for trimmed value in ‘salt -d’ output
  - 909916c78e Run test_valid_docs in batches
  - PR #39081: (terminalmage) Move fileclient tests to tests/integration/fileserver/fileclient_test.py
  - PR #39067: (rallytime) Bump openstack deprecation notice to Oxygen

**PR #39047:** (rallytime) [2016.3] Merge forward from 2015.8 to 2016.3 @ 2017-01-30 23:48:14 UTC
  - a24af5ac46 Merge pull request #39047 from rallytime/merge-2016.3
  - b732a1f646 Merge branch '2015.8' into '2016.3'
  - 56ccae6ff7 Add 2015.8.14 release notes file (#39046)
  - 5943fe65d3 Update 2015.8.13 release notes (#39037)
  - PR #39045: (rallytime) Add 2016.3.6 release notes file
  - PR #39042: (rallytime) [2016.3] Update release numbers for doc build
  - PR #39038: (rallytime) Update 2016.3.5 release notes

**PR #39028:** (terminalmage) Clarify delimiter argument @ 2017-01-30 18:20:26 UTC
  - 5b09dc4198 Merge pull request #39028 from terminalmage/clarify-delimiter-argument
  - f29ef071f3 Clarify delimiter argument
  - PR #39030: (rallytime) Back-port #38972 to 2016.3
  - PR #38972: (rallytime) Add CLI Example for rest_sample_utils.get_test_string function (refs: #39030)

**ISSUE #38753:** (alexbleotu) __proxy__ dunder is not injected when invoking the salt variable in sls files (refs: #38899, #38829)

**ISSUE #38557:** (alexbleotu) Proxy not working on develop (refs: #38829)

**ISSUE #38265:** (mirceaulation) __utils__ object not available in proxy module (refs: #38899, #38829)

**ISSUE #32918:** (mirceaulation) Proxy minions reconnection (refs: #38829)
  - PR #38899: (cro) Enable __proxy__ availability in states, highstate, and utils. Enable __utils__ for prox-
ies.
• **PR #38829**: (cro) MANY dunder variable fixes for proxies + proxy keepalive from @mirceaulinic (refs: #38899)

• **PR #37864**: (mirceaulinic) Proxy keepalive feature (refs: #38829)

• **ISSUE #37938**: (johje349) Memory leak in Reactor (refs: #38951)

• **ISSUE #33890**: (hvnsweeting) salt memleak when running state.sls (refs: #38951)

• **PR #38951**: (DmitryKuzmenko) Keep the only one record per module-function in depends decorator. @ 2017-01-27 17:05:42 UTC
  
  - da96221741 Merge pull request #38951 from DSRCorporation/bugs/37938_fix_depends_decorator_memleak
  - 0b18f34678 Keep the only one record per module-function in depends decorator.

• **ISSUE #34780**: (joehoyle) S3fs broken in 2016.3.1 (refs: #38982)

• **PR #38982**: (rallytime) Set response when using "GET" method in s3 utils @ 2017-01-27 17:04:48 UTC
  
  - 8516edeb70 Merge pull request #38982 from rallytime/fix-34780
  - 1583c5579a Set response when using "GET" method in s3 utils

• **PR #38989**: (anlutro) Documentation: fix SLS in environment variable examples @ 2017-01-27 17:00:08 UTC
  
  - cfdbe99e12 Merge pull request #38989 from alprs/docfix-state_pt3_environ
  - 52a9ad16b0 fix SLS in environment variable examples

• **PR #39000**: (rallytime) Skip the test_badload test until Jenkins move is complete @ 2017-01-27 16:58:21 UTC
  
  - 55e4d2572e Merge pull request #39000 from rallytime/skip-badload-test
  - 4b3ff0fe0f Skip the test_badload test until Jenkins move is complete

• **PR #38995**: (terminalmage) Fix pillar.item docstring @ 2017-01-27 16:58:00 UTC
  
  - fe054eb772 Merge pull request #38995 from terminalmage/fixed-pillar.item-docstring
  - 06d094dd60 Fix pillar.item docstring

• **ISSUE #34551**: (mbom2004) salt.engines.logstash not loading (refs: #38950)

• **PR #38950**: (mbom2004) Fixed Logstash Engine in file logstash.py @ 2017-01-26 19:10:07 UTC
  
  - b66b6f423 Merge pull request #38950 from mbom2004/2016.3
  - c0f9f39d6c9 Remove unused json import
  - 249efa3068 Fixed Logstash Engine in file logstash.py

• **PR #38973**: (rallytime) Handle changing "is_default" value in moto package for boto test mock

• **PR #38952**: (terminalmage) Make the ext_pillars available to pillar.ext tunable @ 2017-01-26 19:01:56 UTC
  
  - b965b5d2c2 Merge pull request #38952 from terminalmage/zd1168
  - 6b014e53fc Rename on_demand_pillar to on_demand_ext_pillar
  - d216f90c63 Document new on_demand_pillar option and add to config template
  - 426b20f02f Add documentation for on-demand pillar to pillar.ext docstring
  - 7b10274b6b Make on-demand ext_pillars tunable
  - d54723c9ae Add on_demand_pillar config option

• **ISSUE #35777**: (rallytime) Properly deprecate template context data in Fluorine (refs: #38948)

• **PR #38948**: (rallytime) Bump the template context deprecation version to Oxygen @ 2017-01-25 19:45:59 UTC
- 2c4ad85a78 Merge pull request #38948 from rallytime/bump-template-context-deprecation
- 749e0031d7 Bump the template context deprecation version to Oxygen

**PR #38946:** (rallytime) Back-port #37632 to 2016.3 @ 2017-01-25 19:40:40 UTC
- PR #37632: (twangboy) Fix versions report for Windows Server platforms (refs: #38946)
- e4514ca7d8 Merge pull request #38946 from rallytime/bp-37632
- ee37dcace9 Fix some lint
- c08071e182 Fix versions report for server OSs

**PR #38913:** (Adaephon-GH) Ignore plist files without Label key @ 2017-01-25 19:07:27 UTC
- 953a20350a Merge pull request #38913 from Adaephon-GH/patch-1
- e2f4a16fdd Removing trailing whitespace
- 616292c6b1 Ignore plist files without Label key

**PR #38917:** (twangboy) Update Jinja2 to 2.9.4 @ 2017-01-25 19:05:38 UTC
- 826dce1059 Merge pull request #38917 from twangboy/update_jinja_mac
- 62e608b627 Update Jinja2 to 2.9.4

**ISSUE #38540:** (amendlik) API wheel client throws exception and success=true (refs: #38925)

**ISSUE #38537:** (amendlik) API client wheel_async always returns status 500 (refs: #38925)

**PR #38925:** (terminalmage) Fix two wheel issues in netapi @ 2017-01-25 18:28:52 UTC
- b27733cc33 Merge pull request #38925 from terminalmage/issue38540
- 76392fc6ad Fix traceback when a netapi module uses wheel_async
- bd4474fa62 Fix 'success' value for wheel commands

**PR #38926:** (gtmanfred) add note about pysss for pam eauth @ 2017-01-25 18:12:20 UTC
- 618596f0cc Merge pull request #38926 from gtmanfred/2016.3
- 9cae953c93 add note about pysss for pam eauth

**ISSUE #38825:** (IshMalik) file.managed multiple sources for redundancy failure (refs: #38847)

**PR #38847:** (terminalmage) Catch MinionError in file.source_list @ 2017-01-24 16:03:10 UTC
- 405d86a2ca Merge pull request #38847 from terminalmage/issue38825
- 11a47803ce Use log.exception() instead
- e40fac589a Catch MinionError in file.source_list

**ISSUE #36121:** (Ashald) TemplateNotFound/Unable to cache file (refs: #38875)

**PR #38875:** (terminalmage) Reactor: fix traceback when salt:// path is nonexistant @ 2017-01-24 15:23:39 UTC
- b5df104fc2 Merge pull request #38875 from terminalmage/issue36121
- fbc4d2a2c4 Reactor: ensure glob_ref is a string
- 2e443d79a3 cp.cache_file: add note re: return for nonexistent salt:// path

**ISSUE #37413:** (Snarffingcode666) Salt-cloud vmware missing reboot command (refs: #38887, #38890)

**PR #38890:** (cro) Backport #38887 to 2016.3: Enable resetting a VM via salt-cloud & VMware driver @ 2017-01-24 15:15:35 UTC
PR #38887: (cro) Enable resetting a VM via salt-cloud & VMware driver (refs: #38890)
e9ebec4d80 Merge pull request #38890 from cro/vmware_reset_vm_20163
0146562fb4 Call correct function for resetting a VM

• PR #38883: (techhat) Don’t require text_out path to exist @ 2017-01-23 18:20:42 UTC
  • PR #38867: (mchugh19) Touch deploy.sh before use (refs: #38883)
  • PR #32026: (techhat) Don’t require the decode_out file to already exist (refs: #38883)
  c3fbfcd231 Merge pull request #38883 from techhat/dontrequire
  67bc4d6687 Don’t require text_out path to exist

• PR #38851: (terminalmage) Support docker-py 2.0 in dockerng @ 2017-01-23 16:48:12 UTC
  6430a45196 Merge pull request #38851 from terminalmage/docker-py-2.0
  3c061b21fe Support docker-py 2.0 in dockerng

• PR #38844: (cachedout) Fix memory leak in HTTP client @ 2017-01-20 20:59:14 UTC
  ac8008d843 Merge pull request #38844 from cachedout/http_memory_leak
  c46bf85518 Fix memory leak in HTTP client

• ISSUE #38798: (ripta) match.compound fails to match when pillar data is used (refs: #38823)
  • PR #38823: (gtmanfred) pass pillar to compound matcher in match module @ 2017-01-20 19:19:09 UTC
    df66defe963 Merge pull request #38823 from gtmanfred/2016.3
    f0a71e8707 pass pillar to compound matcher in match module

30.2.69 Salt 2016.3.7 Release Notes

Version 2016.3.7 is a bugfix release for 2016.3.0.

Security Fix

CVE-2017-12791 Maliciously crafted minion IDs can cause unwanted directory traversals on the Salt-master

This release corrects a flaw in minion ID validation which could allow certain minions to authenticate to a master despite not having the correct credentials. To exploit the vulnerability, an attacker must create a salt-minion with an ID containing characters that will cause a directory traversal. Credit for discovering the security flaw goes to: Vernhk@qq.com

Changelog for v2016.3.6..v2016.3.7

Generated at: 2018-05-27 14:09:17 UTC
  • 11d176ff1b Add release notes for 2016.3.7 release
dc649ded51 Add clean_id function to salt.utils.verify.py

30.2. Previous Releases
30.2.70 Salt 2016.3.8 Release Notes

Version 2016.3.8 is a bugfix release for 2016.3.0.

Security Fix

CVE-2017-14695 Directory traversal vulnerability in minion id validation in SaltStack. Allows remote minions with incorrect credentials to authenticate to a master via a crafted minion ID. Credit for discovering the security flaw goes to: Julian Brost (julian@0x4a42.net)

CVE-2017-14696 Remote Denial of Service with a specially crafted authentication request. Credit for discovering the security flaw goes to: Julian Brost (julian@0x4a42.net)

Changelog for v2016.3.7..v2016.3.8

Generated at: 2018-05-27 14:11:36 UTC

- 8cf08bd7be Update 2016.3.7 Release Notes
- 0425defe84 Do not allow IDs with null bytes in decoded payloads
- 31b38f50eb Don't allow path separators in minion ID

30.2.71 Salt 2016.3.9 Release Notes

Version 2016.3.9 is a bugfix release for 2016.3.0.

Master Changes

The following options have been added to the master config file:

- allow_minion_key_revoke - This option controls whether a minion can request that the master revoke its key. When True, a minion can request a key revocation and the master will comply. If it is False, the key will not be revoked by the master.

- require_minion_sign_messages - This requires that minions cryptographically sign the messages they publish to the master. If minions are not signing, then log this information at loglevel INFO and drop the message without acting on it.

- drop_messages_signature_fail - Drop messages from minions when their signatures do not validate. Note that when this option is False but require_minion_sign_messages is True, minions MUST sign their messages, but the validity of their signatures is ignored.

- minion_sign_messages - Causes the minion to cryptographically sign the payload of messages it places on the event bus for the master. The payloads are signed with the minion's private key so the master can verify the signature with its public key.
30.2.72 Salt 2015.8.0 Release Notes - Codename Beryllium

2015.8.0 Detailed Change List

Extended changelog courtesy of Todd Stansell (https://github.com/tjstansell/salt-changelogs)

Generated at: 2015-09-09T18:15:43Z

This list includes all pull requests merged into the 2015.8 branch between the forking of the branch from develop and the release of 2015.8.0.

Statistics:

- Total Merges: 682
- Total Issue references: 342
- Total PR references: 866

Pull Requests:

- #26993: (whiteinge) Backport #26975
- #26970: (cachedout) Revert "better path query parsing in fileserver"
- #26980: (terminalmage) Use human-readable cachedirs for gitfs-backed winrepo
- #26969: (TheBigBear) URL of salt windows downloads has changed
- #26968: (TheBigBear) URL of salt windows downloads has changed
- #26958: (s0undt3ch) Bradthurber bootstrap command line help doc update
- #26949: (rallytime) Back-port #25148 to 2015.8
- #26914: (cro) Add salt-proxy script and manpage to setup.py so they will get installed.
- #26909: (terminalmage) Don't try to git clone from /tmp on Windows
- #26910: (s0undt3ch) Sometimes the event system is just too fast
- #26905: (s0undt3ch) Exit the loop if run_once is true
- #26897: (msteed) spm file hash part deoux
- #26900: (s0undt3ch) If no tag is passed, don't actually subscribe to anything.
- #26880: (s0undt3ch) Restore backwards compatibility to salt.utils.event
- #26896: (msteed) spm remove: use pkgfiles to calculate file hashes
- #26891: (jtand) Fixed an unboundlocalerror
- #26892: (cachedout) Make the testing ioloop the current one
- #26886: (jtand) Gets the azure version correctly on python-azure 1.0.0
- #26870: (rallytime) Back-port #26834 to 2015.8
- #26865: (dmurphy18) Fix apt preferences for apts, repos for pbuilder building for Debian
- #26873: (terminalmage) Properly handle getting local config values in older git versions
- #26869: (rallytime) Fix provider --> driver change for salt-cloud lxc
- #26858: (terminalmage) Fix a couple version checks for git state and execution module
- #26853: (UtahDave) Fix salt-cloud on windows
- #26852: (basepi) [2015.8] Only reference msgpack if it imported successfully
• #26835: (terminalmage) Backport #26572 to 2015.8
• #26836: (jacobhammons) Added rst source for salt-proxy man page, added build and copy lines ...
• #26818: (terminalmage) Support empty repositories in git.latest
• #26819: (rallytime) Make sure we’re calling _validate_name in the correct place in 2015.8 Linode driver
• #26841: (l2ol33rt) Fix reference before assignment in sqs engine
• #26822: (terminalmage) Add some missing imports for masterless winrepo
• #26831: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #26826: (techhat) Pass a package name to unregister_file()
• #26757: (cachedout) Fix various filehandle leaks
• #26816: (gtmanfred) rev defaults to HEAD
• #26801: (jacobhammons) Added doc for dockerng minion configuration options
• #26808: (anlutro) Fix git init argument formatting
• #26807: (terminalmage) Move salt.utils.itersplit() to salt.utils.iter tools.split()
• #26796: (jacobhammons) Add doc for __states__
• #26764: (sjorge) salt.utils.is_proxy() is no longer always true on SunOS/Illumos/SmartOS
• #26772: (sjorge) pull in smartos ‘virt’ module from develop
• #26726: (terminalmage) Redact HTTPS Basic Auth in states/funcs which deal with git remotes
• #26769: (terminalmage) Use --track to set tracking branch on older git versions
• #26765: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #26761: (sjorge) fix SPM paths on smartos/illum os esky
• #26751: (terminalmage) Fixes for masterless winrepo
• #26745: (rallytime) Make sure pyrax configs are in place before checking for deps
• #26746: (rallytime) Make sure nova configs are set before checking for dependencies
• #26750: (basepi) [2015.8] Add __utils__ to state modules
• #26752: (cro) Fix typo in some diagram labels
• #26747: (basepi) [2015.8] Add __states__ to state modules, for cross-calling states
• #26744: (basepi) [2015.8] Fix issue from #26717
• #26737: (dmurphy18) Fix to allow for package naming other than just salt
• #26742: (rallytime) Only warn about vsphere deprecation if vsphere is configured
• #26733: (sjorge) Refactor of smartos_vmadm module
• #26735: (s0undt3ch) Add .hg and .cvs to spm_build_exclude
• #26720: (UtahDave) Updates for winrepo in 2015.8 to support jinja, while maintaining backwards compat
• #26719: (jodv) Backport 26532 to 2015.8
• #26721: (rallytime) Linode Driver Cleanup
• #26707: (techhat) Add top_level_dir to FORMULAs
• #26723: (s0undt3ch) Handle SPM paths in the setup script
• #26717: (basepi) [2015.8] Revert loader changes from #26645
• #26712: (techhat) Move SPM paths around
• #26680: (TheBigBear) add more python libs info in '--versions-report'
• #26716: (terminalmage) Allow git identity to be a list
• #26691: (garethgreenaway) Fixes to ipset module for 2015.8
• #26701: (kev009) Ignore the first element of kern.disks split, which is the sysctl name (new disks grain)
• #26678: (terminalmage) Restructure git.latest rewrite to work better when following HEAD
• #26679: (rallytime) Back-port #26661 to 2015.8
• #26684: (techhat) Add reactor formulas to spm
• #26682: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #26671: (rallytime) Warn users if cloud driver dependencies are missing.
• #26674: (rallytime) Back-port #26583 to 2015.8
• #26670: (techhat) Set up SPM to install -conf packages
• #26657: (jfindlay) top file compilation fixes
• #26659: (TheBigBear) minor doc edits - spelling
• #26654: (jfindlay) merge #26650
• #26567: (jtand) Added git version check to git module
• #26649: (twangboy) Fixed Lint for real in win_repo.py
• #26608: (jacobhammons) 2015.8.0 release notes and doc/conf.py updates
• #26646: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #26645: (rallytime) Back-port #26390 to 2015.8
• #26642: (twangboy) Added function to render winrepo Jinja
• #26625: (twangboy) Correctly detect packages with no version, docs
• #26575: (msteed) Update spm for integration into raas
• #26635: (cro) Don't report windows as a proxy.
• #26622: (rallytime) [2015.8] Also add -Z to script args for cloud tests
• #26619: (rallytime) Apply cloud test fixes from 2015.5 to 2015.8
• #26603: (terminalmage) Fixes for git.latest, git module integration tests, etc.
• #26577: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #26534: (cachedout) Bump required Tornado version to 4.2.1
• #26666: (cachedout) Don't stacktrace trying to publish without a master
• #26541: (terminalmage) Make winrepo execution module use the same code as the runner
• #26530: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #26570: (cachedout) Fix haproxy docs to be valid
• #26562: (cachedout) Fix suprious error message with systemd-detect
• #26557: (jfindlay) add docs to #26550
• #26544: (nmadhok) Do not raise KeyError when calling avail_images if VM/template is in disconnected state
• #26501: (terminalmage) Update git_pillar docs, add git.list_worktrees function
• #26521: (terminalmage) Work around upstream git bug when cloning repo as root
• #26518: (krak3n) Fix for #25492
• #26514: (evverx) Unmask a runtime masked services too
• #26529: (mnalt) bugfix: fix service.enable for missing rc.conf
• #26516: (techhat) Move more path operations into SPM loader
• #26533: (cachedout) Fix too aggressive even init check
• #26522: (cro) Do not load package provider if its not a proxy
• #26531: (cachedout) Fix failing event tests and modify event init
• #26433: (cro) Add support for default proxy config options, change default location of proxy config and log to /etc/salt/proxy and /var/log/proxy
• #26504: (nmadhok) [Backport] Adding ability to specify the virtual hardware version when creating VM
• #26517: (cachedout) Better fix for opensuse tornado httpclient
• #26479: (rallytime) Don't allow VMs with duplicate names to be created in EC2/AWS
• #26488: (cachedout) Don't pass unsupported kwarg to tornado
• #26451: (terminalmage) Use ‘rpm -qa’ instead of repoquery to list installed packages
• #26491: (jacobhammons) doc site css fix for tiny fonts that appeared in code or pre tags in ...
• #26442: (rallytime) Hide API Key from debug logs for Linode Driver
• #26441: (rallytime) Refactor a few linode functions to be useful with salt-cloud command
• #26485: (s0undt3ch) One more missed typo
• #26495: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #26492: (cachedout) Fix schedule test error on py26
• #26489: (cachedout) Fixing more tarfile tests on py2.6
• #26475: (cachedout) Better object checking on asyncreq cleanup
• #26477: (cachedout) Fix integration.modules.git.GitModuleTest.test_archive on py26
• #26469: (jtand) --annotate and --message aren’t valid options in older versions of git.
• #26439: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #26464: (rallytime) Back-port #26456 to 2015.8
• #26463: (rallytime) Back-port #26455 to 2015.8
• #26449: (s0undt3ch) The CLI options are not meant to include underscores.
• #26270: (sjorge) salt.modules.network now supports SmartOS and SunOS < Solaris 11
• #26436: (TheBigBear) minor edits
• #26410: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #26427: (anlutro) git.latest with no rev: fix concatenation error (NoneType and str)
• #26307: (cachedout) Fix bug in top file ordering
- #26428: (cro) Update docs to reflect new pillar structure
- #26429: (cachedout) Add release note regarding tcp transport on freebsd
- #26418: (driskell) Fix forward-merged caching from 2015.5 into 2015.8 to be compatible with the new match_func
- #26522: (DmitryKuzmenko) Issues/24048 http client 2015.8
- #26413: (evverx) Fix service.[start,restart,reload,force-reload] for masked services
- #26393: (dmurphy18) Added option parameters to make_repo to allow for configuration settings
- #26422: (TheBigBear) no dots in SLS filename __AND__ any directories (incl git repos)
- #26323: (0xf10e) Fix Credentials used in glance Exec Module
- #26341: (terminalmage) Rewrite git state and execution modules
- #26419: (terminalmage) Only use pygit2.errors if it exists
- #26423: (eliasp) doc - Correct function name for peer configuration
- #26401: (cachedout) Adapt proxy minion to tornado (w/lint)
- #26400: (rallytime) Back-port #26318 to 2015.8
- #26397: (s0undt3ch) A single isinstance() check for all types is enough
- #26385: (gtmanfred) don't require volume endpoint in nova driver
- #26287: (techhat) Break out SPM components into loaders
- #26384: (TheBigBear) Fix shell quoting for cmd.run
- #26391: (rallytime) Back-port #26367 to 2015.8
- #26383: (rallytime) Allow the creation of a VM without a profile
- #26375: (s0undt3ch) [2015.8] Schema DictItem required attribute fixes
- #26363: (garethgreenaway) Fixes to mount state 2015.8
- #26347: (0xf10e) Load 'pkgng' as 'pkg' on FreeBSD 9 when providers:pkg == 'pkgng'
- #26361: (TronPaul) sign security token
- #26346: (TronPaul) Fix s3 using IAM credentials
- #26331: (mnalt) fix bug in sysrc to allow for empty rc variables
- #26334: (rallytime) Call salt.utils.cloud.bootstrap in GCE Driver provisioning
- #26308: (dmurphy18) Support for environment overrides building packages
- #26279: (TheScriptSage) Merge changes for pull #26083` and pull #25632` into 2015.8
- #26224: (cachedout) Cleanup of a few cases to move to salt.utils.fopen
- #26260: (nmadhok) Correct spelling of integration in docs
- #26226: (rallytime) Fix #25463
- #26248: (nmadhok) Initial commit of unit tests for vmware cloud driver
- #26228: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
- #26244: (nmadhok) Backport additions to VMware cloud driver from develop to 2015.8 branch
- #26235: (sjorge) salt.utils.is_smartos_zone, inverse of is_smartos_globalzone
- #26221: (sjorge) SmartOS grain fixes
- #26218: (terminalmage) Add warning about file.recurse unicode errors with vim swap files.
- #26214: (rallytime) Back-port #24878 to 2015.8
- #26211: (techhat) Move SPM to its own directory
- #26197: (TronPaul) Fix GitFS when whitelisting base
- #26200: (anlutro) Make it possible to run salt-cloud as current user
- #26201: (kev009) Avoid VBOX storage emulation bugs in FreeBSD disks grain
- #26188: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
- #26194: (basepi) Allow virtual grains to be generated even if virt-what is not available
- #26176: (rallytime) Back-port #26165 to 2015.8
- #26169: (terminalmage) Fix attribute error in gitfs' find_file functions
- #26170: (nmadhok) [Backport] Make sure variable is a dictionary before popping something from it.
- #26143: (nmadhok) VMware cloud driver fixes [forward port from 2015.5 into 2015.8]
- #26173: (jacobhammons) Updates to cloud docs for the provider > driver change
- #26125: (everver) Use timedatectl set-timezone to tzsetting if available
- #26145: (sjorge) smartos_imgadm cleanup
- #26148: (terminalmage) Refactor winrepo support
- #26128: (sjorge) imgadm.avail should return multiple results
- #26109: (jfindlay) fix quote indent
- #26089: (anlutro) User state/module: fix coercing of None into string "None" in GECOS
- #26081: (cachedout) Move invocation routine up
- #26086: (rallytime) Back-port #26019 to 2015.8
- #26087: (rallytime) Back-port #26059 to 2015.8
- #26052: (jtand) Rh_ip fix
- #26078: (cachedout) Fix missing key in error return
- #26074: (basepi) [2015.8] Re-apply #25358 in 2015.8
- #26069: (jfindlay) fix win_firewall.delete_rule
- #26066: (s0undt3ch) [2015.8] Update to latest bootstrap stable release v2015.06.08
- #26049: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
- #26026: (anlutro) Fix httpasswd result false positive in test mode
- #26037: (rallytime) Back-port #25489 to 2015.8
- #26004: (techhat) Allow updating a single SPM repo at a time
- #26012: (cachedout) Merge kwargs into opts for tcp client
- #26007: (anlutro) file.managed: wrap os.remove in if isfile, don’t remove on success
- #26009: (terminalmage) Add winrepo and dockerng information to 2015.8.0 release notes
- #26006: (basepi) Revert #25727 in favor of #25645
• #26001: (cachedout) Fix failing tests
• #25978: (anlutro) Correct service state changes in test mode
• #25982: (sjorge) salt.modules.smartos_* limit to global zone only
• #25989: (rallytime) Back-port #25832 to 2015.8
• #25988: (cachedout) Move #25642 to 2015.8
• #25999: (s0und3ch) Include subschema defaults
• #25997: (s0und3ch) Allow getting a defaults dictionary from schema defaults
• #25979: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #25902: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #25956: (anlutro) Fix user argument to cron functions
• #25946: (sjorge) Fix for salt.utils.decorators under esky
• #25957: (anlutro) Remove temporary file after file.managed with checkcmd
• #25874: (rallytime) Back-port #25668 to 2015.8
• #25929: (sjorge) salt.module.pkgin's __virtual__() should not return None if pkg_info is not present
• #25952: (garethgreenaway) Log when event.fire and event.fire_master fail 2015.8
• #25944: (sjorge) Smartos libcrypto nonesky fix
• #25906: (dmurphy18) Cherry-pick of pkgbuild changes from develop branch
• #25925: (sjorge) Create default log location in smartos esky buildscript
• #25928: (cachedout) Fix stacktrace for non-existant states
• #25922: (jacksontj) Correct max_wait -> max_auth_wait in MultiMinion
• #25907: (rallytime) Back-port #25892 to 2015.8
• #25910: (terminalmage) Pass osarch to check_32()
• #25849: (basepi) Repress template error for GPG renderer (can't seek an OrderedDict)
• #25868: (rallytime) Back-port #25404 to 2015.8
• #25896: (cachedout) Lint
• #25876: (jacksontj) Fixes for 2015.8
• #25867: (rallytime) Back-port #25370 to 2015.8
• #25845: (jacobhammons) updated versionadded
• #25836: (jacksontj) Keep track of SyncWrapper's IOLoop usage
• #25859: (0xf10e) warn_until(Carbon,...) instead of Boron
• #25505: (0xf10e) Glance state module for 2015.8 "Beryllium"
• #25843: (jtand) Fixed a lint error in parsers.py
• #25835: (techhat) spm update_repo doesn't always require arguments
• #25837: (jacobhammons) regenerated man pages
• #25830: (sjorge) Loading of libcrypto on smartos esky fixed
• #25808: (jfindlay) add highstate opts to config/__init__.py, update docs
• #25820: (sjorge) Prerequisite to fix the smartos libcrypto loading
• #25781: (anlutro) Fix iptables.build_rule
• #25764: (gtmanfred) allow use of cloudnetworks in ssh_interface
• #25736: (jfindlay) insert explicit formatter number
• #25742: (rallytime) Back-port #25731 to 2015.8
• #25741: (rallytime) Back-port #25727 to 2015.8
• #25712: (cachedout) Fix outputter for state.apply
• #25698: (rallytime) Back-port #25659 to 2015.8
• #25690: (anlutro) Fix highstate duration alignment (again)
• #25684: (davidjb) Fix doc around Include/Exclude for states
• #25549: (techhat) Switch Scaleway to salt.utils.cloud.bootstrap()
• #25667: (jfindlay) add 2015.8.0rc2 autogenerated changelog
• #25653: (anlutro) Properly align highstate duration sum
• #25663: (rallytime) Back-port #25638 to 2015.8
• #25639: (terminalmage) Don't do pre-flight check on git_pillar if it is not configured
• #25587: (cachedout) Fix prereq in salt.state
• #25628: (anlutro) Highstate output: show duration in seconds instead of milliseconds when appropriate
• #25631: (basepi) Remove trailing whitespace
• #25627: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #25626: (basepi) Fix the highstate outputter if 'duration' is not present
• #25601: (terminalmage) Fix error message when local bin pkg path is not absolute
• #25595: (terminalmage) Bring git_pillar up to feature parity with gitifs
• #25619: (cachedout) Lint stateconf changes
• #25578: (davidjb) Allow parent relative includes in state files
• #25610: (s0undt3ch) [2015.8] Update the bootstrap script to latest release v2015.07.22
• #25599: (jfindlay) fix transport settings in #25596
• #25596: (jfindlay) Tcp test
• #25591: (garethgreenaway) Return data for scheduled jobs in 2015.8 default to True.
• #25588: (basepi) Fix some of the retcode work from #23105
• #25583: (jtand) Fixed lint error where pprint wasn't imported.
• #25572: (rallytime) Back-port #25570 to 2015.8
• #25575: (rallytime) Make Sure Scaleway driver works with deprecation paths
• #25564: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #25566: (techhat) Fix download process for SPM repo updates
• #25553: (techhat) Switch SoftLayer to salt.utils.cloud.bootstrap()
• #25552: (techhat) Update pricing for SoftLayerHW
• #25547: (techhat) Switch Parallels to salt.utils.cloud.bootstrap()
• #25548: (techhat) Switch Proxmox to salt.utils.cloud.bootstrap()
• #25543: (techhat) Switch GCE to salt.utils.cloud.bootstrap()
• #25546: (techhat) Switch CloudStack to salt.utils.cloud.bootstrap()
• #25558: (cachedout) Lint config_test
• #25515: (soundt3ch) salt.utils.schema fixes
• #25514: (garethgreenaway) fixes to schedule.add documentation in 2015.8
• #25508: (soundt3ch) [2015.8] Update bootstrap script to latest stable release, v2015.07.17
• #25501: (basepi) Add optional job end time to the local_cache returner
• #25491: (soundt3ch) Let's call it for what it is!
• #25462: (rallytime) Wrap is_profile_configured calls in try/except block
• #25439: (rallytime) Reduce digital_ocean API call frequency
• #25451: (soundt3ch) Salt-SSH Scan roster bugfixes (And Py3 support)
• #25449: (ruzarowski) Exclude dotfiles and directories from minion key lists (Fixes #25448)
• #25421: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #25412: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8
• #25415: (bechtoldt) [docs] declare YAML as code block
• #25407: (rallytime) Back-port #23236 to 2015.8
• #25409: (rallytime) Back-port #24422 to 2015.8
• #25394: (rallytime) Back-port #25355 to 2015.8
• #25393: (rallytime) Back-port #25289 to 2015.8
• #25387: (cachedout) Lint #25319
• #25319: (ruzarowski) [cloud:EC2] Move SourceDest logic to _update_enis and add alias for delete_interface_on_terminate
• #25310: (anlutro) Add an "is list" test to the jinja environment
• #25264: (ruzarowski) Fix AttributeError in fileserver update_opts
• #25372: (rallytime) Don't stacktrace when provisioning instances with softlayer* drivers
• #25315: (ruzarowski) [cloud:EC2] Move handling of AssociatePublicIpAddress to associate_eip/allocate_new_eip logic depending on value type
• #25312: (ruzarowski) [cloud:EC2] Introduce eni Name property to set name tag value after its creation
• #25311: (ruzarowski) [cloud:EC2] Add ability to attach an existing eni
• #25280: (rallytime) Remove deprecation warnings for Beryllium
• #25329: (twangboy) Fixed some documentation errors
• #25300: (soundt3ch) Fix ordering issue & Added requirements support
• #25283: (jfindlay) ensure ret is always defined
• #25252: (jfindlay) make args optional with default values in win_firewall.delete_rule
• #25257: (notpeter) Document SourceDestCheck added in #25242.

30.2. Previous Releases 2731
The 2015.8.0 feature release of Salt contains several major new features. As usual the release notes are not exhaustive and primarily include the most notable additions and improvements. Hundreds of bugs have been fixed and many modules have been substantially updated and added.

New SaltStack Installation Repositories

SaltStack now provides installation repositories for several platforms, with more to come. See the following links for instructions:

- Red Hat / CentOS 5, 6, 7
- Debian 8
- Windows
Send Event on State Completion

A `fire_event` global state keyword argument was added that allows any state to send an event upon completion. Useful for custom progress bars and checking in on long state runs. See `fire_event`.

ZeroMQ socket monitoring

If `zmq_monitor` is enabled, log all ZMQ events for socket monitoring purposes. Verbose, but useful.

SPM (Salt Package Manager)

Allows Salt formulas to be packaged for ease of deployment. See `spm`.

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Note: The `spm` executable was not included in the Debian or Ubuntu packages for the 2015.8.0 or the 2015.8.1 releases. This executable will be included in an upcoming release. As a workaround, copy the SPM script from the salt library installation into `/usr/local/bin` or your local equivalent.

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Specify a Single Environment for Top Files

A new `default_top` option was added to load the state top file from a single, specific environment, rather than merging top data across all environments. Additionally, new `top_file_merge_strategy` and `env_order` options were added for more control over top file merging. See The Top File.

Tornado TCP Transport

Implemented a pure-TCP transport, in addition to ZeroMQ and RAET. The new transport uses Tornado, which allows Salt to use a standardized set of libraries for asynchronous behavior, which should greatly improve reliability and performance.

Note: Tornado is considered expiermental in this release. The following known issues were being investigated at the time of release:

- TCP tests show performance degradation over time (issue #26051)
- TCP transport stacktrace on windows minion: Future exception was never retrieved (issue #25718)
- [freebsd] TCP transport not working in 2015.8.0rc3 (issue #26364)

Proxy Minion Enhancements

Proxy Minions have undergone a significant overhaul in 2015.8, see Proxy Minion Enhancements.
Engines

Salt engines are long-running, external processes that leverage Salt. See Salt Engines.

Core Changes

- Add system version info to versions_report, which appears in both salt --versions-report and salt '*' test.versions_report. Also added is an alias test.versions to test.versions_report. (issue #21906)

- Add colorized console logging support. This is activated by using %\(\text{colorlevel}\)s, %\(\text{colorname}\)s, %\(\text{colorprocess}\)s, %\(\text{colormsg}\)s in log_fmt_console in the config file for any of salt-master, salt-minion, and salt-cloud.

Git Pillar

The git external pillar has been rewritten to bring it up to feature parity with gitfs. Support for pygit2 has been added, bringing with it the ability to access authenticated repositories.

Using the new features will require updates to the git ext_pillar configuration, further details can be found in the pillar.git_pillar docs.

Salt Cloud Improvements

- Pricing data from several cloud providers (GCE, DigitalOcean, SoftLayer_HW, EC2)
- All cloud providers now use standardized bootstrapping code.
- Modified the Linode Salt Cloud driver to use Linode's native API instead of depending on apache-libcloud or linode-python.

Salt Cloud Changes

- Changed the default behavior of rename_on_destroy to be set to True in the EC2 and AWS drivers.
- Changed the default behavior of the EC2 and AWS drivers to always check for duplicate names of VMs before trying to create a new VM. Will now throw an error similarly to other salt-cloud drivers when trying to create a VM of the same name, even if the VM is in the terminated state.
- When querying for VMs in digital_ocean.py, the number of VMs to include in a page was changed from 20 (default) to 200 to reduce the number of API calls to Digital Ocean.Ocean.

State and Execution Module Improvements

- New and improved Docker state and execution modules (state and execution module).
Git State and Execution Modules Rewritten

The git state and execution modules have gone through an extensive overhaul.

Changes in the `git.latest` State

- The `branch` argument has been added, allowing for a custom branch name to be used in the local checkout maintained by the `git.latest` state. This can be helpful in avoiding ambiguous refs in the local checkout when a tag is used as the `rev` argument. If no `branch` is specified, then the state uses the value of `rev` as the branch name.

- The `always_fetch` argument no longer has any effect, and will be removed in a future release. The state now detects whether or not a fetch is needed based on comparisons made between the local and remote repositories.

- The `force_fetch` argument has been added to force a fetch if the fetch is not a fast-forward (for instance, if someone has done a reset and force-pushed to the remote repository).

- The `remote_name` argument has been deprecated and renamed to `remote`.

- The `force` argument has been deprecated and renamed to `force_clone` to reduce ambiguity with the other "force" arguments.

- Using SHA1 hashes (full or shortened) in the `rev` argument is now properly supported.

- Non-fast-forward merges are now detected before the repository is updated, and the state will not update the repository if the change is not a fast-forward. Non-fast-forward updates must be overridden with the `force_reset` argument. If `force_reset` is set to `True`, the state will only reset the repository if it cannot be fast-forwarded. This is in contrast to the earlier behavior, in which a hard-reset would be performed every time the state was run if `force_reset` was set to `True`.

- A `git pull` is no longer performed by this state, dropped in favor of a fetch-and-merge (or fetch-and-reset) workflow.

`git.config_unset` state added

This state allows for configuration values (or entire keys) to be unset. See here for more information and example SLS.

`git.config` State Renamed to `git.config_set`

To reduce confusion after the addition of `git.config_unset`, the `git.config` state has been renamed to `git.config_set`. The old `config.get` name will still work for a couple releases, allowing time for SLS files to be updated. In addition, this state now supports managing multivar git configuration values. See here for more information and example SLS.
Initial Support for Git Worktrees in Execution Module

Several functions have been added to the execution module to manage worktrees (a feature new to Git 2.5.0). State support does not exist yet, but will follow soon.

New Functions in Git Execution Module

- `git.config_get_regexp`
- `git.config_unset`
- `git.is_worktree`
- `git.list_branches`
- `git.list_tags`
- `git.list_worktrees`
- `git.merge_base`
- `git.merge_tree`
- `git.rev_parse`
- `git.version`
- `git.worktree_rm`
- `git.worktree_add`
- `git.worktree_prune`

Changes to Functions in Git Execution Module

**git.add**

- `--verbose` is now implied when running the `git add` command, to provide a list of the files added in the return data.

**git.archive**

- Now returns `True` when the `git archive` command was successful, and otherwise raises an error.
- The `overwrite` argument has been added to prevent an existing archive from being overwritten by this function.
- The `fmt` argument has been deprecated and renamed to `format`.
- Trailing slash no longer implied in `prefix` argument, must be included if this argument is passed.
The rev argument is now optional when using -b or -B in opts, allowing for a branch to be created (or reset) using HEAD as the starting point.

The name argument has been added to specify the name of the directory in which to clone the repository. If this option is specified, then the clone will be made within the directory specified by the cwd, instead of at that location.

The repository argument has been deprecated and renamed to url.

The setting_name argument has been deprecated and renamed to key.

The global argument has been added, to query the global git configuration.

The all argument has been added to return a list of all values for the specified key, allowing for all values in a multivar to be returned.

The cwd argument is now optional if global is set to True.

The value(s) of the key being set are now returned.

The setting_name argument has been deprecated and renamed to key.

The setting_value argument has been deprecated and renamed to value.

The is_global argument has been deprecated and renamed to global.

The multivar argument has been added to specify a list of values to set for the specified key. The value argument is not compatible with multivar.

The add argument has been added to add a value to a key (this essentially just adds an --add to the git config command that is run to set the value).

The force argument has been added to force the fetch when it is not a fast-forward. This could have been achieved in previous Salt versions by including --force in the opts argument, this argument is just for convenience and to match the usage of other functions with force arguments.

The refspects argument has been added to allow for one or more refspects to be provided which override the one(s) specified by the remote.remote_name.fetch git configuration option.
**git.ls_remote**

- The repository argument has been deprecated and renamed to remote.
- The branch argument has been deprecated and renamed to ref.
- The opts argument has been added to allow for additional CLI options to be passed to the `git ls-remote` command.

**git.merge**

- The branch argument has been deprecated and renamed to rev.

**git.status**

- Return data has been changed from a list of lists to a dictionary containing lists of files in the modified, added, deleted, and untracked states.

**git.submodule**

- Added the command argument to allow for operations other than update to be run on submodules, and deprecated the init argument. To do a submodule update with init=True moving forward, use command=update opts='--init'.
- OpenStack Glance API V2 execution module
- Amazon VPC state module
- RallyDev execution module
- BambooHR execution module
- Stormpath execution, state modules
- Remove unused argument timeout in jboss7.status.
- Deprecate enabled argument in pkgrepo.managed in favor of disabled.
- Archive module changes: In the archive.tar and archive.cmd_unzip module functions, remove the arbitrary prefixing of the options string with -. An options string beginning with a --long-option, would have uncharacteristically needed its first - removed under the former scheme. Also, tar will parse its options differently if short options are used with or without a preceding -, so it is better to not confuse the user into thinking they're using the non- - format, when really they are using the with- - format.
- Added __states__ to state modules, for cross-calling states. This enables using existing states when writing custom states. See cross calling states.
Windows Improvements

- Enhanced the windows minion silent installation with command line parameters to configure the salt master and minion name. See Silent Installer Options.
- Improved user management with additional capabilities in the user module for Windows.
- Improved patch management with a new module for managing windows updates (win_wua).
- Turned on multi-processing by default for windows in minion configuration.

Windows Software Repo Changes

A next-generation (ng) windows software repo is available for 2015.8.0 and later minions. When using this new repository, the repo cache is compiled on the Salt Minion, which enables pillar, grains and other things to be available during compilation time.

See the Windows Software Repository documentation for more information.

Changes to legacy Windows repository

If you have pre 2015.8 Windows minions connecting to your 2015.8 Salt master, you can continue to use the legacy Windows repository for these Salt minions.

If you were previously using this repository and have customized settings, be aware that several config options have been renamed to make their naming more consistent.

See the Windows Software Repository documentation for more information.

Win System Module

The unit of the timeout parameter in the system.halt, system.poweroff, system.reboot, and system.shutdown functions has been changed from seconds to minutes in order to be consistent with the linux timeout setting. (issue #24411) Optionally, the unit can be reverted to seconds by specifying in_seconds=True.

Other Improvements

- Sanitize sensitive fields in http.query
- Allow authorization to be read from Django and eauth
- Add templating to SMTP returner
- New REST module for SDB
- Added rest_timeout config option and timeout argument to jobs api call
- Provide config options for Raet lane and road buffer count. (Useful for BSD kernels)
- Implemented ZeroMQ socket monitor for master and minion
- Add end time to master job cache for jobs (optional, off by default)
- Tornado is now the default backend for http.request
- Support pillarenv selection as it’s done for saltenv
- salt was updated to use python-crypto version 2.6.1, which removes the dependency on python-m2crypto.
Deprecations

- The `digital_ocean.py` Salt Cloud driver was removed in favor of the `digital_ocean_v2.py` driver as DigitalOcean has removed support for APIv1. The `digital_ocean_v2.py` was renamed to `digital_ocean.py` and supports DigitalOcean's APIv2.
- The `vsphere.py` Salt Cloud driver has been deprecated in favor of the `vmware.py` driver.
- The `openstack.py` Salt Cloud driver has been deprecated in favor of the `nova.py` driver.
- The use of `provider` in Salt Cloud provider files to define cloud drivers has been deprecated in favor of using `driver`. Both terms will work until the 2017.7.0 release of Salt. Example provider file:

```
my-ec2-cloud-config:
id: 'HJGRYCILJLKJYG'
key: 'kdjgfsgm;woormgl/aserigksjhasdfgn'
private_key: /etc/salt/my_test_key.pem
keyname: my_test_key
securitygroup: default
driver: ec2
```

- The use of `lock` has been deprecated and from `salt.utils.fopen`, `salt.utils.flopen` should be used instead.
- The following args have been deprecated from the `rabbitmq_vhost.present` state: `user`, `owner`, `conf`, `write`, `read`, and `runas`.
- The use of `runas` has been deprecated from the `rabbitmq_vhost.absent` state.
- Support for output in `mine.get` was removed. `--out` should be used instead.
- The use of `delim` was removed from the following functions in the `match` execution module: `pillar_pcre`, `pillar`, `grain_pcre`,

Security Fixes

CVE-2015-6918 - Git modules leaking HTTPS auth credentials to debug log

Updated the Git state and execution modules to no longer display HTTPS basic authentication credentials in log level debug output on the Salt master. These credentials are now replaced with REDACTED in the debug output. Thanks to Andreas Stieger <asteiger@suse.com> for bringing this to our attention.

Major Bug Fixes

- Fixed minion failover to next master on DNS errors (issue #21082)
- Fixed memory consumption in SaltEvents (issue #25557)
- Don't lookup outside system path in which() util (issue #24085)
- Fixed broken jobs rest api call (issue #23408)
- Fixed stale grains data using in modules (issue #24073)
- Added `ssh_identities_only` config flag for ssh-agent configured environments (issue #24096)
- Fixed "object has no attribute" errors for Raet transport (issue #21640)
- Flush event returners before master exit (issue #22814)
- Fix `CommandExecutionError` in grains generation with `lspci` missing (issue #23342)
- Fix salt-ssh against CentOS 7 when python-zmq not installed (issue #23503)
- Fix salt-ssh issues related to out-of-date six module (issue #20949)
- Fix salt-ssh thin generation after previous run was interrupted (issue #24376)
- Use proper line endings on Windows with "file.managed" w/contents (issue #25675)
- Fixed broken comment/uncomment functions in file.py (issue #24620)
- Fixed problem with unicode when changing computer description (issue #12255)
- Fixed problem with chocolatey module not loading (issue #25717)
- Fixed problem adding users to groups with spaces in the name (issue #25144)
- Fixed problem adding full name to user account (issue #25206)
- Fixed gem module stack trace (issue #21041)
- Fixed problem with file.managed when test=True (issue #20441)
- Fixed problem with powershell hanging while waiting for user input (issue #13943)
- Fixed problem where the salt-minion service would not consistently start (issue #25272)
- Fixed problem where pkg.refresh_db would return True even when winrepo.p was not found (issue #18919)
- Could someone please provide end to end example for Proxy Minion with REST (issue #25500)
- Proxy minions stopped working between 2014.7 and 2015.5 (issue #25053)
- Proxy minion documentation includes outdated code sample (issue #24018)
- Proxy Minion documentation missing grains example (issue #18273)
- Improve process management in proxy minion (issue #14024)
- Proxy minion never comes up with message ' I am XXX and I am not supposed to start any proxies.' (issue #25908)
- Fixed an issue that caused an exception when using Salt mine from pillar. (issue #11509)

### 30.2.73 Salt 2015.8.1 Release Notes

Version 2015.8.1 is a bugfix release for 2015.8.0.

#### Statistics

- Total Merges: 201
- Total Issue References: 39
- Total PR References: 135
- Contributors: 40 (DmitryKuzmenko, The-Loeki, TheBigBear, basepi, bechtoldt, bernieke, blueyed, cachedout, cedwards, clinta, cro, deuscapturus, dmurphy18, dsmsky, eliasp, flowhamster, isbm, jacksontj, jacobhammons, jfindlay, justinta, l2ol33rt, macgyver13, meggiebot, msteed, multani, nasenbaer13, perfinion, pprkut, rallytime, rhealitycheck, ruzarowski, ryan-lane, s0undt3ch, systembell, techhat, terminalmage, ticosax, twangboy, whiteinge)
Security Fixes

CVE-2015-6941 The Windows user module and salt-cloud display passwords in log when log level is set to debug or more verbose.

For the Windows user module, the password is now replaced with the string XXX-REDACTED-XXX.

For salt-cloud, debug logging no longer displays win_password and sudo_password authentication credentials.

CVE-2015-6918 Git state/execution modules log HTTPS auth credentials when log level is set to debug or more verbose.

These credentials are now replaced with REDACTED in the debug output. Thanks to Andreas Stieger <asteiger@suse.com> for bringing this to our attention.

Major Bug Fixes

- Add support for spm.d/*.conf configuration of SPM (issue #27010)
- Fix proxy grains breakage for non-proxy minions (issue #27039)
- Fix global key management for git state
- Fix passing http auth to util.http from state.file (issue #21917)
- Fix multiprocessing: True in windows (on by default)
- Add pkg.info to pkg modules
- Fix name of serial grain (this was accidentally renamed in 2015.8.0)
- Merge config values from master.d/minion.d conf files (rather than flat update)
- Clean grains cache on grains sync (issue #19853)
- Remove streamed response for fileclient to avoid HTTP redirection problems (issue #27093)
- Fixed incorrect warning about osrelease grain (issue #27065)
- Fix authentication via Salt-API with tokens (issue #27270)
- Fix winrepo downloads from https locations (issue #27081)
- Fix potential error with salt-call as non-root user (issue #26889)
- Fix global minion provider overrides (issue #27209)
- Fix backward compatibility issues for pecl modules
- Fix Windows uninstaller to only remove ./bin, salt*, nssm.exe, uninst.exe (issue #27383)
- Fix misc issues with mongo returner.
- Add sudo option to cloud config files (issue #27398)
- Fix regression in RunnerClient argument handling (issue #25107)
- Fix dockerng.running replacing creation hostconfig with runtime hostconfig (issue #27265)
- Fix dockerng.running replacing creation hostconfig with runtime hostconfig (issue #27265)
- Increased performance on boto asg/elb states due to __states__ integration
- Windows minion no longer requires powershell to restart (issue #26629)
- Fix x509 module to support recent versions of OpenSSL (issue #27326)
• Some issues with proxy minions were corrected.

Known Issues

• Proxy minions currently cannot execute a highstate because of the way the proxymodule is being loaded internally. This will be fixed in a future release.

Changelog for v2015.8.0..v2015.8.1


• PR #27588: (jfindlay) add autogenerated 2015.8.1 release notes @ 2015-10-01 04:52:32 UTC
  – 87d86e4b3e Merge pull request #27588 from jfindlay/2015.8
  – f2eb20f26b add autogenerated 2015.8.1 release notes

• PR #27584: (jacobhammons) added changes list to 2015.8.1 release notes @ 2015-10-01 04:32:47 UTC
  – f7510babf33 Merge pull request #27584 from jacobhammons/release-notes
  – ee4a3b3549 added changes list for 2015.8.1

• ISSUE #27532: (centromere) salt-cloud does not recognize terminated instances (refs: #27575)

• PR #27575: (rallytime) Don't report existing instances as running only if they're actually terminated in EC2 @ 2015-09-30 22:17:24 UTC
  – 1a31b19f15 Merge pull request #27575 from rallytime/fix-27532
  – 57c6535fc2 Make sure message is the most accurate. Instance may be stopped or shutting down.
  – da6b4b36d4 Don't report existing instances as running only if they're actually terminated

• ISSUE #27290: (pirogoeth) Grains set in minion_opts do not appear in a call to grains.items. (refs: #27573)

• PR #27573: (basepi) [2015.8] Use the custom yaml serializer for minion_opts for salt-ssh @ 2015-09-30 21:16:22 UTC
  – bee78a4e5c Merge pull request #27573 from basepi/salt-ssh.grains.minion_opts.27290
  – 0785438b37 Use the custom yaml serializer for minion_opts for salt-ssh

• ISSUE #27326: (ralphvanetten) Signing the X509 CA certificate does not work on Debian 8 (refs: #27514)

• PR #27514: (clinta) Recent Versions of OpenSSL don't allow importing incomplete PEMs @ 2015-09-30 19:33:12 UTC
  – a4a53ecff5 Merge pull request #27514 from clinta/2015.8-27326
  – 515e62bfa7 change "None" to empty string
  – 2988f2416f fix 27326 and fix minor errors in docs.

• PR #27564: (jacobhammons) Man pages @ 2015-09-30 19:29:37 UTC
  – 6cf0228adc Merge pull request #27564 from jacobhammons/man-pages
  – cc37dc1087 updated version in salt.7
  – a9dbb2a313 regenerated man pages for 2015.8.1

• ISSUE #26629: (efficks) Windows minion: Remove powershell dependencies (refs: #27522)

• PR #27522: (twangboy) Removed dependency on powershell to restart salt-minion @ 2015-09-30 16:19:29 UTC
- fd11e0cd95 Merge pull request #27522 from twangboy/fix_26629
- 163c54505d Fixed tests... hopefully
- dc8c01ed07 Fixed some lint
- 2cbf0f1269e Removed dependency on powershell to restart salt-minion

**PR #27550:** ([rallytime]) [2015.8] Clean up salt-cloud logging and make it more useful @ 2015-09-30 15:48:53 UTC
- eb76531e96 Merge pull request #27550 from rallytime/cloud-logging
- 9e0fcd543 Don't commit private-ip changes from testing another bug...
- 78c85fbb31 Add unit tests for new recursive function
- d9a2dc6bc5 [2015.8] Clean up salt-cloud logging and make it more useful

**ISSUE #27281:** ([lrhazi]) Wrong path for yum repo in installation-rhel-repo (refs: #27517)

**ISSUE #27179:** ([samhamilton]) Debian Install Instructions Shows Two Different Repos (refs: #27517)

**PR #27517:** ([jacobhammons]) Updated install docs @ 2015-09-30 15:19:51 UTC
- 1f7ea7c764 Merge pull request #27517 from jacobhammons/install-docs
- 167fd2304e Fixed a duplicated link ID
- c05fa71f91 Updated install docs Refs #27281 Refs #27179

**PR #27526:** ([eliasp]) Add missing newlines before param listing to fix doc rendering @ 2015-09-30 15:19:04 UTC
- 2a4c11ae24 Merge pull request #27526 from eliasp/2015.8-modules.slack_notify-doc-params
- 204e669f3f Add missing newlines before param listing to fix doc rendering

**PR #27525:** ([basepi]) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-09-30 03:38:22 UTC
- e5de9409c2 Merge pull request #27525 from basepi/merge-forward-2015.8
- 1f3eb1c526 Remove useless mocked unit test
- 73b90f155e Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
  * 6d773f66c3 Merge pull request #27516 from basepi/merge-forward-2015.5
    * a0895f0f8a Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
    * 5262f01325 Merge pull request #27335 from rallytime/cloud-logging-7
    * adeb1dca4 Pylint Fix
    * 588c13783c Salt-cloud logging clean up for windows functions
    * 96000013c [2014.7] Fixup salt-cloud logging
  * 68d784c3dd Merge pull request #27472 from cachedout/fix_27447
    * 5e745ad6da Change recommended schema for data field in mysql event table
  * ee6e0ed057 Merge pull request #27468 from cachedout/fix_27351
    * 0bc37c0d41 Fix test
    * 9a19f720de fix sysctl truncating newline on os x
  * a214c7f84e Merge pull request #27479 from aboe76/fixed_locale_suse
    * a8f2dad1be fix locale on opensuse and suse #27438
  * 931f593b51 Merge pull request #27483 from rallytime/fix-17103
- 441241eb90 Change `sync_outputters` to `sync_output` for consistency, but alias `sync_outputters`
  - 105528720b Outputters should sync to output, not outputters, on the minion.

* 9c2c028953 Merge pull request #27484 from rallytime/bp-27434-and-27470
  - 5de2ee35ab Minor doc fixup.
  - af656c7e87 Doc: copy key to server via ssh-copy-id

* 927874d316 Merge pull request #27469 from twangboy/fix_27433
  - a996ea46e2 Added quotes to version numbers example

* 38a53403f Merge pull request #27467 from cachedout/lint_27375
  - 4e54a98f5e Lint #27375
  - 278ade52d2 file.managed: check contents_[pillar|grain] result

* ed6207a438 Merge pull request #27419 from rallytime/fix-9856
  - 551396564a Ammend error log to include multiple tips for troubleshooting.

* 73fa89edf7 Merge pull request #27426 from rallytime/fix-16753
  - f6cb81e66 Don’t stacktrace if there are conflicting id errors in highstate

* 5dd1b70475 Merge pull request #27408 from rallytime/fix-27406-for-2015.5
  - 39a4ae5a6c Remove hdd: 19 refs from SL docs - no longer available from SoftLayer.
  - de2f923ad3 Use correct default for bandwith
  - 42d8127f79 Don’t set the optional_products default to a boolean, and then try to loop.
  - 9d8a3d8303 Fix avail_locations function for the softlayer_hw driver in 2015.5

* 8f9a3cfbab Merge pull request #27410 from jacobhammons/doc-updates
  - a9fdecada1 Fix css layoutRefs #27389 sample typo fix in linux_acl additional module folders listed in dynamic-modules

* 3746085587 Merge pull request #27336 from rallytime/cloud-logging-five
  - 7954b3b6e6b [2015.5] Fixup salt-cloud logging

* 5a3be10a3e Merge pull request #27358 from lorengordon/escape-search-replacement-text
  - 88bb1fbff Escape search replacement text, fixes #27356

* 6759f79dded Merge pull request #27345 from rallytime/docs-for-19236
  - 1d3925bfbfb Added version tag for ex_disk_type option
  - f23369300c Allow use of rst header links by separating options out from yaml example

* c2efb291e2 Merge pull request #26903 from bersace/fix-defaults-modules
  - 474d7af95fixup! Review defaults loading
  - 36141d226efixup! Review defaults loading
  - 62b6495358fixup! Review defaults loading
  - cf0624e8bf8fixup! Review defaults loading
  - 2c58b9b77fixup! Review defaults loading
  - 82c5b1d8fdf Review defaults loading
2746 Chapter 30. Release Notes

- a372466922 Merge pull request #27317 from efficks/fix27316
  - bf216c101e State unzip should use unzip command instead of unzip_cmd. Issue #27316
- bd3771e80f Merge pull request #27309 from rallytime/fix-15514
  - 9383d91ff8 Change a value list to a comma-separated string in boto_route53.present
- b5fe944875 Merge pull request #27311 from jfindlay/maxoc
  - 8ec2e921bd discuss replacement occurrences in file doc

- PR #27513: (terminalmage) Fix integration tests for worktree addition in git >= 2.6 @ 2015-09-29 18:39:19 UTC
  - 0e37fb3bd3 Merge pull request #27513 from terminalmage/fixed-worktree-tests
  - 519bdd6438 Fix integration tests for worktree addition in git >= 2.6

- PR #27510: (rallytime) Merge #27475 with test fixes @ 2015-09-29 18:34:32 UTC
  - PR #27475: (ryan-lane) Use __states__ for calls to other boto states (refs: #27510)
  - e974a3c8aa Merge pull request #27510 from rallytime/ryan-lane-test-fix
  - cae2c4715 Syntax fix
  - 458547ba03 Fix test failures for boto __state__ changes
  - 5e25454fc1 Followups for using __states__
  - a01f8ac62e Use __states__ for calls to other boto states

- ISSUE #27265: (Arabus) State: dockerng.running; creation hostconfig replaced with runtime hostconfig when using runtime options (refs: #27451)

- PR #27451: (ticosax) [dockerng] Enforce usage of host_config and require docker-py>=1.4.0 @ 2015-09-29 15:51:28 UTC
  - d85b0cb69 Merge pull request #27451 from ticosax/dockerng-host-config-support
  - b184fa55b Enforce usage of host_config and require docker-py>=1.4.0

- PR #27461: (cachedout) Only clean context if it exists @ 2015-09-29 15:49:52 UTC
  - e8f58a6a3f Merge pull request #27461 from cachedout/clean_context_ioloop
  - 7367a432b Only clean context if it exists

- ISSUE #27220: (TheBigBear) [ERROR ] Exception 'close_fds is not supported on Windows platforms if you redirect stdin/stdout/stderr' (refs: #27473)

- PR #27473: (terminalmage) salt.utils.gitfs: Don’t use close_fds=True on Windows @ 2015-09-29 15:34:03 UTC
  - 25a30a5621 Merge pull request #27473 from terminalmage/issue27220
  - fa70ef2e31 salt.utils.gitfs: Don’t use close_fds=True on Windows

- PR #27496: (blueeyed) Fix version reporting of gitpython @ 2015-09-29 15:31:48 UTC
  - 3807c5dc4e Merge pull request #27496 from blueeyed/fixed-gitpython-version
  - d8969363c8 Fix version reporting of gitpython

- PR #27502: (ticosax) Add test to check we don’t call inspect_image on absent images. @ 2015-09-29 15:15:09 UTC
  - PR #25162: (ticosax) [dockerng] Do not call inspect_image if we know the image is not downloaded (refs: #27502)
  - 057fd0729d Merge pull request #27502 from ticosax/backport-test-from-develop
- fadd9bd43e Add test to check we don’t call inspect_image on absent images.

- **PR #27497**: (blueyed) dockerng: fix image_present for forced, non-existent image @ 2015-09-29 13:49:46 UTC
  - f3da6e4bb3 Merge pull request #27497 from blueyed/dockerng-fix-404-private-forced
  - e3c66cea3a dockerng: fix image_present for forced, non-existent image

- **ISSUE #27205**: (msummers42) In git.config_set state CommandExecutionError occurs when global=True when using salt 2015.8.0 (refs: #27411)

- **PR #27411**: (terminalmage) Fix invocation of git.config_get and git.config_set @ 2015-09-28 22:53:01 UTC
  - 284984e6ba Merge pull request #27411 from terminalmage/issue27205
  - c3a17ae992 add missing commas
  - f2751ef7c4 Fix shadowed outer-scope attributes
  - 81a6c27010 Fix invocation of git.config_get and git.config_set

- **ISSUE #27217**: (nasenbaer13) Gitfs cleans up wrong directories (refs: #27218, #27477, #27276, #27382)

- **PR #27477**: (terminalmage) Don’t append role to hash_cachedir @ 2015-09-28 22:26:34 UTC
  - cbcb5475b6 Merge pull request #27477 from terminalmage/issue27217
  - c185e99970 Second attempt to fix #27217

- **PR #27474**: (whiteinge) Add fake pymongo version attribute for the docs @ 2015-09-28 21:49:25 UTC
  - 2f71833260 Merge pull request #27474 from whiteinge/docs-pymongo-fix
  - 64b54e668a Add fake pymongo version attribute for the docs

- **PR #27466**: (blueyed) Fix version reporting of python-gnupg and mysql-python @ 2015-09-28 20:25:01 UTC
  - 9202f956f3 Merge pull request #27466 from blueyed/fix-gnupg-version
  - 9c1454fe59 Fix version reporting of mysql-python
  - 437fb4407e Fix version reporting of python-gnupg

- **PR #27465**: (ticosax) Fix usage of dockerng "cmd" was #27459 @ 2015-09-28 19:27:41 UTC
  - PR #27459: (terminalmage) Fix usage of dockerng "cmd" (refs: #27465)
  - PR #27444: (ticosax) docker-py expect only command argument not cmd (refs: #27459)
  - PR #27331: (terminalmage) dockerng: Allow both cmd and command to be used to specify command (refs: #27459, #27444)
  - 6d8e9af297 Merge pull request #27465 from ticosax/fixed-dockerng-cmd
  - a1ed6ca56 Skip test if docker-py is not installed
  - 6f7769aa94 Correct log messages/docstrings
  - cc8471bd1b dockerpy expect only command argument not cmd

- **ISSUE #27409**: (pcn) 2015.8.0 API (cherrypy) fails to lookup job id via pepper (refs: #27417)

- **ISSUE #25107**: (whiteinge) Regression in RunnerClient argument handling (refs: #25243)

- **PR #27417**: (whiteinge) Backport #25243 into 2015.8 @ 2015-09-28 19:15:53 UTC
  - PR #25243: (DmitryKuzmenko) Runnerclient regression fix (refs: #27417)
  - aefe6d794a Merge pull request #27417 from whiteinge/bp-25243
  - 53e7a6b7c5 RunnerClient support old style commands with kwargs on top level.
• PR #27423: (dmurphy18) Changes to support configurable repository for Debian / Ubuntu @ 2015-09-28 17:34:22 UTC
  - a07411a4d9 Merge pull request #27423 from dmurphy18/dgm_envfix
  - 63407f2da9 Changes to support configurable repository for Debian / Ubuntu

• ISSUE #26689: (double-yaya) Salt - SSH using machine IP to execute commands, without having to write a roster file (refs: #27398)

• PR #27428: (rallytime) Back-port #27398 to 2015.8 @ 2015-09-28 15:03:16 UTC
  - PR #27398: (flowhamster) Allow cloud roster to use sudo (refs: #27428)
  - d4d96bb3fc Merge pull request #27428 from rallytime/bp-27398
  - 6969326ae2 doc: added documentation to cloud roster and fixed whitespace
  - b4334649d5 Allow cloud roster to use sudo

• PR #27429: (rallytime) Back-port #27344 to 2015.8 @ 2015-09-28 15:01:20 UTC
  - PR #27344: (rhealitycheck) Mongo returners patch 1 (refs: #27429)
  - 668c69hd7e Merge pull request #27429 from rallytime/bp-27344
  - e39a57afe1 Update mongo_return.py
  - f796c9a448 Update mongo_return.py
  - 30d07cb27 Update mongo_return.py
  - 44ef4b48f8 Update mongo_future_return.py
  - 34b160b841 Update mongo_return.py
  - b2b5623da3 Update mongo_future_return.py
  - 079a8b95b Update mongo_return.py
  - b7ddc83b4d Update mongo_future_return.py
  - 50b3f2690 Update mongo_return.py
  - 405edd0718 Update mongo_future_return.py
  - 5c753a5ff Update mongo_return.py
  - 06e95bea7 Update mongo_future_return.py

• PR #27450: (ticsax) [dockerng] Fix typo in docstring @ 2015-09-28 14:27:35 UTC
  - c639931340 Merge pull request #27450 from ticsax/fixed-typo
  - 9ce062de67 Fix typo in docstring

• PR #27430: (jacksontj) Fix bug introduced in eee0291ff8b65ff1e22f4dc2447a74aa28a3ce7f @ 2015-09-26 01:09:40 UTC
  - 333c305ba0 Merge pull request #27430 from jacksontj/2015.8
  - d2aff12f8f Fix bug introduced in eee0291ff8b65ff1e22f4dc2447a74aa28a3ce7f

• PR #27418: (terminalmage) Don’t always remove dest path in salt.utils.files.rename() @ 2015-09-25 23:09:59 UTC
  - 1f4ca089a2 Merge pull request #27418 from terminalmage/file-rename
- 7bc0949d48 Don't always remove dest path in salt.utils.files.rename()

- **ISSUE #27032**: (lorenegordon) Windows Installer: Please be more kind to existing configurations (refs: #27383)

- **PR #27383**: (twangboy) Uninstaller only removes specific files and dirs @ 2015-09-25 22:47:24 UTC
  - ec5fa1829 Merge pull request #27383 from twangboy/fix_27032
  - 63a7305ae9 Uninstaller only removes specific files and dirs

- **PR #27416**: (rallytime) Back-port #27399 to 2015.8 @ 2015-09-25 22:39:07 UTC
  - **PR #27399**: (multani) Various documentation fixes (refs: #27416)
  - 9ab3c6dc5d Merge pull request #27416 from rallytime/bp-27399
  - 1d848118c9 doc: fixed indentation in salt.renderers.jinja's documentation
  - f5d053a033 doc: fixed indentation in salt.modules.consul's documentation
  - 06beea6b2f doc: fix etcd state documentation typos
  - 97e69ebb97 doc: fix state's top documentation typo
  - b411730d60 doc: fix documentation formatting for state blockdev
  - ce91bb9446 doc: fix formatting in state boto_elb
  - c69229875e doc: fix links in Docker state documentation
  - 15b751d6e2 doc: Docker state use ports and not port_bindings anymore
  - 880b6e0944 doc: fix link to docker-py documentation
  - 33db0c27f8 doc: fix RAET links
  - e69ba2f943 doc: fix rendering of salt.states.hipchat

- **ISSUE #27093**: (TheBigBear) 2015.8.0 winrepo downloader corrupts some installers (refs: #27394, #27163)

- **PR #27394**: (jacksontj) Remove streamed response for fileclient to avoid HTTP redirection problems @ 2015-09-25 21:55:31 UTC
  - **PR #27163**: (terminalmage) Workaround upstream tornado bug affecting redirects (refs: #27394)
  - 9842d9728b Merge pull request #27394 from jacksontj/2015.8
  - 01132c305c Re-add files.rename call instead of os.rename
  - acf2d51440 Remove streamed response for fileclient to avoid HTTP redirection problems
  - a6ecf35125 Revert "Remove unused import"
  - 66c73a3996 Revert "Workaround upstream tornado bug affecting redirects"

- **PR #27415**: (ryan-lane) Backwards compat fixes for pecl module @ 2015-09-25 19:40:55 UTC
  - 44b246bf93 Merge pull request #27415 from lyft/fix-pecl
  - 8be8ef585c Backwards compat fixes for pecl module

- **PR #27407**: (meggiebot) Adding stretch label definition @ 2015-09-25 18:10:46 UTC
  - d76a77e911 Merge pull request #27407 from saltstack/meggiebot-patch-1
  - 1c779700f6 Adding stretch label definition

- **ISSUE #27209**: (justinta) Provider overrides appear to be broken (refs: #27388)

- **PR #27388**: (basepi) [2015.8] Fix global provider overrides @ 2015-09-25 16:49:03 UTC
- db6acfd832 Merge pull request #27388 from basepi/provider.overrides.27209
- d87147e14b Don't use ret.items(), forces load of all modules
- a5ee33a9ad pack __salt__ before loading provider overrides

• ISSUE #27354: (gravyboat) salt-ssh roster docs should note the requiretty option (refs: #27386)

• PR #27386: (rallytime) Document tty: True usage in salt-ssh roster file @ 2015-09-25 15:44:12 UTC
  - b72e0b1133 Merge pull request #27386 from rallytime/fix-27354
  - 08c04da48b Document tty: True usage in salt-ssh roster file

• PR #27380: (justinta) Skipping Async tests @ 2015-09-25 15:13:04 UTC
  - 51e765078a Merge pull request #27380 from jtand/async_tests
  - fddeded99 Skipping Async tests

• ISSUE #27217: (nasenbaer13) Gitfs cleans up wrong directories (refs: #27218, #27477, #27276, #27382)

• PR #27382: (terminalmage) Revert "fixes #27217 clear_old_remotes clears wrong directory (gitfs)" @ 2015-09-24 22:54:23 UTC
  - 63a5f6517 Merge pull request #27382 from terminalmage/revert-27218
  - 2379748f9e Revert "fixes #27217 clear_old_remotes clears wrong directory (gitfs)"

• PR #27361: (cro) Correct some issues with proxy minions @ 2015-09-24 16:03:38 UTC
  - 12a021da11 Merge pull request #27361 from cro/pxm_doc
  - 1a2c41ce9e Add versionadded.
  - 93a6397598 func_alias should be list_ and should have a corresponding list_fn.
  - 0221f7ee4e Pylint
  - 3a297d8036 Add release notes for proxy fixes.
  - 39df44b841 Pylint
  - e3efb99f6e Fix some problems with the rest_sample, remove unnecessary file and make sure that rest_service has the right contents.
  - 4944fe68a Fix typo in docs

• PR #27364: (ruzarowski) SaltCloud[EC2] Fix missing credentials in modify_eni_properties api call @ 2015-09-24 13:55:39 UTC
  - cff74510de Merge pull request #27364 from ruzarowski/2015.8-modify-eni-properties-api-call
  - 100ee46d5 Issue #27121 - Remove leftover code comment
  - c887a00f3 Issue #27121 - Attempt to fix missing credentials when modifying eni properties
  - 5d292a221e Merge remote-tracking branch 'upstream/2015.8' into 2015.8
  - 6d939ee30 Merge remote-tracking branch 'upstream/2015.8' into 2015.8

• PR #27349: (jfindlay) add freebsd install docs to release notes @ 2015-09-24 13:51:02 UTC
  - 928e59a8a Merge pull request #27349 from jfindlay/doc_typo
  - e509cfca17 fix typo in 2015.8.0 pull list
  - 7137e731d3 add FreeBSD documentation to 2015.8.0 notes

• ISSUE #26889: (UtahDave) salt-call w/non root user outputs repeating error (refs: #27343)
• PR #27343: (cachedout) Close io loop before deleting attribute @ 2015-09-24 13:49:55 UTC
  - 331230ea4f Merge pull request #27343 from cachedout/issue_26889
  - 2b648e51af Close io loop before deleting attribute

• PR #27337: (rallytime) [2015.8] Fixup salt-cloud logging @ 2015-09-24 13:49:17 UTC
  - cd82ead005 Merge pull request #27337 from rallytime/cloud-logging-eight
  - ed1838108 Merge pull request #7 from jtand/cloud-logging-eight
    - a6c1d0b408 Fixed a bug where logging_command wasn't set as a key in a couple spots
    - 8bb7cb7ff4 Use correct indexes
    - c3483002b0 [2015.8] Fixup salt-cloud logging

• PR #27332: (terminalmage) Adjust dockerng/dockerio docstrings @ 2015-09-24 13:45:34 UTC
  - b2f8418fffc Merge pull request #27332 from terminalmage/adjust-dockerng-docstring
  - bdbf6d8e5c Add deprecation notice to dockerio state module
  - 17829ab38d Fix name of dockerng module in dockerio docstring
  - ed5ae75180 Adjust dockerng docstrings

• PR #27353: (cachedout) Fix case where var not set in config @ 2015-09-23 21:45:32 UTC
  - ac9ec2532 Merge pull request #27353 from cachedout/fix_retry_get
  - ea286e1874 Fix case where var not set in config

• ISSUE #21390: (fyatzeck) Having trouble with GCE cloud profile assigning static IP and enabling IP forward (refs: #27350)
• PR #27350: (rallytime) Allow IP-forwarding in GCE driver @ 2015-09-23 21:36:41 UTC
  - 3f6b60116f Merge pull request #27350 from rallytime/fix-21390
  - 2bf566d93d Allow IP-forwarding in GCE driver
  - 484015a7a3 Added version tag for ex_disk_type option
  - a71eb97b2 Allow use of rst header links by separating options out from yaml example

• ISSUE #27103: (twangboy) Salt-Minion doesn't display logs for new processes with multiprocessing on (refs: #27305)
• PR #27305: (cachedout) Re-init logging system on Windows when using multiprocessing @ 2015-09-23 15:32:32 UTC
  - 6f3da863fc Merge pull request #27305 from cachedout/issue_27103
  - 7a7492d186 Fix typo
  - 22c653482c Re-init logging system on Windows when using multiprocessing

• PR #27331: (terminalmage) dockerng: Allow both cmd and command to be used to specify command (refs: #27459, #27444) @ 2015-09-23 15:27:43 UTC
  - 684e33ae82 Merge pull request #27331 from terminalmage/dockerng-cmd
  - 7d4eaac8ae dockerng: Allow both cmd and command to be used to specify command

• PR #27327: (isbm) Fix a typo in the RPM output @ 2015-09-23 14:27:42 UTC
  - a3f4fa1106 Merge pull request #27327 from isbm/isbm-pkg-info-typofix
- 7912f8c13b Fix typo

- **PR #27312:** ([basepi](https://github.com/saltstack/salt)) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-09-22 22:52:14 UTC
  - a789303d75 Merge pull request #27312 from basepi/merge-forward-2015.8
  - 647080d064 Add missing import
  - 95e70f0bef Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
  - ca4597b93a Merge pull request #27310 from basepi/merge-forward-2015.5
    - 7b75e4aed1 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
    - e90412d3b8 Merge pull request #27252 from jfindlay/version.2014.7
      - 3d28307a00 2014.7 -> 2014.7.0
  - 982c21c79f Merge pull request #27308 from terminalmage/fix-refresh_db-regression
    - 77686b7ce Fix refresh_db regression in yumpkg.py
  - 775a4f9ad0 Merge pull request #27286 from terminalmage/return_retry_timer
    - 540a7dfc1f Add default values for new minion config options
    - 453b883820 Add a configurable timer for minion return retries
  - 02482c0572 Merge pull request #27278 from rallytime/bp-27256
    - 1bedf6311 Fix error handling in salt.modules.file.statvfs
  - e36c019c37 Merge pull request #27277 from rallytime/bp-27230
    - 3ce77db1bc Fix typo in AWS doc config
  - b22286476e Merge pull request #27253 from jfindlay/version.2015.5
    - 967e3bb72a 2015.5 -> 2015.5.0
  - 51a0193b54 Merge pull request #27244 from garethgreenaway/ec2_create_snapshot_no_return_data_exception
    - 820fd576b9 Fixing the cause when the r_data from aws.query is empty and an exception happens when looking for the snapshotID
  - 26540f15bc Merge pull request #27231 from jfindlay/cronchange
    - 1e335297e2 only write cron file if it is changed

- **PR #27303:** ([jacobhammons](https://github.com/saltstack/salt)) Updated module doc index using [https://github.com/saltstack/salt/pull/27303](https://github.com/saltstack/salt/pull/27303) @ 2015-09-22 19:29:04 UTC
  - c3b690273b Merge pull request #27303 from jacobhammons/ref-updates
  - 7ac98a03b6 Updated module doc index using [https://github.com/saltstack/salt/pull/27203](https://github.com/saltstack/salt/pull/27203)

- **ISSUE #27081:** ([TheBigBear](https://github.com/saltstack/salt)) winrepo - SSLError: [Errno 1] _ssl.c:510: error:14090086:SSL routines:SSL3_GET_SERVER_CERTIFICATE:certificate verify failed (refs: #27301)

- **PR #27301:** ([twangboy](https://github.com/saltstack/salt)) Pass ca_bundle for windows (fixes SSL Error) @ 2015-09-22 19:00:45 UTC
  - aaa2db9943 Merge pull request #27301 from twangboy/fix_27081
  - 5c4f58944 Changed windows gate to check for verify_ssl option
  - e2fe5a60b5 Pass ca_bundle for windows (fixes SSL Error)

- **PR #27300:** ([rallytime](https://github.com/saltstack/salt)) Back-port #27287 to 2015.8 @ 2015-09-22 16:59:07 UTC
  - PR #27287: ([rhealitycheck](https://github.com/saltstack/salt)) Mongo returners patch 1 (refs: #27300)
- 55f4050146 Merge pull request #27300 from rallytime/bp-27287
- e49a6dc449 Update mongo_return.py
- 63153322b9 Update mongo_future_return.py

**PR #27288:** (rallytime) Filter on 'name', not 'id', when listing images @ 2015-09-21 22:37:26 UTC
- d96462af48 Merge pull request #27288 from rallytime/do-cleanup
- 6e16fad760 Use name in all places, not id.
- 9b34542cb0 Filter on 'name', not 'id', when listing images

**PR #27283:** (justinta) __grains__['osrelease'] returns a string @ 2015-09-21 19:18:44 UTC
- 688f24e9e4 Merge pull request #27283 from jtand/yumpkg_yum_fix
- b73f5289b4 __grains__['osrelease'] returns a string. Cast to int for correct comparison

**ISSUE #27217:** (nasenbaer13) Gitfs cleans up wrong directories (refs: #27218, #27477, #27276, #27382)

**PR #27276:** (rallytime) Back-port #27218 to 2015.8 @ 2015-09-21 19:05:54 UTC
- PR #27218: (nasenbaer13) fixes #27217 clear_old_remotes clears wrong directory (gitfs) (refs: #27276)
- 78d44a5c74 Merge pull request #27276 from rallytime/bp-27218
- 8c0991d527 fixes #27217 clear_old_remotes clears wrong directory (gitfs)

**ISSUE #27217:** (nasenbaer13) Gitfs cleans up wrong directories (refs: #27218, #27477, #27276, #27382)

- 78d44a5c74 Merge pull request #27276 from rallytime/bp-27218
- 8c0991d527 fixes #27217 clear_old_remotes clears wrong directory (gitfs)

**PR #27275:** (rallytime) Back-port #27213 to 2015.8 @ 2015-09-21 19:05:18 UTC
- PR #27213: (macgyver13) Make get_event compatible with salt/client (refs: #27275)
- d5ce81e8e7 Merge pull request #27275 from rallytime/bp-27213
- 5d4c90c479 Make get_event compatible with salt/client

**ISSUE #27217:** (nasenbaer13) Gitfs cleans up wrong directories (refs: #27218, #27477, #27276, #27382)

**PR #27274:** (rallytime) Back-port #27272 to 2015.8 @ 2015-09-21 18:54:48 UTC
- PR #27272: (techhat) Make sure list_nodes_full contains a name attribute (refs: #27274)
- 2be21d6451 Merge pull request #27274 from rallytime/bp-27272
- f3ea3259a5 Make sure list_nodes_full contains a name attribute

**PR #27271:** (isbm) Bugfix: crash on token authentication via API @ 2015-09-21 15:53:09 UTC
- c0943dd4d1 Merge pull request #27271 from isbm/isbm-bufix-27270
- fc524c17b9 Reduce the criteria that would match empty iterables as well as None or False values
- 3152a78b5 Fix the crash on token auth via API (http://git.io/vn4tx)

**ISSUE #19947:** (gcuzczy) Unable to supply provisioning script to softlayer create() (refs: #27251)

**PR #27251:** (rallytime) Add support for post_uri in SoftLayer cloud drivers @ 2015-09-21 15:43:16 UTC
- b11ce6ac2a Merge pull request #27251 from rallytime/fixed-19947
- aabf77680b Add support for post_uri in SoftLayer cloud drivers

**ISSUE #21879:** (bechtoldt) Reference pages in documentation are outdated again (refs: #27260, #25019, #21880)

**ISSUE #19262:** (bechtoldt) salt.pillar.file_tree doesn't appear in the documentation (refs: #27260, #25019)

**PR #27260:** (bechtoldt) add missing module doc references @ 2015-09-21 05:48:38 UTC
- PR #25019: (bechtoldt) add missing module documentation to references (refs: #27260)
- PR #24421: (bechtoldt) add missing module documentation (refs: #27260, #25019)
- **PR #21880**: (bechtoldt) update references, fixes #21879 (refs: #27260, #25019)
- **PR #20039**: (bechtoldt) completing some doc references (refs: #27260, #25019)
- de6e5abe6c Merge pull request #27260 from bechtoldt/missing_refs
- 3a7d31a91c add missing module references
- **PR #27254**: (jfjfindlay) 2015.2,2015.8,Beryllium --> 2015.8.0 @ 2015-09-18 23:44:46 UTC
  - 1a32b9f778 Merge pull request #27254 from jfjfindlay/version.2015.8
  - 8ea15f498e 2015.2,2015.8,Beryllium --> 2015.8.0
- **ISSUE #25079**: (jondonas) Salt-cloud does not check for duplicate ssh keys when using provider such as DigitalOcean (refs: #27245)
- **PR #27245**: (rallytime) If two ssh keynames are found in DigitalOcean, abort and warn the user. @ 2015-09-18 21:42:36 UTC
  - f3a847823b Merge pull request #27245 from rallytime/fix-25079
  - 4b0f7cece1d If two ssh keynames are found in DigitalOcean, abort.
- **ISSUE #27065**: (loregordon) 2015.8.0: yumpkg reporting "Unexpected osrelease grain '6.7'" (refs: #27241)
- **PR #27241**: (jfjfindlay) osrelease is only an integer for fedora @ 2015-09-18 21:40:50 UTC
  - e4a5b004ae Merge pull request #27241 from jfjfindlay/yumwarn
  - 1f7570250f osrelease is only an integer for fedora
- **PR #27234**: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-09-18 20:41:38 UTC
  - f8e71f69c7 Merge pull request #27234 from basepi/merge-forward-2015.8
  - be2b0fc497 Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
    * 579f375f74 Merge pull request #27233 from basepi/release.notes.stubs
      - f4563e9b7 Add stub release notes for 2015.5.6
    * f5a322e3f2 Merge pull request #27208 from basepi/nop.state.25423
      - 9414b05b2c Add test.nop example
      - a84ce67b8f Add test.nop state
    * 59a07cae68 Merge pull request #27201 from jfjfindlay/sshash
      - 1b620b77cd rename hash_host arg to hash_known_hosts
      - 12f14ae37c update hash_known_hosts docs in ssh module
    * 560545c4e5 Merge pull request #27214 from jacksontj/2015.5
      - e7526dbf04 Correctly support https, port 443 is not a requirement
    * 7a34c7742d Merge pull request #27172 from rallytime/bp-27150
      - 0d7ee4b209 Merge config values from master.d/minion.d conf files
- **PR #27240**: (isbm) Backport of the fix of 'pkg.info*' for Beryllium @ 2015-09-18 20:02:15 UTC
  - 2d6c75cab7 Merge pull request #27240 from isbm/isbm-pkg.info-tz-bugfix-backport-2015.8
  - 19a361851a Return install date only if possible.
  - ff857bc8aa Return RPM package time in UTC timezone
  - eaa0f370bf Remove time fraction and return ISO in UTC
- ce9570f6c6 Return UTC timestamp for modification of path.

- **ISSUE #27222**: (pprkut) Support firewalld zone configuration in network.managed state for rh7 systems (refs: #27223)

- **PR #27223**: (pprkut) Support firewalld per interface zone config on rh7 systems @ 2015-09-18 19:44:45 UTC
  
  - 80a45b74ed Merge pull request #27223 from M2Mobi/zone
  
  - 48023669e7 Support permanent per interface firewalld zone configuration on rh7 systems.

- **PR #27239**: (bechtoldt) test #27238 prevent keyerror when partition doesn’t exist (refs: #27238)

- **PR #27238**: (bechtoldt) salt.modules.disk.percent() throws KeyError when partition doesn’t exist (refs: #27239) @ 2015-09-18 19:44:45 UTC
  
  - 652b2998af Merge pull request #27238 from bechtoldt/fix_disk_percent_keyerror
  
  - 0511f611bb prevent KeyError by checking whether partition even exists

- **PR #27232**: (basepi) [2015.8] Add stub release notes for 2015.8.1 @ 2015-09-18 19:37:00 UTC
  
  - 253ac5e0c3 Merge pull request #27232 from basepi/release_notes.stubs
  
  - 25410706ee Add stub release notes for 2015.8.1

- **ISSUE #24573**: (bailsman) cloud.profile RuntimeWarning: dictionary changed size during iteration (refs: #27199)

- **PR #27199**: (rallytime) Avoid RunTimeWarning (dictionary changed size during iteration) with keys() @ 2015-09-18 15:44:27 UTC
  
  - c542cd49d0 Merge pull request #27199 from rallytime/fix-24573
  
  - 6b2a00e947 Avoid RunTimeWarning (dictionary changed size during iteration) with keys()

- **PR #27206**: (rallytime) Don’t repeat GCE setup instructions, and make the use of .json files clearer @ 2015-09-18 14:38:40 UTC
  
  - 6b79ad69a9 Merge pull request #27206 from rallytime/gce-doc-cleanup
  
  - cced6e9031 Don’t repeat GCE setup instructions, and make the use of .json files clearer

- **PR #27210**: (rallytime) Refactor some digital ocean functions @ 2015-09-18 14:38:01 UTC
  
  - 1d022eb5de Merge pull request #27210 from rallytime/do-clean-up
  
  - 808a5b3b81 Make sure we set the full data to the ret variable
  
  - 9b635004e2 Refactor some digital_ocean functions to help simplify the driver

- **PR #27197**: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-09-17 19:53:22 UTC
  
  - 8c204a45ab Merge pull request #27197 from basepi/merge-forward-2015.8
  
  - 2c2a5f85ac Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
    
    - e956d885df Merge pull request #27194 from rallytime/bp-27180
      
      - 327d343f6 file copy ret result True if no change in test mode
    
    - a02d043309 Merge pull request #27176 from basepi/merge-forward-2015.5
      
      - 66f4641be3 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
      
      - c186e51764 Merge pull request #27117 from jacobhammons/release-docs-2014.7
      
      - b69e11e0a4 made 2014.7 an archived release minor doc site updates
      
      - 69d758ee2b Merge pull request #27114 from cachedout/warn_on_insecure_log
507fb04683 Issue warning that some log levels may contain sensitive data
aa71bae8aa Merge pull request #27075 from twangboy/fix_password_2014.7
c0689e3215 Replaced password with redacted when displayed
* de2027426e Merge pull request #27170 from rallytime/gce-docs
  * a07db909bd Update Getting Started with GCE docs to use cloud.profiles or cloud.profiles.d examples
28cfd6d067 Merge pull request #27167 from rallytime/bp-27148
  * d12be52355 Pass filepointers to the serialize load functions.
4495f4f4d0 Merge pull request #27168 from techhat/gateimpacket
  * cc448f1d9c Add further gating of impacket library
* 3e5ef0dc30 Merge pull request #27166 from rallytime/fx-27100
  * 50f3a489a Allow a full-query for EC2, even if there are no profiles defined
* f1c9de7ed9 Merge pull request #27162 from rallytime/softlayer-service
  * d281068c70 Be explicit in using "SoftLayer" for service queries in SoftLayer drivers
59e97d8de Merge pull request #27149 from twangboy/fix_27133
  * 7992be20a Fixed some tests... hopefully...
  * d4c8e305f5 Fixed problem with add/remove path
* 097fd101 Merge pull request #27147 from rallytime/fx-11669
  * 55312ea03f Provide a more friendly error message.
  * 36555856c7 Enforce bounds in the GCE Regex
* f5c3f157dd Merge pull request #27128 from eguven/2015.5-fix-test-diff
  * ec2d68a84a don't show diff for test run if show_diff=False
* 0881dbb3e Merge pull request #27116 from jacobhammons/release-docs-2015.5
  * 6e323b6dd3 Update latest to 2015.8, 2015.5 is now previous Assorted style and minor updates
* 440855b182 Merge pull request #27033 from jfindlay/n0ne
  * 3334b9d548 fix comment and unit test for reg state
  * 39fa09d5ac update reg state unit tests
  * ebbf2b05ca Fixed reg state module for None, 0, and " values
* 35fc74132a Merge pull request #26942 from Arabus/fix-docker.run
  * e61e1de1f5 Fixes value typo for dockerio.loaded state
  * 39fa11b696 further linting
  * 4ae037397c Further Linting to quiet the linter
  * 7ef8ad070 Code Linting and cmd call fix
  * a51676e0eb Fixes #17088 olyif and unless should run on the host
  * d0c6128b8f Fixes #17088 retcode now returns True or False based on return status
  * 8b2e7cc4f5 Syntax clarification
- **PR #27195**: (jacobhammons) Fixed sphinx / latex build warnings and errors @ 2015-09-17 17:28:37 UTC
  - 430c48c5ea Merge pull request #27195 from jacobhammons/doc-build
  - fad87e34a2 Fixed lint errors
  - e56f02b025 re-add cheatsheet do-over
  - 60a330561 re-added cheatsheet.tex
  - f7a9e25d52 Fixed sphinx / latex build warnings and errors Added missing modules to contents

- **PR #27182**: (bernieke) fix restart_on_error @ 2015-09-17 17:24:01 UTC
  - 8f8e75c5ff Merge pull request #27182 from Awingu/2015.8
  - 693b81f7e1 fix restart_on_error #27127

- **ISSUE #27093**: (TheBigBear) 2015.8.0 winrepo downloader corrupts some installers (refs: #27394, #27163)

- **ISSUE #27163**: (terminalmage) Workaround upstream tornado bug affecting redirects (refs: #27394) @ 2015-09-17 16:09:01 UTC
  - 97d2a5fdde Merge pull request #27163 from terminalmage/issue27093
  - 80b396db73 Handle potential ValueError when checking content length
  - a89c987943 Remove unused import
  - 469e18f74c Workaround upstream tornado bug affecting redirects
  - f2a562ac60 Add salt.utils.files.rename() for cross-platform renaming

- **ISSUE #19954**: (gczuczy) Multiple disks on softlayer (refs: #27173)

- **PR #27177**: (rallytime) Remove note - incorrect info @ 2015-09-17 01:34:04 UTC
  - PR #27173: (rallytime) Add the ability to specify multiple disks on the SoftLayer driver (refs: #27177)
  - 65c59ec2ea Merge pull request #27177 from rallytime/fx-19954
  - 531b4243d Remove note - incorrect info

- **ISSUE #19954**: (gczuczy) Multiple disks on softlayer (refs: #27173)

- **PR #27173**: (rallytime) Add the ability to specify multiple disks on the SoftLayer driver (refs: #27177) @ 2015-09-17 00:32:57 UTC
  - cbb7e7f1a5 Merge pull request #27173 from rallytime/fx-19954
  - 45c6aabde9 DeviceID '1' is reserved for the SWAP disk; let's skip it.
  - 54e104c5fb Don't stacktrace if local_disk isn't set
  - fe74d203f5 Add the ability to specify multiple disks on the SoftLayer driver

- **ISSUE #22724**: (ty2u) digital_ocean_v2.py doesn't restore snapshot (refs: #26824)

- **PR #27164**: (rallytime) Make sure changes from #26824 to digital_ocean_v2.py driver make it to digital_ocean.py in 2015.8 @ 2015-09-16 18:55:17 UTC
  - PR #26824: (systembell) [salt-cloud] Fix creating droplet from snapshot in digital_ocean provider (refs: #27164)
  - 0e04588d58 Merge pull request #27164 from rallytime/add-26824-changes-to-2015.8
  - a44bd763dd Make sure changes from #26824 to digital_ocean_v2.py driver make it to digital_ocean.py in 2015.8

- **ISSUE #19853**: (ksalman) master needs a way to invalidate grains on the minion (refs: #27143)
• **PR #27143**: (cachedout) Clean grains cache on grains sync @ 2015-09-16 16:27:06 UTC
  - 38d93a96fe Merge pull request #27143 from cachedout/clean_grains_cache_on_sync
  - 0a669a9f80 Break apart long line
  - 6de2e2a50c Better error checking
  - 252f7c7ea9 Clean grains cache on grains sync

• **ISSUE #18582**: (mainframe) Allow merging file_roots and pillar_roots from different config files included from master.d (refs: #27150)

• **PR #27150**: (cachedout) Merge config values from master.d/minion.d conf files (refs: #27172) @ 2015-09-16 15:36:41 UTC
  - 626cb6e1ce Merge pull request #27150 from cachedout/issue_18582
  - 6351a9d08 Merge config values from master.d/minion.d conf files

• **ISSUE #27135**: (SEJeff) Regression in core grains in the latest version of salt (refs: #27137)

• **PR #27137**: (jfindlay) revert serial grain regression @ 2015-09-15 21:52:25 UTC
  - **PR #22267**: (The-Loeki) modify _hw core grains to use the new smbios module, add system uuid (refs: #27137)
  - 72fad569b0 Merge pull request #27137 from jfindlay/serial
  - 78c9687f0e revert serial grain regression

• **PR #27144**: (rallytime) Don’t stacktrace on softlayer_hw.show_all_prices if a code isn’t supplied @ 2015-09-15 21:52:09 UTC
  - 58b56b9d78 Merge pull request #27144 from rallytime/softlayer-fixes
  - 3963a5cf0f Don’t stacktrace on softlayer_hw.show_all_prices if a code isn’t supplied

• **PR #27139**: (jacobhammons) Updated key instruction on rhel7 @ 2015-09-15 16:06:14 UTC
  - b71de75c1c Merge pull request #27139 from jacobhammons/rhel-doc
  - 7ed9626f0e Updated key instruction on rhel7

• **PR #27134**: (isbm) Backport to 2015.8: "pkg.info" @ 2015-09-15 15:57:46 UTC
  - 0d8248930e Merge pull request #27134 from isbm/isbm-pkg.info-backport-2015.8
  - b60e6a37a7 Lintfix: E7801, C0321
  - cb470ec7e8 Add license extraction for Dpkg.
  - 38753fe8b2 Enhance filter for the "technical" fields that are not generally needed as a package information for the CMDB
  - ffe8f14dae Implement additional package information merger
  - 2aaf4c69d0 Fix the size and installed-size keys
  - 3f3c89435b Add homepage translator key
  - 25040c9c71 Docfix
  - 911bae1bae Add alias for ‘info’ of deprecation in v. Boron
  - 306958da0 Fix renamed method
  - 6ba269fbc6 Remove ‘N/A’ when no data.
  - 137eb75ca2 Rename existing ‘info’ to ‘info_available’
- 7b376fd5c3 Implement compatible 'info_installed'. Returned keys are common to other systems with other package managers
- ca7d0d5025 Implement compatible 'info_installed'. Returned keys are common to other systems with other package managers
- c1faebf0b5 Implement compatible 'info_installed'. Returned keys are common to other systems with other package managers
- f14f4036df Lint: regexp as a string
- cabeb63b81 Implement package info function
- 0668f1da53 Implement getting package installation time
- e03716e5b5 Implement getting general packages information
- 8737d690fe Extract package description
- a283d53737 Lintfix the regexp string
- fc9c95678 Convert time to ISO 8601
- 9fb9296276 Return a detailed information about package(s)

• PR #27119: (l2ol33rt) Boto dynamodb module should be using layer 2 abstractions @ 2015-09-15 14:09:57 UTC
    - 7f512852ef Merge pull request #27119 from l2ol33rt/boto_dynamo_module_fix
    - 46cc7ae8367 Boto dynamodb util should be using layer 2 abstractions

• PR #27092: (perfinion) salt/master: chdir to root not homedir @ 2015-09-15 14:09:24 UTC
    - 100e340111 Merge pull request #27092 from perfinion/chdir-fix-2015.8
    - 26a4d68855 salt/master: chdir to root not homedir

• PR #27131: (jacobhammons) Install docs @ 2015-09-15 12:34:38 UTC
    - 748355b5b5 Merge pull request #27131 from jacobhammons/install-docs
    - d1e8a9b6e added command to remove key from rhel6
    - 69d6af77b moved rhel5 commands to separate lines
    - 90431278ea Install instruction updates for rhel6 and debian

• PR #27124: (jfindlay) Backport #27123 @ 2015-09-15 08:37:43 UTC
    - PR #27123: (cedwards) update for freebsd installation documentation (refs: #27124)
    - fc8afcc9f9 Merge pull request #27124 from jfindlay/bp-27123
    - 016f85f6e Update freebsd.rst
    - 026fc9a884 update for freebsd installation documentation

• PR #27111: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-09-15 07:29:30 UTC
    - 06d62d3470c Merge pull request #27111 from basepi/merge-forward-2015.8
    - ab519b5ffff Remove heavily-mocked unit tests
    - 27e4d64a85b Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
        * 59f2a0c7ae Merge pull request #26977 from abh/2015.5-ntppeer
            * df3d6e817f Add support for PEERNTP network interface configuration on RH derived systems
Chapter 30. Release Notes

- e05b1f3951 Merge pull request #27023 from jfindlay/htwebutilpass
  - 9f3d7890a6 add test support for htpasswd state mod
- 9f99c0027 Merge pull request #27074 from twangboy/fix_password_2015.5
  - fdd3557456 Replaced password with redacted when displayed
- 46b44f85ed Merge pull request #27073 from rallytime/remove-lxc-warning
  - 76c056d02b Remove "use develop branch" warning from LXC tutorial now that 2015.5.0 has been released
- caab21d99c Merge pull request #27054 from rallytime/bp-27029
  - 0be393be22 Removed check for no package name
- 0227e1cb57 Merge pull request #27053 from rallytime/bp-26992
  - 83798aff3c Do not use full return for documentation.
  - d9d5bbaa68 Summary requires full return information.
- b72a0ef86d Merge pull request #27052 from rallytime/bp-26930
  - d9787aa318 aptpkg.mod_repo: Raise when key_url doesn’t exist
- 8b554dd16f Merge pull request #27049 from johanek/repoquery-dedupe
  - c113916a23 When running repoquery to check for available versions of packages, run once for all packages rather than once per package
- cc2cbf9869 Merge pull request #27070 from stanislavb/2015.5
  - 1e6e5ddc9c Deprecate salt.utils.iam in Carbon
- e23eaa8ccf Merge pull request #27030 from jfindlay/winreg
  - 120be78e0 remove trailing line in win_path exec module
  - b36a7107b2 update win_path exec module unit tests
  - a2dc6f2dd7 Fixes win_path module, migrates from reg.(set|get).key to reg.(set|get).value
- 843c28b435 Merge pull request #27025 from cachedout/issue_25581
  - ecc09d9b93 Lint
  - bfcaab9ef4 Better try and error handling for prep_jid
- b9baa0b39a Merge pull request #27035 from terminalmage/useradd-contextmanager
  - e430e97f6c Update user states to reflect changes to login class handling
  - f24b979c7c useradd.py: Use contextmanager to prevent leaked filehandles
- 1cddf7a92 Merge pull request #27034 from rallytime/softlayer-doc-fix
  - cb64f8145 Update softlayer docs for where to find apikey
- 9e06d3f01a Merge pull request #27024 from rallytime/bp-27004
  - 54d6f4c7 Fix ’dict’ object has no attribute split
  - bb29d73c71 Fix ’dict’ object has no attribute split
  - 5f1a9c46aa Fix ’dict’ object has no attribute split
  - 2bfdd9724e Fix ’dict’ object has no attribute split
- 9ab2cae1e4 Merge pull request #27027 from rallytime/bp-27013
• 19a6e9cb1c Remove unwanted debug statement.
• 2c8beb238f Merge pull request #27026 from rallytime/bp-27011
  • f8518d545f Move giant eventlisten.sh example out of the state.event docstring
• e8cdcc62f7 Merge pull request #26972 from twangboy/fix_20522
  • 0110786fa9 Catch the 404 error from fileclient
• fbc95f4685 Merge pull request #26951 from terminalmage/fix-timezone
  • 30a4915762 Update tests to reflect changes to timezone module
  • b6f926919f Fix timezone module for CentOS
• f2ad3c333c Merge pull request #26875 from marccardinal/patch-2
  • 36d5a62262 LXC gateway provisioned only when IP is provided
• 7b2e7b1b37 Merge pull request #26997 from twangboy/fix_symlink_windows
  • 89cc02d4e0 Added versionadded
  • 835177b0c8 Fixed symlinks for windows (don't use user root)
• 5389a85894 Merge pull request #27001 from twangboy/fix_reg_docs
  • 2980bbda17 Minor clarification
  • 4684b2dd1 Added CLI example for reg.delete_key_recursive
• 37814f5dff Merge pull request #26996 from jacobhammons/beacon-doc
  • e475ea688e Fixed typo
  • 2401533d9e New content added to beacon docs.
• 4ba7eed711 Merge pull request #26868 from joejulian/2015.5_lvm vg_symlink_fix
  • 3dfb33849a Use the actual device name when checking vgdisplay
• 1537e945be Merge pull request #26955 from dsumsky/s3-pillar-module-cache-fix-2015.5
  • 8219acffe7 - fixed pylint warnings
  • a3b10e8ab1 - fixed broken caching in S3 ext_pillar module (file_md5 was a list) - added
dev messages - static parameters are available as module parameters now
• 3e902e86b1 Merge pull request #26987 from rallytime/bp-26966
  • 6a29e0c003 URL has changed
• eddb532713 Merge pull request #26915 from rallytime/joyent-tests
  • d4ad42d697 Update Joyent Cloud Tests
• f86814b2a4 Merge pull request #26971 from rallytime/reactor-doc-fix
  • 0214a2619 Fix a couple of typos in reactor docs
• 57b1080f94 Merge pull request #26976 from saltstack/revert-26899-fix_26730
  • 6d54e6bedc Revert "file.symlink gets windows account instead of root"
• 67be01f5fe Merge pull request #26975 from whiteinge/rest_cherrypy-integration
  • 9a0989585b Add additional 'groups' check to rest_cherrypy if groups are not used
  • d68aefcfde Remove mocks from rest_cherrypy integration tests
2a3da8911 Rename the rest_cherrpy tests to conform to our convention

20a48f7f2e Merge pull request #26899 from twangboy/fix_26730
  9d9b3bb47a file.symlink gets windows account instead of root

dbc6b862f4 Merge pull request #26960 from rallytime/cherrypy-docs
  c1420711db Fix bash code block formatting

f733e048c9 Merge pull request #26940 from rallytime/api-doc-fix
  00fe6a225c Fix minor doc typo in client api

dc5b504666 Merge pull request #26871 from rallytime/bp-26852
  5a4c8dd2f5 Only reference msgpack if it imported successfully

5b1b934192 Merge pull request #26851 from jacobhammons/doc-bugs
  ac3bd47440 states/pkgrepo examples, suse installation updates Refs #26644 Refs #26638

5b1b934192 Merge pull request #26817 from jfindlay/grouparg
  82d39399f3 modify groupadd for rhel 5

cdc0ea2fe3 Merge pull request #26824 from pravka/fix-droplet-creation-from-snapshot-in-dov2
  0e3192536 removing log
  e4a82d78d9 removing stringification of every value in the image dict
  cdc2b4584a fixing condition for slug check

4af6951a4c Merge pull request #26823 from jfindlay/ctlfix
  a9928cb413 pep8 fixes
  6108ec4280 Gated dbus for os families that use it
  e154c7b16f remove trailing spaces
  c1c1266cc3 fix indent change
  0a35320aa7 Use dbus directly

a1749b76b8 Merge pull request #26820 from jfindlay/ctlfix
  3a2c0d5fbb add default param in _parse_localectl in locale mod

ff733547c4 Merge pull request #26821 from twangboy/fix_26788
  cf979e4877 Fixed user.rename function in windows

c892e3255 Merge pull request #26803 from twangboy/fix_26754
  23576c65e6 Added check for PyMySQL if MySQLdb import fails

6edfa36083 Merge pull request #26815 from jfindlay/linstr
  0a35320aa7 Use dbus directly

ff5823944e stringify linode id before performing str actions

- PR #27122: (terminalmage) Fix broken link to git-config(1) docs @ 2015-09-15 07:25:05 UTC
  - 886e7bc234 Merge pull request #27122 from terminalmage/fix-broken-link
  - 0b212ea5b3 Fix broken link to git-config(1) docs

- PR #27115: (jacobhammons) Release docs @ 2015-09-14 22:19:18 UTC
  - 551bbe70af Merge pull request #27115 from jacobhammons/release-docs
- 42eaa80997 Restored missing css
- 9ab642295e Fixed a release notes typo and bad file rename
- daa3f4ee0 Updated release notes, change 2015.8 to latest release for doc site
- d939a38c8c release notes updates

- **ISSUE #11993:** (UtahDave) salt-cloud -Q output not consistent across providers (refs: #27110)
- **PR #27110:** (rallytime) Make sure -Q output is consistent across salt-cloud drivers @ 2015-09-14 21:48:40 UTC
  - 89c90df909 Merge pull request #27110 from rallytime/fix-11993
  - c1abc5a19f Remove implied None
  - 5d7d357cdd digital_ocean list_nodes function should list public and private ips like other drivers
  - 4b27ae4b46 Add 'name' to the output of salt-cloud -Q commands, where needed, for consistency.

- **PR #27050:** (twangboy) Turned multiprocessing on @ 2015-09-14 17:34:18 UTC
  - 7e35b13022 Turned multiprocessing on

- **PR #27086:** (techhat) Document development of SPM loader modules @ 2015-09-13 04:52:55 UTC
  - c78d833540 Merge pull request #27086 from techhat/spmdevdocs
  - e0c8955dd Document development of SPM loader modules

- **ISSUE #23125:** (bemeyert) Elasticsearch as master_job_cache throws critical (refs: #26941)

- **PR #26941:** (msteed) Make elasticsearch work as master job cache @ 2015-09-12 17:13:44 UTC
  - df88fe402c add versionadded info to save_load() & get_load()
  - 5d2fae8a89 make master job cache index configurable
  - bc041fa4a7 Merge branch 'issue-23125' of github.com:msteed/salt into issue-23125
    - 9aedc2662e issue-23125
  - 593c4d6b2f issue-23125

- **PR #27080:** (bechtoldt) [Proposal] Add Github SPM label for issues @ 2015-09-12 14:32:58 UTC
  - b763d0ba52 Merge pull request #27080 from bechtoldt/spm_doc
  - b9e5095bf5 add GH issue label SPM to docs

- **PR #27064:** (twangboy) Fixed user docs @ 2015-09-11 22:37:19 UTC
  - cf59a03432 Merge pull request #27064 from twangboy/user_docs
  - db03ca198e Fixed user docs

- **PR #27072:** (rallytime) Back-port #26840 to 2015.8 @ 2015-09-11 22:35:52 UTC
  - **PR #26840:** (deuscapturus) Update http.py (refs: #27072)
  - 71c12cbf46 Merge pull request #27072 from rallytime/bp-26840
  - d0b9e3cc4a Update http.py

- **PR #27060:** (cro) Fix grains breakage when hosts are not Linux, Windows, or SunOS @ 2015-09-11 17:28:49 UTC
• PR #27051: (rallytime) Back-port #26953 to 2015.8 @ 2015-09-11 16:28:20 UTC
  - PR #26953: (dsumsky) S3 ext_pillar module has broken caching mechanism (refs: #27051)
  - 0e755089f Merge pull request #27060 from cro/proxy_grains_breakage
  - e697326f1b Don’t check for proxy in the individual is_linux/is_windows/etc functions. This breaks too many things.

• PR #26864: (terminalmage) Only do git_pillar preflight checks on new-style git_pillar configs @ 2015-09-11 07:47:12 UTC
  - 249f55cd8c Merge pull request #26864 from terminalmage/fixed-git_pillar-tests
  - 0b5a653f7c Only do git_pillar preflight checks on new-style git_pillar configs

• PR #26967: (TheBigBear) new URL for windows salt downloads @ 2015-09-10 20:51:33 UTC
  - efadb8aea Merge pull request #26967 from TheBigBear/patch-4
  - 8d2c042cf7 new URL for windows salt downloads

• PR #26921: (terminalmage) Get rid of error in legacy git pillar when using branch mapping notation @ 2015-09-10 20:06:29 UTC
  - 757d3c4eab Merge pull request #26921 from terminalmage/legacy_git_pillar_tests
  - 28e07d5d06 Get rid of error in legacy git pillar when using branch mapping notation

• PR #26923: (rallytime) Code clean up of cloud drivers and files @ 2015-09-10 16:37:26 UTC
  - 68eb508e6c Merge pull request #26923 from rallytime/cloud-cleanup
  - bf33c99b08 Remove redundant parentheses
  - 5045989be7 Make sure function names comply
  - e327d9a8a4 Remove redundant parens
  - eee0291ff8 Code clean up of cloud drivers and files

• PR #27010: (rallytime) Back-port #26988 to 2015.8 @ 2015-09-10 16:30:30 UTC
  - PR #26988: (s0undt3ch) Process spm.d/*.conf and add prefix root dir support to SPM directories (refs: #27010)
  - 590c46f4e3 Merge pull request #27010 from rallytime/bp-26988
  - 93b30b5ba8 Whitespace
  - 685fa911e7 Version Added for new apply_spm_config function
  - 9612a6c7ad Process spm.d/*.conf and add prefix root dir support to SPM directories

• PR #26985: (rallytime) Fix versionadded tag @ 2015-09-10 16:29:38 UTC
  - ec185d77fa Merge pull request #26985 from rallytime/versionadded-fix
  - 79eb606cb7 Fix versionadded tag
30.2.74 Salt 2015.8.10 Release Notes

Version 2015.8.10 is a bugfix release for 2015.8.0.

This release includes fixes for two issues discovered in 2015.8.9:

- Pip state broken in 2015.8.9 with pip <6.0 (issue #33376)
- Fix traceback in logging for config validation (PR #33386)

Final Release of Debian 7 Packages

Regular security support for Debian 7 ended on April 25th 2016. As a result, 2016.3.1 and 2015.8.10 will be the last Salt releases for which Debian 7 packages are created.

Important Post-Upgrade Instructions for Linux Mint

As a result of some upstream changes, the os grain on Mint Linux is now being detected as LinuxMint (issue #33295). Run the following command after you upgrade to 2015.8.10 to reset the os grain to Mint and the os_family grain to Debian:

```
salt -G 'os:LinuxMint' grains.setvals "{'os': 'Mint', 'os_family': 'Debian'}"
```

Changelog for v2015.8.9..v2015.8.10

Generated at: 2018-05-28 00:51:57 UTC

- c3d2c4eaae Fix traceback in logging for config validation (#33386)
- 2a060ea1e8 restore whitespace
- aa1f45d664 blast, put the try/except int he right place
- be1a7659a3 maintain the fallabck because I am totally sick of this crap

30.2.75 Salt 2015.8.11 Release Notes

Version 2015.8.11 is a bugfix release for 2015.8.0.

Statistics

- Total Merges: 122
- Total Issue References: 70
- Total PR References: 221
- Contributors: 48 (AABozuZaid, BlaineAtAffirm, DmitryKuzmenko, The-Loeki, abednarik, babilen, bebehei, cachedout, clinta, complexsplit, cro, danslimmon, dcolish, dincamihai, edgan, gerhardqux, ghedo, isbm, jacobhammons, jfindlay, jody, justinta, l13t, lomeroe, lorengordon, lvg01, mcalmer, meaksh, morganwillcock, oeufete, opdude, phistrom, rallytime, rmarcinik, ryan-lane, sacien, steverweber, techhat, tegbert, terminalmage, thatch45, the-glu, thegoodduke, ticosax, tveastman, twangboy, vutny, zer0def)
Ubuntu 16.04 Packages

SaltStack is now providing official Salt 2015.8 packages for Ubuntu 16.04.

Returner Changes

- Any returner which implements a `save_load` function is now required to accept a `minions` keyword argument. All returners which ship with Salt have been modified to do so.

New Master Configuration Parameter

- `rotate_aes_key` - if `True`, causes Salt to generate a new AES key whenever a minion key is deleted. This eliminates the chance that a deleted minion could continue to eavesdrop on communications with the master if it continues to run after its key is deleted.

Changelog for v2015.8.10..v2015.8.11

Generated at: 2018-05-28 01:16:12 UTC

- PR #34682: (jfindlay) update 2015.8.11 release notes
- PR #34676: (cachedout) Revert "Modify lodaer global test to use populated dunders" @ 2016-07-14 18:12:55 UTC
  - 3192e1674b Merge pull request #34676 from cachedout/partial_revert_34644
  - 64a154826a Revert "Modify lodaer global test to use populated dunders"
- PR #34601: (lorenegordon) Clarifies the proper way to reference states @ 2016-07-14 14:20:41 UTC
  - 3b6f1089b2 Merge pull request #34601 from lorenegordon/clarify-doc
  - bfe0dd0b8a Clarifies the proper way to reference states
  - PR saltstack/salt#34644: (cachedout) Cleanup loader errors (refs: #34651)
  - PR #34651: (rallytime) Lint 34644
  - PR #34647: (cachedout) Adjust the mine test a little bit to give it a better chance of success
- PR #34642: (justinta) Check that mysqladmin exists before running mysql integration tests @ 2016-07-13 18:12:44 UTC
  - 8a0209101e Merge pull request #34642 from jtand/mysql_integration_cleanup
  - dd1559a599 Check that mysqladmin exists before running mysql integration tests.
- PR #34618: (justinta) Network state integration test test=True @ 2016-07-13 16:30:15 UTC
  - 3e612c3794 Merge pull request #34618 from jtand/network_integration_fix
  - 34bc9cefec Changed network state test to use test=True
  - b2616833b0 Some small changes
  - ed5911e94 Change network state integration test to use test=True
- PR #34617: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-07-12 20:11:40 UTC
  - 9f123549e5 Merge pull request #34617 from rallytime/merge-2015.8
  - 3026fd346f Merge branch '2015.5' into '2015.8'
- 57df38e685 Update github IP for ssh state integration tests (#34592)
- 2e1007254b Avoid circular imports when calling salt.utils functions (#34584)

• ISSUE #33649: (tyhunt99) 2016.3.0 dockerng state fails comparing cmd configuration (refs: #salt-stack/salt#33851, #33851)
  - PR saltstack/salt#33851: (ticosax) dockerng Add support for edge case when Cmd and Entrypoint can’t be blanked (refs: #34593)
  - PR #34593: (rallytime) Back-port #33851 to 2015.8
  - PR #33851: (ticosax) dockerng Add support for edge case when Cmd and Entrypoint can’t be blanked (refs: #34593)
  - PR #34590: (oeufette) [2015.8] dockerng: When sorting list actual_data, make it a list
  - PR #34591: (justinta) Gate docker unit test to check for docker
  - PR #34560: (terminalmage) Add a bunch of documentation on getting files from other environments

• ISSUE #34397: (jaredhanson11) ignore_epoch needs to be passed through to version_cmp functions (refs: #34531)

• PR #34531: (terminalmage) Support ignore_epoch argument in version comparisons @ 2016-07-08 16:43:36 UTC
  - 91e0656d44 Merge pull request #34531 from terminalmage/issue34397
  - d0fecz1b86 salt/modules/zypper.py: accept ignore_epoch argument
  - 5ae9463c1f salt/modules/yumpkg.py: accept ignore_epoch argument
  - c2791117af salt/modules/rpm.py: accept ignore_epoch argument
  - c5de88b880d salt/modules/ebuild.py: accept ignore_epoch argument
  - 4ee8e03f37 salt/modules/apt/pkg.py: accept ignore_epoch argument
  - 5b123b403c Pass ignore_epoch to salt.utils.compare_versions()
  - 07368fac40 Accept ignore_epoch argument for salt.utils.compare_versions()

• PR #34545: (terminalmage) Handle cases where Docker Remote API returns an empty ExecutionDriver @ 2016-07-08 16:34:30 UTC
  - e99befad47 Merge pull request #34545 from terminalmage/docker-exec-driver
  - dd5838e242 Handle cases where Docker Remote API returns an empty ExecutionDriver

• PR #34546: (rallytime) Rename unit.states.boto_secgroup to unit.states.boto_secgroup_test @ 2016-07-08 16:16:42 UTC
  - 7120d4f0d0 Merge pull request #34546 from rallytime/rename-boto-secgroup-test
  - 84e3622be7 Rename unit.states.boto_secgroup to unit.states.boto_secgroup_test

• PR #34537: (rallytime) Rename tests.unit.simple to tests.unit.simple_test @ 2016-07-08 00:08:36 UTC
  - ca92061821 Merge pull request #34537 from rallytime/rename-simple-test
  - ceebf634c Rename tests.unit.simple to tests.unit.simple_test
  - PR #34527: (rallytime) [2015.8] Update bootstrap script to latest stable
  - PR #34521: (cachedout) Prevent many errors in the test suite in loader tests
  - PR #34507: (AAboutZaid) Fix wrong order of retention_policy_exists.
• PR #34518: (terminalmage) Fix pkg.latest integration test for non-LTS ubuntu @ 2016-07-07 19:29:13 UTC
  - 685df80929 Merge pull request #34518 from terminalmage/fix-pkg.latest-test
  - 4ae44ecd2d Fix pkg.latest integration test for non-LTS ubuntu

• PR #34513: (cachedout) Lower the log level for modules which cannot be loaded to trace @ 2016-07-07 17:00:48 UTC
  - a516f116d1 Merge pull request #34513 from cachedout/fix_loader_log
  - 73d5d0d0c0 Lower the log level for modules which cannot be loaded to trace

• PR #34498: (rallytime) Use -O in the wget example in the bootstrap tutorial for the develop branch @ 2016-07-07 16:30:46 UTC
  - 63f0451041 Merge pull request #34498 from rallytime/fix-bootstrap-tutorial-doc-fix
  - 23c5739c3b Use -O in wget develop example in bootstrap tutorial
  - PR #34503: (rallytime) Rename some unit test files by adding _test

• ISSUE #34302: (ghost) Salt gitfs loads top files from all branches and tags (refs: #34505)
  - PR #34505: (terminalmage) Improve top file merging documentation
  - PR #34492: (zerodef) Gracefully handle non-XML output in GlusterFS execution module.
  - PR #34489: (justinta) Use skipTest for network state integration test

• ISSUE #34261: (vernondcole) salt.modules.dnsmasq documentation errors (refs: #34488, #34323)
  - PR #34488: (rallytime) Update dnsmasq.get_config docs to use correct config_file param.

• PR #34462: (terminalmage) Use --always when available to git describe @ 2016-07-06 03:59:33 UTC
  - e2f576e847 Merge pull request #34462 from terminalmage/git-describe-always
  - 6ef7ee198e Restrict use of --always to git 1.5.6 and newer
  - c554b22fc8 modules/git: added --always parameter for git.describe().

• PR #34467: (rallytime) Back-port #34457 to 2015.8 @ 2016-07-06 03:56:58 UTC
  - PR #34457: (ryan-lane) Only access key metadata if we found key metadata (refs: #34467)
  - 85f1f18239 Merge pull request #34457 from rallytime/bp-34457
  - 746883741f Only access key metadata if we found key metadata

• PR #34432: (twangboy) Fix file.append @ 2016-07-05 23:14:22 UTC
  - 9e15337b74 Merge pull request #34432 from twangboy/fix_file.append
  - 13f1fddcdef Remove refactoring code
  - 78f7c530bb Remove unit tests, integration tests written
  - b83392aeda Remove len() in favor of boolean test
  - 4373408163 Fix line error
  - 2479b53e2f Fix erroneous report on newline code
  - 75b6ed1f65 Change back to binary read
  - 65753c9f6d Use os.linesep instead of n
  - a55a63f086 Fix object names
  - 3e2fe12e5e Add new line if missing
- 0b7821e8db Fix file.append state

- **PR #34429:** (terminalmage) Skip version checking for targeted packages in pkg.latest state @ 2016-07-05 17:50:41 UTC
  - 91e995bb41 Merge pull request #34429 from terminalmage/pkg-latest-versioncheck
  - 667f31a72a Skip version checking for targeted packages in pkg.latest state

- **PR #34455:** (cro) Forgot reference to inotify

- **PR #34451:** (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-07-05 15:57:54 UTC
  - 7bb0868c66 Merge pull request #34451 from rallytime/merge-2015.8
  - 55a91e22be Merge branch '2015.5' into '2015.8'
  - 8c72ee56e4 Merge pull request #34435 from cachedout/backport_config_dir_integration
    - 0e2c71a537 Backport change to integration test suite

- **ISSUE #34390:** (ingresser) Use rpmdev-vercmp to determine correct version of rpms in CentOS5 (refs: #34401)

- **PR #34401:** (terminalmage) Use rpmdev-vercmp as a fallback for version comparison on RHEL5 @ 2016-07-01 17:42:24 UTC
  - e65d1ae374 Merge pull request #34401 from terminalmage/rpm-version_cmp
  - 7cefd4182e Use rpmdev-vercmp as a fallback for version comparison on RHEL5

- **PR #34366:** (steverweber) Update service.py @ 2016-07-01 17:40:31 UTC
  - 5ddf417432 Merge pull request #34366 from steverweber/fix_servicerestart
  - 7847c39024 Update service.py

- **PR #34426:** (cro) Document that inotify is Linux only @ 2016-07-01 17:04:38 UTC
  - 485454f6bb Merge pull request #34426 from cro/inotify-linux-only
  - 54a0a2f25ba Document that inotify is Linux only

- **PR #34392:** (cro) Clarify that salt-cloud doesn't get installed by bootstrap @ 2016-06-30 18:16:23 UTC
  - fe18bb527 Merge pull request #34392 from cro/salt-cloud-doc-clarify
  - 6c6ce75d40 Clarify that salt-cloud doesn't get installed by bootstrap

- **PR #34373:** (justinta) Network state integration test @ 2016-06-30 15:05:44 UTC
  - 45b8fb10d7 Merge pull request #34373 from jtand/network_state_integration_tests
  - 1d24053e36 network.system sls file
  - 4a9e6af542 network.routes sls file
  - 76c90b2ef6 network.managed sls file
  - 84a3e6369fa Added network state integration test

- **PR #34377:** (terminalmage) Optimize pkg integration tests and add a couple new tests

- **PR #34368:** (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-06-29 17:54:49 UTC
  - af8ef1e461 Merge pull request #34368 from rallytime/merge-2015.8
  - 3bce0cb510 Merge branch '2015.5' into '2015.8'
  - 970aaa46a4 Merge pull request #34252 from gtmanfred/2015.5
    - 82183f1572 return list of nodes for lxc driver when called directly
• PR #34344: (rallytime) Back-port #34324 to 2015.8
• PR #34324: (cachedout) Test custom grains matcher (refs: #34344)

• ISSUE #33674: (edgan) salt-ssh returns a zero code on jinja template failure. (refs: #34316)

• ISSUE #28300: (srkunze) [salt-ssh] Does not return non-zero exit code (refs: #34316)
  – PR #34342: (rallytime) Back-port #34316 to 2015.8
  – PR #34316: (edgan) Making salt-ssh pass proper return codes for jinja rendering errors (refs: #34342)
  – PR #34339: (terminalmage) Revert py3modernize lint changes

• PR #34306: (ghedo) Fix iptables.flush state: Do not force ‘filter’ table when flushing @ 2016-06-28 19:03:14 UTC
  – 046bdaa9f2 Merge pull request #34306 from ghedo/iptables_flush_table
  – 8826ce9e86 Do not force ‘filter’ table when flushing

• ISSUE #34261: (vernondcole) salt.modules.dnsmasq documentation errors (refs: #34488, #34323)

• ISSUE #34249: (ssgward) Clarify doc on file.copy (refs: #34323)

• ISSUE #34247: (gravyboat) Update logging docs to mention profile level (refs: #34323)

• ISSUE #33694: (hjc) Document That Local Files Can Be Used as a Source for File States (refs: #34323)
  – PR #34323: (jacobhammons) Doc clarifications to file modules, addition of new profile log lev...
  – PR #34325: (terminalmage) Remove unnecessarily-disabled sanity check

• PR #34335: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-06-28 15:07:15 UTC
  – c5890a0eca Merge pull request #34335 from rallytime/merge-2015.8
  – 2296587536 Merge branch '2015.5' into '2015.8'
  – 6c6e545d92 Merge pull request #34313 from rallytime/bootstrap-2015.5
    * c7db73be92 [2015.5] Update to latest bootstrap script v2016.06.27
  – PR #34319: (rallytime) Back-port #34244 to 2015.8
  – PR #34244: (theglu) Typo in dockerio doc (refs: #34319)

• PR #34312: (rallytime) [2015.8] Update to latest bootstrap script v2016.06.27 @ 2016-06-27 18:59:59 UTC
  – dd4c937009 Merge pull request #34312 from rallytime/bootstrap-2015.8
  – 944a393f89 [2015.8] Update to latest bootstrap script v2016.06.27

• PR #34307: (rallytime) Fix test example in integration testing docs @ 2016-06-27 17:41:24 UTC
  – 91703d2dc4 Merge pull request #34307 from rallytime/fix-test-example
  – f44a0543fe Fix test example in integration testing docs

• PR #34233: (thegoodduke) ipset: fix the comment containing blank @ 2016-06-24 19:28:34 UTC
  – d235b125b Merge pull request #34233 from thegoodduke/for_2015.8_ipset
  – 4da5e35bf4 ipset: fix the comment containing blank

• ISSUE #34037: (bobrik) salt-call ignores --config-dir resulting in failing gpg renderer (refs: #34257)

• PR #34257: (rallytime) Use 'config_dir' setting instead of CONFIG_DIR in gpg renderer @ 2016-06-24 17:25:04 UTC
  – 65c5675a3f Merge pull request #34257 from rallytime/fix-34037
- d7a5e9b10e Remove test that doesn't actually test anything
- c4c037d600 Use 'config_dir' setting instead of CONFIG_DIR in gpg renderer

**ISSUE #34273**: (clinta) file.recurse does not properly cache files, adds a pipe to path (refs: #34274)

**PR #34274**: (clinta) Don't escape source before calling managed @ 2016-06-24 17:23:35 UTC
  - 203870f147 Merge pull request #34274 from clinta/2015.8
  - 6572454918 Don't escape source before calling managed

**PR #34258**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-06-24 14:27:06 UTC
  - a59dc85a15 Merge pull request #34258 from rallytime/merge-2015.8
  - ea914b67cd Merge branch '2015.5' into '2015.8'
  - 8d5ed91f80 Merge pull request #34225 from richardscollin/fix-win-set-datetime
    * 6286771ef7 Fix win_system.set_system_date_time
    * cb1e8bf082 Merge pull request #34232 from thegoodduke/for_2015.5_ipset
      * 344eb60762 ipset: fix commont containing blank

**ISSUE #33873**: (hrumph) refresh: True not working with pkg.installed state (refs: #34093)

**PR #34093**: (terminalmage) Catch CommandExecutionError in pkg states @ 2016-06-23 21:00:13 UTC
  - 92962957c8 Merge pull request #34093 from terminalmage/issue33873
  - 5ed845d746 win_pkg: refresh pkg database if refresh=True passed to version() or list_pkgs()
  - 0078ade35 Catch CommandExecutionError in pkg states

**PR #34136**: (meaksh) Fixed behavior for SUSE OS grains in 2015.8 @ 2016-06-23 20:24:58 UTC
  - PR #34134: (meaksh) Fixed behavior for SUSE OS grains in 2016.3 (refs: #34136)
  - PR #33903: (meaksh) Fetching grains['os'] from /etc/os-release on SUSE systems if it is possible (refs: #34134)
    - cb5399787c Merge pull request #34136 from meaksh/salt-suse-os-detection-2015.8
    - 9f1958863 some cleanup and renaming
    - 72c8e5d78f better way to check for openSUSE Leap
    - 548971bdc9 Fix for SUSE OS grains in 2015.8

**ISSUE #34074**: (fooka03) Unable to use S3 file backend with 2016.3.1 on Ubuntu 14.04 or 16.04 (refs: #34208)

**ISSUE #32916**: (giannello) file.managed memory usage with s3 sources (refs: #33599)
  - PR #34208: (lomeroe) fix regression from #33681 which causes pulling a list of s3 objects ...
  - PR #33681: (rallytime) Back-port #33599 to 2015.8 (refs: #34208)
  - PR #33599: (lomeroe) Fix s3 large file download (refs: #33681)

**ISSUE #34213**: (terminalmage) gitfs w/pygit2 - corner case, traceback with short hexadecimal environment names (refs: #34218)

**ISSUE #34212**: (terminalmage) gitfs: commit SHAs no longer available as fileserver environments (refs: #34218)
  - PR #34218: (terminalmage) Fix a pair of gitfs bugs

**ISSUE #34043**: (rallytime) state execution stacktraces when psutil isn't installed (refs: #34182)
• **PR #34182**: (rallytime) Handle child PIDs differently depending on the availability of psutils @ 2016-06-22 19:22:06 UTC
  - **PR #33942**: (cachedout) ZD 762 (refs: #34182)
  - 6d643cd528 Merge pull request #34182 from rallytime/fix-34043
  - b7d49c5052 Handle child PIDs differently depending on the availability of psutils
  - **PR #34188**: (terminalmage) Clarify pkg.list_repo_pkgs docstring for held packages
  - **PR #34206**: (terminalmage) Change target for dockerng assuming default status to Nitrogen release

• **PR #34184**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-06-21 21:43:46 UTC
  - 1c4369d093 Merge pull request #34184 from rallytime/merge-2015.8
  - 8e36e90966 Merge branch '2015.5' into '2015.8'
  - 5411ebb3b4 Merge pull request #34141 from jtand/boto_vpc_test_fix
    * b7ac6c735a Moved imports to top, out of _get_moto_version function
    * 02f9ba99ba Updated version check. Moved check into its own function
    * d445026c56 Updated test to work with new moto version. Changed strings to unicode

• **ISSUE #33972**: (morganwillcock) 2016.3.1 breaks diskusage beacon (refs: #34176, #34103)

• **PR #34176**: (rallytime) Back-port #34103 to 2015.8 @ 2016-06-21 20:01:46 UTC
  - **PR #34103**: (morganwillcock) Fix diskusage beacon (refs: #34176)
  - **PR #33474**: (cachedout) Fix diskusage beacon (refs: #34103)
  - c059d6c08c Merge pull request #34176 from rallytime/bp-34103
  - 2e5e7ed03c Fix diskusage beacon

• **ISSUE #34114**: (onorua) can't read PID from lock file due to exception if gitfs_global_lock is enabled (refs: #34179)

• **PR #34179**: (terminalmage) Raise the correct exception when gitfs_lockfile is empty @ 2016-06-21 20:00:59 UTC
  - 5cbaaed167 Merge pull request #34179 from terminalmage/issue34114
  - 86d1b8e864 Raise the correct exception when gitfs_lockfile is empty

• **PR #34178**: (terminalmage) Remove unnecessary comment @ 2016-06-21 19:15:37 UTC
  - 67deded119 Merge pull request #34178 from terminalmage/remove-comment
  - 4965be72b1 Remove unnecessary comment
  - **PR #34165**: (ncalmer) fix salt --summary to count not responding minions correctly
  - **PR #34175**: (rallytime) Back-port #34128 to 2015.8
  - **PR #34128**: (bebehei) doc: add missing dot (refs: #34175)
  - **PR #34174**: (rallytime) Back-port #34066 to 2015.8
  - **PR #34066**: (complexsplit) Typo fix (refs: #34174)

• **PR #34077**: (rallytime) Add some grains targeting tests @ 2016-06-21 16:06:30 UTC
  - 3669048654 Merge pull request #34077 from rallytime/grains-tests
  - 2199bb8a78 Add integration tests for grains.append
  - 37cfe70724 Add some grains targeting tests
• **PR #34142**: (isbm) Move log message from INFO to DEBUG. @ 2016-06-20 18:57:34 UTC
  - 65fb5b4d7 Merge pull request #34142 from isbm/isbm-getid-loglevel-shift
  - 2366a7b702 Move log message from INFO to DEBUG.
• **PR #34100**: (terminalmage) Update documentation on "refresh" behavior in pkg states
• **PR #34072**: (jfindlay) modules.pkg int tests: skip refresh_db upon error
• **PR #34069**: (rallytime) Add a test to check for disconnected minion messaging @ 2016-06-16 21:18:38 UTC
  - 1b76de1557 Merge pull request #34069 from rallytime/test-minion-return-message
  - 60561ac6f6 Add a test to check for disconnected minion messaging
• **ISSUE #30100**: (armoo) Masterless gitfs performance (refs: #34048)
• **PR #34048**: (terminalmage) RFC: proposed fix for multiple fileserver updates in masterless runs @ 2016-06-16 21:10:59 UTC
  - 3119693dac Merge pull request #34048 from terminalmage/issue30100
  - 715e7af8a4 Ensure only one fileserver update in a masterless run
• **PR #34011**: (rallytime) Back-port #33948 and #34009 to 2015.8 @ 2016-06-16 15:41:02 UTC
  - PR #34009: (rallytime) Back-port #33948 to 2016.3 + add log message (refs: #34011)
  - PR #33948: (cachedout) Save an entire minion cache traversal on each master pub (refs: #34011, #34009)
  - dd03024931 Merge pull request #34011 from rallytime/bp-33948-2015.8
  - a4660d1ff7 Warn when custom returners don't have minions kwarg in save_load
  - 78befde62f Add note to release notes about returner minions kwarg change
  - 4e7f35f36e Fix loop over cache in auth checking!
  - 06963e0505 Save an entire minion cache traversal on each master pub
• **PR #34051**: (tegbert) Fixed a bug in the consul.py module that was preventing services
• **PR #34045**: (jacobhammons) Updated latest release version @ 2016-06-15 19:22:43 UTC
  - 8ba117c7f6 Merge pull request #34045 from jacobhammons/release-prev
  - 434ba12aa2 Updated latest release version
• **PR #34020**: (twangboy) Always make changes to minion config if set (2015.8)
• **PR #34030**: (vutny) More YAML indentation fixes in state module examples
• **PR #34003**: (vutny) states.file: fix indentation in YAML examples (refs: #34030)
• **PR #34018**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-06-14 22:53:19 UTC
  - 5b5eae4ca9 Merge pull request #34018 from rallytime/merge-2015.8
  - 77f44f3087 Merge branch '2015.5' into '2015.8'
  - 871f7966e6 Lint fix for #34000 (#34005)
  - f758e42172 Fix incorrectly written test (#34000)
  - cf6281b4cf Add loader.utils() example to calling minion_mods (#33953)
  - 6b98e8a9ea Merge pull request #33880 from terminalmage/zh744
  - ea726d11c8 pkg.uptodate: Pass kwargs to pkg.list_upgrades
Salt Documentation, Release 3002.5

- de90b35d2b salt/modules/zypper.py: add fromrepo support to list_upgrades
- 35fb06df5 salt/modules/win_pkg.py: add kwargs to list_upgrades
- bf5505f425 salt/modules/solarisips.py: add kwargs to list_upgrades
- 6e89a8be98 salt/modules/pkgutil.py: add kwargs to list_upgrades
- 5179dbce4 salt/modules/pacman.py: add kwargs to list_upgrades
- 46e5a52784 salt/modules/macports.py: add kwargs to list_upgrades
- 76143b76ca salt/modules/ebuild.py: add kwargs to list_upgrades
- b40fc9bc62 salt/modules/brew.py: add kwargs to list_upgrades
- 4f11c16d86 salt/modules/aptpkg.py: add fromrepo support to list_upgrades

- cb88960ed1 Merge pull request #33904 from rallytime/bp-33806
  - 638ccf501d Work around upstream cherrypy bug
- PR #34003: (vutny) states.file: fix indentation in YAML examples (refs: #34030)

- ISSUE #20809: (loren:gordon) Function pam.read_file is not available? (refs: #34002)
  - PR #34002: (loren:gordon) Remove loader test for pam module

- PR #33990: (jacobhammons) Adds links to several current Salt-related projects @ 2016-06-14 01:15:20 UTC
  - c4dab6a074 Merge pull request #33990 from jacobhammons/community-projects
  - b20213fd79 Adds links to several current Salt-related projects Removes the salt_projects.rst file which hasn't been updated in a long time, this is replaced by the updated topics/projects/index.rst file Adds a note about Salt Pack to the installation doc

- PR #33983: (twangboy) Clarify the account_exists parameter @ 2016-06-14 01:11:48 UTC
  - 444c15792c Merge pull request #33983 from twangboy/fix_docs_join_domain
  - b057be04b4 Fix typo, more documentation
  - d8c2f3e57a Clarify the account_exists parameter

- PR #33951: (jfindlay) modules.gem int tests: more fixes @ 2016-06-14 00:46:43 UTC
  - 9bd2317992 Merge pull request #33951 from jfindlay/gem_tests
  - 2eb633ecad modules.gem int tests: only check known installed gems
  - 9f3e18b037 modules.gem int tests: (un)install a non-core gem

- PR #33984: (jfindlay) Add docs and tests to disk state @ 2016-06-14 00:43:38 UTC
  - 53baa6e6b1 Merge pull request #33984 from jfindlay/disk_capacity
  - 6cbe31e6c2 states.disk: rewrite unit tests
  - 82c77b533f states.disk.status: validate percent values
  - aedc4e15e5 states.disk: add documentation

- PR #33985: (rallytime) Write some more simple batch command tests @ 2016-06-14 00:38:05 UTC
  - fa5efb6a69 Merge pull request #33985 from rallytime/more-batch-tests
  - 3e7ab8c7b3 Write some more simple batch command tests
  - PR #33684: (jfindlay) add acl unit tests
  - PR #33942: (cachedout) ZD 762 (refs: #34182)
- **PR #33946**: (rallytime) Back-port #33698 to 2015.8 @ 2016-06-13 15:55:22 UTC
  - **PR #33698**: (opdude) Vsphere fixes (refs: #33946)
  - 0281d491c6 Merge pull request #33946 from rallytime/bp-33698
  - 5f6fed1eb9 Make sure we only use GetConnection if we are using a proxy salt minion
  - 1505c5724b Fix a bug with self signed certificates and creating a new VM
- **ISSUE #33911**: (xlotlu) salt-ssh + grains.filter_by Type error: filter_by() got an unexpected keyword argument 'base' (refs: #33952)
- **PR #33952**: (rallytime) Add base argument to salt-ssh grains wrapper for filter_by func @ 2016-06-13 15:51:33 UTC
  - df3f151955 Merge pull request #33952 from rallytime/fixed-33911
  - 03b7cbbd2c Add base argument to salt-ssh grains wrapper for filter_by func
  - **PR #33962**: (jacobhammons) Adds a "Generated on <timestamp>" line to the html footer
- **ISSUE #29525**: (apergos) master config setting ping_on_rotate is broken if minion_data_cache is disabled (refs: #33765)
  - **PR #33765**: (cachedout) Correct issue with ping on rotate with minion cache
- **PR #33888**: (jfindlay) random.org checks @ 2016-06-10 15:45:07 UTC
  - 378dd7ca06 Merge pull request #33888 from jfindlay/random_check
  - 6ace3cc30 modules.random_org.query: only return text if present
  - 82f95429db modules.random_org.unit tests: skip if random.org down
  - 1f942e06c0d utils.http.query: also except gaierror with tornado
- **ISSUE #31499**: (Reiner030) FeatureRequest: boto_elb misses connection_settings - idle_timeout (refs: #33936)
  - **PR #33936**: (rallytime) Add connecting_settings to boto_elb state attributes list
- **ISSUE #29249**: (timcharper) salt-cloud sync_after_install: all does not seem to sync anything at all (refs: #33917)
  - **PR #33917**: (techhat) Wait for up to a minute for sync_after_install
- **PR #33877**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-06-09 14:50:42 UTC
  - ef6da0be5d Merge pull request #33877 from rallytime/merge-2015.8
  - 398534a9e7 Fix ret return from merge-conflict resolution
  - b8e4706074 Merge branch '2015.5' into '2015.8'
  - cdada593c50 Merge pull request #33829 from terminalmage/update-versionchanged
    - f7028eb1c6 Update versionchanged directive
  - b8e6c144d8 Merge pull request #33833 from terminalmage/issue33645
    - 91745c2a67 Support syncing pillar modules to masterless minions
  - e601788e81 Merge pull request #33814 from terminalmage/archive-extracted-xz
    - 897a716df2 Support extraction of XZ archives in archive.extracted state
  - fa983e91cf Merge pull request #33778 from sodium-chloride/2015.5-2016-0604-1938
    - a5fb6d7a69 Fix minor docstring issues
  - b9133326c8 Merge pull request #33726 from jtand/sysmod_skip_valid_docs_glance
ISSUE #33810: (chiro79) locate.locate fails always (refs: #33827)

- PR #33827: (cachedout) Fix broken locate.locate function @ 2016-06-08 13:49:57 UTC
  - e0909c45 Merge pull request #33827 from cachedout/issue_33810
  - df2f1e474 Fix broken locate.locate function

- PR #33839: (cachedout) Fix another unit test stacktrace in pkg_resource @ 2016-06-08 13:32:55 UTC
  - 9b3d0eda0 Merge pull request #33839 from cachedout/fix_pkgresource_test_stacktrace
  - 453547a747 Fix another unit test stacktrace in pkg_resource

- PR #33840: (cachedout) Remove matcher tests @ 2016-06-08 13:31:41 UTC
  - e862a0d6c Merge pull request #33840 from cachedout/remove_matcher_unit_tests
  - 629748377 Remove matcher tests

- PR #33836: (cachedout) Fixing more stupid unit tests @ 2016-06-07 21:34:04 UTC
  - cda032da2 Merge pull request #33836 from cachedout/fix_winserver_manager_test
  - 45396ac91 Fixing more stupid unit tests

- PR #33805: (jfindlay) states.pkg int tests: skip if pkg mgr unavailable @ 2016-06-07 14:40:47 UTC
  - 9e5a69ae9 Merge pull request #33805 from jfindlay/pkg_tests
  - e069ddc95 states.pkg int tests: skip if pkg mgr unavailable

- PR #33808: (jfindlay) fix some problems with the gem module integration tests @ 2016-06-07 14:40:25 UTC
  - 9884b65486 Merge pull request #33808 from jfindlay/gem_tests
  - f7c9a1a58 modules.gem int tests: relax version checks
  - 6af47d2ba7 modules.gem int tests: remove pkgs before testing install

- PR #33770: (jfindlay) service state integration tests @ 2016-06-07 14:37:54 UTC
  - c30d8a8c61 Merge pull request #33770 from jfindlay/service_tests
  - f13f914755 states.service: add integration tests
  - 90ae79c93 states.service.mod_watch: update unit test
  - d210a92f09 states.service.mod_watch: update sfun and force docs

- PR #33691: (justinta) Gem integration test @ 2016-06-06 11:13:23 UTC
  - 7f3f5e9a28 Merge pull request #33691 from justinta/gem_integration_test
  - f2da103d ubuntu doesn't install default gems when ruby is installed
  - 504df9a65a Fixed lint error
  - 0cb1f9ad03 Removed extra :
  - 86f59b3e80 Made more pythonic
  - 2f36f34981 Fixed salt.util import. Added status check to make sure external resource is available
- 400a71ec33 Removed redundancies
- 91db411bea A couple lint fixes
- c97f3319b9 Add check for gem binary
- 210aceb402 Refactored tests to not use return messages
- 9d437bd45d Removed artifact from testing
- 134e1fa888 Fixed typos, and added destructiveTest decorator
- 37bc3ad8fd Fixed typo, uninstalled to uninstall
- 5b23b91ac6 Integration test for gem module

- PR #33777: (sacren) Fix minor docstring issue of arg being missing @ 2016-06-06 10:44:59 UTC
  - bb4194bb79 Merge pull request #33777 from sodium-chloride/2015.8-2016-0604-1939
  - c1fd830a1a Fix minor docstring issue of arg being missing

- ISSUE #31219: (gladiatr72) when the minions have all been destroyed... (refs: #33759)

- PR #33759: (cachedout) Catch no minions exception in batch mode @ 2016-06-03 21:22:49 UTC
  - c749aae409 Merge pull request #33759 from cachedout/issue_31219
  - 15a39f8646 Catch no minions exception in batch mode

- ISSUE #33554: (jfindlay) local cache missing directories while running test suite (refs: #33653)

- PR #33719: (cachedout) Catch oserror for race condition @ 2016-06-03 17:25:26 UTC
  - PR #33653: (cachedout) Create missing jid dir if it doesn’t exist (refs: #33719)
  - 47d668e071 Merge pull request #33719 from cachedout/fixup_33653
  - 635efa248b Change to just surround the mkdir
  - 21b7123a60 Catch oserror for race condition

- PR #33712: (meaksh) Fix for groupadd execution module failures in SLES11 systems @ 2016-06-03 16:13:06 UTC
  - 11e39e7203 Merge pull request #33712 from meaksh/fix-for-groupadd-module-failures-in-SLE11-2015.8
  - ab738416ba pylint fix
  - bf27e5d36e test_members cleanup
  - ba815dbf76 improvements on groupadd unit tests
  - 3bbc5aee0d9 one line is better
  - a53dc192c9 fix groupadd module for sles11 systems

- PR #33718: (rallytime) Back-port #33700 to 2015.8 @ 2016-06-03 16:10:44 UTC
  - PR #33700: (sacren) Fix incorrect args passed to timezone.set_hwclock (refs: #33718)
  - 2c450a7494 Merge pull request #33718 from rallytime/bp-33700
  - a6a446121a Fix speed issue
  - a41146730a Fix incorrect args passed to timezone.set_hwclock

- ISSUE #33725: (terminalmage) git_pillar w/pygit2 fails to checkout a non-master branch when remote repo has no master branch (refs: #33727)

- PR #33727: (terminalmage) Fix git_pillar edge case for remote repos without a master branch @ 2016-06-03 16:03:59 UTC
- b07701f0a0 Merge pull request #33727 from terminalmage/issue33725
- d8ba7ed5a5 Fix git_pillar edge case for remote repos without a master branch

**PR #33728:** (jfindlay) Make `configurable_test_state` configurable in test mode @ 2016-06-03 16:02:57 UTC
- 015e50ec88 Merge pull request #33728 from jfindlay/test_state_test
- 87e018af2a states.test.configurable_test_state: add unit tests
- c2d0679c4b states.test.configurable_test_state: refactor change_data
- f06ff1af1f states.test.configurable_test_state test mode

**PR #33729:** (twangboy) Add exclude option to `win_servermanager` @ 2016-06-03 15:53:13 UTC
- 1cf86e3f1d Merge pull request #33729 from twangboy/fix_win_servermanager
- 2de91d166f Fix docstring
- 9870479d99 Add exclude option to state
- 50bd76e206 Add exclude option

**ISSUE #31816:** (vutny) Deprecate or update the http://debian.saltstack.com/ (refs: #33743)

**PR #33743:** (vutny) Debian installation docs: drop section about community-maintained repo @ 2016-06-03 15:29:45 UTC
- 6c150d840d Merge pull request #33743 from vutny/drop-debian-community-repo-doc
- 8621f5be54 Debian installation docs: drop section about community-maintained repository

**ISSUE #33554:** (jfindlay) local cache missing directories while running test suite (refs: #33653)
- **PR #33653:** (cachedout) Create missing jid dir if it doesn’t exist (refs: #33719)

**PR #33654:** (twangboy) Fix win servermanager @ 2016-06-02 17:55:45 UTC
- 8a56df44b9 Merge pull request #33654 from twangboy/fix_win_servermanager
- 6c7b21676a Fix lint and tests
- 4775e6bdf0 Add additional params to state
- b0af32346d Add additional params to install and remove

**ISSUE #33424:** (thusoy) Error logging with non-environment branches in gitfs (refs: #33679)

**PR #33679:** (terminalmage) Only compile the template contents if they evaluate to True @ 2016-06-02 17:20:00 UTC
- 996f156dd4 Merge pull request #33679 from terminalmage/issue33424
- 9da40c4437 Append empty dictionaries for saltenvs with no top file
- 5eb1b3ca62 Only compile the template contents if they evaluate to True

**PR #33685:** (jfindlay) modules.cp.get_url: add test for https:// @ 2016-06-01 22:25:41 UTC
- c8dc70b96a Merge pull request #33685 from jfindlay/get_url_test
- 2b5035f0c0 modules.cp.get_url: add test for https://

**PR #33581:** (dincamihai) Call zypper refresh after adding/modifying a repository @ 2016-06-01 22:25:11 UTC
- 5e022ff29c Merge pull request #33581 from dincamihai/2015.8
- 788730ea72 DRY test
- 1d3769ecfa Improve zypper_patchers_config looks
- 42d8d4195c Assert only gpgautoimport: True works
- ced75e8e62 Reverse if conditions and rename variable
- 80fbe5c52 Reduce dicts and lists to one line where possible
- 1d5d6d7d60 Update test method names to pass pylint
- c7ae5907ee Call zypper refresh after adding/modifying a repository

- **ISSUE #32916**: (giannello) file.managed memory usage with s3 sources (refs: #33599)
- **PR #33681**: (rallytime) Back-port #33599 to 2015.8 (refs: #34208) @ 2016-06-01 21:14:29 UTC
  - **PR #33599**: (lomeroe) Fix s3 large file download (refs: #33681)
  - 069ee15b7c Merge pull request #33681 from rallytime/bp-33599
  - 45143a599b use requests streaming for uploads/downloads to file (return_bin unchanged) allows downloading files larger than amount of memory (non-stream reads into memory before writing to disk or uploading)
  - 4a9b23f03f first go at having requests use streaming for get/put requests
- **ISSUE #33393**: (babilen) pip.installed does not work with ancient pip versions (refs: #33396)
- **PR #33396**: (babilen) Issue 33393 @ 2016-06-01 21:12:03 UTC
  - 13537c4891 Merge pull request #33396 from babilen/issue-33393
  - 57e0475cd4 Make pip InstallationError import more robust
  - 291a3e21fa Remove duplicated code.
- **PR #33652**: (terminalmage) Lower the log level for failed auths @ 2016-06-01 16:37:09 UTC
  - 7bce4ece1a Merge pull request #33652 from terminalmage/zh723
  - 411841603a Lower the log level for failed auths
- **ISSUE #33582**: (waxie) mysql module gives traceback if no working authentication (refs: #33615)
- **PR #33615**: (danslimmon) Fix crash on unconnectable MySQL server (resolves #33582) @ 2016-05-31 16:03:51 UTC
  - 504989388a Merge pull request #33615 from danslimmon/mysql-traceback-33582
  - 180099ae9f Wrote test for broken server connection
  - c6c3ff02e3 Added some error checking to resolve #33582.
- **PR #33558**: (twangboy) Fix win servermanager @ 2016-05-27 22:05:43 UTC
  - b47182e47c Merge pull request #33558 from twangboy/fix_win_servermanager
  - 62a6bde0ea Fix comment when already installed
  - 79bc7195dc Fix unit tests
  - 56a6f6bb83 Fix changes
  - 8ebe99ec5e Fix restart_needed
  - 6e478cbaa0 Add restart needed
  - 72ebf26616 Add missing import
  - 193583be96 Use dictionary compare for changes in remove
  - 1ae7dd76c1 Use dictionary compare for changes

30.2. Previous Releases
• **ISSUE #33544**: (tjuup) Salt 2016.3.0 (Boron) clean_old_jobs fails (refs: #33555)

• **PR #33555**: (cachedout) Fix crashing Maintenance process @ 2016-05-26 19:25:39 UTC
  - 58d89d66e3 Merge pull request #33555 from cachedout/issue_33544
  - fe7ee7a470 Fix crashing Maintenance process

• **PR #33501**: (meaksh) unit tests for rpm.checksum() and zypper.download() @ 2016-05-26 14:34:27 UTC
  - d052908729 Merge pull request #33501 from meaksh/zypper-download-check-signature-2015.8
  - eaaef25c79 lint issue fixed
  - 6b6febb211 unit tests for rpm.checksum() and zypper.download()

• **ISSUE #33319**: (ghost) Salt interperts jinja syntax in contents pillar (refs: #33513)

• **PR #33513**: (rallytime) Add a section to the jinja docs about escaping jinja @ 2016-05-26 14:24:58 UTC
  - e2d0c4abb1 Merge pull request #33513 from rallytime/fix-33319
  - 81c1471209 Add a section to the jinja docs about escaping jinja

• **PR #33520**: (jacobhammons) Updated version numbers in the docs for the 2016.3.0 release @ 2016-05-26 14:15:00 UTC
  - fabc15e616 Merge pull request #33520 from jacobhammons/release-notes.8
  - 42e358af7d Updated version numbers in the docs for the 2016.3.0 release

• **PR #33507**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-05-25 19:14:41 UTC
  - 5a6b037cbd Merge pull request #33507 from rallytime/merge-2015.8
  - 03bc097520 Merge branch '2015.5' into '2015.8'
  - 6f7fd0354 Merge pull request #33486 from jtid/2015.5
    * d1e210ff8 Merge branch '2015.5' of https://github.com/saltstack/salt into 2015.5
    * ee2ae0ea8a Added docstring examples to glance.image_schema and schema_get
    * 59e90064e6 modules.swift.head does not have a body. Should not be checked for a docstring right now.
  - f72ec1479b Merge pull request #33482 from rallytime/pillar-opts-docs
    * 087564528d Add pillar_opts docs to master.rst
  - dc644b145d Merge pull request #33488 from rallytime/fix-18752
    * ba9f9f181f Add docs for the syndic_finger config
  - 4e84aa7d2 Merge pull request #33454 from scubahub/2015.5
    * d3c0b8e78 Correct (and make consistent) determination of the test flag.
  - 3a52ace673 manage account information for pam (#33473)

• **ISSUE #15252**: (gravyboat) Standalone minion docs don’t explain what file is being modified. (refs: #33503)

• **PR #33503**: (rallytime) Add docs about minion config file in standalone minion docs @ 2016-05-25 17:23:08 UTC
  - ee76e3b0b6 Merge pull request #33503 from rallytime/fix-15252
  - cfc07f7641 Add docs about minion config file in standalone minion docs

• **PR #33474**: (cachedout) Fix diskusage beacon (refs: #34103) @ 2016-05-25 17:10:54 UTC
  - e9b648e461 Merge pull request #33474 from cachedout/issue_29451
- aa2bac3a0d Remove debugging
- 68d805cb8 Fix diskusage beacon

- **PR #33465**: (meaksh) jobs.exit_success allow to check if a job has executed and exit successfully @ 2016-05-25 16:52:53 UTC
  - 3fb6bf719 Merge pull request #33465 from meaksh/check-if-job-returns-successfully-2015.8
  - 9deb70fd8e jobs.exit_success() now works parsing the results of jobs.lookup_id()
  - 7ba40c4f31 jobs.exit_success allow to check if a job has executed and exit successfully
- **PR #33487**: (justinta) Add docstring examples to glance.py and nova.py [2015.8] @ 2016-05-25 16:47:25 UTC
  - 70eb7b66f3 Merge pull request #33487 from jand/glance_doc_fixes
  - 0b1cae05d9 Added docstring examples to glance methods and nova.list
  - ebf1256545 Don't need to check swift.head due to it having no body

- **ISSUE #33423**: (warden) etcd profile doesn’t work when used in master conf file (refs: #33481)
- **PR #33481**: (rallytime) Fix docs about etcd config options and add pillar_opts doc (refs: #33482) @ 2016-05-25 16:41:56 UTC
  - 56ea9f991e Merge pull request #33481 from rallytime/fix-33423
  - 7fd3e8f361 Fix docs about etcd config options and add pillar_opts doc
- **ISSUE #16319**: (lsh-0) create a postgresql query function (refs: #33490)
- **PR #33490**: (rallytime) Document the postgres.psql_query function @ 2016-05-25 16:41:22 UTC
  - 2394dce4bf Merge pull request #33490 from rallytime/fix-16319
  - 0c5548f9d1 Document the postgres.psql_query function
- **PR #33480**: (jfindlay) states.service: minor doc updates @ 2016-05-25 16:38:14 UTC
  - ede232f01 Merge pull request #33480 from jfindlay/service_doc
  - 29c0a1b1b states.service: clarify function description language
  - 6a9ae0e979 states.service.__virtual__: add load fail reason
- **PR #33483**: (twangboy) Return full pending computer name (2015.8)
- **ISSUE #32444**: (justindesilets) Feature Request - jobs runner list by target (refs: #33491)
  - **PR #33499**: (cachedout) Use six.string_types in jobs runner
  - **PR #33491**: (BlaineAtAffirm) fix jobs.list_jobs failing with search_target (refs: #33499)
- **ISSUE #32444**: (justindesilets) Feature Request - jobs runner list by target (refs: #33491)
- **PR #33491**: (BlaineAtAffirm) fix jobs.list_jobs failing with search_target (refs: #33499) @ 2016-05-25 15:11:22 UTC
  - 2e24a04565 Merge pull request #33491 from BlaineAtAffirm/2015.8
  - 7599b18995 fix jobs.list_jobs failing with search_target
- **ISSUE #33467**: (beelit94) Orchestration gives exception when a target does not exist (refs: #33478)
- **ISSUE #32479**: (ssgward) Orchestration gives exception when a target does not exist (refs: #32484, #33478)
- **PR #33478**: (rallytime) Back-port #32484 to 2015.8 @ 2016-05-24 19:14:23 UTC
Salt Documentation, Release 3002.5

- PR #32484: (cachedout) Only unsub if we have a jid (refs: #33478)
- 1861af427e Merge pull request #33478 from rallytime/bp-32484
- 042f17efa4 Only unsub if we have a jid

- PR #33457: (rallytime) Make doc formatting consistent and use correct version
  added @ 2016-05-24 17:52:34 UTC
  - b8154b678e Merge pull request #33457 from rallytime/doc-formatting
  - 82f8f3e0ff Make doc formatting consistent and use correct version
  - PR #33477: (terminalmage) Don't allow a "repo" kwarg for pkgrepo.managed

- ISSUE #29451: (githubcdr) 2015.8.3 pillar beacons bugged? (refs: #33476)
  - PR #33476: (cachedout) Allow for config entry to be a list in a dict for beacons

- PR #33469: (meaksh) check the RPM signature of zypper pkg.download packages and report errors @ 2016-05-24 16:09:05 UTC
  - 9f6a4b4c45 Merge pull request #33469 from meaksh/zypper-download-check-signature-2015.8
  - a65071a6d1 simpler rpm.checksum function
  - 80fe303e38 Renamed check_sig to checksum and some refactoring
  - d56e3f4258 bugfix: showing errors when a package download fails using zypper pkg.download
  - 8a21b9149e check the signature of downloaded RPM files

- ISSUE #33389: (DaveQB) Too many hostnames in pillar? (refs: #33459)
  - PR #33459: (rallytime) Add docs about PyYAML's 1024 character limitations for simple keys
  - PR #33464: (isbm) Prevent several minion processes on the same machine
  - PR #33432: (dincamihai) Make --gpg-auto-import-keys a global param when calling zypper

- ISSUE #32446: (sel-fish) " salt '*' saltutil.wheel minions.connected " not work (refs: #33414)
  - PR #33414: (rallytime) Fix the saltutil.wheel function and add integration tests

- ISSUE #29286: (harlanbarnes) Can't disable Job Cache? (refs: #33328)
  - PR #33440: (rallytime) Make sure the path we're removing is present first - avoid an OSError
  - PR #33328: (rallytime) Update job_cache and keep_jobs docs to be more specific to their behavior (refs: #33440)

- ISSUE #26913: (imchairmanm) manage.bootstrap runner quotation escape bug (refs: #33443)
  - PR #33443: (rallytime) Avoid a syntax error by using " instead of escaped \'
  - PR #33436: (rmarcinik) Fix virtual function

- PR #33438: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-05-23 17:50:51 UTC
  - 6e94a4a03b Merge pull request #33438 from rallytime/merge-2015.8
  - 7c41c34528 Merge branch '2015.5' into '2015.8'
    - 2c650965a update 2015.5.11 release notes (#33412)
    - dc8ce2db81 Fix traceback in logging for config validation (#33386) (#33405)

- ISSUE #33395: (finnisme) salt doc error (refs: #33421)
  - PR #33421: (abednarik) Documentation update in file.serialize.
- **PR #33398**: (lvg01) Fix LVM parameter devices as a pure list. Comma separated lists are c...
- **PR #33406**: (rallytime) Back-port #33387 to 2015.8
- **PR #33387**: (tveastman) Spelling correction. (refs: #33406)
- **ISSUE #33298**: (loengordon) Windows: pkg.install returns failed for msiexec/instmsi exit code 3010 (ERROR_SUCCESS_REBOOT_REQUIRED) (refs: #33321)
- **PR #33321**: (loengordon) Update windows pkg.[install|remove] error logic
- **ISSUE #29252**: (mitar) reload_modules is not documented for the pkg state (refs: #33374)
- **PR #33374**: (rallytime) Add note about reload_modules functionality for pkg.installed
- **ISSUE #31430**: (The-Loeki) Salt Coding Style regarding absolute_imports (refs: #33377)
- **PR #33377**: (rallytime) Add note to absolute_imports practice about __future__ import
- **ISSUE #21720**: (kaithar) Revisiting aliases.file option. (refs: #33380)
- **PR #33380**: (rallytime) Document how to set the alias file location for alias state
- **PR #33403**: (jacobhammons) 2015.8.10 release notes @ 2016-05-20 16:02:50 UTC
  - 3c9def310c Merge pull request #33403 from jacobhammons/dot10
  - 8ef769780e Merge branch '2015.5' into '2015.8'
    - d15f5e2ce5 Merge pull request #33383 from thatch45/2015.5
      - f5ecbca21c restore whitespace
      - 1d8b289db1 blast, put the try/except int he right place
      - 081e6c5b83 maintain the fallback because I am totally sick of this crap
    - 755acfb97e Improve doc clarity for disable_modules documentation (#33379)
  - 8ef769780e Merge branch '2015.5' into '2015.8'
    - 2b5ad128bf Better YAML syntax error handling (#33375)
    - 5ce502160b revved 2015.8 branch to .9 in version selector
- **PR #33386**: (terminalmage) Fix traceback in logging for config validation (refs: #33405)
- **ISSUE #27737**: (mpaolini) name param never mentioned in pillar_ext git documentation (refs: #33369)
- **PR #33369**: (rallytime) Add note about name parameter in git_pillar docs
- **ISSUE #32913**: (hrumph) Possible problem with salt.states.pkg.installed documentation (refs: #33362)
- **PR #33362**: (rallytime) Add win_pkg to list of modules that support "version" in pkg.installed
- **ISSUE #27779**: (jboss) [Doc] Hipchat returner documentation update (refs: #33365)
- **PR #33365**: (rallytime) Add note to docs about api settings for Hipchat API v2
- **PR saltstack/salt-bootstrap#828**: (vutny) Fix bootstrapping from git on Debian 8 by installing latest tornado via pip (refs: #32857)
- PR #820: (dcolish) Refactor of cli parsers, normalize around conf_file (refs: `saltstack/salt-bootstrap#828`)
- PR #32857: (vutny) Add initscripts, SystemD service units and environment files for Debian
- PR #33370: (jacobhammons) Update docs version to 2015.8.9 @ 2016-05-19 19:59:15 UTC
- 80f52a658e Merge pull request #33370 from jacobhammons/2015.8.9
- 146b4df0be Updates docs version to 2015.8.9 Adds note regarding the os grain on Mint Linux Adds an FAQ regarding grains that change due to upstream changes
- PR #33366: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-05-19 19:41:40 UTC
- 3e5689abbf Merge pull request #33366 from rallytime/merge-2015.8
- 52b3128678 Merge branch '2015.5' into '2015.8'
- 55be0abfd4 Expanded documentation for boto_elb state and module (#33341)
- ISSUE #33313: (morganwillcock) pkg.py: pkgs parameter documented as not supported on Windows (refs: #33361)
- ISSUE #3313: (mou) If no fileserver backend initialized there should be warning or error message on performing various file operations (refs: #33361)
- PR #33361: (rallytime) Remove mentions of windows not supporting pkgs param
- ISSUE #29286: (harlanbarnes) Can’t disable Job Cache? (refs: #33328)
- PR #33328: (rallytime) Update job_cache and keep_jobs docs to be more specific to their behavior (refs: #33440)
- ISSUE #33295: (andrew-vant) Linux Mint service module not correctly detected. (refs: #33359)
- PR #33359: (terminalmage) Properly detect newer Linux Mint distros
- ISSUE #32260: (jagguli) git.latest UnboundLocalError: local variable 'desired_upstream' referenced before assignment (refs: #33340)
- PR #33340: (terminalmage) Fix UnboundLocalError in git.latest
- PR #33339: (phistrom) states.boto_elb Describe parameters in register_instances function
- PR #33347: (rallytime) Fix some link errors in the test writing tutorial
- PR #33312: (twangboy) Fix network.managed for windows
- PR #33327: (cro) Bp 28467 calm mine
- PR #28467: (jodv) Make mine.update more manageable for large environments (refs: #33327)
- PR #33334: (jfindlay) import ps from psutil_compat in beacons
- ISSUE #21520: (jfindlay) sudo.salt_call is broken (refs: #25089)
- PR #33318: (jfindlay) remove redundant, incorrect sudo_runas config documentation
- PR #25089: (jfindlay) fix minion sudo (refs: #33318)
- PR #22480: (thatch45) Add sudo user docs into salt (refs: #33318)
- PR #20226: (thatch45) Allow sudo priv escalation (refs: #25089, #33318)
- ISSUE #33323: (terminalmage) Overeager globbing in systemd.py for sysv service detection (refs: #33324)
- PR #33324: (terminalmage) Disambiguate non-exact matches when checking if sysv service is enabled
- ISSUE #30130: (dreampuf) Non-root minion not work with state.sls module (refs: #33325)
Salt Documentation, Release 3002.5

- **PR #33325**: (cachedout) Allow concurrency mode in state runs if using sudo

- **ISSUE #29674**: (jakehilton) Salt Master Hang (refs: #33333)
  - **PR #33333**: (DmitryKuzmenko) Fix master hanging after a request from minion with removed key.

- **ISSUE #33266**: (Timandes) Method `grains.items` returns unexpected `manufacturer` information (refs: #33302)
  - **PR #33306**: (rallytime) Back-port #33302 to 2015.8
  - **PR #33302**: (The-Loeki) Cleanup comments in smbios.get output (fixes #33266) (refs: #33306)

- **ISSUE #23643**: (falzm) Error in iptables module: argument --match-set: expected 2 argument(s) (refs: #33314, #33301, #28325)
  - **PR #33314**: (gerhardqux) Fix iptables --match-set (#23643)
  - **PR #33301**: (gerhardqux) Fix iptables --match-set (#23643) (refs: #33314)
  - **PR #28325**: (l13t) Fix issue with --match-set option. #23643 (refs: #33314)

- **PR #33308**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-05-17 19:26:05 UTC
  - d0ed1616b0 Merge pull request #33308 from rallytime/merge-2015.8
  - 1c43a62f85 Merge branch '2015.5' into '2015.8'
    * 9b42a05519 Added some more docs for master and minion config settings (#33292)
  - 5004d2fa61 Merge branch '2015.5' into '2015.8'
  - 8ace5e06c Fix iptables --match-set (#23643) (#33301)
  - 757ef20a31 fix "loose" typo (#33290)
  - b7d98da64d Add auth_tries config option to minion.rst docs (#33287)
  - 061851bcbf Document minion_id_caching config value (#33282)

### 30.2.76 Salt 2015.8.12 Release Notes

Version 2015.8.12 is a bugfix release for 2015.8.0.

#### Statistics

- Total Merges: 58
- Total Issue References: 43
- Total PR References: 117
- Contributors: 29 (Azidburn, Ch3LL, UtahDave, bobrik, cachedout, cedwards, deepakhj, dere, gongled, gtmanfred, humph, hu-dabao, isbm, jacobhammons, jfindlay, jmesquita, junovitch, justinta, kev009, martinhoefling, multani, rallytime, randomed, sjorge, terminalmage, thatch45, theothergraham, twangboy, whiteinge)
Changelog for v2015.8.11..v2015.8.12

Generated at: 2018-05-28 01:19:12 UTC

- PR #35614: (rallytime) Update release notes for 2015.8.12
- PR #35611: (rallytime) Everything in the sample master config file should be commented out
- ISSUE #35384: (ghost) The unless requisite stops at first successful command (refs: #35569)
  - PR saltstack/salt#35545: (hu-dabao) fix-35384, fix cmd.run unless (refs: #35566)
- PR #35569: (rallytime) Write test for multiple unless commands where 1st cmd passes and 2nd fails @ 2016-08-19 19:28:01 UTC
  - PR #35566: (rallytime) Back-port #35545 to 2015.8 (refs: #35569)
  - PR #35545: (hu-dabao) fix-35384, fix cmd.run unless (refs: #35569, #35566)
  - c9070c212f Merge pull request #35569 from rallytime/test-for-35384
  - 30f42d5352 Write test for multiple unless commands where 1st cmd passes and 2nd fails
  - PR #35600: (rallytime) Update release notes for 2015.8.12
  - PR #35599: (rallytime) Update release notes for 2015.8.12
  - PR #35584: (terminalmage) Update linux_sysctl tests to reflect new context key
  - PR #35575: (terminalmage) Add warning about AWS flagging of nmap usage
- PR #35577: (terminalmage) Unit file changes for 2015.8.12, 2016.3.3 @ 2016-08-18 20:36:25 UTC
  - 26a7ff7d97 Merge pull request #35577 from terminalmage/unit-file-changes
  - 6cb0bf4793 pkg/salt-syndic.service: change Type to notify
  - 175ba99e0e pkg/salt-minion.service: remove KillMode, change Type to notify
  - 540ec28954 pkg/salt-master.service: remove KillMode
  - 69fad464ab pkg/salt-api.service: change Type to notify
  - PR saltstack/salt#35545: (hu-dabao) fix-35384, fix cmd.run unless (refs: #35566)
  - PR #35566: (rallytime) Back-port #35545 to 2015.8 (refs: #35569)
  - PR #35545: (hu-dabao) fix-35384, fix cmd.run unless (refs: #35569, #35566)
  - PR #35492: (terminalmage) Clarify config.get docstring
- ISSUE saltstack/salt#18419: (jasonrm) salt-cloud fails to run as non-root user (refs: #35483)
- ISSUE #34806: (jerrykan) salt-cloud ignores sock_dir when firing event (refs: #35483)
- PR #35483: (gtmanfred) use __utils__ in salt.cloud @ 2016-08-18 13:32:22 UTC
  - 205d8e2e7b Merge pull request #35483 from gtmanfred/2015.8
  - 2d8ec1e9db use __opts__ in salt.utils.cloud for cache functions
- PR #35546: (whiteinge) Salt api eauth fail gracefully @ 2016-08-18 07:21:55 UTC
  - 70fa2d0901 Merge pull request #35546 from whiteinge/salt-api-eauth-fail-gracefully
  - eb3574adae Don't fail hard if the user's permissions cannot be found
  - ec597bd54c Change groups check in token to look for truthy values
  - PR #35525: (UtahDave) add missing glob import
- **PR #35540**: (rallytime) Whitespace fix for 2015.8
- **ISSUE #33803**: (dmurphy18) systemd notification is not fully supported by Salt (refs: #35510)
- **ISSUE #33516**: (Ch3LL) When upgrading from 2015.8.10 to 2016.3.0 on centos7/redhat7 I have to restart the salt-minion twice (refs: #35510)
- **PR #35510**: (terminalmage) Better systemd integration @ 2016-08-17 18:54:11 UTC
  - fd3274c800 Merge pull request #35510 from terminalmage/issue33516
  - 5b5f19d269 Update zypper unit test to reflect call to config.get
  - 2730ed516 Add note about systemd-run usage in package states
  - e2d9e87e10 salt/modules/systemd.py: Use systemd-run --scope where needed
  - 22919a25bc Notify systemd on salt-api start
  - a40b3f8a08 Notify systemd on syndic start
  - e847d3af30 Notify systemd on minion start
  - d648887af0 salt/modules/zypper.py: Use systemd-run --scope where needed
  - 2e17976722 salt/modules/yumpkg.py: Use systemd-run --scope where needed
  - 86b59c1e74 salt/modules/pacman.py: Use systemd-run --scope where needed
  - e32d92c6d5 salt/modules/ebuild.py: Use systemd-run --scope where needed
  - c7d21d3ae3 salt/modules/aptpkg.py: Use systemd-run --scope where needed
  - f83e0ef242 Add unit tests for salt.utils.systemd
  - 5b12f03c6 Add func to salt.utils.systemd to tell if scopes are available
  - **PR #35513**: (cachedout) Might be a good idea to be able to download the software we make
- **PR #35302**: (Ch3LL) Add job cache test @ 2016-08-17 10:45:28 UTC
  - 9f87081cef Merge pull request #35302 from Ch3LL/add_job_cache_test
  - ccb2a5cadf remove unused imports
  - 512ae81d9f remove TMP and add integration.TMP
  - c9b7c3cf80 need to add returners option in other places
  - 7316df7a02 fix pylint
  - 50a4f0fe6a fix comment
  - 6837ace742 add job cache integration tests
- **PR #35512**: (cachedout) Fixup 35419 @ 2016-08-17 10:11:17 UTC
  - 1c826b0ee5 Merge pull request #35512 from cachedout/fixup_35419
  - 253662541a Fix import
  - f16a30786b Fixes consul.agent_service_register which was broken for registering service checks.
- **PR #35497**: (deepakhj) Fixes spacing in requirements files @ 2016-08-17 09:34:15 UTC
  - e1a373fa4c Merge pull request #35497 from deepakhj/2015.8
  - 685db4ab88 Fix spacing
- **PR #35508**: (terminalmage) Add Carbon to versionadded for git.diff @ 2016-08-17 06:17:12 UTC
- 4048255ed6 Merge pull request #35508 from terminalmage/update-docstring
- 67c945f1ce0 Add Carbon to versionadded for git.diff
- PR #35486: (rallytime) Update bootstrap script to latest stable (2016.08.16)

• ISSUE #35296: (szjur) cp.push_dir gets confused when using upload_path and is probably insecure too (refs: #35413)

• PR #35413: (cachedout) Resolve path issues with cp.push @ 2016-08-16 16:40:39 UTC
  - 240fc12863 Merge pull request #35413 from cachedout/issue_35296
  - fb8a12d677 Fix silly error
  - 3646cf1afa Additional checks on master and integration test
  - 09efde7634 Splat the list into os.path.join
  - fc0d5878bc Set file_recv on test master
  - 81c4d136c5 Transition file push paths to lists

• ISSUE saltstack/salt#35380: (anlutro) salt-ssh with sudo stopped working (refs: #35476)

• PR #35476: (cachedout) Fixup SSH bug where sudo without sudo user would break @ 2016-08-16 15:41:25 UTC
  - c3319b2a8b Merge pull request #35476 from cachedout/issue_35380
  - c05cf33d1 Fixup SSH bug where sudo without sudo user would break

• PR #35471: (terminalmage) win_pkg: Fix traceback when package is not installed @ 2016-08-16 02:02:00 UTC
  - 004778c966 Merge pull request #35471 from terminalmage/issue34479
  - e243c63e43 win_pkg: Fix traceback when package is not installed

• PR #35448: (isbm) Add ignore_repo_failure option to suppress zypper's exit code 106 on ... @ 2016-08-16 01:39:43 UTC
  - 5c9428c32d Merge pull request #35448 from isbm/isbm-zypper-106-fix
  - dd82e6a848 Add ignore_repo_failure option to suppress zypper's exit code 106 on unavailable repos

• PR #35451: (isbm) Bugfix: zypper mod repo unchanged @ 2016-08-16 01:38:25 UTC
  - 1473474b04 Merge pull request #35451 from isbm/isbm-zypper-mod_repo-unchanged
  - 8790197d86 Fix Unit test for suppressing the exception removal on non-modified repos
  - 3f00c6997a Remove zypper's raise exception if mod_repo has no arguments and/or no changes

• ISSUE saltstack/salt#34279: (vmadura) Salt 2016.3.1 - Master Side Pillar Cache (backend: Disk) never Expires. (refs: #35453)

• ISSUE #34279: (vmadura) Salt 2016.3.1 - Master Side Pillar Cache (backend: Disk) never Expires. (refs: #35453)

• PR #35453: (theothergraham) fixes #34279 - disk cache ttl expiry @ 2016-08-16 01:34:33 UTC
  - a8c4f17f50 Merge pull request #35453 from theothergraham/fix_CacheDisk
  - ae5b233d51 fixes #34279

• PR #35459: (thatch45) Ensure that output for salt-ssh gets back @ 2016-08-16 01:29:16 UTC
  - d8c35b5260 Merge pull request #35459 from thatch45/shim_fix
  - 10037b00cb Some environments refuse to return the command output
  - PR #35460: (rallytime) [2015.8] Update bootstrap script to latest stable (2016.08.15)
• ISSUE saltstack/salt#35010: (vchav73) cp.push_dir returns incorrect result for non-existent directories (refs: #35442)
  – PR #35442: (cachedout) Fix cp.push_dir pushing empty dirs
• ISSUE saltstack/salt#35387: (mzealey) Document reload_grains and reload_pillar (refs: #35436)
  – PR #35436: (cachedout) Minor doc fixup
• ISSUE saltstack/salt#35121: (sjorge) file.append always results in change (refs: #35132)
  – PR #35132: (sjorge) fixes , causing lots of mayhem (onchange) with 2016.3.2 for me @ 2016-08-15 07:11:22 UTC
    a0b128a85a Merge pull request #35132 from sjorge/2015.8-35121
    5cb38c8ae0 switch to fpread().splitlines(), as per @lorendordon suggestion
    634f1dded5 fixes #35121, causing lots of mayhem (onchange) with 2016.3.2 for me
  – PR saltstack/salt#34573: (cedwards) Update freebsd.rst (refs: #35394)
  – PR #35394: (rallytime) Back-port #34573 to 2015.8
  – PR #34573: (cedwards) Update freebsd.rst (refs: #35394)
  – PR #35359: (terminalmage) Clean up open filehandles
  – PR #35339: (isbm) Bugfix: Prevent continuous restart, if a dependency wasn’t installed @ 2016-08-11 16:15:17 UTC
    9ea7a34c30 Merge pull request #35339 from isbm/isbm-2015.8-minion-importerror-fix
    12a60b7be Fix continuous minion restart if a dependency wasn’t installed
• PR #35357: (twangboy) Fix file.recurse with clean: True on Windows (2015.8) @ 2016-08-11 00:44:14 UTC
  – fd9b05ace4 Merge pull request #35357 from twangboy/file.recurse.clean.2015.8
  – d328ee0157 Fix file.recurse with clean: True
• PR #35323: (thatch45) Fix issue with bad error check in salt-vt @ 2016-08-10 11:33:49 UTC
  – 4618b433e9 Merge pull request #35323 from thatch45/ssh_crazy
  – 8a5b47b5d7 Collect all error data from the wfuncs call
  – 11864c31b7 supress a stack trace to show clean ssh error
  – 9fbfa282fa wow this solves an issue!
• PR #35325: (kev009) Fix freebsd netstat route on fbsd 10+ @ 2016-08-10 11:33:12 UTC
  – cf8e62972 Merge pull request #35325 from kev009/fbsd-netstat-route
  – 0d49dd3c29 Fix fbsd netstat route on fbsd 10+
• ISSUE #35264: (bobrik) ssh_known_hosts.present is not idempotent in test=true with port (refs: #35301)
  – PR #35301: (bobrik) Pass port to ssh.check_known_host, closes #35264
• ISSUE #34945: (babilen) file.recurse breaks directory permissions (refs: #35309)
  – PR #35309: (terminalmage) file.recurse: Do not convert octal mode string to int
• ISSUE #35051: (terminalmage) Runner/Wheel funcs still print return data to console when invoked from orchestration (refs: #35290)
• PR #35290: (terminalmage) Resolve a couple bugs in orchestration output @ 2016-08-09 15:27:00 UTC
  – 2efc1b333b Merge pull request #35290 from terminalmage/issue35051
- d621aa7b61 Update runner/wheel unit tests to reflect new key in ret dict
- 90c12a9c7b Add __orchestration__ key to orch returns for runner/wheel funcs
- 7b8c3b86e7 Suppress error about invalid changes data for orchestration jobs
- 54a1704d6c Suppress event for wheel/runner funcs executed from orchestration
- f409f62bf2 Accept print_event option in WheelClient.cmd()
- b42b25ccce Add cmd func for RunnerClient
- 480065fe00 Add print_event option to client mixins

• ISSUE #31074: (turtletraction) salt-ssh sudo_user execution not running as sudo_user (refs: #35211)

• PR #35211: (cachedout) Alternative sudo users for salt-ssh @ 2016-08-08 15:40:55 UTC
  - f8158124d5 Merge pull request #35211 from cachedout/issue_31074
  - 6f53232e6d Better error handling and a workaround for group mismatch.
  - 5b564ac7ff Docs
  - ae04e7aaeb Initial POC

• ISSUE #35166: (bobrik) state_output_profile defaults are confusing (refs: #35271)

• PR #35271: (bobrik) Default state_output_profile to True everywhere, closes #35166 @ 2016-08-08 14:36:24 UTC
  - 3e4eb13daa Merge pull request #35271 from bobrik/default-output-profile
  - 6cdec21036 Default state_output_profile to True everywhere, closes #35166

• ISSUE #32719: (azweb76) Salt-Call Hangs when IPv6 is disabled on System (refs: #35233)

• PR #35233: (terminalmage) Do not attempt to get fqdn_ip{4,6} grains when ipv{4,6} grains are empty @ 2016-08-06 22:58:32 UTC
  - 673e1aa1aa Merge pull request #35233 from terminalmage/issue32719
  - 730a077041 Do not attempt to get fqdn_ip{4,6} grains when ipv{4,6} grains are empty

• PR #35202: (multani) doc: fix broken links in the test documentation page @ 2016-08-06 08:29:41 UTC
  - cdf3c0fe73 Merge pull request #35202 from multani/fix/test-doc
  - 1642dbad51 doc: fix broken links in the test documentation page

• ISSUE saltstack/salt#34861: (dere) minion incorrectly reports package cannot be installed (refs: #35119)

• PR #35256: (rallytime) Back-port #35119 to 2015.8 @ 2016-08-06 08:10:54 UTC
  - PR #35119: (dere) Assume two EVRs are equal if E and V are equal but one R is missing. (refs: #35236)
  - e1331cd2a3 Merge pull request #35236 from rallytime/bp-35119
  - 9ade78de7b Revise unnecessary code duplication
  - 7c15f520a Fix formatting
  - 64f93f8938 Assume two EVRs are equal if E and V are equal but one R is missing.

• ISSUE saltstack/salt#29785: (paul-mulvihill) pkg.installed to accept 'latest' as a version keyword (refs: #35225)

• ISSUE #29785: (paul-mulvihill) pkg.installed to accept 'latest' as a version keyword (refs: #35240)

• PR #35240: (dere) Backport #35225 to 2015.8 @ 2016-08-06 07:54:19 UTC
  - PR #35225: (dere) Add missing documentation for pkg.installed (refs: #35240)
4f2b8aa5b6 Merge pull request #35240 from derekmaciel/bp-35225
9ed47f713a Add missing documentation for pkg.installed

**PR #35241:** (terminalmage) Ensure max recursion in gitfs results in no blob object being returned. @ 2016-08-06 07:53:49 UTC
- 4bcaaa97d0 Merge pull request #35241 from terminalmage/gitfs-fixes
- e05648cc2d Break from loop when file is found
- 6764a88601 Ensure that failed recursion results in no blob object being returned
- PR saltstack/salt#35039: (whiteinge) Add saltenv support to module.run (refs: #35245)

**PR #35245:** (rallytime) Back-port #35039 to 2015.8 @ 2016-08-06 07:52:44 UTC
- PR #35039: (whiteinge) Add saltenv support to module.run (refs: #35245)
- f6d760e0b Merge pull request #35245 from rallytime/bp-35039
- 51ab9cd6d4 Add saltenv support to module.run

**ISSUE #35214:** (tdenny) git.latest fails on non-fast-forward when a fast-forward is possible (refs: #35249)

**PR #35249:** (terminalmage) Fix regression in git.latest @ 2016-08-06 07:52:15 UTC
- d65a5c7134 Merge pull request #35249 from terminalmage/issue35214
- bcd5129e9f Fix regression in git.latest when update is fast-forward
- e28dbbde Add integration test for #35214

**ISSUE saltstack/salt#34691:** (dmacvicar) beacons.list does not include beacons configured from the pillar/ext_pillar (refs: #saltstack/salt#34827, #34827)
- PR saltstack/salt#35146: (cachedout) Don’t discard running beacons config when listing beacons (refs: #35174)
- PR saltstack/salt#34827: (thatch45) fix beacon list to include all beacons being processed (refs: #35146, # saltstack/salt#35146"
- PR #35174: (rallytime) Back-port #35146 to 2015.8
- PR #35146: (cachedout) Don’t discard running beacons config when listing beacons (refs: #35174)
- PR saltstack/salt#35135: (rallytime) Add missing CLI Examples to aws_sqs module funcs (refs: #35173)
- PR #35173: (rallytime) Back-port #35135 to 2015.8
- PR #35135: (rallytime) Add missing CLI Examples to aws_sqs module funcs (refs: #35173)
- PR #35145: (jacobhammons) doc version update to 2015.8.11, updates to release notes

**PR #35114:** (terminalmage) Add clarification docs on a common git_pillar misconfiguration @ 2016-08-02 00:30:48 UTC
- 81845ee31d Merge pull request #35114 from terminalmage/git_pillar-env-remap-docs
- 5951554e9f Add clarification docs on a common git_pillar misconfiguration

**ISSUE saltstack/salt#34767:** (hrumph) Ensure that pkg.installed function refreshes properly with windows. (refs: #34768)

**ISSUE #34767:** (hrumph) Ensure that pkg.installed function refreshes properly with windows. (refs: #34768)

**PR #34768:** (hrumph) Fixes #34767 @ 2016-08-01 21:46:16 UTC
- 88a9fb1b31 Merge pull request #34768 from hrumph/bad-installed-state

30.2. Previous Releases
- e1fcb8311d Put pkg.latest_version in try/except structure Move refreshed or refresh to different spot (just for code tidyness)
- e0b6261659 changed name of variable 'refreshed' to 'was_refreshed'
- 340110b4b4 Move check for rtag to outermost-nesting in function
- ac67c6b493 Lint fix
- 0435a1375e Get rid of repetition in code by using new "refreshed" variable instead
- 3b1dc978e2 Lint fix
- a9bd192b9 lint fixes
- 71d69343ef Fixes #34767

- **PR #35043:** (rallytime) Start release notes file for 2015.8.12 @ 2016-08-01 17:22:04 UTC
  - 343576408f Merge pull request #35043 from rallytime/new-release-notes
  - bdcc81a384 Start release notes file for 2015.8.12

- **PR #35050:** (terminalmage) [orchestration] Properly handle runner/wheel funcs which accept a 'saltdev' argument @ 2016-08-01 15:48:08 UTC
  - 848bf0272f Merge pull request #35050 from terminalmage/fixed-saltdev-arg
  - 40ca7cf17 Avoid needlessly running 2 argspecs in salt.utils.format_call()
  - fd186b7e4c Pass environment as 'saltdev' if runner/wheel func accepts a saltdev argument
  - 951b52ab93 Pass __env__ from saltmod orch states to to saltutil.[runner,wheel]

- **PR #35066:** (jfindlay) returners.postgres_local_cache: do not log in __virtual__ @ 2016-07-30 01:32:17 UTC
  - 2144178ae0 Merge pull request #35066 from jfindlay/postgres_log
  - c2e442234f returners.postgres_local_cache: do not log in __virtual__

- **ISSUE #34927:** (bobrik) Salt does not run "systemd daemon-reload" on unit override (refs: #35024)

- **ISSUE #34927:** (bobrik) Salt does not run "systemd daemon-reload" on unit override (refs: #35024)

- **PR #35024:** (bobrik) Cache systemd unit update check per unit, closes #34927 @ 2016-07-28 17:56:29 UTC
  - 7121618142 Merge pull request #35024 from bobrik/daemon-reload-fix
  - c300e15e9d Cache systemd unit update check per unit, closes #34927

- **PR #35026:** (cachedout) Expressly deny a minion if a key cannot be found

- **PR saltstack/salt#33875:** (jmesquita) Fix naive fileserver map diff algorithm (refs: #35000)

- **PR #35000:** (rallytime) Back-port #33875 and #34999 to 2015.8 @ 2016-07-27 21:55:58 UTC
  - **PR #34999:** (cachedout) Fixup #33875 (refs: #35000)
  - **PR #33875:** (jmesquita) Fix naive fileserver map diff algorithm (refs: #35000, #34999)
  - 2b511f3013 Merge pull request #35000 from rallytime/bp-33875
  - 35696ad377 Pylint fix
  - f9fd6dd8a Fixup #33875
  - 56b16c6561 Fix naive fileserver map diff algorithm

- **ISSUE saltstack/salt#34526:** (danielmotaleite) salt-ssh + mine = weird error (refs: #34835, #saltstack/salt#34835’ underscore)
- PR saltstack/salt#34835: (thatch45) Make the mine and publish combine minion and master opts in salt-ssh (refs: #34994)

- PR #34994: (rallytime) Back-port #34835 to 2015.8 @ 2016-07-27 18:21:10 UTC
  - PR #34835: (thatch45) Make the mine and publish combine minion and master opts in salt-ssh (refs: #34994)
  - 837bc6ba7d Merge pull request #34994 from rallytime/bp-34835
  - 9268a793de same thing for the mine in salt-ssh
  - 3e11e19714 Fix the mine in salt ssh

- PR #34991: (cachedout) SSH timeout @ 2016-07-27 17:24:38 UTC
  - b58ce663d8d Merge pull request #34991 from cachedout/ssh_timeout
  - 39cd8da399 Lint diff against salt-testing
  - 443e5cdde2 Add timeout to ssh tests
  - PR #34976: (cachedout) Refine errors in client

- ISSUE #34509: (srkunze) No atomic thin.tgz deploy (refs: #34831)

- PR #34831: (thatch45) If the thin does not match, then redeploy, don’t error @ 2016-07-26 22:27:01 UTC
  - a83cd9339 Merge pull request #34831 from thatch45/recoverssh
  - fa73041a49 If the thin does not match, then redeploy, don’t error
  - PR #34916: (cachedout) Master performance improvement

- PR #34911: (cachedout) Backport #34906 @ 2016-07-22 23:23:24 UTC
  - PR #34906: (cachedout) Set timeout for run_salt in test suite (refs: #34911)
  - 34dc2fd792 Merge pull request #34911 from cachedout/backport_34906
  - 8bececc2f4f Backport #34906

- ISSUE saltstack/salt#33620: (TheBigBear) [2016.3.0] win_pkg: pkg.list_upgrades loops (almost) endlessly - cmds take VERY long (refs: #34898)

- PR #34898: (hrumph) Stop multiple refreshes during call to pkg.list_upgrades @ 2016-07-22 22:28:42 UTC
  - 6cc27f697 Merge pull request #34898 from hrumph/list_upgrades_refresh
  - ac4d5b1a23b Fixes #33620

- PR #34606: (isbm) Bugfix: Exit on configuration read (backport) (refs: #34751) @ 2016-07-22 17:35:18 UTC
  - 5c13ee60e72 Merge pull request #34606 from isbm/isbm-config-reading-exit-2015.8
  - 5f5b802c0c Add option to master config reader on ignoring system exit for wrong configuration
  - 6fc677f177 Ignore minion config errors everywhere but the minion itself
  - 8699194647 Remove deprecation: BaseException.message deprecated as of 2.6
  - 0e65f4ec91 Fix lint: E8302
  - 67faa56bf1 Use Salt default exit codes instead of hard-coded values
  - a8456e5966 Exit immediately on configuration error
  - 43d965907c Raise an exception on any found wrong configuration file
  - 30ed728d05 Cover exception handling in the utils.parsers
• ISSUE saltstack/salt#27783: (anlutro) salt-ssh not properly updating file_lists, causing file.recurse to fail (refs: #34862)
  
  • PR #34862: (thatch45) Fix salt-ssh cacheing issue

• ISSUE #34725: (akoumjian) git.latest with force_reset set to True does not reset local changes, causing it to fail. (refs: #34869)
  
  • PR #34869: (terminalmage) Fail git.latest states with uncommitted changes when force_reset=False

• PR #34859: (cachedout) Fix wheel test @ 2016-07-21 19:55:25 UTC
  
  • b4be66dedf Fix wheel test

• ISSUE saltstack/salt#34798: (Ch3LL) exception when running state.low over salt-ssh (refs: #34822)

• ISSUE saltstack/salt#34796: (Ch3LL) exception when running state.high over salt-ssh (refs: #34822)

• PR #34822: (thatch45) Fix salt-ssh state.high and state.low @ 2016-07-21 19:16:19 UTC
  
  • acc9e31c02 Merge pull request #34822 from thatch45/ssh_fixes

• PR #34827: (thatch45) fix beacon list to include all beacons being processed @ 2016-07-21 14:49:56 UTC
  
  • 07d1d36653 Merge pull request #34827 from thatch45/34691

• ISSUE saltstack/salt#34691: (dmacvicar) beacons.list does not include beacons configured from the pillar/ext_pillar (refs: saltstack/salt#34827, #34827)

• PR #34833: (rallytime) Back-port #28521 to 2015.8 @ 2016-07-21 14:37:24 UTC
  
  • PR #28521: (gongled) SPM: packaging doesn’t work in Python 2.6. Fixed. (refs: #34833)

• PR #34832: (rallytime) Back-port #25276 to 2015.8 @ 2016-07-20 20:56:04 UTC
  
  • a028796eff copy spm.1 man page during setup

• ISSUE #25213: (aboe76) Add spm man page to setup.py (refs: saltstack/salt#25276, #25276)
  
  • PR saltstack/salt#25276: (jacobhammons) copy spm.1 man page during setup (refs: #34823)

• PR #34823: (rallytime) Back-port #25276 to 2015.8 @ 2016-07-20 20:56:04 UTC
  
  • 042646582f Merge pull request #34823 from rallytime/bp-25276

• ISSUE saltstack/salt#34648: (bortels) Error that % cannot start token (refs: #34828)
• ISSUE #34648: (bortels) Error that % cannot start token (refs: #34828)
  - PR #34828: (thatch45) Fix #34648
  - PR saltstack/salt#34642: (justinta) Check that mysqladmin exists before running mysql integration tests (refs: #34818)

• PR #34818: (justinta) Skip mysql state test if mysqladmin is not available @ 2016-07-20 16:10:35 UTC
  - 98fa4a404e Merge pull request #34818 from j.rand/mysql_state_integration_test_cleanup
  - 9aab6912bb Skip mysql state test if mysqladmin is not available

• ISSUE saltstack/salt#26278: (jiahua-h) "order: first" doesn’t work? (refs: #34803)

• ISSUE saltstack/salt#24744: (anlutro) Allow states to define order: first (refs: #34803)

• ISSUE #24744: (anlutro) Allow states to define order: first (refs: #34803)

• PR #34803: (junovitch) salt/state.py: set 'chunk['order'] = 0' with 'order: first'; fixes #24744 @ 2016-07-20 13:56:20 UTC
  - 66362b449f Merge pull request #34803 from junovitch/issue_24744
  - 64850410f salt/state.py: set 'chunk['order'] = 0' with 'order: first'; fixes #24744

• PR #34773: (randomed) Bugfix: Startup states on minions are not being written to mysql returner @ 2016-07-19 12:39:53 UTC
  - 58021035a9 Merge pull request #34773 from randomed/mysql-returner-startup/2015.8
  - 0cd55eb7d7 Add jid=req handling for mysql returner. It should also store the return jid into the jid list table.
  - PR #34751: (cachedout) Remove unneded config test
  - PR #34606: (isbm) Bugfix: Exit on configuration read (backport) (refs: #34751)

• PR #34754: (cachedout) Disable test @ 2016-07-18 18:40:50 UTC
  - f19caac8e4 Merge pull request #34754 from cachedout/disable_mid_test
  - 4690166e5c Disable test

• ISSUE saltstack/salt#34678: (martinhoefling) config.get module is broken due to bug in dictupdate.py (refs: #34726, #saltstack/salt#34726, #34741)
  - PR saltstack/salt#34726: (martinhoefling) Always loop over updated keys in non recursive update (refs: #34741)

• PR #34741: (rallytime) Back-port #34726 to 2015.8 @ 2016-07-18 18:00:23 UTC
  - PR #34726: (martinhoefling) Always loop over updated keys in non recursive update (refs: #34741)
  - 81f29006f2 Merge pull request #34741 from rallytime/bp-34726
  - d949110993 Loop over updated keys in non recursive update

• ISSUE saltstack/salt#34703: (Cashwini) Is it possible to return output from python execution module to a file on salt master? (refs: #34721)

• PR #34721: (rallytime) Add output_file option to master config docs @ 2016-07-16 20:04:03 UTC
  - e9e5b3b38b Merge pull request #34721 from rallytime/fix-34703
  - 9c803d05a5 Add output_file option to master config docs

• ISSUE saltstack/salt#32276: (javicacheiro) pkg.installed using sources from master fails with file not found after first succesful run (refs: #34689)
Salt Documentation, Release 3002.5

• PR #34689: (Azidburn) fix second run problems with pkg.installed using sources @ 2016-07-15 21:19:39 UTC
  – 08d00f3a61 Merge pull request #34689 from Azidburn/fix_pkg_sources
  – 2c0fc919b3 fix second run problems with pkg.installed using sources

• PR #34695: (isbm) Bugfix: Zypper pkg.list_products returns False on some empty values (2015.8) @ 2016-07-15 21:08:00 UTC
  – 4cb1ded520 Merge pull request #34695 from isbm/isbm-zypper-product-boolean-values
  – 5ed5142fbc Update test data for 'registerrelease' and 'productline' fields
  – 21444ee240 Bugfix: return boolean only for 'isbase' and 'installed' attributes

30.2.77 Salt 2015.8.13 Release Notes

Version 2015.8.13 is a bugfix release for 2015.8.0.

Security Fixes

CVE-2017-5192 local_batch client external authentication not respected

The `LocalClient.cmd_batch()` method client does not accept `external_auth` credentials and so access to it from salt-api has been removed for now. This vulnerability allows code execution for already-authenticated users and is only in effect when running salt-api as the `root` user.

CVE-2017-5200 Salt-api allows arbitrary command execution on a salt-master via Salt's ssh_client

Users of Salt-API and salt-ssh could execute a command on the salt master via a hole when both systems were enabled.

We recommend everyone on the 2015.8 branch upgrade to a patched release as soon as possible.

30.2.78 Salt 2015.8.2 Release Notes

Version 2015.8.2 is a bugfix release for 2015.8.0.

Statistics

• Total Merges: 379
• Total Issue References: 138
• Total PR References: 351
• Contributors: 83 (DmitryKuzmenko, JaseFace, LovelsGrief, MasterNayru, Oro, SmithSamuelM, The-Loeki, TheBigBear, aboe76, ajacoutot, anlutro, avinash, basepi, bdrung, bechtoldt, bernieke, blueyed, cachedout, cbuechler, cedwards, clarkperkins, cro, dkiser, douglas-vaz, dr4Ke, eguven, eliasp, erchn, eyj, favadi, flavio, garethgreenaway, gravyboat, gtmanfred, hedinfaok, hexedpackets, hyn-salt, isbm, itsamenathan, jacksontj, jacobhammons, jeffreyctang, jejenone, jfindlay, johnsocp, justinta, keesbos, latham, ldbozon, lomeroe, martinhoefling, mbarrien, mbologna, merll, mrosembled, mister, multani, madsenbaerl3, nmadhok, notpeter, opdude, papertigers, pass-by-value, plastikos, quantongan, rallytime, redmcg, rowillia, ruzarowski, ryan-lane, s0undt3ch, sdm24, sjansen, skizunov, srkunze, techhat, terminalmage, ticosax, tkwilliams, todptomkinson, twangboy, twellspring, whiteinge)
**Important:** A significant orchestrate issue ([issue #29110](https://github.com/saltstack/salt/issues/29110)) was discovered during the release process of 2015.8.2, so it has not been officially released. Please use **2015.8.3** instead.

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**Changelog for v2015.8.1..v2015.8.2**

*Generated at:* 2018-05-27 23:17:44 UTC

- **PR #28865:** ([jfindlay](https://github.com/jfindlay)) add 2015.8.2 release notes @ 2015-11-13 17:30:18 UTC
  - af297b0ae Merge pull request #28865 from jfindlay/2015.8
  - 1f847fc9ba add 2015.8.2 release notes
- **ISSUE #27392:** ([ahammond](https://github.com/ahammond)) schedule running state.orchestrate fails (refs: #28730)
- **PR #28730:** ([garethgreenaway](https://github.com/garethgreenaway)) Fixes to how return_job is handled in the scheduler for the salt master. @ 2015-11-13 16:58:20 UTC
  - 15672a3fcaa Merge pull request #28730 from garethgreenaway/27392_2015_8_scheduler_return_job_master
  - 882350a543 Fixing the salt scheduler so that it only attempts to return the job data to the master if the scheduled job is running from a minion's scheduler.
- **PR #28848:** ([cro](https://github.com/cro)) Lint @ 2015-11-13 13:46:36 UTC
  - 5560cb662b Merge pull request #28848 from cro/fx2_multi_creds
  - f032bff7dc Lint
  - 6bb6703c3e Merge branch ‘fx2_multi_creds’ of git://github.com/cro/salt into cro
  - 3b7d22248c Fix fallback credentials, add grains based on dracr.server_info and dracr.inventory, fix short-circuited for loop that was preventing retrieval of most data from CMC and DRAC devices, format responses from racadm more clearly.
  - b86c614564 Better logic around fallback credentials.
  - 2701826a99 Update fx2.py, fix typos in new fallback parameters.
  - 8ce5348808 Better variable name.
  - 92038b8718 Default configuration file for proxy minions.
- **PR #28842:** ([cachedout](https://github.com/cachedout)) Add transport setting to shell test @ 2015-11-12 21:43:11 UTC
  - 778ace3ca5 Merge pull request #28842 from cachedout/tcp_shell_test
  - 785bf94f55 Add transport setting to shell test
- **PR #28837:** ([basepi](https://github.com/basepi)) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-11-12 21:17:14 UTC
  - 5639971744 Merge pull request #28837 from basepi/merge-forward-2015.8
  - 1c91ad6765 fix lint
  - 4b706ac76a Merge remote-tracking branch ‘upstream/2015.5’ into merge-forward-2015.8
    - eb904665dc Merge pull request #28832 from basepi/backport.28826
      - 57be72eb91 Add backports_abc and singledispatch_helpers to thin as well
      - 897cad627b Add singledispatch to the thin
    - eff811a0ad Merge pull request #28833 from basepi/increase.gather_job_timeout.8647

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### 30.2. Previous Releases
• c09243dd01 Increase the default gather_job_timeout
  • e4a036365d Merge pull request #28829 from basepi/merge-forward-2015.5
  • f8b8441485 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  • 76ee6b4bff Merge pull request #28777 from rallytime/bp-28740-2014.7
  • da5fac2b36 Back-port #28740 to 2014.7
  • 45c73ebf2f Merge pull request #28716 from rallytime/bp-28705
  • 32e7bd3ea0 Account for new headers class in tornado 4.3
  • f4fe921965 Merge pull request #28717 from cachedout/umask_note
  • 1874300e08 Add note about recommended umask
    • 5aeab71f76 Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
      • 93562631aa Merge pull request #28756 from MrCitron/fix-25775
        • 82075c809c Add logs and correct pylint error
        • e31e22d96a Fix 25775
      • 30cc48e37f Merge pull request #28786 from chrigl/fix-28783
        • ba6d814553 closes #28783
      • 8f1d0b636e Merge pull request #28776 from rallytime/bp-28740-2015.5
        • 49256b7d90 Back-port #28740 to 2015.5
      • 77d4b980f1 Merge pull request #28760 from dmyerscough/28732-Fix-cherrypi-api-keys-endpoint
        • 206d1684b2 Fixing CherryPy key bug
      • 6f8f04975f Merge pull request #28746 from rallytime/bp-28718
        • 092f441cad Account for no POST data
• ISSUE #28549: (lodelossa) dockerng module issue (refs: #28827)
• PR #28827: (jacksontj) Cleanup virtual_timer in loader @ 2015-11-12 19:39:29 UTC
  • c4fb815147 Merge pull request #28827 from jacksontj/2015.8
  • f49502fd48 __modules__ isn’t a global, although __salt__ is
  • c734eb8876 Fix virtual_timer branch such that it will catch exceptions.
• PR #28836: (cachedout) Cast to dict to fix wheel tests in tcp @ 2015-11-12 19:22:44 UTC
  • 215206c61d Merge pull request #28836 from cachedout/fix_tcp_wheel_tests
  • 8d3244166b Cast to dict to fix wheel tests in tcp
• PR #28834: (cachedout) Fix breakage in tcp server @ 2015-11-12 18:57:18 UTC
  • 560671a170 Merge pull request #28834 from cachedout/tcp_revert_master_uri
  • 755d493bed Fix breakage in tcp server
• PR #28804: (cachedout) TCP test fixes @ 2015-11-12 18:39:25 UTC
  • 224602437a Merge pull request #28804 from cachedout/tcp_test_fixes
  • f799971280 Change logic
  • 52ed06500a Fix typo
- 9b18f372e6 Normalize IPC check among transports
- e8ead2bfded Allow for tcp transport in publish
- e3b903c7b Allow for tcp transport in mine
- 3d80e67a2d Allow for tcp transport in auth

- **ISSUE #28828:** (basepi) salt-ssh doesn’t package tornado’s new deps in the thin (refs: #28826)
- **PR #28826:** (basepi) [2015.8] Add new tornado deps to salt-ssh thin (refs: #28832) @ 2015-11-12 18:14:43 UTC
  - 49992070db Merge pull request #28826 from basepi/salt-ssh.singledispatch.thin
  - 1e1a74fd61 Add backports_abc and singledispatch Helpers to thin as well
  - da1a2773dd Add singledispatch to the thin
- **PR #28759:** (jfindlay) simplify stdin use of stdin in at.present state @ 2015-11-12 18:11:55 UTC
  - PR #28187: (sjansen) fix at.present (refs: #28759)
  - af52c3272f Merge pull request #28759 from jfindlay/at
  - 987d1fee7c simplify stdin use of stdin in at.present state
- **PR #28824:** (rallytime) Back-port #28778 and #28820 to 2015.8 @ 2015-11-12 18:06:31 UTC
  - PR #28820: (cro) Add versionadded directives for chronos and marathon proxy grains. (refs: #28824)
  - PR #28778: (toddtomkinson) marathon and chronos proxy minions (refs: #28824)
  - 08891cb210 Merge pull request #28824 from rallytime/bp-28778-and-28820
  - ab5943995b Change versionaddeds to 2015.8.2 from Boron
  - da7ad0df99 Add versionadded directives.
  - 4bd10df5 documentation updates
  - 675be2acce more pylint fixes
  - 8e19b5c518 pylint fixes
  - ba9487f45 marathon and chronos proxy minions

- **ISSUE #23271:** (twisty7867) Unicode paths break file states with masterless minion on Vagrant/Ubuntu 14.04 (refs: #28803)
- **PR #28803:** (jfindlay) decode strings to utf-8 @ 2015-11-12 04:59:38 UTC
  - 30ea94439e Merge pull request #28803 from jfindlay/sdecodes
  - 11163380cf sdecode chunk name in state compiler
  - 7f95c483e1 sdecode strings in file state
  - fe4d08526d sdecode strings in highstate outputter

- **ISSUE #25363:** (syphernl) rabbitmq_[user|vhost].present in test=True reports unnecessary changes (refs: #28269)
- **ISSUE #24856:** (pruiz) rabbitmq_user state incorrectly reports result=True when using test=true (refs: #28269)
- **PR #28782:** (rallytime) Fixes to rabbitmq user state @ 2015-11-12 00:59:57 UTC
  - PR #28269: (rallytime) Refactor rabbitmq_user state to use test=True correctly (refs: #28782, #28772)
  - 59b505f7c Merge pull request #28782 from rallytime/rabbitmq-user-state
  - e2b00ee57e Don’t change perms list, only existing perms should be a dictionary.
- 7601647d69 Revert "rabbitmq.list_user_permissions returns a dict, not a list. Don't expect a list."

- **ISSUE #28429**: (cbuechler) salt-cloud VMware driver fails with uncustomizable guest when not customizing guest (refs: #28789)

- **PR #28789**: (nmadhok) Provide ability to enable/disable customization for newly create VMs using VMware salt-cloud driver @ 2015-11-11 22:48:57 UTC
  - 098d48ad26 Merge pull request #28789 from nmadhok/2015.8-customization-fix
  - 9294ebd984 Provide ability to enable/disable customization for new VMs. Fixes #28429

- **ISSUE #28692**: (mrosedale) puppet.run fails with arguments (refs: #28768)

- **PR #28768**: (mrosedale) 2015.8 @ 2015-11-11 19:29:11 UTC
  - 1e510be55b Merge pull request #28768 from mrosedale/2015.8
  - fbdbcc02e Update puppet.py
  - 1c1ab4410 Update puppet.py
  - 59bd6ae5c Merge pull request #1 from mrosedale/mrosedale-patch-1
    * c26ea916aa Update puppet.py

- **ISSUE #25363**: (syphernl) rabbitmq_{user|vhost}.present in test=True reports unnecessary changes (refs: #28269)

- **ISSUE #24856**: (pruiz) rabbitmq_user state incorrectly reports result=True when using test=true (refs: #28269)

- **PR #28772**: (rallytime) rabbitmq.list_user_permissions returns a dict, not a list. Don't expect a list. @ 2015-11-11 18:17:09 UTC
  - **PR #28269**: (rallytime) Refactor rabbitmq_user state to use test=True correctly (refs: #28782, #28772)
  - a6cad46301 Merge pull request #28772 from rallytime/rabbitmq-user-state
  - 07482211eb rabbitmq.list_user_permissions returns a dict, not a list. Don't expect a list.

- **ISSUE #28724**: (quantonganh) Exception occurred when calling boto_vpc.route_table_present with test=True (refs: #28725)

- **PR #28774**: (rallytime) Back-port #28725 to 2015.8 @ 2015-11-11 18:16:27 UTC
  - **PR #28725**: (quantonganh) boto_vpc: return an empty dict in case cannot get the route tables (refs: #28774)
  - d570ac48f4 Merge pull request #28774 from rallytime/bp-28725
  - c3420461c3 boto_vpc: return an empty dict in case cannot get the route tables

- **PR #28775**: (rallytime) Back-port #28740 to 2015.8 @ 2015-11-11 17:57:24 UTC
  - **PR #28740**: (MasterNayru) Add missing S3 module import (refs: #28777, #28775, #28776)
  - 806d1b3669 Merge pull request #28775 from rallytime/bp-28740
  - 8a2780da18 Add missing S3 module import

- **PR #28755**: (rallytime) Move most vmware driver list_* functions to use salt.utils.vmware functions @ 2015-11-11 17:49:16 UTC
  - f273c46f07 Merge pull request #28755 from rallytime/vmware-utils
  - 5abe010023 Move most vmware driver list_* functions to use salt.utils.vmware functions

- **ISSUE #28655**: (sjorge) possible issue with state module boto_cfn/docker/... (refs: #28744)
• **PR #28744**: (jfindlay) import gate elementtree @ 2015-11-11 16:29:12 UTC
  - 0d912bf0d4 Merge pull request #28744 from jfindlay/elementtree
  - e321d60002 import gate elementtree in artifactory module
  - f20f3f697b import gate elementtree in boto_iam state
  - 9845d2f2c6 import gate elementtree in boto_cfn state

• **ISSUE #28726**: (feigenblatt) user.present ignores "createhome: False" (refs: #28758)

• **PR #28758**: (jfindlay) remove redundant logic in useradd execution module @ 2015-11-11 16:22:21 UTC
  - b65e786351 Merge pull request #28758 from jfindlay/user
  - dbd582cd8d fix doc formatting in user.present state
  - 3824d2e9fc only change/report new home when createhome is True
  - 3fbf81611f remove redundant logic in useradd execution module

• **PR #28757**: (mbarrion) Bug fix: pip command to not quote spaces in cmd line args @ 2015-11-11 16:08:46 UTC
  - 6eced26013 Merge pull request #28757 from mbarrion/fix-pip-cmd
  - 6df6cb82a6 Fix pip command to not quote spaces in cmd line args

• **PR #28764**: (multani) Various documentation fixes @ 2015-11-11 16:06:10 UTC
  - 356bf2987d Merge pull request #28764 from multani/fix/docs
  - 1a31b69763 doc: fix documentation formatting in salt.utils.jinja
  - 59c105b4b9 doc: fix documentation formatting in salt.states.boto_iam*
  - cbb1b6c8ee doc: fix documentation formatting in in salt.modules.lxc
  - cb03a89e52 doc: fix documentation formatting in salt.modules.aptpkg

• **PR #28752**: (aboe76) Update openSUSE grain for tumbleweed @ 2015-11-11 03:54:37 UTC
  - d77c24e70d Merge pull request #28752 from aboe76/suse_tumbleweed_grain
  - 76c1b06e0 Update openSUSE grain for tumbleweed

• **ISSUE #28712**: (hexedpackets) Service registration in the Consul module is broken (refs: #28713)

• **PR #28713**: (hexedpackets) Rename consul.list to consul.list_keys. @ 2015-11-11 00:57:23 UTC
  - a620bc5596 Merge pull request #28713 from hexedpackets/fix-consul-module
  - 0889907b3c Make consul.list a function alias.

• **PR #28719**: (jacobhammons) removed dependencies info from docs @ 2015-11-10 00:04:53 UTC
  - decc31a766 Merge pull request #28719 from jacobhammons/spm
  - d7017be031 removed dependencies info from docs

• **PR #28709**: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-11-09 23:38:27 UTC
  - 989069f44a Merge pull request #28709 from basepi/merge-forward-2015.8
  - 2d04ddc108 Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
    - f40c617bad Merge pull request #28705 from cachedout/tornado_http_headers
      - 7ac6cde1ee Account for new headers class in tornado 4.3
  - c90431eddc Rip out unit test that doesn't apply anymore
- aeeaa7c90d Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
  - 604a7b4199 Merge pull request #28699 from rallytime/bp-28670
    - e436b23296 psutil can fail to look-up a uid and raise a KeyError
  - 7bd3eb8370 Merge pull request #28703 from rallytime/bp-28690
    - a0988dab58 Fix 28689: Check s3 ext pillar cache file before calculating expiration
  - 2a40f57b93 Merge pull request #28694 from s0undt3ch/2015.5
    - 0910c6ffe4 Update to latest bootstrap script v2015.11.09
  - 3249b322e8 Merge pull request #28698 from rallytime/fix-26592
    - 098fb815af Use the -q argument to strip extraneous messages from rabbitmq
  - 29e8250d0c Merge pull request #28694 from jacksontj/2015.5
    - f63c2d70a7 Rework minion return_retry_timer
  - 1bbaea8aad Merge pull request #28669 from twangboy/fix_15177
    - 745b8f75f6 Fixed some lint
    - a43eb53f28 Added version added notes in docs
    - 6b537c8640 Fixed join_domain and unjoin_domain for Windows
  - 4ad5056066 Merge pull request #28666 from jfindlay/r_data
    - 29228f445f define r_data before using it in file module
  - e129e889ad Merge pull request #28662 from cachedout/issue_24758
    - 78f489433 Add note about disabling master_alive_interval
  - df121d0cecc Merge pull request #28627 from twangboy/backport_win_useradd
    - 87282b6354 Backport win_useradd

- **ISSUE #28469**: (mlalpho) state boto_secgroup.present fails to find vpc_name (refs: #28710, #28534)

- **PR #28710**: (rallytime) Pass kwargs correctly to _get_group from get_group_id @ 2015-11-09 22:29:09 UTC
  - 8d5ab15c16 Merge pull request #28710 from rallytime/fix-28469
  - 0571608f5d Pass kwargs correctly to _get_group from get_group_id

- **PR #28698**: (rallytime) Back-port #28530 to 2015.8 @ 2015-11-09 18:11:51 UTC
  - **PR #28530**: (skizunov) AsyncTCPReqChannel will fail after 10 uses (refs: #28614, #28698)
    - cfa0c19ce Merge pull request #28698 from rallytime/bp-28530
    - d94d0db805 AsyncTCPReqChannel will fail after 10 uses

- **ISSUE #28678**: (johnsocp) Error in netapi/rest_tornado preventing it from starting (refs: #28679)

- **PR #28700**: (rallytime) Back-port #28679 to 2015.8 @ 2015-11-09 18:07:44 UTC
  - **PR #28679**: (johnsocp) Adding err variable definition to fix error that is preventing rest_tornado from initializing (refs: #28700)
    - 2fe9e2e7c5 Merge pull request #28700 from rallytime/bp-28679
    - 4e0870e636 Adding variable definition for issue #28678
    - **PR saltstack/salt-bootstrap#868**: (cachedout) Always refresh the Arch Linux keyring if needed (refs: #28695, #28694)
• PR #28695: (s0undt3ch) [2015.8] Update to latest bootstrap script v2015.11.09 @ 2015-11-09 17:50:15 UTC
  – 8ccea2a855 Merge pull request #28695 from s0undt3ch/2015.8
  – bb6c60a330 Update to latest bootstrap script v2015.11.09

• ISSUE #28526: (clarkperkins) yumpkg.installed broken in salt v2015.8.1 on CentOS 6 minions (refs: #28656)

• PR #28656: (clarkperkins) #28526 fixed yumpkg module issue with pkg.installed @ 2015-11-09 05:16:00 UTC
  – 61ba00b163 Merge pull request #28656 from clarkperkins/bugfix/fix-yumpkg-module
  – e11f87be93 #28526 fixed yumpkg module

• ISSUE #28588: (aboe76) openSUSE Leap not recognized as ‘Suse’ os grain and os_family grain (2015.8.1 ) (refs: #28672)

• PR #28672: (jfindlay) add OS grain support for SuSE Leap @ 2015-11-08 01:05:51 UTC
  – 5448e4e29 Merge pull request #28672 from jfindlay/suse_grain
  – b44b6fa9c add OS grain support for SuSE Leap

• ISSUE #28603: (alexharrington) MooseFS/LizardFS mount options force remount (refs: #28673)

• PR #28673: (jfindlay) add hidden_opts to mount.mounted @ 2015-11-08 00:51:19 UTC
  – 476f55ebc0 Merge pull request #28673 from jfindlay/mount_hide
  – 1dca8e1d7 add hidden_opts to mount.mounted
  – d3a9f86eb8 minor refactoer of mount state

• PR #28667: (cro) saltutil.sync_all should sync proxymodules as well as the rest. @ 2015-11-07 01:09:28 UTC
  – 24d75709fa Merge pull request #28667 from cro/proxy_sync_all
  – 08e53b317f Sync proxymodules with sync_all

• PR #28665: (jfindlay) fixes to windows execution and state modules @ 2015-11-07 00:47:38 UTC
  – 019c13948a Merge pull request #28665 from jfindlay/win_fixorz
  – e8c7371b56 fix minor doc issues in win_system module
  – 582bf391b9 handle error on nonexistent net dev in win_network
  – d15609ea9 check for wua time setting as a str

• ISSUE #28542: (Ch3LL) s3.get execution module returns error (refs: #28660)

• PR #28660: (techhat) Don't sign empty regions @ 2015-11-06 20:49:25 UTC
  – ce3ce7df2 Merge pull request #28660 from techhat/emptyregion
  – a52518494a Don't sign empty regions

• PR #28632: (terminalmage) Fixes/improvements to pkgbuild state/modules @ 2015-11-06 20:48:07 UTC
  – 0583575f82 Merge pull request #28632 from terminalmage/pkgbuild-fixes
  – 59f3b14dca Initialize logging in pkgbuild state
  – af0b2c4a33 Fix false-positives for pkgbuild.built state
  – d83e779eac rpmbuild: Change return data to include a list of packages built
  – 03d9321379 debbuild: Change return data to include a list of packages built

• ISSUE #28591: (ssgward) SPM package install error (refs: #28658)
• PR #28658: (techhat) Remove _pkgdb_fun() references @ 2015-11-06 20:25:59 UTC
  - b82abadd9b Merge pull request #28658 from techhat/issue28591
  - 4fb175467 Remove _pkgdb_fun() references

• ISSUE #28470: (mlalpho) salt boto_rds.present fails to execute, too many arguments (refs: #28612, #28653)

• PR #28653: (rallytime) Provide possible parameters for boto_rds.present engine values @ 2015-11-06 18:58:35 UTC
  - e59d160120 Merge pull request #28653 from rallytime/boto_rds_engine_docs
  - 7b30d7e002 Provide possible parameters for boto_rds.present engine values

• PR #28649: (bdrung) Fix OS related grains on Debian @ 2015-11-06 18:25:46 UTC
  - 911761d8bc Merge pull request #28649 from bdrung/2015.8
  - 92a17d4cae Fix OS related grains on Debian

• ISSUE #26889: (UtahDave) salt-call w/non root user outputs repeating error (refs: #28113, #27343)

• PR #28646: (rallytime) Back-port #28614 to 2015.8 @ 2015-11-06 18:19:08 UTC
  - PR #28614: (skizunov) Fixed memory leak in AsyncTCPReqChannel (refs: #28646)
  - PR #28530: (skizunov) AsyncTCPReqChannel will fail after 10 uses (refs: #28614, #28698)
  - PR #28113: (skizunov) 'RuntimeError: IOLoop is closing' thrown in Minion on TCP transport (refs: #28614)
  - PR #27343: (cachedout) Close io loop before deleting attribute (refs: #28614)
  - 7531bc7334 Merge pull request #28646 from rallytime/bp-28614
  - 034cf28e57 Fixed memory leak in AsyncTCPReqChannel

• PR #28647: (rallytime) Back-port #28624 to 2015.8 @ 2015-11-06 18:18:32 UTC
  - PR #28624: (hyn-salt) Added reasoning why boto_cloudwatch.py cannot be loaded. (refs: #28647)
  - a829120746 Merge pull request #28624 from rallytime/bp-28624
  - 3b59cfac5f Added reasoning why boto_cloudwatch.py cannot be loaded.

• PR #28648: (rallytime) Merge branch '2015.5' into '2015.8' @ 2015-11-06 17:46:59 UTC
  - 52d70c986d Merge pull request #28648 from rallytime/merge-2015.8
  - 814974fde Merge branch '2015.5' into '2015.8'
    - 64a20228c6 Merge pull request #28617 from cachedout/umask_module_sync
      - 227792e158 Set restrictive umask on module sync
    - 065f8c7fb3 Merge pull request #28622 from gravyboat/update_puppet_module_docs
      - 4ea28bed30 Update puppet module wording

• PR #28638: (anlutro) Salt-SSH: Return more concise error when SSH command fails @ 2015-11-06 16:54:46 UTC
  - 4722e41787 Merge pull request #28638 from alprs/saltssh-handle_ssh_errors
  - 5419b9836d return concise error when ssh fails

• PR #28644: (pass-by-value) Make sure versionchanged is correct @ 2015-11-06 16:53:31 UTC
  - e72e60d4b4 Merge pull request #28644 from pass-by-value/update_versionchanged
  - f4c297e794 Make sure versionchanged is correct
• ISSUE #8: (thatch45) Network persistence (refs: #28615)
• ISSUE #64: (thatch45) State file rendering system (refs: #28615)
• ISSUE #54: (thatch45) Release items (refs: #28615)
• PR #28615: (The-Loeki) Fixes to FreeBSD pkg @ 2015-11-05 23:43:33 UTC
  – PR #198: (techhat) Basic salt support for Tomcat (refs: #28615)
  – cf79722260 Merge pull request #28615 from The-Loeki/patch-1
  – a9ee178e0d rehash is a shell builtin, needs cmd.shell to work
  – 17f3852bdd environ.get has no output_loglevel
• PR #28613: (cachedout) Add facility to deepcopy bound methods in Py2.6 and apply to grains @ 2015-11-05 23:28:50 UTC
  – PR #28587: (cachedout) Reset yaml rendering hooks to avoid leaks (refs: #28613)
  – 9196c57e3f Merge pull request #28613 from cachedout/py26_method_deepcopy
  – 0935fcf4fc Spelling is hard
  – 2435b45195 Move to compat module to avoid namespace collisions in salt.utils
  – f51966875 Add facility to deepcopy bound methods in Py2.6 and apply to grains
• ISSUE #28527: (Oro) boto_rds.create needs storage_type, which does not exist in boto.rds2 create_db_instance
  (refs: #28613)
• ISSUE #28470: (mlalpho) salt boto_rds.present fails to execute, too many arguments (refs: #28612, #28653)
• PR #28612: (rallytime) Remove unsupported storage_type argument for parity with boto_rds module @ 2015-11-05 19:07:42 UTC
  – PR #28561: (Oro) Issue #28527 boto_rds.create does not work (refs: #28612)
  – 2032d61e68 Merge pull request #28612 from rallytime/fix-28470
  – 8fd26a5488 Remove unsupported storage_type argument for parity with boto_rds module
• PR #28611: (rallytime) [2015.8] Be explicit about salt.utils.vmware function calls @ 2015-11-05 18:43:36 UTC
  – d81330ac7f Merge pull request #28611 from rallytime/vmware-utils-fix
  – f46547eb56 [2015.8] Be explicit about salt.utils.vmware function calls and avoid naming
• PR #28610: (pass-by-value) Lxc config additions @ 2015-11-05 18:43:05 UTC
  – 35dbca24e7 Merge pull request #28610 from pass-by-value/lxc_config_additions
  – 83193641ca Add doc about cloud lxc options
  – 8977ddad59 Add argument to init
  – 2bef38b5bb Add bootloader delay and systemd check options
• ISSUE #28601: (nasenbaer13) boto_asg.present overwrites custom dimensions in alarms (refs: #28602)
• PR #28602: (nasenbaer13) Allow setting of custom dimensions in asg alarm specification @ 2015-11-05 15:00:24 UTC
  – 464aa6b062 Merge pull request #28602 from eyj/fix-28601
  – 963ad4250a Allow setting of custom dimensions in asg alarm specification
• PR #28596: (rallytime) Merge branch '2015.5' into '2015.8' @ 2015-11-05 14:25:09 UTC
- 572d95b3e1 Merge pull request #28596 from rallytime/merge-2015.8
- eec9d69387 Merge branch '2015.5' into '2015.8'
  * 08295de5a5 Merge pull request #28563 from s0undt3ch/2015.5
    * 16f4db79a0 Update to latest bootstrap script v2015.11.04
  * 1e09f186ce Merge pull request #28541 from twangboy/fix_28173
    * 7edf5ce370 Fixed problem with system.set_computer_name
  * f44ed780b5 Merge pull request #28537 from jfindlay/decode_state_2015.5
    * 06e514940c decode filename to utf-8 in file.recurse state
  * 6acf87593f Merge pull request #28529 from rallytime/fix-28272
    * a959681858 Add link to Sending a GH PR to documentation docs
    * 1c612e2772 Update contributing and documentation pages to recommend submitting against branches
  * 025bff2bf0 Merge pull request #28548 from nmadhok/2015.5-task-error
    * 804a0a6537 Tasks can be in queued state instead of running. Fixes #28511
  * 63bd3e52b3 Merge pull request #28531 from rallytime/fix-24585
    * bc577b2531 Add versionadded directives to virtualenv_mod state/module
  * ea3bf972c4 Merge pull request #28508 from twangboy/fix_unit_tests_windows
    * 0da6f7c50 Fixed some logic
    * cf1e059be5 Fixed windows tests
  * 73c5735fc1 Merge pull request #28525 from rallytime/route53_spacing
    * 6ab2ce615c Fix spacing in doc examples for boto_route53 state and module
  * 2d7f934f67 Merge pull request #28517 from rallytime/fix-28243
    * be8f650901 Punctuation.
    * fd846822c1 Add state_auto_order defaults to True note to ordering docs
- PR #28593: (blueyed) doc: fix typo with salt.states.file: s/preserce/preserve/ @ 2015-11-04 22:33:25 UTC
  - 73c33e0b4a Merge pull request #28593 from blueyed/fix-typo-preserve
  - eaf27d6ee7 doc: fix typo with salt.states.file: s/preserce/preserve/
- PR #28578: (twangboy) Fixed the script... something got broke... @ 2015-11-04 22:00:18 UTC
  - 8b483ee354 Merge pull request #28578 from twangboy/fix_windows_installer_script
  - 90b19a3279 Fixed the script... something got broke...
- PR #28579: (jfindlay) fix __virtual__ returns: tls,uptime mods @ 2015-11-04 22:00:02 UTC
  - 7ca7ed4b37 Merge pull request #28579 from jfindlay/virt_ret
  - 333c132378 fix __virtual__ returns: tls,uptime mods
- ISSUE #27574: (jgill) salt-cloud: Could not associate elastic ip address <None> with network interface <eni-xxxxxxxxx> (refs: #28584)
- PR #28584: (rallytime) If AssociatePublicIpAddress is set to True, don't auto-assign eip. @ 2015-11-04 21:59:38 UTC
- **PR #25315**: (ruzarowski) [cloud:EC2] Move handling of AssociatePublicIpAddress to associate_eip/allocate_new_eip logic depending on value type (refs: #28584)
  - ae764e6b5e Merge pull request #28584 from rallytime/fix-27574
  - 490e1bd5bb If AssociatePublicIpAddress is set to True, don’t auto-assign eip.

- **ISSUE #28392**: (jacksontj) AsyncZeroMQReqChannel does not implement tries (2015.8) (refs: #28410)

- **PR #28576**: (jacksontj) Only encode the zmq message once @ 2015-11-04 21:59:20 UTC
  - **PR #28410**: (jacksontj) Add retries to the zeromq.AsyncReqMessageClient (refs: #28576)
  - 231cdd4316 Merge pull request #28576 from jacksontj/transport
  - b29fc676a3 Only encode the zmq message once

- **ISSUE #3436**: (madduck) Pillar does not handle Unicode data (refs: #28134, #saltstack/salt#28134)

- **ISSUE #655**: (thatch45) Add general command management to service (refs: #saltstack/salt’#28134’_)

- **PR saltstack/salt#28134**: (bernieke) fix unicode pillar values #3436 (refs: #28581)

- **PR #28581**: (basepi) Revert b4875e585a165482c4c1ddec8987d76b0a71ef1b0 @ 2015-11-04 19:28:20 UTC
  - 69081d00e0 Merge pull request #28581 from saltstack/revert-28134-2015.8
  - 0a07c90d5e Revert b4875e585a165482c4c1ddec8987d76b0a71ef1b0

- **ISSUE #28477**: (anlutro) KeyError with file.managed HTTPS source (refs: #28573)

- **PR #28573**: (jacksontj) Add body to salt.utils.http.query returns @ 2015-11-04 17:18:19 UTC
  - ea3658eac8 Merge pull request #28573 from jacksontj/2015.8
  - d55ea7550b Add body to salt.utils.http.query returns

- **ISSUE #655**: (thatch45) Add general command management to service (refs: #saltstack/salt-bootstrap#656)

- **PR saltstack/salt-bootstrap#656**: (jfindlay) add support for repo.saltstack.com (refs: #28564, #28563)

- **PR saltstack/salt-bootstrap#656**: (mbologna) Change to ‘dnf’ as package manager for Fedora 22- (refs: #28564, #28563)

- **PR saltstack/salt-bootstrap#656**: (eyj) Make bootstrap work with FreeBSD 11-CURRENT. (refs: #28564, #28563)

- **PR saltstack/salt-bootstrap#653**: (cbuechler) Add bootstrap -b flag (don’t install dependencies) (refs: #28564, #28563)

- **PR saltstack/salt-bootstrap#654**: (hedinafook) Fixes error finding python-jinja2 in RHEL 7 (refs: #28564, #28563)

- **PR saltstack/salt-bootstrap#655**: (eyj) Add bootstrap -b flag (don’t install dependencies) (refs: #28564, #28563)

- **ISSUE #28527**: (Oro) boto_rds.create needs storage_type, which does not exist in boto.rds2 create_db_instance (refs: #28561)

- **PR #28564**: (s0undt3ch) [2015.8] Update to latest bootstrap script v2015.11.04 @ 2015-11-04 15:29:46 UTC
  - 3a729c2b40 Merge pull request #28564 from s0undt3ch/2015.8
  - b6a5a6bfb Update to latest bootstrap script v2015.11.04

- **ISSUE #28527**: (Oro) boto_rds.create needs storage_type, which does not exist in boto.rds2 create_db_instance (refs: #28561)

- **PR #28561**: (Oro) Issue #28527 boto_rds.create does not work (refs: #28612) @ 2015-11-04 15:13:09 UTC
  - fed4c6f482 Merge pull request #28561 from Oro/fix-boto-rds-create
- 54782b6fd9 Removed exception message where there is no exception
- e08f45c824 Issue #28527 boto_rds.create does not work

**PR #28560: (bdrung) Fix various typos @ 2015-11-04 15:06:36 UTC**
- ec924e8410 Merge pull request #28560 from bdrung/2015.8
- 89dbc66310 Fix the wrong "allow to do" phrase
- 859b6646a6 Fix typo an nonexistent -> nonexistent
- 66921cc61e Fix typo an succeeded -> successfully
- c1e3e9f98c8f Fix typo an explicitly -> explicitly
- 029a95398c Fix typo an superflous -> superfluous
- 026c215933 Fix typo an unnecessary -> unnecessary
- 5f7f5f94b Fix typo an edditable -> editable
- 0b768944c2 Fix typo an deamon -> daemon
- 5af9881d7 Fix typo an completly -> completely
- 14d2a16f74 Fix typos of compatibility
- 46a5a9b073 Fix typo an supped -> supported
- abc490a78e Fix typo an usefull -> useful
- ddd41210c Fix typo an targeting -> targeting
- 610a6a7ae Fix typo an verison -> version
- e0a5d46a1e Fix typo an seperated -> separated
- 7f11cfd5e1 Fix typo an helpfull -> helpful
- 2e9b520d84 Fix typos of omitted
- 3029f64481 Fix typo an compatibility -> compatibility
- 470e82f17f Fix typo an dictionnary -> dictionary
- 5843c7aa24 Fix typo an optionnal -> optional
- 730d0f95e7 Fix typo an transferred -> transferred
- c7e7884de2 Fix typo an recieved -> received
- 50eea287f3 Fix typo an managment -> management
- cb01da81c6 Fix typos of parameter
- 45fcd7d339 Fix typo an dont -> don’t
- 3629353d32 Fix typo an other -> another
- d16afe2607 Fix typo sofware -> software
- b9b7cb525 Fix typo sofware -> software
- 8edd2c1add Fix typos of dependency
- 3a5e2e3437 Fix typo documention -> documentation

**ISSUE #28528: (schlagify) timezone.system error: CommandExecutionError: Failed to parse timedatectl out-put, this is likely a bug (refs: #28550)**
• **PR #28550**: (jfindlay) check timedatectl errno and return stdout on failure @ 2015-11-04 15:00:24 UTC
  - bd0b291b63 Merge pull request #28550 from jfindlay/ctl_err
  - 11a9a5868f simplify timezone module unit test mocks
  - 476b651c94 update timezone module unit tests for timedatectl
  - 5c0e5dacc0 check timedatectl errno and return stdout on failure

• **ISSUE #19249**: (ahetmanski) Cannot create cache_dir salt master exception. (refs: #28545)

• **PR #28545**: (jfindlay) pass on concurrent create of jid_dir in local_cache @ 2015-11-04 14:54:11 UTC
  - e048667c91 Merge pull request #28545 from jfindlay/concurrent_dir
  - 58ad699331 pass on concurrent create of cache_dir in roots fs
  - e45618b04 pass on concurrent create of jid_dir in local_cache

• **PR #28544**: (rallytime) Start moving some vmware.py cloud funcs to utils/vmware.py @ 2015-11-04 14:52:59 UTC
  - 082fdd5734 Merge pull request #28544 from rallytime/vmware-utils
  - 403f37704 Pylint.
  - d9301ea95 Don't move _set_cd_or_dvd_backing_type yet
  - 8d69639230 Start moving some vmware.py cloud funcs to utils/vmware.py

• **PR #28543**: (gtmanfred) clean up changes for pkg.uptodate and supervisord.dead @ 2015-11-04 14:49:46 UTC
  - bf4f7cd4b Merge pull request #28543 from gtmanfred/2015.8
  - 3d57b392cb return changes if supervisord stopped process
  - 5547a34acc return empty changes if server is uptodate

• **ISSUE #28524**: (bmcorser) UnicodeDecodeError in states.file (refs: #28537, #28538)

• **PR #28538**: (jfindlay) decode path and url to utf-8 in url.create (refs: #28537) @ 2015-11-04 14:48:34 UTC
  - d345768b81 Merge pull request #28538 from jfindlay/decode_state
  - b05df5c58 decode path and url to utf-8 in url.create

• **ISSUE #28476**: (ColorFuzzy) state.sls UnicodeDecodeError (refs: #28533)

• **PR #28533**: (jfindlay) decode highstate error messages to utf-8 @ 2015-11-04 14:47:55 UTC
  - 2e0c8264db Merge pull request #28533 from jfindlay/decode_err
  - 9f9bb75c37 decode highstate error messages to utf-8

• **PR #28547**: (nmadhok) [Backport] [2015.8] Tasks can be in queued state instead of running @ 2015-11-04 04:13:30 UTC
  - cfc3146b2d Merge pull request #28547 from nmadhok/2015.8-task-error
  - 3fb1f9ee6b Tasks can be in queued state instead of running. Fixes #28511

• **PR #28535**: (techhat) Fail gracefully if 169.254* isn't available @ 2015-11-03 22:39:38 UTC
  - 7e22c7cf24 Merge pull request #28535 from techhat/fixcreds
  - 8d9224bd09 Catch timeouts too
  - fa46db2a3 Lint
  - f05a5e0936 Fail gracefully if 169.254* isn't available

30.2. Previous Releases 2809
• PR #28536: (cro) Default configuration file for proxy minions. @ 2015-11-03 21:26:27 UTC
  - 9a5208e8aa Merge pull request #28536 from cro/proxyconf
  - 1e03c4940 Default configuration file for proxy minions.
• ISSUE #28469: (mlalpho) state boto_secgroup.present fails to find vpc_name (refs: #28710, #28534)
• PR #28534: (rallytime) Add versionadded directive for vpc_name arg in boto_secgroup.present @ 2015-11-03 19:30:04 UTC
  - 2bc78a32ef Merge pull request #28534 from rallytime/fix-28469
  - ebe3b3ae7 Add versionadded directive for vpc_name arg in boto_secgroup.present
• PR #28516: (rallytime) Back-port #28489 to 2015.8 @ 2015-11-03 14:05:54 UTC
  - 36a217acbd Merge pull request #28506 from basepi/salt-ssh.minions.log.debug
• PR #28506: (basepi) [2015.8] Log minion list for all rosters, at debug level @ 2015-11-03 14:05:22 UTC
  - 06cdb50494 Log minion list for all rosters, at debug level
• PR #28514: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-11-03 01:19:33 UTC
  - 463a03b2a9 Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
  - 63ce8f78d5 Merge pull request #28512 from basepi/merge-forward-2015.5
    - 097838ec0c Wrap all cache calls in state.sls in correct umask
    - f3e61db045 Merge pull request #28407 from DSRCompany/issues/24910_token_auth_fix_2014
      - b7b5bec309 Don't request creds if auth with key.
• PR #28502: (cachedout) Lint #28427 @ 2015-11-02 21:09:20 UTC
  - 8cbea63e40 Merge pull request #28514 from basepi/merge-forward-2015.8
  - 459a342102 Lint #28427
- 238411c8ce Merge pull request #28464 from basepi/merge-forward-2015.8
- 6f6e687cb4 Mock master_uri for even tests
- 3286a5250f Merge remote-tracking branch ‘upstream/2015.5’ into merge-forward-2015.8
  * 37ceae1e88 Merge pull request #28448 from gwaters/add-redhat-notes
    - e70990704a added a note to the tutorial for those that redhat so they can use the state file too.
  * 5ef50d60cd Merge pull request #28406 from rallytime/bp-28381
    - e5322d2c44 Add FreeBSD detection for VirtualBox
  * 30d5f7bbae Merge pull request #28413 from rallytime/bp-28400
    - ae1921b922 Do not execute _preflight_check if not_installed list is empty in _find_install_targets. Calling with empty list on rhel/centos cause execution of repo-query --whatprovides without pkg list which is memory consumptive task for host and also for red hat satellite server.
  * 045d540aff Merge pull request #28366 from erchn/fix_yumpkg_mod_repo_disabled
    - 8187a4ce20 re-arrange things a bit to have less overall changes
    - f1d570ff18 move todelete above disabled check, add comment
    - 64fiec413f also remove disabled key from repo_opts
    - 2f2eb7bb6 mark repo not enabled when pkgrepo state passes in disable: True
  * 3923f4a569 Merge pull request #28373 from beverlcl/fix-use_carrier-28372
    - 32cffeceb6 Fixing bug #28372 for use_carrier option on bonding network interfaces.
  * e07e3f257b Merge pull request #28359 from rallytime/bp-28358
    - 9cacbf582b docstring typo fix - list returners not runners
  * 282be7ba5a Merge pull request #28346 from twangboy/fix_installer
    - f65e3e5275 Updated documentation to reflect the new parameter
    - a0c5223554 Fixes #27923 and #28000
  * 7858f04ebc Merge pull request #28315 from gwaters/update-pillar-doc
    - b1528c0b4 adding a working example of setting pillar data on the cli
  * 45305ccf29 Merge pull request #28211 from terminalmage/legacy_git_pillar-2015.5
    - 0d6a4ac115 Remove non-functional test
    - ab991d61d9 Fix for ext_pillar being compiled twice in legacy git_pillar code (2015.5 branch)
  * a6cc84c407 Merge pull request #28263 from cachedout/issue_26411-1
    - 3b880a5f07 New channel for event.fire_master
    - 29e9533aab Stand up a new channel if using salt-call
  * 788e1463d8 Merge pull request #28293 from cachedout/fix_28271
    - 499ed8519b Minor grammar changes to #28271
  * e178af0b90 Merge pull request #28271 from gwaters/update-tutorial-documentation
    - f96d39483d updated the tutorial with gravyboat’s suggestions

30.2. Previous Releases

2811
- b1f4a2bdf4 i think i changed the wrong header, updated to fix
  - 846b3aece1 I found you can not run the cp.push commands until after enabling the feature in the conf, so I wanted to update the docs so others who try these commands won’t bump into the same issue I had.
- e3eff9b909 Merge pull request #28280 from 0xf10e/patch-1
  - 6d4316b0ac Correct Jinja function load_* to import_*
- 909fa3dc97 Merge pull request #28255 from cachedout/cli_opt
  - a2408157de Add __cli opt
- 0fa094ae11 Merge pull request #28213 from rallytime/boto_route53_state
  - 237d64ff11 If record returned None, don’t continue with the state. Something went wrong.
- 1768014705 Merge pull request #28238 from basepi/fix.schedule.present.28217
  - 087a8dc3c2 Only insert enabled if it’s a dict
  - 5b49f41fab Fix schedule comparison to adjust for ‘enabled’ being added in schedule.list
  - 2dc1226ab8 Build new item with ‘enabled’ if available
- bdd48c92de Merge pull request #28174 from lorengordon/file-replace-multiline
  - acdef2da60 Update docstrings with new guidance
  - 0835b005b7 Use a test that makes the extra file read unnecessary
  - 6d6121a6e5 Use flags when checking whether content was added previously
  - b25e609e9e Set flags=8 since now the file is read as a MULTILINE string by default
  - 89e8dcdfffd Use finally block to ensure mmap object is closed
  - 5aea6647c9 Add support for multiline regex in file.replace
- 2225925fb5 Merge pull request #28175 from twangboy/fix_19673
  - ae8fbb208f Fixes #19673

- **ISSUE #15583**: (dr4Ke) state grain.present should accept dict values (isn’t it?) (refs: #26945)
- **ISSUE #11870**: (gpkvt) Nested Grain-Support for grains.present / grains.absent (refs: #26945)
- **PR #28486**: (rallytime) Back-port #26945 to 2015.8 @ 2015-11-02 18:43:35 UTC
  - **PR #26945**: (dr4Ke) Feature state grains support nested and dict (refs: #28486)
  - a25e3c8eda Merge pull request #28486 from rallytime/bp-26945
  - 8d26bbd777 grains module and state: documentation fixes
  - df7e936910 grains module and state: use a unique object...
  - df8ec1184c grains module documentation fixes
  - 25e9a5c9ad grains state and module: fix version strings
  - eee2318873 grains state: allow deleting grain with 'False' value
  - c92326f5ea grains module: yaml representer for OrderedDict
  - 2c9e8d4073 grains state doc update
  - 576252da05 grains state: list_present, list_absent support nested grain
  - 62a1f37d86 grains state: nested support for grains.append
- 3019a055c9 grains state: rewrite doc + example
- c19ccf517a grains state: more tests
- cc844e4a2c grains state tests: test the grain file content as well
- 1c5cd4c82d grains state: changes comment more accurate
- 563fd2b56c grains state: use DEFAULT_TARGET_DELIM
- c63913e602 grains module: simpler comment for already set key
- 2000180791 grains.present uses grains.set
- a03c79b13b module grains.set default comment is a string
- 64e9e2c3b3 grains.absent uses set(None)
- 6b8c245b87 grains state: new tests for nested grains

**PR #28472**: (gtmanfred) overwrite more than one value with names @ 2015-11-02 17:56:53 UTC
- f3640b3ad6 Merge pull request #28472 from gtmanfred/2015.8
- 8b90cced5 overwite more than one value with names

**PR #28493**: (rallytime) Back-port #28492 to 2015.8 @ 2015-11-02 17:54:09 UTC
- **PR #28492**: (cedwards) Updated FreeBSD installation docs (refs: #28493)
- e31ef51053 Merge pull request #28493 from rallytime/bp-28492
- ffc77259e9 Updated FreeBSD installation docs:

**PR #28494**: (whiteinge) Fix filter_by passing incorrect parameters to match functions @ 2015-11-02 17:53:55 UTC
- 38c77206db Merge pull request #28494 from whiteinge/filter_by-argfix
- e61ac75d6f Fix filter_by passing incorrect parameters to match functions

**ISSUE #23685**: (Snergster) inotify beacon on file. 'change' event to reactor to reset file to known state will cause loop (refs: #28388)

**PR #28491**: (rallytime) Back-port #28388 to 2015.8 @ 2015-11-02 17:13:23 UTC
- **PR #28388**: (cachedout) Beacon state disable (refs: #28491)
- d19affd44d Merge pull request #28491 from rallytime/bp-28388
- f740a19477 Working right now
- 700eab0d0 Disable starting to come to life
- f8b17748ef More fixing
- 04585a2878 Documentation for disable_during_state_run
- dbbd53699d Add documentation note in inotify beacon
- 40217fe813 More refactoring and add new option to disable during state run
- 19af5e5ed3 Starting on refactor of beacon config parsing

**ISSUE #12363**: (joehealy) unable to manage password expiry of windows users (refs: #28465)

**PR #28465**: (twangboy) Fix #12363: Password Expiration in Windows @ 2015-11-02 17:01:18 UTC
- f7042967 Merge pull request #28465 from twangboy/fix_12363
- bcfd58dbb Fixed array if there's a problem with user.info
• ISSUE #28484: (nasenbaer13) Elastycache subnet group creation raises TypeError (refs: #28485)
• PR #28485: (nasenbaer13) Fix invalid usage of _get_conn causing #28484 @ 2015-11-02 16:47:52 UTC
  – ec0cbe00b Merge pull request #28485 from eyj/fix_28484
  – 9d80b6070 Fix invalid usage of _get_conn causing #28484
• ISSUE #28453: (sdm24) Fix Formatting for Nodegroup Targetting Docs (refs: #28454)
• ISSUE #28268: (gravyboat) Update nodegroup docs to explain how to target via nodegroups (refs: #28306)
• PR #28454: (sdm24) Fixed nodegroup doc formatting to correctly link to pillar_opts in the master config @ 2015-11-02 15:14:40 UTC
  – PR #28306: (sdm24) Updated the Nodegroup docs to include how to target nodegroups in SLS Jinja (refs: #28454)
  – 1116798f21 Merge pull request #28454 from sdm24/fix-formating-in-nodegroup-docs
  – b968581eb1 Fixed nodegroup doc formatting to correctly link to pillar_opts in the master config
• PR #28487: (cachedout) Lint 28456 @ 2015-11-02 14:52:27 UTC
  – fac7803a59 Merge pull request #28487 from cachedout/lint_28456
  – 58fe15437a Lint #28456
  – 322a28bb06 updated states.virtualenv_mod comments to reflect that some kwargs need 'distribute: True'
• ISSUE #24775: (ymote) jinja returned host ip address with square bracket (refs: #28457)
• PR #28457: (sdm24) Clarified comments for grains/core.py for ip_interfaces, ip4_interfac... @ 2015-11-02 14:47:59 UTC
  – 22a4f14625 Merge pull request #28457 from sdm24/update-grain-ip-interfaces-comments
  – eb92afe238 Clarified comments for grains/core.py for ip_interfaces, ip4_interfaces, and ip6_interfaces, to explicitly state that the ips for each interface are passed as a list
• PR #28473: (anlutro) Show check_cmd output on failure @ 2015-11-02 14:15:30 UTC
  – 5818b28c85 Merge pull request #28473 from alprs/feature-cmd_check_output
  – a772ce330a fix tests
  – 90b01e9e0d show check_cmd output on failure
• PR #28460: (justinta) Skipped wipesfs test if wipesfs does not exist on OS @ 2015-10-31 04:09:32 UTC
  – cfe39df7ac Merge pull request #28460 from jtand/wipe_fs_fix
  – 7ca79f17b Skipped wipesfs test if wipesfs does not exist on OS
• PR #28426: (terminalmage) pkgbuild.built: make template engine optional @ 2015-10-30 17:13:36 UTC
  – 9b44b5e347 Merge pull request #28426 from terminalmage/pkgbuild-template
  – 6d32497848 pkgbuild.built: make template engine optional
• ISSUE #28123: (hrumph) local.cmd not working for windows minions (refs: #28422)
• PR #28422: (cachedout) Handle windows logging on thread_multi [WIP] @ 2015-10-30 17:12:26 UTC
  – 31777cb4e9 Merge pull request #28422 from cachedout/issue_28123
- fd3b2a9e20 Handle windows logging on thread_multi

- **ISSUE #13513**: (ironwilliamcash) Windows Registry Key Problem on 64bit Machine (refs: #28425)
  - PR #28425: (twangboy) Fix #13513 - Reflection @ 2015-10-30 17:07:23 UTC
    - f9992fc948 Merge pull request #28425 from twangboy/fix_13513
    - beb141df69 Fixed some lint
    - 0d747355c4 Fix #13513

- **ISSUE #27980**: (rayba) salt-cloud 2015.5.0 azure provider could not be loaded (refs: #28417)
  - PR #28417: (rallytime) Add note about azure sdk version to getting started docs @ 2015-10-29 19:47:05 UTC
    - 4c8cd064a4 Merge pull request #28417 from rallytime/azure-version-warning
    - 8e3a2ba7e7 Add note about azure sdk version to getting started docs

- **ISSUE #28392**: (jacksontj) AsyncZeroMQReqChannel does not implement tries (2015.8) (refs: #28410)
  - PR #28410: (jacksontj) Add retries to the zeromq.AsyncReqMessageClient (refs: #28576) @ 2015-10-29 18:05:50 UTC
    - 7ead823731 Merge pull request #28410 from jacksontj/2015.8
    - 70b5ae9b1d Add retries to the zeromq.AsyncReqMessageClient

- **ISSUE #28392**: (cedwards) [FreeBSD] user state option empty_password: True fails with Traceback (refs: #28395)
  - PR #28395: (cedwards) Updating bsd_shadow to match mainline shadow (refs: #28404)
    - 50845a1e91 Merge pull request #28404 from rallytime/bp-28395
    - badc87e9 Use correct version release number
    - 52c915e29d fix at.present

- **ISSUE #28375**: (merll) Merge pillar includes correctly @ 2015-10-29 15:12:48 UTC
  - PR #28375: (merll) Merge pillar includes correctly @ 2015-10-29 15:12:48 UTC
    - 5eacf26c10 Merge pull request #28375 from Precis/fix-pillar-include-loop
    - e8e2c26473 Variable err is from previous loop, too.
    - 042314246f Unit test for merging included pillars.
    - a42c51f9bf Do not merge previous values in pillar include loop.

- **ISSUE #28376**: (ryan-lane) Support update of route53 records with multiple values @ 2015-10-29 14:54:47 UTC
  - PR #28376: (ryan-lane) Support update of route53 records with multiple values (refs: #28376)
    - a69b124aaa Merge pull request #28376 from lyft/multivalue-route53-values-2015.8
cd221515a1 Support update of route53 records with multiple values

- PR #28377: (terminalmage) Deprecate 'always' in favor of 'force' in pkgbuild.built @ 2015-10-29 14:42:22 UTC
  - 9e5a510e73 Merge pull request #28377 from terminalmage/force-pkgbuild
  - f18305e19e Add versionadded directive
  - 7046d0d896 Deprecate 'always' in favor of 'force' in pkgbuild.built

- PR #28380: (cro) Add missing call for service provider @ 2015-10-29 14:26:55 UTC
  - cd632f798d Merge pull request #28380 from cro/sshprox_fix
  - 7bcc275dce Lint + logic error.
  - 92d712a54b Add a missing call for the service provider

- ISSUE #28202: (guettli) Docs: Difference between modules.cron.rm_job and modules.cron.rm (refs: #28348)

- PR #28348: (jfindlay) salt.utils.alias informs user they are using a renamed function @ 2015-10-28 20:46:36 UTC
  - c7571e6d61 Merge pull request #28348 from jfindlay/alias
  - 7915d7e5e8 use alias util to formally alias module functions
  - 6a86b16d12 create function alias to improve api documentation

- PR #28364: (justinta) In CentOS 5 the .split() causes a stacktrace. @ 2015-10-28 20:46:02 UTC
  - 072eb9a26 Merge pull request #28364 from jfindlay/blockdev_test_fix
  - 3b4d03ff1a In CentOS 5 the .split() causes a stacktrace. Confirmed.split() appears to be unneeded in other OSs.

- ISSUE #26415: (CaesarC) salt.wheel.WheelClient doesn’t work follow the python api(ATTRIBUTE: 'None-Type' object has no attribute 'get') (refs: #28087)

- PR #28361: (rallytime) Back-port #28087 to 2015.8 @ 2015-10-28 20:44:32 UTC
  - PR #28087: (DmitryKuzmenko) Revert "Update __init__.py" (refs: #28361)
  - 06b928cf9b Merge pull request #28361 from rallytime/bp-28087
  - 41536e55b9 Revert "Update __init__.py"

- PR #28360: (multani) Various documentation fixes @ 2015-10-28 20:43:20 UTC
  - d9e5fa9b5 Merge pull request #28360 from multani/fix/docs
  - ed4a5f839 doc: fix warnings in clouds.linode
  - 5a9c4c2d60 doc: simplified states.postgres_tablespace introduction
  - cf38ff1384 doc: fix rendering of titles in the /ref/states/all/ index page

- PR #28370: (rallytime) Back-port #28276 to 2015.8 @ 2015-10-28 20:37:49 UTC
  - PR #28276: (plastikos) Correct state pkg.updtodate to succeed when packages are up-to-date (refs: #28370)
  - 4157c8331b Merge pull request #28370 from rallytime/bp-28276
  - 227dddbcb24 Simplify setting success when there are no pkg updates.
  - cd58165138 Correct state pkg.updtodate to succeed when packages are up-to-date

- ISSUE #27890: (dkiser) pillar recurse list strategy (refs: #27891)

- ISSUE #25954: (tbaker57) [2015.8.0rc2] pillar merge strategy default behaviour change (refs: #28353)
- **PR #28353**: (merll) Consider each pillar match only once. @ 2015-10-28 15:05:21 UTC
  - **PR #27891**: (dkiser) introduce recurse_list pillar_source_merging_strategy (refs: #28353, #28013)
  - 3942b4d0e6 Merge pull request #28353 from Precis/fix-pillar-sls-matches
  - 2f3f2d6f29 Consider each pillar match only once.
- **PR #28334**: (anlutro) iptables needs -m comment for --comment to work @ 2015-10-28 14:24:52 UTC
  - 0d8ba6c43 Merge pull request #28334 from alprs/fix-iptables_comment
  - 170ea7c50d iptables needs -m comment for --comment to work
- **ISSUE #27789**: (eduherraiz) UnicodeDecodeError: 'ascii' codec can’t decode byte in 2015.8.0 (refs: #28340, #27833)
- **PR #28340**: (jffindlay) sdecode file and dir lists in fileclient @ 2015-10-28 14:23:10 UTC
  - 7000b6e8f Merge pull request #28340 from jfindlay/decode_client
  - bd915b5e3 sdecode file and dir lists in fileclient
- **PR #28344**: (ryan-lane) Fix iptables state for non-filter tables @ 2015-10-28 14:21:54 UTC
  - 48448c9a48 Merge pull request #28344 from lyft/fix-iptables-non-filter
  - 21ba070b3d Fix iptables state for non-filter tables
- **PR #28343**: (rallytime) Back-port #28342 to 2015.8 @ 2015-10-28 13:58:28 UTC
  - **PR #28342**: (gravyboat) Fix up a dup doc entry for the file state. (refs: #28343)
  - 72f0c106cf Merge pull request #28343 from rallytime/bp-28342
  - 03d15dd090 Fix up a dup doc entry.
- **PR #28330**: (rallytime) Back-port #28305 to 2015.8 @ 2015-10-27 17:20:35 UTC
  - **PR #28305**: (rowillia) Fix Cabal states. (refs: #28330)
  - 64d5c2362a Merge pull request #28330 from rallytime/bp-28305
  - a46dbcb62b Fix Cabal states.
- **ISSUE #21216**: (syphernl) State rabbitmq_plugin missing proper error handling (refs: #28270)
- **PR #28270**: (rallytime) Refactor RabbitMQ Plugin State to correctly use test=true and format errors @ 2015-10-27 17:18:35 UTC
  - a44e8d8dab Merge pull request #28270 from rallytime/refactor_rabbitmq_plugin_state
  - 9e40c3a6a6 Fine tuning and fix tests
  - d50916cdd Pylint fix
  - 196b18146d Refactor RabbitMQ Plugin State to correctly use test=true and format errors
- **ISSUE #25363**: (syphernl) rabbitmq_[user|vhost].present in test=True reports unnecessary changes (refs: #28269)
- **ISSUE #24856**: (pruiz) rabbitmq_user state incorrectly reports result=True when using test=true (refs: #28269)
- **PR #28269**: (rallytime) Refactor rabbitmq_user state to use test=True correctly (refs: #28782, #28772) @ 2015-10-27 17:17:42 UTC
  - 4efd07eab5 Merge pull request #28269 from rallytime/refactor_rabbitmq_user_state
  - aebcb88ea Pylint fix
- 1b8b868a3 Clean-up/fixes to rabbitmq_user state and test adjustments
- 3e08fc8c6 Refactor rabbitmq_user state to use test=True correctly

- ISSUE #27855: (dverbeek84) boto_vpc is not reading availability_zone (refs: #28299, #28168)
- PR #28299: (rallytime) Add test for availability_zone check to boto_vpc_tests @ 2015-10-27 14:17:11 UTC
  - PR #28168: (rallytime) Make sure availability zone gets passed in boto_vpc module when creating subnet (refs: #28299)
  - 93a930615e Merge pull request #28299 from rallytime/tests-for-28168
  - 65fdb50246 Get the list indice to compart before looking at keys
  - 95deb87c57 Add test for availability_zone check to boto_vpc_tests

- ISSUE #28268: (gravyboat) Update nodegroup docs to explain how to target via nodegroups (refs: #28306)
- PR #28306: (sdm24) Updated the Nodegroup docs to include how to target nodegroups in SLS Jinja (refs: #28454) @ 2015-10-27 14:07:12 UTC
  - 0ab7c0053d Merge pull request #28306 from sdm24/update-nodegroup-docs-with-state-targeting
  - 02cacf9e00 Update nodegroups.rst
  - b2c3307c2e Update nodegroups.rst
  - e79939c5f7 updated nodegroups.rst
  - f2ab8c94df Updated the Nodegroup docs to include how to target nodegroups in SLS Jinja

- ISSUE #27435: (LukeCarrier) firewalld state: firewalld.prepare calls new_service, not add_service (refs: #28308)
- PR #28308: (rallytime) Firewalld state services should use --add-service, not --new-service @ 2015-10-27 01:08:41 UTC
  - b4ba26ffeca Merge pull request #28308 from rallytime/fix-27435
  - d37289f973 Don't forget to pass the zone!
  - fca6f83555 Firewalld state services should use --add-service, not --new-service

- ISSUE #21744: (rallytime) [2015.5] Multi-Master Minions Block on Authentication (refs: #28302)
- PR #28302: (DmitryKuzmenko) Always close socket even if there is no stream. @ 2015-10-27 01:08:41 UTC
  - 044737ba6e Merge pull request #28302 from DSRCompany/issues/21744_fix_context_term
  - b0fc66fa68 Always close socket even if there is no stream.

- PR #28282: (keesbos) Fix for __env__ in legacy git_pillar @ 2015-10-26 21:20:25 UTC
  - 2f2f5906d Merge pull request #28282 from keesbos/git-pillar-env-fix
  - d46e9af6c6 Fix for __env__ in legacy git_pillar

- PR #28258: (pass-by-value) Add service module for ssh proxy example @ 2015-10-26 14:57:47 UTC
  - 6a92bfbd42 Merge pull request #28258 from pass-by-value/ssh_service
  - 04bc1c64ad Add versionadded information
  - 76d8d859f1 Add service module for ssh proxy example

- PR #28294: (bechtoldt) correct a bad default value in http utility @ 2015-10-26 14:45:27 UTC
  - PR #25668: (techhat) Sanitize sensitive fields in http.query() (refs: #28294)
  - 25778cf1ba Merge pull request #28294 from bechtoldt/fix_bad_param_default_val
- 4852c03d08 don't iterate over var that is NoneType

- **PR #28185:** (justinta) Added single package return for latest_version, fixed other bug. @ 2015-10-26 14:09:40 UTC
  - 0245820b73 Merge pull request #28185 from jtand/zypper_pkg
  - 457f5d085 Added back nfo.get lines after finding the problem in them
  - 5cdb15c9e3 Added single package return for latest_version, fixed other bug.

- **PR #28297:** (cachedout) Lint fix proxy junos @ 2015-10-26 13:59:44 UTC
  - **PR #28116:** (jejenone) converted junos proxy minion to new __proxy__ global (refs: #28297)
  - 443b486c22 Merge pull request #28297 from cachedout/lint_fix_proxy_junos
  - 5194d9a2ef Lint
  - 28eff3caf2 converted junos proxy minion to new __proxy__ global added cli() in junos.py module to execute arbitrary command

- **ISSUE #28209:** (basepi) Legacy git_pillar configs cause duplicate ext_pillar calls (refs: #28210)

- **PR #28210:** (terminalmage) Fix for ext_pillar being compiled twice in legacy git_pillar code (refs: #28211) @ 2015-10-26 12:36:58 UTC
  - c8dd79d683 Merge pull request #28210 from terminalmage/legacy_git_pillar
  - 86f0e71bf Remove non-functional test
  - b80da6e23a Fix for ext_pillar being compiled twice in legacy git_pillar code

- **ISSUE #28203:** (edhgoose) blockdev.formatted failing on 2nd+ run, despite disk already being formatted (refs: #28265)

- **PR #28265:** (jfindlay) fix blockdev execution and state modules @ 2015-10-26 12:27:36 UTC
  - 62485e567f Merge pull request #28265 from jfindlay/blockdev
  - 0dc72135de update blockdev exec and state module unit tests
  - 07253cb5fb move fstype checks to blockdev execution module
  - 20ec4a1dc6 move fs create logic from blockdev state to module
  - 613671a85c safer examples in blockdev exec module docs
  - 359df1bcf7 refactor dump in blockdev exec module
  - 88acc9356d check, notify for deps in blockdev exec/state mods

- **PR #28266:** (rallytime) Back-port #28260 to 2015.8 @ 2015-10-26 12:20:56 UTC
  - **PR #28260:** (justinta) Ioflo lint (refs: #28266)
  - 556d79d583e Merge pull request #28260 from rallytime/bp-28260
  - 03509e6c9b2 Removed unnecessary blank line
  - 2d06c97879 Moved lint disable to end of offending line
  - d13fe0cf53 Disabled lint check for ioflo

- **PR #28253:** (rallytime) Back-port #28063 to 2015.8 @ 2015-10-23 18:10:56 UTC
  - **PR #28063:** (SmithSamuelM) Fixes broken Salt Raet. master.flo file path broken (refs: #28253)
  - acd2214c9d Merge pull request #28253 from rallytime/bp-28063
db4aa58f7b Changed reference to reflect refactoring of ioflo package locations as of ioflo 1.2.3. Deprecated package locations still supported in ioflo for now.

87abf84b54 Changed reference to reflect refactoring of ioflo package locations as of ioflo 1.2.3. Deprecated package locations still supported in ioflo for now.

19a81dcf77 Fixed exception in loader when no file extension.

2afe86803e Raet Salt broken when config moved to package directory. The path to the master.flo file no longer worked. This fixes.

a17b7f8f47 Fixed unit tests missing close of roadstack caused an error on other tests.

• ISSUE #28227: (jfindlay) DigitalOcean FreeBSD profile fails with image: 10.2 (refs: #28231)

• PR #28231: (rallytime) Make sure we're comparing strings when getting images in the DO driver @ 2015-10-23 13:49:37 UTC
  - 570e7f6a3b Merge pull request #28231 from rallytime/fix-28227
  - 0985780f12 Make sure we're comparing strings when getting images in the DO driver

• PR #28224: (techhat) Optimize create_repo for large packages @ 2015-10-23 13:40:06 UTC
  - 1c55513ce3 Merge pull request #28224 from techhat/spmoptimize
  - fae5f5dd2f Optimize create_repo for large packages

• ISSUE #27374: (mool) boto_route53 state doesn't create a record (refs: #28214, #28213)

• PR #28228: (rallytime) Back-port #27562 to 2015.8 @ 2015-10-23 13:34:42 UTC
  - PR #27562: (techhat) Add dependency resolution to SPM (refs: #28228)
  - 0775d159f8 Merge pull request #27562 from rallytime/bp-27562
  - 847809541e Updates as per @s0undt3ch
  - cf5fedf5f Add dependency resolution to SPM

• ISSUE #28230: (jfindlay) DigitalOcean FreeBSD fails to bootstrap: Please use the freebsd@ user to access this droplet. (refs: #28232)

• PR #28232: (rallytime) Add documentation to supply the ssh_username: freebsd config to DO docs @ 2015-10-23 13:31:52 UTC
  - af241dc05e Merge pull request #28232 from rallytime/fix-28230
  - 8b06ab4335 Add documentation to supply the ssh_username: freebsd config to DO docs

• PR #28198: (jacobhammons) Added note regarding missing spm exe on Debian/Ubuntu @ 2015-10-22 04:40:18 UTC
  - 36dc12c62c Merge pull request #28198 from jacobhammons/docs
  - cfadda0c0c Added note regarding missing spm exe on Debian/Ubuntu Minor fixes to spm docs

2820 Chapter 30. Release Notes
• PR #28182: (erchn) Some fixes for nova driver for Rackspace @ 2015-10-21 21:26:18 UTC
  - fbad88fb99 Merge pull request #28182 from erchn/fix_nova_rackspace
  - 7b54f04ba2 wrap server_list[_.detailed] in try/except block for TypeError
  - b7f8487615 rackconnectv3 default to False, not 'False' get private_ips in rackconnectv2 environment and populate data object get public_ips and put in data object before returning “result” structure

• ISSUE #27454: (MrFishFinger) firewallld returns a dictionary rather than a string in the ret[‘comment’] (refs: #28181)

• PR #28181: (rallytime) Revamp firewallld state to be more stateful. @ 2015-10-21 21:19:18 UTC
  - a1a924f170 Merge pull request #28181 from rallytime/fix-27454
  - 3e13880af8 Make sure we catch all potential exceptions
  - cb4efa87e8 Make sure state returns False when execution module calls fail
  - 232b2825e4 Revamp firewallld state to be more stateful.

• PR #28176: (cro) Add ping function @ 2015-10-21 20:49:54 UTC
  - d93ad103c7 Merge pull request #28176 from cro/ssh_no_ping
  - 3e05437f15 Add ping function

• PR #28167: (The-Loeki) file.serialize needs to add a final newline to serialized files @ 2015-10-21 17:12:33 UTC
  - 8e08f39381 Merge pull request #28167 from The-Loeki/patch-1
  - 46bf644fa3 Update file.serialize test for Python serialized
  - 6683fd087 file.serialize needs to add a final newline to serialized files

• ISSUE #27855: (dverbeek84) boto_vpc is not reading availability_zone (refs: #28299, #28168)

• PR #28168: (rallytime) Make sure availability zone gets passed in boto_vpc module when creating subnet (refs: #28299) @ 2015-10-21 14:48:03 UTC
  - 559a517ad6 Merge pull request #28168 from rallytime/fix-27855
  - 50fb77dc50 Make sure availability zone gets passed in boto_vpc module when creating subnet

• ISSUE #26107: (thecosmicfrog) Issue targeting nodegroups - Invalid compound target: ( L@ … ) (refs: #28148)

• ISSUE #24660: (Mrten) nodegroups not backwards compatible (refs: #28148)

• PR #28148: (basepi) [2015.8] Only expand nodegroups to lists if there is a nested nodegroup @ 2015-10-21 13:20:06 UTC
  - dcd90363fe Merge pull request #28148 from basepi/fix.nodegroup.backwards.compat.24660
  - 11d6a2b6ac Add some docs
  - 036d767a98 Keep track of recursive nodegroup_comp calls, keep list format if it’s recursing
  - 155634a0aa Finish thought
  - 528b16756b Only expand nodegroups to lists if there is a nested nodegroup

• PR #28155: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-10-20 23:48:41 UTC
  - 053ad408c7 Merge pull request #28155 from basepi/merge-forward-2015.8
  - c4c889f97b Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
  - ab18dcf637 Merge pull request #28140 from rallytime/bsd-installation-doc
- 458a544d83 Add OpenBSD installation documentation to 2015.5 branch
- fad38eb3c3 Merge pull request #28138 from rallytime/bp-28130-sizes-only
  - 6ab31e1886 Pylint
  - 37e4ed58a9 Added missing comma
  - 667f5e669f Added a bunch of instance sizes and updated some outdated ones
- ce8f858536 Merge pull request #28097 from jacksontj/2015.5
  - 75e04bcbfc For all multi-part messages, check the headers. If the header is not your minion_id, skip the message
- 9cdb970289 Merge pull request #28117 from rallytime/fix-23655
  - dfb908e405 Clean up stacktrace when master can't be reached in lxc cloud driver
- bf7ed0a397 Merge pull request #28110 from terminalmage/masterless-mode
  - ed90103124 Add explanation of file_client: local setting masterless mode
- a569ef4980 Merge pull request #28109 from rallytime/fix-27940
  - 18b2245611 Add created reactor event to lxc cloud driver
- d4604f0db26 Merge pull request #27996 from rallytime/fix-21845
  - f8380d751e Provide empty string as default stdout instead of None
  - f9406b5828 Don't fail if pip package is already present and pip1 is installed
- 28b97c51f4 Merge pull request #28056 from rallytime/bp-28033
  - af2c5ab759 Fixed win_useradd.py
- dfe3aace74 Merge pull request #28059 from rallytime/bp-28040
  - 76a0d4937b Revert "Allow passing in auth_version, defaulting to 2."
  - 63d5675d34 default auth_version = 2
  - 8072716888 remove extra spaces
  - 977056f04 cleanup whitespace, default to None to be consistent with profile
  - f4adfe98c0 Allow passing in auth_version, defaulting to 2.
  - fab1ad39af Rackspace support for swift module.
- d1fa036b55 Merge pull request #28047 from cachedout/issue_27534
  - 6ea37ddbca Context manager
  - 4d6f6bb371 Lint
  - 59018289dc Restore FTP functionality to file client
- fd2ca2df1b Merge pull request #28032 from twangboy/fix_win_path
  - 2bcac93314 Fixed win_path.py
- 88c1770be4 Merge pull request #28037 from rallytime/bp-28003
  - 4fc5f1b1e Fix PR #26336
- de72d8bd2 Merge pull request #28031 from jacobhammons/relnotes6
  - 05927bb6f0 Updated release notes with additional CVE information
- 16c0272849 Merge pull request #28008 from jfindlay/host_path
  - 9f7047dd3c platform independent line endings in hosts mod
- d41018fa8e Merge pull request #28012 from rallytime/fix-28010
  - 0d7059e0c2 Clean up stack trace when something goes wrong with minion output
- f728307001 Merge pull request #27995 from jacobhammons/pillar-doc
  - 2870af2ba3 added link to grains security FAQ to targeting and pillar topics.
- efede904a7 Merge pull request #27986 from jacobhammons/dot6
  - bb61c68c11 Changed current release to 5.6 and added CVE to release notes
- 831ec680d9 Merge pull request #27913 from pass-by-value/proxmox_verify_ssl
  - 0774c837a 2015.5 branch: Fix traceback when 2015.8 git ext_pillar config schema used

- PR #28149: (pass-by-value) Add clarification to cloud profile doc about host @ 2015-10-20 19:46:05 UTC
  - 53dd01fc24 Merge pull request #28149 from pass-by-value/proxmox_profile_doc_change
  - bc371c55cd Add clarification to cloud profile doc about host
- PR #28146: (cachedout) Lint dracr.py @ 2015-10-20 17:55:07 UTC
  - 7badd634ae Merge pull request #28146 from cachedout/lint_dracr
  - 8b057f39e8 Lint dracr.py
- ISSUE #28118: (basepi) Salt-cloud Linode driver using RAM number for disk size (refs: #28141)
- PR #28141: (rallytime) Don’t use RAM for root disk size in linode.py @ 2015-10-20 17:32:29 UTC
  - 5f99bd4dc6 Merge pull request #28141 from rallytime/fix-28118
  - 5f98e41554 Don’t use RAM for root disk size in linode.py
- PR #28143: (justinta) Removed blank line at end of chassis.py @ 2015-10-20 16:39:35 UTC
  - 7cd0440c33 Merge pull request #28143 from jtand/lint_fix
  - 427df95515 removed extraneous file
  - 1a58283f23 Removed blank line at end of chassis.py
- PR #28021: (blueeyed) Handle includes in include_config recursively @ 2015-10-20 16:19:37 UTC
  - 858875e9fd Merge pull request #28021 from blueeyed/recursive-include
  - 1d80520958 Handle includes in include_config recursively
- ISSUE #27998: (papertigers) pkgin install broken (refs: #28001)
- PR #28095: (rallytime) Back-port #28001 to 2015.8 @ 2015-10-20 16:18:11 UTC
  - PR #28001: (papertigers) #27998 Cleanup pkgin isatty mess (refs: #28095)
  - 4dbae6b0c Merge pull request #28095 from rallytime.bp-28001
  - ddf8a8d2bb Cleanup pkgin isatty mess
- ISSUE #28060: (LovelsGrief) Default paths for test environment (refs: #28061)
- PR #28096: (rallytime) Back-port #28061 to 2015.8 @ 2015-10-20 16:15:34 UTC
- **PR #28061**: (LoveIsGrief) Fix #28060 - Default paths for test environment (refs: #28096)
- 572487073c Merge pull request #28096 from rallytime/bp-28061
- cb8a72d580 Fix #28060
- **PR #28139**: (rallytime) Back-port #28103 to 2015.8 @ 2015-10-20 16:15:05 UTC
  - PR #28103: (ajacoutot) OpenBSD salt package: update list of dependencies. (refs: #28140, #28139)
  - 9ce526260b Merge pull request #28139 from rallytime/bp-28103
  - bc9159a126 OpenBSD salt package: update list of dependencies.
- **ISSUE #26844**: (double-yaya) The function "state.sls" is running as PID XXXX and was started at .... with jid XXXX always shows the current jid (refs: #28098, #28097)
- **PR #28098**: (jacksontj) For all multi-part messages, check the headers. If the header is not ... @ 2015-10-20 15:00:08 UTC
  - 97db00a68 Merge pull request #28098 from jacksontj/2015.8
  - 6d26842925 For all multi-part messages, check the headers. If the header is not your minion-id or a broadcast, drop the message.
- **ISSUE #3436**: (madduck) Pillar does not handle Unicode data (refs: #28134, #saltstack/salt`#28134`_)
- **PR #28134**: (bernieke) fix unicode pillar values #3436 @ 2015-10-20 14:51:10 UTC
  - b4875e585a Merge pull request #28134 from Awingu/2015.8
  - 53285f7781 fix unicode pillar values #3436
- **PR #28076**: (redmcg) Replace option 'i' with an explicit queryformat @ 2015-10-20 13:59:57 UTC
  - f90a21029 Merge pull request #28076 from redmcg/2015.8
  - 07413ce162 Remove unnecessary padding from rpm.info
  - 4987530986 Replace option 'i' with an explicit queryformat
- **PR #28119**: (jacksontj) Check if the remote exists before casting to a string. @ 2015-10-20 12:34:10 UTC
  - 3fd85d1bf Merge pull request #28119 from jacksontj/fetch_issue
  - c012cc2f6 Check if the remote exists before casting to a string.
- **ISSUE #28080**: (githubcdr) Salt minion locale module missing on Archlinux (refs: #28105)
- **PR #28105**: (jfindlay) add reason for not loading localemod @ 2015-10-20 12:25:40 UTC
  - 69ab1d50e2 Merge pull request #28105 from jfindlay/locale_msg
  - 1e75665a9a add reason for not loading localemod
- **ISSUE #28074**: (eliasp) Salt logfiles are created world-readable (refs: #28108)
- **PR #28108**: (cachedout) Set logfile permissions correctly @ 2015-10-20 12:25:22 UTC
  - 8dbbe016ec Merge pull request #28108 from cachedout/issue_28074
  - b416dccc07b Set logfile permissions correctly
- **PR #27922**: (cro) WIP States/Modules for managing Dell FX2 chassis via salt-proxy @ 2015-10-19 23:29:21 UTC
  - 1085eeab2b Merge pull request #27922 from cro/fx2
  - 6caca2ae5 Lint
  - 104c3cbe7f Lint
- fe75594737 Lint
- 479137ce8 Lint
- 3712066fc9 More docs.
- 2a3ebf5688 More Documentation.
- 4ce2f8bb11 Documentation.
- 18663306fb Cleanup, add blade_idrac stub
- 0957bea4a6 Lint fixes and some changes by @rallytime
- cca310ee0 WIP modules and states for managing Dell FX2 chassis via salt-proxy

- **PR #28104**: (pass-by-value) Add documentation for proxy minion ssh @ 2015-10-19 19:30:20 UTC
  - a715803c92 Merge pull request #28104 from pass-by-value/proxy_ssh_docs
  - 7c8f236115 Add documentation for proxy minion ssh

- **ISSUE #27130**: (githubcdr) salt-run broken in 2015.8? (refs: #28020)

- **PR #28020**: (DmitryKuzmenko) LazyLoader deepcopy fix. @ 2015-10-19 13:17:57 UTC
  - 07cac0b434 Merge pull request #28020 from DSRCompany/issues/27130_loader_deepcopy_fix
  - 5353518623 Fix lint errors
  - 8c256c94f4 LazyLoader deepcopy fix.

- **ISSUE #27932**: (eliasp) Can't include Pillar SLS across GitPillar repositories (refs: #27933)

- **PR #27933**: (eliasp) Provide all git pillar dirs in `opts[pillar_roots]` @ 2015-10-19 13:05:54 UTC
  - f884df5d78 Merge pull request #27933 from eliasp/fix-27932
  - 0578aa78f Provide all git pillar dirs in `opts[pillar_roots]`

- **ISSUE #27890**: (dkiser) pillar recurse list strategy (refs: #27891)

- **PR #28013**: (rallytime) Back-port #27891 to 2015.8 @ 2015-10-19 12:57:51 UTC
  - **PR #27891**: (dkiser) introduce recurse_list pillar_source_merging_strategy (refs: #28353, #28013)
  - 1db6406bef Merge pull request #28013 from rallytime/bp-27891
  - 9ea33bf0e4 Pylint fixes
  - 4af5b5c33f introduce recurse_list pillar_source_merging_strategy

- **ISSUE #27938**: (mostafahassein) Grains are not rendering correctly (refs: #28018)

- **PR #28018**: (rallytime) Add example to Writing Grains of how grains can be loaded twice @ 2015-10-19 12:47:10 UTC
  - 26b3e01dda Merge pull request #28018 from rallytime/fx-27938
  - c23af0d8e2 Clarify loading vs rendering the final grains data structure
  - a4d7fb76e0 Add example to Writing Grains of how grains can be loaded twice

- **PR #28084**: (cachedout) #28069 with lint @ 2015-10-19 12:18:38 UTC
  - **PR #28069**: (blueyed) dockerng: use error from modules.dockerng in states’ `__virtual__` (refs: #28084)
  - c6e7dd4812 Merge pull request #28084 from cachedout/lint_28069
  - 8026212733 Lint
- 7a2c80cf6f dockerng: use error from modules.dockerng in states' __virtual__

- **PR #28079**: (The-Loeki) Fix for trace dump on failing imports for win32com & pythoncom 4 win_task @ 2015-10-19 12:12:11 UTC
  - 428e64e24d Merge pull request #28079 from The-Loeki/fixed-trace-on-windows-tasks
  - 869e2108c1 Fix for trace dump on failing imports for win32com & pythoncom 4 win_task

- **PR #28081**: (The-Loeki) fix for glance state trace error on import failure @ 2015-10-19 12:08:47 UTC
  - 2ac8fd793d Merge pull request #28081 from The-Loeki/fix-trace-on-keystone-state
  - 258e11f754 fix for glance state trace error on import failure

- **ISSUE #27794**: (The-Loeki) Requests backend for HTTP fetches is broken after removing streamed response handlers (refs: #28066)

- **PR #28066**: (jacksontj) Use the generic text attribute, not .body of the handler @ 2015-10-18 16:17:12 UTC
  - a2128c8f80 Merge pull request #28066 from jacksontj/issue_27794
  - b1bf79821d Use the generic text attribute, not .body of the handler

- **ISSUE #27828**: (cubranic) Note the version when 'user' and 'group' became available in docs for archive.extracted (refs: #28055)

- **PR #28055**: (rallytime) Back-port #28043 to 2015.8 @ 2015-10-17 17:26:37 UTC
  - **PR #28043**: (gtmanfred) the nova driver does not require libcloud (refs: #28055)
  - 6db970c93a Merge pull request #28055 from rallytime/bp-28043
  - 744e556be7 the nova driver does not require libcloud

- **PR #28046**: (pass-by-value) Add pkg install and remove functions @ 2015-10-17 14:56:24 UTC
  - d7263da82e Merge pull request #28046 from pass-by-value/proxy_minion_ssh_example_additions
  - 3435d28fc9 Add pkg install and remove functions

- **PR #28050**: (ryan-lane) Use a better method for checking dynamodb table existence @ 2015-10-17 14:55:52 UTC
  - d00fdd827e Merge pull request #28050 from lyft/better-dynamo-exists-check-2015.8
  - 24f1e1a12 Use a better method for checking dynamodb table existence

- **ISSUE #28038**: (gtmanfred) [Docs] the ubuntu repo documentation needs to be fixed (refs: #28042)

- **PR #28042**: (jfindlay) fix repo path in ubuntu installation documentation @ 2015-10-16 19:30:52 UTC
  - 027092e2fb Merge pull request #28042 from jfindlay/ubuntu_docs
  - ae92a8a1dc fix repo path in ubuntu installation documentation

- **PR #28033**: (twangboy) Fixed win_useradd.py (refs: #28056) @ 2015-10-16 19:19:44 UTC
- a3390cfe6 Merge pull request #28033 from twangboy/fix_win_useradd
- 2137b5f79a Fixed win_useradd.py

**PR #28027:** (cro) Make ssh conn persistent. @ 2015-10-16 18:50:51 UTC
- 4f81358c9a Merge pull request #28027 from cro/persistent_ssh
- 8b4067b6db Spelling, lint.
- 76a93d5922 Spelling.
- c800f60338 Default multiprocessing to False since anything that needs salt.vt will have trouble with our forking model.
- cc0ad81b3d Lint, remove debug.
- e41b677450 Make SSH connection 'persistent'. Note that right now this requires 'multiprocessing: False' in /etc/salt/proxy.

**PR #28029:** (jacobhammons) Updated release notes with additional CVE information @ 2015-10-16 16:19:33 UTC
- 4dec2f9307 Merge pull request #28029 from jacobhammons/relnotes8
- 0d1b691549 Updated release notes with additional CVE information

**PR #28022:** (jacobhammons) Updated Debian and Ubuntu repo paths with new structure for 2015.8.1 @ 2015-10-16 15:31:36 UTC
- 5286c01f39 Merge pull request #28022 from jacobhammons/install
- e4d7df8695 Updated Debian and Ubuntu repo paths with new structure for 2015.8.1

**ISSUE #27971:** (srkunze) pip.installed returned Result: None (refs: #27983)

**PR #27983:** (rallytime) Pip state run result should be False, not None, if installation error occurs. @ 2015-10-16 13:37:42 UTC
- 340229355c Merge pull request #27983 from rallytime/fixed-27971
- 9855290b99 Maintain stateful output if something went wrong running the pip command
- 5bcc89bb8e Pip state run result should be False, not None, if installation error occurs.

**ISSUE #20678:** (damon-atkins) Windows Installer (Separation/Downloader/Contains VC++) (refs: #27991)

**PR #27991:** (twangboy) Fix for #20678 @ 2015-10-16 13:33:48 UTC
- 97d473a0d Merge pull request #27991 from twangboy/fix_20678
- 5254ba18b3 Fix for #20678

**ISSUE #21845:** (kitsemets) pip.install: fails in v2015.2.0rc1 when the package is already installed (pip v1.0) (refs: #27996)

**PR #27997:** (rallytime) Remove note about pip bug with pip v1 vs pip v2 return codes @ 2015-10-16 13:23:58 UTC
- PR #27996: (rallytime) Don't fail if pip package is already present and pip1 is installed (refs: #27997)
- bd7b39bc18 Merge pull request #27997 from rallytime/remove-pip-bug-note
- f08d483313 Remove note about pip bug with pip v1 vs pip v2 return codes

**PR #27994:** (justinta) Fix schedule_test failure @ 2015-10-16 13:20:56 UTC
- 3256e38932 Merge pull request #27994 from jtand/schedule_test-fix
• Issue #27949: (itsamenathan) Error enabling or disabling a beacon on a minion (refs: #27992)
• PR #27992: (cachedout) Make load beacon config into list @ 2015-10-16 12:43:53 UTC
  - 4a7a25eeff Merge pull request #27992 from cachedout/issue_27949
  - 8944e1395a Make load beacon config into list
• Issue #26336: (jfindlay) windows user.present broken (refs: #27992)
• PR #27992: (cachedout) Make load beacon config into list @ 2015-10-16 12:43:53 UTC
  - bae81d3a8d Merge pull request #28003 from twangboy/fixed_26336
  - 6c9414d86e Fix PR #26336
• PR #27984: (rallytime) Version added for clean_file option for pkgrepo @ 2015-10-15 18:57:54 UTC
  - PR #19561: (favadi) add pkgrepo.managed clean_file option (refs: #27984)
  - e15e6ed236 Merge pull request #27984 from rallytime/version-clean-file
  - 6d94c8843e Version added for clean_file option for pkgrepo
• PR #27989: (ryan-lane) Do not try to remove the main route table association @ 2015-10-15 18:57:42 UTC
  - 6efa71a482 Merge pull request #27989 from lyft/boto_vpc-main-route-association2-2015.8
  - 296731d29f Do not try to remove the main route table association
• PR #27982: (pass-by-value) Add example for salt-proxy over SSH @ 2015-10-15 17:27:57 UTC
  - 7169fad02d Merge pull request #27982 from pass-by-value/proxy_ssh_sample
  - b85fa6b339 Add example for salt-proxy over SSH
• PR #27985: (jacobhammons) Changed current release to 8.1 and added CVEs to release notes @ 2015-10-15 17:27:05 UTC
  - d0be1ab98e Merge pull request #27985 from jacobhammons/dot1
  - 236992b2be Changed current release to 8.1 and added CVEs to release notes
• Issue #27750: (justyns) Salt-master too sensitive to whitespace in public keys (again) (refs: #27979)
• Issue #21910: (justyns) Salt-master too whitespace-sensitive when dealing with minion pub keys (refs: #22115)
• PR #27979: (cachedout) Fix regression with key whitespace @ 2015-10-15 15:26:08 UTC
  - PR #22115: (douglas-vaz) Strip whitespace characters using strip() for pub key check (refs: #27979)
  - 7a4058605d Merge pull request #27979 from cachedout/issue_27750
  - 12c6bf458e Fix regression with key whitespace
• Issue #27712: (eduherraz) saltutil.sync_all can’t sync with the minion (refs: #27977)
• PR #27977: (cachedout) Decode unicode names in fileclient/server @ 2015-10-15 15:17:01 UTC
  - 6f8925ee84 Merge pull request #27977 from cachedout/issuse_27712
  - 5173ef43e8 Decode unicode names in fileclient/server
• PR #27981: (justinta) Fixed trailing whitespace lint @ 2015-10-15 15:10:15 UTC
  - fc1375f39 Merge pull request #27981 from jtand/cloudstack-lint
  - 5dfad190c2 Fixed trailing whitespace lint
• PR #27969: (jeffreyctang) fix parse of { on next line @ 2015-10-15 15:04:33 UTC
  – 1ae302b202 Merge pull request #27969 from jeffreyctang/logrotate_parse
  – 2c9b2bc367 lint fixes
  – 8c6197d42e fix parse of { on next line
• PR #27978: (terminalmage) Add note about dockerng.inspect_image usage @ 2015-10-15 14:54:10 UTC
  – a4ba982b1d Merge pull request #27978 from terminalmage/dockerng-inspect_image-docstring
  – 595f4a6939 Add note about dockerng.inspect_image usage
• PR #27955: (pass-by-value) Bp 27868 @ 2015-10-15 12:43:37 UTC
  – PR #27868: (pass-by-value) Add SSHConnection object
  – bd9d1ed8b5 Merge pull request #27955 from pass-by-value/bp-27868
  – c02ec8b943 Fix pylint errors
  – 6553d135d0 Add SSHConnection object
• PR #27953: (The-Loeki) Fix CloudStack cloud for new 'driver' syntax @ 2015-10-15 12:38:58 UTC
  – c5080a80f Merge pull request #27953 from The-Loeki/patch-1
  – f0d5c9f375 Pop deprecated 'provider' into new 'driver' key
  – 4eb09edd1 Fix CloudStack cloud for new 'driver' syntax
• PR #27965: (ryan-lane) Fail in boto_asg.present if alarms fail @ 2015-10-15 12:32:53 UTC
  – 7006c37627 Merge pull request #27965 from lyft/HOTFIX-boto-asg-fix
  – b8f4079c33 Fail in boto_asg.present if alarms fail
• PR #27958: (twangboy) Added new functionality to win_task.py @ 2015-10-15 12:30:31 UTC
  – 6624ec1f48 Merge pull request #27958 from twangboy/update_win_task
  – 6ecdbab246 Added run_wait function
  – 5731bdcadb Clarified an error
  – 23b9c1c199 Added new functionality
• ISSUE #27956: (The-Loeki) Salt-cloud CLI 2015.8 borks out with global name '__opts__' is not defined (refs: #27959)
• PR #27959: (techhat) Change __opts__ to self.opts @ 2015-10-14 22:29:13 UTC
  – 1efa87a964 Merge pull request #27959 from techhat/issue27956
  – bc01e48122 Change __opts__ to self.opts
• PR #27943: (rallytime) Back-port #27910 to 2015.8 @ 2015-10-14 20:27:20 UTC
  – PR #27910: (twellspring) htpasswd state add comment about dependency on apache2-utils (refs: #27943)
  – 877e217388 Merge pull request #27943 from rallytime/bp-27910
  – 33b3d8f5b3 Clarify that apache2-utils is for Debian-based distros
  – 8ca0bc823c Add dependency on apache2-utils
• PR #27944: (rallytime) Back-port #27909 to 2015.8 @ 2015-10-14 20:26:52 UTC
  – PR #27909: (twellspring) htpasswd module add comment about dependency on apache2-utils (refs: #27944)
- 5f6ed8ac Merge pull request #27944 from rallytime/bp-27909
- a3401c11b1 Clarify that apache2-utils is for Debian-based distros
- 08b7bdeb97 Add dependency on apache2-utils

- **PR #27946**: (justinta) Changed grain to look at osmajorrelease instead of osrelease @ 2015-10-14 19:54:08 UTC
  - f29ca5f87b Merge pull request #27946 from jttand/pkgrepo-fix
  - d88ac2589f Changed grain to look at osmajorrelease instead of osrelease

- **ISSUE #27815**: (tbaker57) Documentation regarding associate_eip for EC2 profiles (refs: #27914)

- **PR #27914**: (rallytime) Use eipalloc instead of eni in EC2 interface properties example @ 2015-10-14 14:37:52 UTC
  - bb900d428b Merge pull request #27914 from rallytime/fix-27815
  - 16a9be9053 Use eipalloc instead of eni in EC2 interface properties example

- **PR #27926**: (rallytime) Back-port #27905 to 2015.8 @ 2015-10-14 14:35:37 UTC
  - **PR #27905**: (itsamenathan) Small documentation error for beacon disable (refs: #27926)
  - 679ce60390 Merge pull request #27926 from rallytime/bp-27905
  - 30e6b055ec Small documentation error fixed

- **ISSUE #27911**: (ryan-lane) rules_egress in boto_secgroup should not manage egress rules, if set to None (refs: #27927)

- **PR #27927**: (ryan-lane) Do not manage ingress or egress rules if set to None @ 2015-10-14 14:03:17 UTC
  - 3bd3b6467b Merge pull request #27927 from lyft/boto_secgroup-fixes-2015.8
  - 0fedcc9a0b Update docs
  - 4cc6bba76 Do not manage ingress or egress rules if set to None

- **PR #27928**: (rallytime) Back-port #27908 to 2015.8 @ 2015-10-14 14:00:50 UTC
  - **PR #27908**: (lathama) Documentation note kwargs for mdadm state already mentioned in module (refs: #27928)
  - b0f9db409d Merge pull request #27928 from rallytime/bp-27908
  - 7febb06223 Sneaky white space
  - 31d5a6be63 Note kwags for mdadm in state

- **ISSUE #27661**: (alf) The dockerng module uses deprecated API in docker-py (refs: #27676)

- **PR #27676**: (ticosax) [dockerng] WIP No more runtime args passed to docker.start() @ 2015-10-14 13:38:41 UTC
  - 2d0b1659e Merge pull request #27676 from ticosax/no-more-arg-to-docker-start
  - a1d0ba392f fixup! Do not pass any argument to docker.start
  - 8cdda15c4 prevent potential error while reporting mismatch versions to user.
  - 65e8762e1f Do not pass any argument to docker.start
  - 8dcca2a009 docker.version_info is now provided.

- **PR #27885**: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-10-13 22:44:20 UTC
  - 723227ee5f Merge pull request #27885 from basepi/merge-forward-2015.8
  - 5ed5615f2 Remove failing heavily-mocked test
3b5e16db67 Merge remote-tracking branch ‘upstream/2015.5’ into merge-forward-2015.8
   - c9c3b7760e Merge pull request #27726 from jfindlay/hashhosts
     - ebce47de7c add docs to ssh.recv_known_host exec module fcn
     - b6ee16b1e5 deprecate hash_hostname in favor of hash_known_hosts
   - 18e31584b0 Merge pull request #27776 from jfindlay/local_msg
     - 03afa3cfaa return message when local jobs_cache not found
   - 86cc7b5537 Merge pull request #27766 from jfindlay/debmail
     - ee78da2c27 better check for debian userdel error
   - c224386e9a Merge pull request #27758 from iggy/patch-1
     - 0994fb6a8c Remove redundant text from syslog returner
   - 34a005041f Merge pull request #27841 from terminalmage/issue27832
     - 8e09fd6a3 Detect Manjaro Linux as Arch derivative
   - 3944a498ad Merge pull request #27852 from rallytime/bp-27806
     - a84b18bc4 Empty string is falsy
   - 7508a1c474 Merge pull request #27838 from basepi/fix.runner.highstate.outputter.27831
     - 8ae9b66d9 Don’t pop ‘outputter’, we expect it further down
   - d178315f93 Merge pull request #27791 from eguven/2015.5-postgres-user-groups-backport
     - 2caf1d21d6 fix test
     - bc90c5bffe improve change reporting for postgres_user groups
     - 8712bce91a backport postgres_user groups

• ISSUE #26908: (twangboy) Fix service.restart salt-minion for other locales (refs: #27882)
• ISSUE #26906: (mblixter) Bug fix #22020 causes a new bug due to the expected date format for the /SD parameter in schtask.exe (refs: #27882)
• PR #27882: (twangboy) Created win_task.py module @ 2015-10-13 16:54:13 UTC
  - 36f05fb526 Merge pull request #27882 from twangboy/win_task_module
  - 56c3f3eb2 Fixed an egregious error with an import
    - 07939ea29c More lint
    - 14e060ed9c Fixed some tests
    - 1e1b29426 Fixed some lint
    - 082277a727 Win_service.py to use the new task module
    - 2212b52620 Created win_task.py module
• ISSUE #27738: (fphhotchips) Git Pillar locks not managed by fileserver runner (refs: #27802)
• PR #27802: (terminalmage) Correct warning logging when update lock is present for git_pillar/winrepo, add runner function for clearing git_pillar/winrepo locks @ 2015-10-13 15:09:11 UTC
  - 577191696d Merge pull request #27802 from terminalmage/issue27738
  - 1b11d548f9 Fix comment in docstring that trailed off mid-sentence
  - 94b5fc572f Process both old and ng winrepo configs when clearing git locks

30.2. Previous Releases
- 7f4366d42e Add CLI example
- 3952c66888 Change log message to reflect new runner function
- c00ef718bf Add cache.clear_git_lock runner function
- d7ca297f7b Add salt.fileserver.clear_lock()
- 947ed5f739 Clarify docstring

• ISSUE #26632: (ryanwalder) postgres_user crashes when trying to add groups formed in a list (refs: #27886)
• PR #27886: (rallytime) Handle group lists as well as comma-separated group strings. @ 2015-10-13 15:00:10 UTC
  - d655bb3616 Merge pull request #27886 from rallytime/fix-26632
  - d235abf907 Handle group lists as well as comma-separated group strings.
• ISSUE #26313: (anlutro) Timezone module error when timedatectl fails to query server (refs: #27746)
• PR #27746: (anlutro) timezone module: handle timedatectl errors @ 2015-10-13 14:55:27 UTC
  - a158cd50e6 Merge pull request #27746 from alprs/fix-timedatectl_failure
  - f616b550b2 lint - use indexed curly brace formatting
  - bc0f167850 update timezone mod unit tests for errors
  - ef26f67b2 timezone module: handle timedatectl errors
• ISSUE #27710: (anlutro) salt-ssh and system.reboot/shutdown (refs: #27816)
• PR #27716: (plastikos) Summary is not correctly inspecting return data to identify not responding connected minions (refs: #27877)
  - 4fb20d9b4f Merge pull request #27877 from rallytime/bp-27774
  - 8c056ba501 Add mention of Periodic Table naming scheme to deprecation docs
• PR #27883: (terminalmage) Work around --is-ancestor not being present in git-merge-base before git 1.8.0 @ 2015-10-13 14:51:27 UTC
  - 7f96ebd69e Merge pull request #27883 from terminalmage/git-merge-base-is_ancestor
  - 45c666e8dd Work around --is-ancestor not being present in git-merge-base before git 1.8.0
  - 38d715ce0a Remove redundant SaltInvocationError raises
• ISSUE #24111: (yermulnik) cli option 'summary' got broken after upgrade to 2015.5.1 (refs: #24732)
• PR #27877: (rallytime) Back-port #27774 to 2015.8 @ 2015-10-13 14:50:45 UTC
  - PR #27774: (plastikos) Summary is not correctly inspecting return data to identify not responding connected minions (refs: #27877)
  - PR #27099: (plastikos) Fix access to ret parameter of _print_returns_summary() (reverts 54b33dd35948 #24732) (refs: #27774)
  - PR #24732: (msteed) Fix stacktrace when --summary is used (refs: #27099)
  - 4fb20d9b4f Merge pull request #27877 from rallytime/bp-27774
- d940d87306 Summary is not correctly inspecting return data to identify not responding|connected minions.

- **ISSUE #26284**: (stornor) apache_module.enable fails on SUSE (SLES 11 SP3) (refs: #27878)
- **PR #27878**: (rallytime) Use apache2ctl binary on SUSE in apache module @ 2015-10-13 14:45:56 UTC
  - 97da0a87e3 Merge pull request #27878 from rallytime/fix-26284
  - 87f0d987a3 Use apache2ctl binary on SUSE in apache module

- **PR #27879**: (cro) Add docs for 2015.8.2+ changes to proxies @ 2015-10-13 14:45:30 UTC
  - 067968c0e4 Merge pull request #27879 from cro/proxydoc
  - 5b33df9d19 Add docs for 2015.8.2+ changes

- **PR #27731**: (cro) Add __proxy__ to replace opts[‘proxymodule’] @ 2015-10-12 20:41:22 UTC
  - 922e2018ef Merge pull request #27731 from cro/dunder_proxy
  - ba3e423b87 Missing object item throws an AttributeError not a NameError.
  - 4cf2b56df5 Lint.
  - dc07245d2 @rallytime is awesome. Moved proxy=None to end of def minion_mods
  - 3152d8ee3f Minor loader fix
  - b15083d719 Flip sense of test for grains load at end of regular minion startup
  - 37c145bcd5 More places where salt.state.State needs a proxy param, sysmod had wrong __proxyenabled__, core grains were checking for proxy the wrong way.
  - ed23f36279 One more check for presence of __proxy__
  - 62d9f5092e what was I thinking?
  - ccf366e1a5 Lint
  - 8ae6e8aa9 Fix comment
  - 48f9755103 Oops, forgot temp var.
  - f0360ca0e More cleanup, found another spot where proxy needed to be passed to a load_modules.
  - 81a4abfe5a __proxy__ is getting nuked somewhere
  - f9461ff298 Add config option so old-style proxymodules will keep loading
  - 3d6ed5b7ff Remove debug statement.
  - b5a19a9740 Enable syncing proxymodules from the master. Proxymodules can go in /srv/salt/_proxy.
  - f878011543 Lint, and some parameter fixes to add proxy= to some overridden load_modules fns.
  - 22f035d8eb Remove debug statement
  - 4432499b45 More progress toward __proxy__
  - 1a229c17b2 Further work on __proxy__
  - 85fd6a41c7 One more check for presence of __proxy__
  - 15e1d3e3df Forgot absolute_import.
  - c5d9d54f19 Fix py3 lint
  - dd50e33543 This module was accidentally overwriting core grains during tests.
  - 525256f6a8 Some calls to highstate won’t have __proxy__ in scope
- a615e5a876 what was I thinking?
- fae3f3ca83 Lint
- b049377cbe Remove rest_sample_test, it wasn’t testing anything
- 42188480d4 Fix comment
- 4112c583e4 Oops, forgot temp var.
- e9b281041c More cleanup, found another spot where proxy needed to be passed to a load_modules.
- 64f967d731 __proxy__ is getting nuked somewhere
- bdff9f57b Add config option so old-style proxymodules will keep loading
- b79b6a39dd Remove debug statement.
- 02fc2d9323 Enable syncing proxymodules from the master. Proxymodules can go in /srv/salt/_proxy.
- 72032650b8 Add __proxy__ to the list of builtns.
- db4c034596 Lint, and some parameter fixes to add proxy= to some overridden load_modules fns.
- 1032ad28fc Remove debug statement
- c41e49d8e5 Make sure that the __proxy__ gets passed all the way into the state system.
- 4a20d48b35 More progress toward __proxy__
- d337f4329e Further work on __proxy__

- ISSUE #26904: (anlutro) pip install --upgrade with virtualenv.managed? (refs: #27745)
- PR #27745: (anlutro) Add pip_upgrade arg to virtualenv.managed state @ 2015-10-12 16:11:02 UTC
  - 64f003fb2 Merge pull request #27745 from alprs/fixed-virtualenv_pip_upgrade
  - 4bd219f8d4 add pip_upgrade arg to virtualenv.managed state, clean up docstring
- PR #27809: (ticosax) [dockerng] Remove dockerng.ps caching @ 2015-10-12 16:07:48 UTC
  - 698f477336 Merge pull request #27809 from ticosax/remove-dockerng.ps-caching
  - 0eb1145856 Remove caching to prevent returning stale data from dockerng.ps
- PR #27859: (ticosax) [dockerng] Clarify doc port bindings @ 2015-10-12 16:06:27 UTC
  - e96d06d71a Merge pull request #27859 from ticosax/clarify-doc-port-bindings
  - 75f7a3ec55 Must be a string
- ISSUE #8646: (micahhausler) Make the clean parameter in the file.directory state respect foreign require_in (refs: #27748)
- PR #27748: (multani) Fix #8646 @ 2015-10-12 15:55:57 UTC
  - ba2a39d4b7 Merge pull request #27748 from multani/fix-8646
  - 6d95cb998 Fix lint errors
  - 4ff94fe2a Fix file.directory with clean=true and require_in with states ID
  - 0d391275de Test cases to demonstrate bug #8646
- ISSUE #27721: (ldobson) boto_cloudwatch_alarm.present returns diff on no change (refs: #27722)
- PR #27850: (rallytime) Back-port #27722 to 2015.8 @ 2015-10-12 15:31:58 UTC
  - PR #27722: (ldobson) Sorted compare for alarm actions (refs: #27850)
- ce1493e06b Merge pull request #27850 from rallytime/bp-27722
- 33936605a0 Sorted compare for alarm actions

**PR #27851:** (rallytime) Back-port #27771 to 2015.8 @ 2015-10-12 15:31:06 UTC
- PR #27771: (srkunze) [VIRTUALENV_MOD] added docs strings to explain parameters (refs: #27851)
- c95437a710 Merge pull request #27851 from rallytime/bp-27771
- 144a743503 added docs strings to explain parameters

**ISSUE #27789:** (eduheraiz) UnicodeDecodeError: ‘ascii’ codec can’t decode byte in 2015.8.0 (refs: #28340, #27833)

**PR #27833:** (jfindlay) decode path before string ops in fileclient @ 2015-10-12 15:26:39 UTC
- a41b59bf6e Merge pull request #27833 from jfindlay/path_decode
- 66c74e591e decode path before string ops in fileclient

**ISSUE #27804:** (chrismcmacken) cmd.run/cmd.run_all documentation contradictory for python_shell argument (refs: #27837)

**PR #27837:** (jfindlay) reverse truth in python_shell documentation @ 2015-10-12 15:25:13 UTC
- e264db7702 Merge pull request #27837 from jfindlay/true_shell
- 1c9708a457 reverse truth in python_shell documentation

**PR #27860:** (flavio) Fix OS related grains on openSUSE and SUSE Linux Enterprise @ 2015-10-12 15:22:59 UTC
- faec838744 Merge pull request #27860 from flavio/fix-os-grains-on-suse-and-opensuse
- fc8d296d72 Fix OS related grains on openSUSE and SUSE Linux Enterprise

**PR #27768:** (rallytime) Clean up bootstrap function to be slightly cleaner @ 2015-10-12 15:06:54 UTC
- 4ac5344c31 Merge pull request #27768 from rallytime/cleanup_bootstrap
- 9df6e106c3 Clean up bootstrap function to be slightly cleaner

**PR #27779:** (isbm) Zypper module clusterfix @ 2015-10-12 15:06:02 UTC
- e1bd91e392 Merge pull request #27797 from isbm/isbm-zypper-fixes
- 36281f6b06 Bugfix: crash if no package specified on adding a lock
- 298061af9 Bugfix: crash if no package specified on removing lock
- 453a18ea15 Return an actual amount of removed locks.
- eaa6a9898 Bugfix: sometimes error goes to the STDOUT instead of STDERR in the RPM
- 350340dafa Bugfix: use boolean type instead of string "Yes" or "No" (NOTE: this was forgotten)
- dcb989eb4 Bugfix and refactor due to the crash on unknown package and incorrect return value
- a6c285bd12 Initialization fix
- 510dedd29f Bugfix: newer Zypper includes also a version of installed package
- f9be516de Bugfix: broken "upgrade_available" and should always return dict.

**ISSUE #27821:** (leodus) Deploy VM on Proxmox requires 'size' configuration setting? Not according the docs! (refs: #27849)

**PR #27849:** (rallytime) Don't require a size parameter for proxmox profiles @ 2015-10-11 01:33:28 UTC
- 286b08a0f5 Merge pull request #27849 from rallytime/fix-27821
- 1bf17c7d48 Don’t require a size parameter for proxmox profiles

- **PR #27827**: (techhat) Add additional error checking to SPM @ 2015-10-09 18:23:09 UTC
  - 4a69db27cd Merge pull request #27827 from techhat/spmfixes
  - ffc8df233b Add additional error checking to SPM

- **ISSUE #27825**: (martinhoefling) Salt-api is not adding cors headers if auth fails (refs: #27826)

- **PR #27826**: (martinhoefling) Fixes #27825 @ 2015-10-09 16:08:05 UTC
  - 9bc19ba7d2 Merge pull request #27826 from martinhoefling/fix-27825
  - 401e7de33d Fixes #27825

- **PR #27824**: (techhat) Update Azure errors @ 2015-10-09 15:25:14 UTC
  - 1e2dede122 Merge pull request #27824 from techhat/azureerrors
  - 5b23ac7099 Update Azure errors

- **PR #27795**: (eguven) better change reporting for postgres_user groups @ 2015-10-08 23:56:53 UTC
  - ec35666f2 Merge pull request #27795 from eguven/2015.8-postgres_user-group-change
  - fffede412 better change reporting for postgres_user groups

- **ISSUE #27703**: (ryan-lane) git.latest seems to ignore the user argument in 2015.8 (refs: #27799)

- **PR #27799**: (terminalmage) Fix usage of identity file in git.latest @ 2015-10-08 23:36:19 UTC
  - 5420006209 Merge pull request #27799 from terminalmage/issue27703
  - 75db07b0c Pass user in calls to git.rev_parse
  - 786786a245 Fix wrong argument name for _git_run()

- **PR #27717**: (pass-by-value) Proxy beacon example @ 2015-10-08 22:58:49 UTC
  - 0533a2b1dd Merge pull request #27717 from pass-by-value/proxy_beacon_example
  - cac3da1ff Fix pylint error
  - 7fe5ea08c Make a call to beacon end point
  - 49f965c33 Comment
  - 8ad7082913 Add example beacon that works with salt-proxy

- **PR #27793**: (anlutro) update code that changes log level of salt-ssh shim command @ 2015-10-08 19:20:12 UTC
  - dd9dab85f9 Merge pull request #27793 from alprs/fix-salt_ssh_b64_log
  - 259d15fc8 update code that changes log level of salt-ssh shim command

- **ISSUE #27714**: (The-Loeki) 2015.8 git_pillar merge inconsistency/bug (refs: #27761)

- **PR #27761**: (terminalmage) Merge git pillar data instead of using dict.update() @ 2015-10-08 15:00:18 UTC
  - bcb74ff5c Merge pull request #27761 from terminalmage/issue27714
  - d149095b0 Merge git pillar data instead of using dict.update()

- **PR #27741**: (ticosax) [dockerng] pass filters argument to dockerng.ps @ 2015-10-08 03:40:14 UTC
  - 2ae7ada3c9 Merge pull request #27741 from ticosax/docker.containers-filters
  - 821ed72f37 pass filters argument to dockerng.ps

- **PR #27760**: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-10-07 19:11:17 UTC
8a51cebde Merge pull request #27760 from basepi/merge-forward-2015.8
35425b14ad Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
b2937ba16 Merge pull request #27759 from basepi/merge-forward-2015.5
- 792ee084bb Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
- d284eb165b Merge pull request #27390 from JaseFace/schedule-missing-enabled
- 563db71bdf Ensure we pass on the enable setting if present, or use the default of True if not in
  build_schedule_item() Prior to this, when schedule.present compares the existing schedule to the
  one crafted by this function, enabled will actually be removed at each run. schedule.present sees
  a modification needs to be made, and invokes schedule.modify, which does so with enabled: True,
  creating and endless loop of an 'enabled' removal and addition.
4b9128b491 Merge pull request #27732 from jacobhammons/26673
- 75cc07cf10 noted that __virtual__ can return False and an error string
- b928e1afa8 update docs for __virtual__ and __virtualname__ Refs #26673
a130896d1c Merge pull request #27747 from Sacro/fix-chocolatey-version
- 8f1fa9e78e Chocolatey doesn’t have a help command.
4e48651de0 Merge pull request #27733 from jacobhammons/bag-fixes
- cbedc4f553 Updated saltstack2 theme to add SaltConf16 banner
- 117e0c2bcc Added hardening topic based on the information in Refs #27088
58da84e6bf Merge pull request #27706 from jacobhammons/bag-fixes
- 76dc8de71b Assorted doc bugs Refs #9051 Refs #13407 Refs #21475 Refs #14876 Refs #27005
3angba89865 Merge pull request #27695 from rallytime/bp-27671
- 2a88028595 Added skip test_ext_pillar_env_mapping if git module does not exist.
cb3d92676e Merge pull request #27524 from jfindlay/pkgng_quiet
- 5e9107b970 parse pkgng output in quiet mode for >= 1.6.0
5b88c55c3 Merge pull request #27686 from rallytime/bp-27476
- 3e08d3de8a fix for: https://github.com/saltstack/salt/issues/27373
f9ddd4647f Merge pull request #27684 from rallytime/bp-27656
- d3780caba0 Fix #27655: handling of success in postgres_local_cache
7ca6f854ff Merge pull request #27683 from rallytime/bp-27659
- 846e0ec58 .pub as public key is what we should send to remote
af3e34656 Merge pull request #27682 from rallytime/bp-27566
- 2a44255748 minor: fix/format doc for returners.local_cache.prep_jid
- fd485e2396 returners.local_cache: fix endless loop on OSError
0b9ba911c4 Merge pull request #27681 from rallytime/bp-25928
- 17e1ddf137 Fix stacktrace for non-existant states
23da0d316a Merge pull request #27680 from rallytime/bp-27535
- 04aed5e105 Versionadded change since 2015.5.6 has already been tagged
Chapter 30. Release Notes

- 579f2646ba .. versionadded:: 2015.5.6
- cbaf46e066 python <2.7 compatibility (pylint issue)
- ecede499478 s/bin/b to avoid confusion with bin()
- 4237c5db80 add a __virtual__ to check that daemontools is installed properly
- 623935a1bc fix doc
- 573de3abd6 fix pylint issue
- 5eb6a30d40 fix pep8 issues
- 298cf4f5c0 import missing logging module
- fe0ad36609 log was missing
- e457083465 s/systemd/FreeBSD
- 3512712e89 forgot service name..
- 8f193a7bcc fixes
- 7d7b97eab6 Merge pull request #27442 from JaseFace/fix-27391-for-2015.5
  - bfbf63e1cc Ensure we pass on the enable setting if present, or use the default of True if not in build_schedule_item() Prior to this, when schedule.present compares the existing schedule to the one crafted by this function, enabled will actually be removed at each run. schedule.present sees a modification needs to be made, and invokes schedule.modify, which does so with enabled: True, creating and endless loop of an 'enabled' removal and addition.
- ccbba8656b Merge pull request #27641 from rallytime/gate-psutil-diskusage
  - da2d93a3dd Gate the psutil import and add depends doc for diskusage beacon
- 09183994f9 Merge pull request #27644 from rallytime/bp-27640
  - a9063a9745 fix typo in default pillar path
- 27f6cccb6 Merge pull request #27612 from rallytime/fixed-27609
  - 8dc047d1c8 If external_up is set to None, don't stacktrace, just use the private ip.
  - 2ebf790f9f [salt-cloud] gce: don't stacktrace if ephemeral is given instead of ephemeral
- c84a1ed1b Merge pull request #27568 from jacobhammons/man-pages-five
  - b59c03d20d regenerated man pages
- 304dc887ff Merge pull request #27582 from jfindlay/2015.5
  - 4f0d5c6d6a add 2015.5.6 release notes
- 7201ce71e4 Merge pull request #27557 from jfindlay/mine_doc
  - 3727d79bad edit mine doc for style and markup
  - 7e037a4666 add doc motivating mine vs grains
- 59c3d5f93e Merge pull request #27515 from jfindlay/suse_fire
  - 4460ad2785 save iptables rules on SuSE
- 9b26357b19 Merge pull request #27509 from jfindlay/gluster_reason
  - 1ccda538d2 tell the user why the gluster module does not work
- 989733ea86 Merge pull request #27379 from jfindlay/pip_vars
- aee5ffdef document and check dict type for pip env_vars

- **ISSUE #27643**: (blueyed) Please document extended return values of __virtual__ (refs: #27724)

- **ISSUE #26755**: (lorenegordon) Associate package dependencies to modules/states? (refs: #27724)

- **PR #27757**: (jfindlay) fix virtual fcn return doc indentation @ 2015-10-07 17:50:18 UTC
  - **PR #27724**: (jfindlay) update __virtual__ return documentation (refs: #27757)
  - **PR #27116**: (jacobhammons) Update latest to 2015.8, 2015.5 is now previous (refs: #27724)
  - aced4229cb Merge pull request #27757 from jfindlay/virtret
  - 03400ef45b fix virtual fcn return doc indentation

- **ISSUE #27636**: (brian-bk) Salt-ssh cannot do simple state 'test.nop': "test.nop is not available." (refs: #27754)

- **PR #27754**: (rallytime) Change test.nop version directive to 2015.8.1 @ 2015-10-07 15:59:55 UTC
  - 57b5b594bd Merge pull request #27754 from rallytime/fix-27636
  - 31b8952d9a Change test.nop version directive to 2015.8.1

- **PR #27734**: (jacobhammons) Updated saltstack2 theme to add SaltConf16 banner @ 2015-10-07 01:43:53 UTC
  - 9a0171089d Merge pull request #27734 from jacobhammons/theme-updates
  - 3a52d3606b Updated saltstack2 theme to add SaltConf16 banner

- **ISSUE #27595**: (ralphvanetten) Debian package does not depend on python-m2crypto which is required by the x509 state/module (refs: #27719)

- **PR #27727**: (rallytime) Merge #27719 w/pylint fix @ 2015-10-06 21:13:37 UTC
  - **PR #27719**: (jfindlay) tell user when x509 exec/state module can't load (refs: #27727)
  - d3f2f6e835 Merge pull request #27727 from rallytime/merge-27719
  - a7fd156162 Pylint
  - 6bf2ee2751 tell user when x509 exec/state module can't load

- **ISSUE #27643**: (blueyed) Please document extended return values of __virtual__ (refs: #27724)

- **ISSUE #26755**: (lorenegordon) Associate package dependencies to modules/states? (refs: #27724)

- **PR #27724**: (jfindlay) update __virtual__ return documentation (refs: #27757) @ 2015-10-06 21:06:47 UTC
  - **PR #27116**: (jacobhammons) Update latest to 2015.8, 2015.5 is now previous (refs: #27724)
  - f26bcd2d21 Merge pull request #27724 from jfindlay/virtret
  - 6bdf80546 update __virtual__ return documentation

- **ISSUE #27481**: (basepi) Fix issues with cross-calling states (refs: #27725)

- **PR #27725**: (basepi) Fix global injection for state cross calls @ 2015-10-06 21:02:15 UTC
  - d67e8c5c2c Merge pull request #27725 from basepi/states.cross.call.27481
  - e12269d871 Remove unused import
  - 4e650b2e7 Return the wrapper (whoops)
  - fadb954676 Use new method for injecting globals into state functions
  - 17b267470a Add decorator for injecting globals into functions in the loader

- **PR #27628**: (ticosax) [dockerng] Add support of labels parameter for dockerng @ 2015-10-06 13:58:40 UTC
- 06e67d25f8 Merge pull request #27628 from ticosax/dockerng-container-label
- edf625c8b4 Add support of labels parameter for dockerng

• ISSUE #26604: (ari) Poor compound matcher documentation (2015.8 docs) (refs: #27704)

• PR #27704: (jacobhammons) Update compound matcher docs to clarify the usage of alternate delimiters (refs: #26604)
  - e47d849af6 Merge pull request #27704 from jacobhammons/26604
  - 1c51ce28a9 Update compound matcher docs to clarify the usage of alternate delimiters (Refs #26604)

• PR #27705: (rallytime) Merge #27602 with final pylint fix @ 2015-10-05 23:36:50 UTC
  - PR #27602: (blueyed) dockerng: fix/enhance version warning in __virtual__ (refs: #27705)
  - 2491ce40f1 Merge pull request #27705 from rallytime/merge-27602
  - 81aad83386 Ignore import error
  - 561d4cf94 dockerng: fix/enhance version warning in __virtual__

• ISSUE #13850: (ryan-lane) s3:// urls in file.managed (and likely elsewhere) require s3.key and s3.keyid to be in minion config (refs: #27691)

• PR #27691: (notpeter) Faster timeout (3s vs 2min) for instance metadata lookups. #13850. @ 2015-10-05 22:55:52 UTC
  - b76eb08c68 Merge pull request #27691 from notpeter/iam_fail_faster
  - 3d9483b4e2 Faster timeout (3s vs 2min) for instance metadata lookups. #13850.

• PR #27696: (blueyed) loader.proxy: call _modules_dirs only once @ 2015-10-05 22:42:32 UTC
  - fc78f49dc5 Merge pull request #27696 from blueyed/load-proxy-call-_module_dirs-only-once
  - 55a76b6c1 loader.proxy: call _modules_dirs only once per run

• PR #27630: (ticosax) Expose container_id in mine.get_docker @ 2015-10-05 21:56:53 UTC
  - 77516912fa Merge pull request #27630 from ticosax/include-container-id-docker-mine
  - 7299deb6f6 Fixup! Expose container_id in mine.get_docker
  - 9e56a7e9db Expose container_id in mine.get_docker

• PR #27660: (blueyed) dockerng: use docker.version=auto by default @ 2015-10-05 21:29:14 UTC
  - 8453cb3eb1 Merge pull request #27660 from blueyed/dockerng-auto-version
  - 53c63e3bde dockerng: use docker.version=auto by default

• PR #27689: (rallytime) Merge #27448 with test fixes @ 2015-10-05 21:17:41 UTC
  - PR #27448: (JaseFace) Ensure we pass on the enable setting if present, or use the default of True if not in build_schedule_item() (refs: #27689)
  - 7a4291008e Merge pull request #27689 from rallytime/fixed-tests-27448
  - 05a506ec9f Use correct comment in test
  - 829f6e3b31 Merge #27448 with test fixes
  - d95e9fd2f Ensure we pass on the enable setting if present, or use the default of True if not in build_schedule_item() Prior to this, when schedule.present compares the existing schedule to the one crafted by this function, enabled will actually be removed at each run. schedule.present sees a modification needs to be made, and invokes schedule.modify, which does so with enabled: True, creating and endless loop of an 'enabled' removal and addition.
• ISSUE #27520: (rmarcnik) winrepo is unavailable in 2015.8 (refs: #27616, #27693)
• ISSUE #23239: (cachedout) [RFC] Deprecate ext_processes (refs: #27693)
• PR #27693: (jacobhammons) initial engines topic, updates to windows repo docs @ 2015-10-05 21:05:26 UTC
  - 4ddc87157a Merge pull request #27693 from jacobhammons/doc-updates
  - 5a3e72fc8e __ops__ to __opts__
  - 5a9867aad1 initial engines topic, updates to windows repo docs Refs #23239 Refs #27520
• PR #27601: (blueyed) dockerng: handle None in container.Names @ 2015-10-05 20:32:19 UTC
  - f7f48d1eeff Merge pull request #27601 from blueyed/dockerng-none-names
  - b1442ac904 dockerng: handle None in container.Names
• PR #27596: (blueyed) gitfs: fix UnboundLocalError for 'msg' @ 2015-10-05 20:18:00 UTC
  - 3ffbb5a3369 Merge pull request #27596 from blueyed/fix-gitfs-UnboundLocalError
  - e70cba490f gitfs: fix UnboundLocalError for 'msg'
• PR #27651: (eliasp) Check for existence of 'subnetId' key in subnet dict @ 2015-10-05 17:01:34 UTC
  - 4d7be3f972 Merge pull request #27651 from eliasp/2015.8-cloud.clouds.ec2-check-for-subnetId-before-using-it
  - f21a763809 Check for existence of 'subnetId' key in subnet dict
• ISSUE #23370: (lisa2lisa) salt artifactory.downloaded module ignore classifier (refs: #27639)
• PR #27639: (rallytime) Docent version added for new artifactory options @ 2015-10-05 17:01:21 UTC
  - d9266505a7 Merge pull request #27639 from rallytime/fix-23370
  - 6de99bd577 Docent version added for new artifactory options
• PR #27677: (rallytime) Back-port #27675 to 2015.8 @ 2015-10-05 15:47:34 UTC
  - PR #27675: (avinassh) Fix a typo (refs: #27677)
  - 771e5136f1 Merge pull request #27677 from rallytime/bp-27675
  - bfa0acfbfe Fix a typo
• PR #27637: (rallytime) Back-port #27604 to 2015.8 @ 2015-10-05 14:54:59 UTC
  - PR #27604: (plastikos) Fix module path to SaltCacheError (refs: #27637)
  - 6bc5ddc561 Merge pull request #27637 from rallytime/bp-27604
  - 3d2ee4297d Fix module path to SaltCacheError
• ISSUE #19291: (gfa) pkg module could accept version: latest (refs: #27657)
• PR #27657: (garethgreenaway) Fix to pkg state module @ 2015-10-03 23:56:02 UTC
  - 905acc6229 Merge pull request #27657 from garethgreenaway/19291_pkg_state_latest_fix
  - c950527b24 When latest is passed in the state as the version to install, once the package is installed the state runs will fail. pkg.latest_version returned an empty string once the package is installed so we need to grab the installed version in that case to avoid passing an empty string to the pkg module in question.
• ISSUE #27538: (lomeroe) boto_iam is not passing parameters properly on a handful of function calls (refs: #27539)
• PR #27632: (rallytime) Back-port #27539 to 2015.8 @ 2015-10-02 19:28:39 UTC
• PR #27539: (lomeroe) boto_iam updates to function calls that were not passing arguments properly (refs: #27632)
  83ae6a1432 Merge pull request #27632 from rallytime/bp-27539
  2b0af0230 Add versionadded to new path option
  e54afed73a moving path kwarg to end of function definition

• ISSUE #27545: (lomeroe) boto_asg allow removing launch configuration with 'absent' state (refs: #27546)

• ISSUE #27544: (lomeroe) boto_asg state incorrectly processes return from boto_vpc.get_subnet_association (refs: #27559, #27546)

• PR #27633: (rallytime) Back-port #27559 to 2015.8 @ 2015-10-02 19:22:07 UTC
  PR #27559: (lomeroe) vpc_id fix for boto_vpc.get_subnet_association (refs: #27633)
  PR #27546: (lomeroe) boto_asg state updates (refs: #27559)
  888e9bdf5d Merge pull request #27633 from rallytime/bp-27559
  3f03815ada rebasing

• ISSUE #27463: (ryan-lane) boto_route53 module should default to region universal, rather then None (refs: #27579)

• PR #27579: (rallytime) Change boto_route53 region default to 'universal' to avoid problems with boto library @ 2015-10-02 18:56:17 UTC
  8b7da5e469 Merge pull request #27579 from rallytime/fx-27463
  d5956132ef Change boto_route53 region default to 'universal' to avoid problems with boto library

• PR #27581: (tkwilliams) Add support for 'vpc_name' tag in boto_secgroup module and state @ 2015-10-02 15:40:40 UTC
  ce4c64a2e3 Merge pull request #27581 from tkwilliams/boto_secgroup_add_vpc_name
  159ccf43f Faulty check logic around optional params
  84ab0bbd74 One last bug to squash. Seriously. It's the last one. Ever! - fixed param vpc_id being passed where vpc_name was intended.
  002cbb5cde Grrr. Add back the import of SaltInvocationError that pylint wanted me to remove :)
  0671d9dd89 Consolidate some redundant code - thanks @ryan-lane!
  fae1199276 Followed @ryan-lane's suggestion to remove duplicated code from boto_vpc and instead call into that module
  3a38a440b7 Merge remote-tracking branch 'upstream/2015.8' into boto_secgroup_add_vpc_name
  f7ef0bd4dc Fixups for pickley pylint pedantry :)
  35b66e28a3 Merge remote-tracking branch 'upstream/2015.8' into boto_secgroup_add_vpc_name
  6770721f8 Add support for 'vpc_name' tag in boto_secgroup module and state

• PR #27624: (nasenbaer13) Wait for sync is not passed to boto_route53 state @ 2015-10-02 15:37:44 UTC
  fb66969c4e Merge pull request #27624 from eyj/fix_wait_for_sync
  ed6a8b0aa6 Wait for sync is not passed to boto_route53 state

• PR #27614: (blueyed) doc: minor fixes to doc and comments @ 2015-10-02 15:34:02 UTC
  eb59cb8d1c Merge pull request #27614 from blueyed/doc-minor
- 98a8c0f055 doc: minor fixes to doc and comments

- **PR #27627** (eyj) Fix crash in boto_asg.get_instances if the requested attribute is None @ 2015-10-02 15:33:32 UTC
  - 61f8a6f39f Merge pull request #27627 from eyj/pr-instance-attribute
  - 03d7c6af3d Fix crash in boto_asg.get_instances if the requested attribute may be None

- **ISSUE #27549** (carlpett) Document winrepo_remotes_ng (refs: #27616)

- **ISSUE #27520** (rmarcinik) winrepo is unavailable in 2015.8 (refs: #27616, #27693)

- **PR #27616** (jacobhammons) Updated windows software repository docs @ 2015-10-02 05:03:37 UTC
  - 764d70af79 Merge pull request #27616 from jacobhammons/win-repo-docs
  - 1c8b32ce26 Updated windows software repository docs

- **ISSUE #27543** (lomeroe) boto_elb incorrectly processes return from boto_vpc.get_subnet_assocaiton (refs: #27569)

- **PR #27569** (lomeroe) boto_vpc.get_subnet_association now returns a dict w/key of vpc_id, a... @ 2015-10-01 16:03:06 UTC
  - db963b7864 Merge pull request #27569 from lomeroe/fix_boto_elb
  - ae09a0b61 boto_vpc.get_subnet_association now returns a dict w/key of vpc_id, adding code to handle the dict now

- **ISSUE #25441** (ahammond) modules.ps documentation missing (refs: #27567)

- **PR #27567** (whiteinge) Use getattr to fetch psutil.version_info @ 2015-10-01 15:39:59 UTC
  - b269cd4754 Merge pull request #27567 from whiteinge/psutil-version-fix
  - 7ebe9acc44 Use getattr to fetch psutil.version_info

- **PR #27583** (tkwilliams) Fixup zypper module @ 2015-10-01 15:38:53 UTC
  - 9cc69e2440 Merge pull request #27583 from tkwilliams/fix_zypper
  - cdd44e128 Fixup zypper module - expected return type of pkg.latest was changed without updating zypper module - unchecked list deref fixed - "zypper info -t" out-of-date status field format has changed

- **PR #27597** (blueyed) gifs: remove unused variable "bad_per_remote_conf" @ 2015-10-01 15:38:15 UTC
  - 5ca7e72c70 Merge pull request #27597 from blueyed/gifs-remove-unused-bad_per_remote_conf
  - 58af4d68f0 gifs: remove unused variable "bad_per_remote_conf"

- **PR #27585** (ryan-lane) Fix undefined variable in cron state module @ 2015-10-01 05:05:58 UTC
  - 9805bdeddf Merge pull request #27585 from lyft/cron-fix
  - 5474666b61 Fix undefined variable in cron state module
30.2.79 Salt 2015.8.3 Release Notes

Version 2015.8.3 is a bugfix release for 2015.8.0.

Statistics

- Total Merges: 74
- Total Issue References: 26
- Total PR References: 64
- Contributors: 30 (DmitryKuzmenko, RealKelsar, alexproca, anlutro, basepi, bogdanr, cachedout, cedwards, chrigl, cro, fcrozat, gtmanfred, isbm, jfindlay, kiorky, kt97679, lomeroe, lorengordon, mhoogendoorn, nmadowhok, optix2000, paulnivin, quantonganh, rallytime, s0undt3ch, schwing, sjorge, tampakrap, terminalmage, ticosax)

Security Fix

CVE-2015-8034 Saving state.sls cache data to disk with insecure permissions

This affects users of the state.sls function. The state run cache on the minion was being created with incorrect permissions. This file could potentially contain sensitive data that was inserted via jinja into the state SLS files. The permissions for this file are now being set correctly. Thanks to zmalone for bringing this issue to our attention.

Changelog for v2015.8.2..v2015.8.3


- PR #29173: (jfindlay) add 2015.8.3 release notes @ 2015-11-25 00:07:51 UTC
  - 345206b68e Merge pull request #29173 from jfindlay/2015.8
  - 212f7dd281 add 2015.8.3 release notes
  - ca1bb49cb6 add note on 2015.8.2 release notes
- PR #29172: (basepi) [2015.8] Backport new philips_hue proxy features from develop @ 2015-11-24 23:52:55 UTC
  - 5e88e9e9c0 Merge pull request #29172 from basepi/philips_backport
  - 1df6c3083b Backport new philips_hue proxy features from develop
- PR #29167: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-11-24 21:40:34 UTC
  - 2fb1ca0eac Merge pull request #29167 from basepi/merge-forward-2015.8
  - 525f9fbbb Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
  - a26c10a811 Merge pull request #29164 from jfindlay/bp-29113
    * 50fab35188 kill unneeded import
  - 4f03196e7d Merge pull request #29138 from jfindlay/2015.5
    * be045f5cb1 add 2015.5.8 release notes
- PR #29141: (optix2000) Add test case for require: sls with only import statements @ 2015-11-24 16:17:57 UTC
  - 68d6c454b8 Merge pull request #29141 from optix2000/full_sls_import
- Add test case for sls with only import Tests https://github.com/saltstack/salt/issues/10852

- **ISSUE #29015**: (jakehilton) git_pillar not honoring git_pillar_base (refs: #29072)

- **ISSUE #28311**: (strocknar) git_pillar conflicts (refs: #29072)

- **ISSUE #27432**: (mafrosis) Using specific tag as GitFS remote (refs: #29072)

- **PR #29072**: (terminalmage) Several gitfs/git_pillar fixes @ 2015-11-24 16:04:39 UTC
  - 732f5364a2 Merge pull request #29072 from terminalmage/issue28311
  - dae738fd3 Use common code to detect envs
  - a9c0cabc77 Don’t add head ref if head red matches desired ref
  - e7540e956b pygit2: Don’t clean local heads along with stale remote refs
  - 16c46f554 pygit2: Properly resolve base saltenv from tag ref
  - 0c592ab552 Support string whitelist/blacklist
  - 744487864d Fix base branch detection for git_pillar
  - 1cd94d1b4 Add some debug logging for git_pillar
  - fac588c0bb Add HEAD ref in git_pillar/winrepo checkout

- **PR #29118**: (ticosax) [dockerng] Add networking capabilities @ 2015-11-24 15:47:36 UTC
  - 95689ee1a4 Merge pull request #29118 from ticosax/dockerng-network
  - e98d18ba41 Expose docker networking as state
  - 94135d91c3 cosmetic
  - 17ff5c1ab5 Add expose networking to modules.dockerng

- **ISSUE #29144**: (anlutro) Error in fileclient with file.managed (refs: #29145)

- **PR #29145**: (anlutro) Remove duplicate import of salt.utils.s3 @ 2015-11-24 15:36:05 UTC
  - 4bf4f212d2d Merge pull request #29145 from alprs/fix-duplicate_import
  - e1101bea19 Remove duplicate import of salt.utils.s3

- **ISSUE #29147**: (lomeroe) boto_route53 unexpected keyword arguments in create_zone() (refs: #29148)

- **PR #29148**: (lomeroe) correcting parameter calls to boto get_zone/create_zone functions in ... @ 2015-11-24 15:33:53 UTC
  - 6079569580 Merge pull request #29148 from lomeroe/boto_route53_create_zone_fix-backport
  - 75408ccf99 correcting parameter calls to boto get_zone/create_zone functions in create_zone parameter check on create_zone on private_zone=True add boto version requirement

- **ISSUE #29107**: (lorengordon) Salt hangs when passing a string representation as the length parameter to random.get_str() (refs: #29108)

- **PR #29108**: (lorengordon) Enforce length as an int, fixes #29107 @ 2015-11-23 19:06:52 UTC
  - 17638c734b Merge pull request #29108 from lorengordon/type-enforce-length
  - c71825d3b0 Enforce length as an int, fixes #29107

- **PR #29125**: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-11-23 18:48:46 UTC
  - 233ab8a474 Merge pull request #29125 from basepi/merge-forward-2015.8
  - 1432cc806d Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
• 219367a23d Merge pull request #29128 from cachedout/tweak_29122
  - b08858b040 Missed check
  - 584efe81ee Set a safer default value for ret in saltmod
  - 8d86bc3056 Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
• 2250a36647 Merge pull request #29122 from cachedout/issue_29110
  - 4b9302d794 Fix broken state orchestration
• 200e771efb Merge pull request #29096 from rallytime/bp-29093
  - f5734423a4 Compare gem versions as a string.
• d8a2018bc8 Merge pull request #29084 from rallytime/bp-29055
  - 52e650aed9 Add section to style guide
• b5cff1a351 Merge pull request #29083 from rallytime/bp-29053
  - f1884de0e7 Update rabbitmq_user.py
• b3e3bebef0 Merge pull request #28932 from twangboy/fix_28928
  - 0653a04887 Fixed user.present / user.absent in windows
• a2e4a227e0 Merge pull request #29011 from rallytime/bp-28630
  - 7baccc1b05 Lint - newline before def
  - 9e5c16d4da Reading S3 credentials from Pillar
  - a3216f813d Fixed requests HTTPError handler, it was still in urllib2 style
• 1a4cd6002f Merge pull request #28982 from basepi/merge-forward-2015.5
  - bfb1b09fbd Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - 4b8bd0af4b Merge pull request #28839 from cachedout/revert_28740
  - 215b26c06f Revert #28740

• ISSUE #29005: (fcrozat) non-standard umask breaks salt-call call in salt-ssh (refs: #29126)
• ISSUE #28830: (fcrozat) non-standard umask breaks salt-ssh deployment (refs: #29126)
• PR #29126: (fcrozat) Fix deployment when umask is non-standard @ 2015-11-23 17:53:46 UTC
  - dc0d47fa2e Merge pull request #29126 from fcrozat/2015.8
  - 4da11a5f3c Fix deployment when umask is non-standard. Fixes #29005
  - bbccb752f9 Fix deployment when umask is non-standard. Fixes #28830
• PR #29124: (rallytime) Back-port #28130 to 2015.8 @ 2015-11-23 17:31:00 UTC
  - PR #29120: (alexproca) Import keypair (refs: #29124)
  - PR #28130: (bogdan) Ec2 upload public key and updated instances size list (refs: #29124)
  - 994d8bd71a Merge pull request #29124 from rallytime/bp-28130
  - e290e4a3f Pylint Fix
  - 9dce8c8b4d Added missing comma
  - 4a7e0e08a8 Documented import_keypair for the ec2 driver
  - 715c12014c Added a bunch of instance sizes and updated some outdated ones
- 506ff01f65 Import public key

- **PR #29076**: (RealKelsar) We can’t query installed use flags for a non installed pkg @ 2015-11-23 16:19:40 UTC
  - d9c32011b4 Merge pull request #29076 from RealKelsar/2015.8
  - f3d1ba1509 We can’t query installed use flags for a non installed pkg. Also one if is enough...
  - 96566d3060 We can’t query installed use flags for a non installed pkg

- **ISSUE #29100**: (quantonganh) boto_ec2.exists does not use region when checking? (refs: #29070)

- **PR #29097**: (rallytime) Back-port #29070 to 2015.8 @ 2015-11-22 17:03:04 UTC
  - PR #29070: (quantonganh) boto_ec2: missing region when checking existence of an EC2 instance (refs: #29097)
  - 1931870f26 Merge pull request #29097 from rallytime/bp-29070
  - 3b202efadc boto_ec2: missing region when checking existence of an EC2 instance

- **PR #29090**: (gtmanfred) clean up novaclient module @ 2015-11-21 15:43:58 UTC
  - bb28b9186b Merge pull request #29090 from gtmanfred/2015.8
  - 2aaabf9d2 clean up novaclient module

- **PR #29095**: (terminalmage) Add warning about pygit2 API instability @ 2015-11-21 15:38:59 UTC
  - 4ff54c6429 Merge pull request #29095 from terminalmage/pygit2-warning
  - 139f5ba4c3 Add warning about pygit2 API instability

- **PR #28919**: (cro) Update Philips Hue proxy minion to support __proxy__ instead of proxymodule stored in __opts__ @ 2015-11-21 15:31:36 UTC
  - 27160b0454 Merge pull request #28919 from cro/hue_proxy_backport
  - 8823225c81 Add `versionadded`
  - 6bd98d2c6 Backport philips_hue proxy module to 2015.8, use __proxy__ instead of opts[‘proxymodule’]
  - 0945d3b5b2 Add the license
  - a8be2d7382 Fix the docstring
  - 13a8973f94 Validate if "requests" are around. NOTE: this will be changed soon!
  - 835e84181b Fix the documentation
  - 68acfd6180 Allow view status from all lamps, if not specified
  - 96ad9cc9 Fix lint issues
  - cd00c5d99f Remove dead code
  - 6a08d2b6b5 Implement static grains for the Philips HUE
  - 5d3c3e90fc Bugfix: show all devices, if no specific IDs were passed
  - 7e86d2d7d Implement color temperature
  - a2d87a18cc Fix the documentation
  - a2bdaa49d4 Implement brightness
  - a2b1a71e01 Fix crash if the controller is down
  - a7d5aabf3 Update documentation for the color settings
  - 15f83e180d Add more preset colors
- 44339f3dc1 Implement color setter with transition
- 0f4d5b9eac Implement effects method
- f341910174 Implement alert function
- e0c95b4c7f Separate device (lamps) getter
- 37ed834a63 Implement lamp rename
- 66b155c3db Enhance _set method so it can set more than just lights status
- 8e94aad5c1 Enhance internal ping report on failures (device is not reachable)
- 3bf79e6920 Implement blink function
- 334371d660 Use blink on internal ping
- a8e4c2162c Fix bug: call in a proper order, if all devices
- a98d518f8 Remove the debug
- a1244223bf Enhance switch method
- e902764e25 Switch all lamps if IDs are not passed
- 1e508e9155 Fix bug: crash, if only one lamp ID is passed
- c0e6706d9a Implement status
- 6d86d6e23 Fix lint
- db053bd8b Add licence
- 2abdb19934 Implement proxy minion configuration
- 1a75be3f71 Cleanup code
- 1a46a180bc Implement light switch ON/OFF
- cc5ee382c5 Implement lights method.
- bfbe4160b2 Add constants class-struct
- 7a8d72e3f Implement device state change
- d769bc85a7 Implement available device listing
- c9e7f45dc18 Cleanup code
- 5503b3f20e Implement Philips HUE wrapper caller for Minion Proxy
- 1b11d1ec74 Initial implementation of Philips HUE proxy

• ISSUE #28810: (syedaali) test.ping is not available (refs: #29065)

• ISSUE #28761: (syedaali) Numerous module import errors in /var/log/salt/minion (test,oracle,archive) (refs: #29065)

• ISSUE #25756: (nshalman) Esky builds on SmartOS broken in 2015.5 branch (refs: #25946, #25923)

• PR #29065: (cachedout) Handle failures inside python's inspect if a module is reloaded @ 2015-11-20 18:10:42 UTC
  - PR #25946: (sjorge) Fix for salt.utils.decorators under esky (refs: #29065)
  - PR #25923: (sjorge) Fix for salt.utils.decorators and module.__name__ under esky (refs: #25946)
  - 88c0354c0c Merge pull request #29065 from cachedout/issue_28810
  - 4767503eb2 Remove trailing whitespace
- c5b667f048 Handle failures inside python's inspect if a module is reloaded

- **PR #29057:** (paulnivin) Add local file support for file.managed source list @ 2015-11-19 21:57:34 UTC
  - 714e8ff27 Merge pull request #29057 from lyft/file-manage-local-source-list
  - 3d7a19cd8 Support local files in list of sources
  - d175061c5d Add tests for file.source_list with local files
  - 4be2a30fe Update documentation to clarify URL support for lists of sources with file.managed

- **ISSUE #28981:** (mimianddaniel) 2015.8.2 import pagerduty error (refs: #29017)

- **PR #29017:** (jfindlay) pagerduty runner: add missing salt.utils import @ 2015-11-19 19:28:35 UTC
  - f4f43381fc Merge pull request #29017 from jfindlay/pager_util
  - 5cc06207fe pagerduty runner: add missing salt.utils import

- **PR #29039:** (anlutro) Allow passing list of pip packages to virtualenv.managed @ 2015-11-19 19:13:50 UTC
  - 1c61bce0a6 Merge pull request #29039 from alprs/feature-virtualenv_pip_pkgs
  - 9bfff3182 allow passing list of pip packages to virtualenv.managed

- **PR #29047:** (schwing) Fix salt.modules.gpg.import_key exception: ‘GPG_1_3_1 referenced before assignment’ @ 2015-11-19 19:07:36 UTC
  - b692ab1cfe Merge pull request #29047 from schwing/fix-gpg-exception
  - 813f66e808 Fix ‘GPG_1_3_1 referenced before assignment’

- **PR #29050:** (terminalmage) Make git_pillar global config option docs more prominent @ 2015-11-19 19:06:38 UTC
  - b4fc2f28a4 Merge pull request #29050 from terminalmage/issue29015
  - 20da057a94 Make git_pillar global config option docs more prominent

- **PR #29048:** (nmadhok) Fix incorrect debug log statement @ 2015-11-19 19:04:10 UTC
  - 4b3b2fe1e7 Merge pull request #29048 from nmadhok/patch-1
  - 948946c3b6 Update vmware.py

- **PR #29024:** (jfindlay) cache runner test: add new unit tests @ 2015-11-19 19:02:54 UTC
  - e52c117368 Merge pull request #29024 from jfindlay/run_test
  - 0c0bec3a6 cache runner test: add new unit tests

- **PR #28967:** (cro) Fix some issues with password changes @ 2015-11-19 18:57:39 UTC
  - bcecc8d8608 Merge pull request #28967 from cro/fx2_switch
  - 67b5b9b8d2 Add docs on automatic lockout on failed auth attempts.
  - 8a3cea4d95 Lint.
  - 040953ab74 Prevent stacktrace if something goes wrong retrieving inventory
  - e79c6ce15a5 Don’t need to get grains at init time here now that we are confirming username and password differently.
  - e42100cf8a Switch from admin_password and fallback_admin_password to a list of passwords to try.
  - 4b382e977d Add ‘versionadded’

- **ISSUE #8516:** (xoJIog) salt-ssh not working with nodegroups and lists (refs: #29020)
• **PR #29020**: (basepi) [2015.8] Add special list-only nodegroup support to salt-ssh @ 2015-11-18 21:15:50 UTC
  - 14b5d0ed0f Merge pull request #29020 from basepi/salt-ssh.nodegroups.8516
  - 6433abf36f Rename ssh_nodegroups to ssh_list_nodegroups
  - bd8487b3b9 Properly save minion list in local_cache for ssh jobs
  - 4b1bf7d5e2 Add support for comma separated list matching in salt-ssh
  - 65c6528cbc Add "nodegroup" matching to salt-ssh
  - 688a78c08c Add new ssh_nodegroups config

• **ISSUE #28911**: (ccmills) GitFS numeric tags cause errors with environments (refs: #28970)

• **PR #28970**: (terminalmage) Properly handle non-string saltenvs @ 2015-11-18 20:38:41 UTC
  - 89801b172a Merge pull request #28970 from terminalmage/issue28911
  - ec64ec85d6 Force file_roots environments to be strings
  - b2690140c7 Properly handle non-string saltenvs

• **ISSUE #28945**: (rallytime) Dell Chassis State Example Improvements (refs: #28959)

• **PR #28959**: (rallytime) Add blade password example and make note of timeout @ 2015-11-18 19:39:04 UTC
  - 83c54351c9 Merge pull request #28959 from rallytime/fix-28945
  - 2f326b57bf Clarify chassis password functionality
  - 3614a88811 Add blade password example and make note of timeout

• **PR #29000**: (kiorky) [Mergeable] Fix up LXC @ 2015-11-18 18:02:47 UTC
  - d8dc81bb2c Merge pull request #29000 from kiorky/2015.8_lxc
  - a4d197821a LXC: doc
  - 43fb0eff02 lxc: remove useless and error prone uses_systemd knob
  - 7ec08cd41c Fix bootstrap delay kwarg exchange

• **ISSUE #28995**: (timcharper) systemd.get_all broken on non-bsd systems / salt-bootstrap failure (refs: #29014)

• **PR #29014**: (jfindlay) systemd module: remove unneeded col command @ 2015-11-18 17:58:59 UTC
  - eedd50e7c3 Merge pull request #29014 from jfindlay/sysctl_col
  - d75e4d5d21 systemd module: line wrap function comment
  - 960d2b936d systemd module: remove unneeded col command

• **PR #28983**: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-11-18 00:49:36 UTC
  - ac85cfd8d0 Merge pull request #28983 from basepi/merge-forward-2015.8
  - f1c80ab943 Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
  - edd26d763a Merge pull request #28949 from whiteinge/sync-sdb
    * b0ec9ab25b Add sync_sdb execution function
    * 43da1bc4ce Merge pull request #28930 from twangboy/fix_28888
    * f5c489eaad Added missing import mmap required by file.py
  - 2488b873b8 Merge pull request #28908 from rallytime/doc-convention-spelling
    * 60e6eddb77 A couple of spelling fixes for doc conventions page.
- 827a1ae020 Merge pull request #28902 from whiteinge/json-keys
  - 9745903301 Fix missing JSON support for /keys endpoint
- d23bd49130 Merge pull request #28897 from rallytime/bp-28873
  - 077e671ead Fix salt-cloud help output typo
- a9dc8b6ca6 Merge pull request #28871 from basepi/mdadm.fix.28870
  - 323bc2d2ac Fix command generation for mdadm.assemble
- ec7fd539b Merge pull request #28864 from jfindlay/2015.5
  - 648b697951 add 2015.5.7 release notes
- bed45f4208 Merge pull request #28731 from garethgreenaway/27392_2015_5_scheduler_return_job_master
  - 771e9f7b6f Fixing the salt scheduler so that it only attempts to return the job data to the master if the scheduled job is running from a minion's scheduler.
- 06f4932876 Merge pull request #28857 from rallytime/bp-28851
  - aa4b193f87 [states/schedule] docstring: args, kwargs -> job_args, job_kwargs
- 0934a52b34 Merge pull request #28856 from rallytime/bp-28853
- 37eeab2683 Typo (with → which)

- PR #28969: (rallytime) Back-port #28825 to 2015.8 @ 2015-11-17 20:43:30 UTC
  - PR #28825: (s0undt3ch) Take into account a pygit2 bug (refs: #28969)
  - f172a0ee03 Merge pull request #28969 from rallytime/bp-28825
  - 40f4ac5b21 Add missing import
  - 2c43da1578 Take into account a pygit2 bug

- ISSUE #28784: (chrigl) iptables.get_saved_rules tests pretty much useless (refs: #28787)
- ISSUE #28783: (chrigl) iptables.get_saved_rules does not handle family=ipv6 (refs: #28787)
- PR #28787: (chrigl) closes #28784 @ 2015-11-17 15:54:04 UTC
  - 1e9214f4e4 Merge pull request #28787 from chrigl/fix-28784
  - 8639e3e9c3 closes #28784

- PR #28944: (rallytime) The ret result must contain 'name', not 'chassis_name' for the state compiler. @ 2015-11-17 15:34:21 UTC
  - d63344575a Merge pull request #28944 from rallytime/dellchassis-state-name-fix
  - f3ea01bbfa Make sure dellchassis.blade_idrac has a name arg and a ret['name']
  - fb718539e9 The ret result must contain 'name', not 'chassis_name' for the state compiler

- PR #28957: (terminalmage) Fix version number for new state option @ 2015-11-17 15:33:50 UTC
  - fcef9f8995 Merge pull request #28957 from terminalmage/fix-docstring
  - f159000de2 Fix version number for new state option

- PR #28950: (DmitryKuzmenko) PR 28812 which test fix @ 2015-11-17 15:32:16 UTC
  - PR #28812: (isbm) Enhance 'which' decorator reliability (refs: #28950)
  - 5b680c938a Merge pull request #28950 from DSRCompany/pr/28812_which
  - 18571000c5 Fix which test in PR #28812`
• **PR #28812**: (isbm) Enhance ‘which’ decorator reliability (refs: #28950) @ 2015-11-17 15:32:10 UTC
  - 73719928f9 Merge pull request #28812 from isbm/isbm-which-decorator-enhancement
  - 20033eeeb7 Save modified environment path
  - 2d43199d20 Preserve ‘first found first win’ ordering
  - 1c59edec2 Enhance ‘which’ decorator reliability for peculiar environments

• **PR #28934**: (terminalmage) git.latest: Add update_head option to prevent local HEAD from being updated @ 2015-11-17 15:15:16 UTC
  - facc34efed Merge pull request #28934 from terminalmage/issue27883
  - 6a35a39ca5 Add update_head option to git.latest
  - 3787f7ed00 Change return output of git.fetch to a dict
  - 9ca0f8f440 Add redirect_stderr argument to cmd.run_all

• **PR #28937**: (rallytime) Update dellchassis state example to use correct jinja syntax @ 2015-11-17 15:12:28 UTC
  - 7da93aad5b Merge pull request #28937 from rallytime/chassis-doc-fix
  - d53713ddba We only need one fancy pillar example to match our state.
  - e2926b1996 Update dellchassis state example to use correct jinja syntax

• **ISSUE #27961**: (ahammond) aggregate: False should disable aggregation even when state_aggregate: True enabled (refs: #28889)

• **PR #28889**: (jfindlay) state compiler: relax aggregate conditional check @ 2015-11-16 17:39:24 UTC
  - 16ebda999e Merge pull request #28889 from jfindlay/aggregate
  - eb9970019a state compiler: relax aggregate conditional check

• **ISSUE #24803**: (cachedout) Rewrite GPG renderer tests (refs: #25470)
  - 91a327bbce Merge pull request #25470 from rallytime/bp-25470
  - a5eece74c20 Change Beryllium to 2015.8.3 release
  - 5c61abf57 rewrite GPG unit tests
  - 7aa424209e reduce globals in GPG renderer for easier testing
  - de5b6682ef log error and return ciphered txt on decrypt error
  - 6a0f344fe3 updated logic to properly detect GPG_KEYDIR path
  - bc9750b85e refactor gpg renderer; removing dependency on python-gnupg

• **PR #28921**: (rallytime) Back-port #25470 to 2015.8 @ 2015-11-16 17:38:59 UTC
  - **PR #25470**: (jfindlay) #24314 with tests (refs: #28921)
  - **PR #24314**: (cedwards) refactor gpg renderer; removing dependency on python-gnupg (refs: #28921, #25470)
  - 91a327bbce Merge pull request #28921 from rallytime/bp-25470
  - a5eece74c20 Change Beryllium to 2015.8.3 release
  - 5c61abf57 rewrite GPG unit tests
  - 7aa424209e reduce globals in GPG renderer for easier testing
  - de5b6682ef log error and return ciphered txt on decrypt error
  - 6a0f344fe3 updated logic to properly detect GPG_KEYDIR path
  - bc9750b85e refactor gpg renderer; removing dependency on python-gnupg

• **PR #28922**: (rallytime) Change 2015.8.2 release note title to reflect proper version @ 2015-11-16 16:47:33 UTC
  - 3707eb1e7c Merge pull request #28922 from rallytime/release-notes-ver
  - 61029f8db1 Change 2015.8.2 release note title to reflect proper version

• **ISSUE #23971**: (dumol) Problems disabling a service in SLES11 SP3. (refs: #28891)

• **PR #28891**: (jfindlay) rh_service module: fix logic in _chkconfig_is_enabled @ 2015-11-16 02:44:14 UTC
- 23ea0d9e0 Merge pull request #28891 from jfindlay/chkconfig_check
- e32a9aad85 rh_service_chkconfig_is_enabled unit tests
- 5a93b7e53c rh_service module: fix logic in _chkconfig_is_enabled

• ISSUE #24019: (dumol) SUSE Linux Enterprise Server 11 SP3 not detected as SLES. (refs: #28892)

• PR #28892: (jfindlay) grains.core: correctly identify SLES 11 distrib_id @ 2015-11-16 02:30:30 UTC
  - 8e6ac97ae Merge pull request #28892 from jfindlay/sles_grain
  - 1cfd50c9 grains.core: correctly identify SLES 11 distrib_id

• PR #28910: (loregordon) Fix winrepo command in windows pkg mgmt doc @ 2015-11-16 02:29:12 UTC
  - cf929e3847 Merge pull request #28910 from loregordon/patch-1
  - 6465398b3 Fix winrepo command in windows pkg mgmt doc

• PR #28896: (rallytime) Back-port #28855 to 2015.8 @ 2015-11-15 00:43:15 UTC
  - PR #28855: (tampakrap) fix the os grain in sle11sp4 to be SUSE instead of SLES (refs: #28896)
  - 7a4f86a790 Merge pull request #28896 from rallytime/bp-28855
  - baf38f270 fix the os grain in sle11sp4 to be SUSE instead of SLES

• PR #28895: (rallytime) Back-port #28823 to 2015.8 @ 2015-11-15 00:43:07 UTC
  - PR #28823: (tampakrap) Add support for priority and humanname in pkrepo zypper backend (refs: #28895)
  - 64dc3e2320 Merge pull request #28895 from rallytime/bp-28823
  - d167a6b83d Add support for priority and humanname in pkrepo zypper backend

• ISSUE #28754: (kt97679) service.enabled fails on xen server (refs: #28885)

• PR #28885: (kt97679) fix for: service.enabled fails on xen server #28754 @ 2015-11-14 04:55:38 UTC
  - a45ce78e20 Merge pull request #28885 from kt97679/2015.8
  - 7d0f1f11cb fix for: service.enabled fails on xen server #28754

• PR #28880: (terminalmage) Add "profile" loglevel @ 2015-11-14 02:07:25 UTC
  - 58b57e77be Merge pull request #28880 from terminalmage/profile-logging
  - a62852d407 Add @wraps decorator
  - cac9f17307 Add profile logging for template rendering
  - c625725f70 Add decorator to do profile-level logging for a function
  - 5a2b49e39 Add "profile" loglevel

• ISSUE #28881: (basepi) salt-ssh stacktraces on first run (refs: #28882)

• PR #28882: (basepi) [2015.8] salt-ssh: Check return type to make sure it's an error @ 2015-11-14 00:14:46 UTC
  - 5dca7fcb07 Merge pull request #28882 from basepi/salt-ssh.stacktrace.28882
  - f1a1c6d607 Check return type to make sure it's actually an error

• PR #28867: (rallytime) [fx2 grains] Grains functions should return dictionaries @ 2015-11-13 21:14:13 UTC
  - 430e9376f6 Merge pull request #28867 from rallytime/fx2-grains-.patch
  - 02cf5d230 [fx2 grains] Grains functions should return dictionaries
• ISSUE #28859: (mhoogendoorn) ebuild.install runs refresh_db() when refresh=False is given. (refs: #28863)

• PR #28863: (mhoogendoorn) Fix ebuild.install causing extra refresh_db calls. @ 2015-11-13 18:46:03 UTC
  – 304072456e Merge pull request #28863 from mhoogendoorn/fix-issue-28859
  – eca09b89a4 Fix ebuild.install causing extra refresh_db calls.

30.2.80 Salt 2015.8.4 Release Notes

Version 2015.8.4 is a bugfix release for 2015.8.0.

Statistics

• Total Merges: 322
• Total Issue References: 120
• Total PR References: 312
• Contributors: 78 (AkhterAli, DmitryKuzmenko, MadsRC, Oro, The-Loeki, abednarik, akissa, anlutro, basepi, bastiaanb, bdrung, borgstrom, cachedout, clan, clinta, cournape, cro, ctrlrsf, dmavcicar, dmurphy18, dnjmd, dr4Ke, eliasp, fcrozat, frioux, galet, garethgreenaway, gqgunhed, gtmanfred, hexedpackets, isbm, jacksontj, jacobhammons, jfindlay, jleimbach, job, joejulian, julianbrost, justinta, kingsquirrel152, kiorky, l2ol33rt, lagesag, lorengordon, mbarrien, mprezioso, multani, nmadhok, oeuftete, opdude, optix2000, pass-by-value, paulnivin, plastikos, pritambaral, rallytime, rasathus, rmatulat, ruxandraburtica, ryan-lane, s0undt3ch, seanjnknns, serge-p, sjorge, stanislavb, thaker57, techhat, terminalmage, thatch45, thegooodude, thomaso-mirodin, ticosax, tim-charper, tkunicki, trevor-h, twangboy, whiteinge, whytewolf)

Known Issues

• *_in requisites (issue #30820)

  This issue affects all users targeting an explicit - name: <name> with a _in requisite (such as watch_in or require_in). If you are not using explicit - name: <name> arguments, are targeting with the state ID instead of the name, or are not using _in requisites, then you should be safe to upgrade to 2015.8.4.

  This issue is resolved in the 2015.8.5 release.

Security Fix

CVE-2016-1866 Improper handling of clear messages on the minion, which could result in executing commands not sent by the master.

This issue affects only the 2015.8.x releases of Salt. In order for an attacker to use this attack vector, they would have to execute a successful attack on an existing TCP connection between minion and master on the pub port. It does not allow an external attacker to obtain the shared secret or decrypt any encrypted traffic between minion and master. Thank you to Sebastian Krahmer <krahmer@suse.com> for bringing this issue to our attention.

We recommend everyone upgrade to 2015.8.4 as soon as possible.
Core Changes

• Support for IAM roles added to S3 module
• Added option mock=True for state.sls and state.highstate. This allows the state compiler to process sls data in a state run without actually calling the state functions, thus providing feedback on the validity of the arguments used for the functions beyond the preprocessing validation provided by state.show_sls (issue #30118 and issue #30189).

```
salt '*' state.sls core,edit.vim mock=True
salt '*' state.highstate mock=True
salt '*' state.apply edit.vim mock=True
```

Changelog for v2015.8.3..v2015.8.4


• PR #30615: (jfindlay) add 2015.8.4 release notes @ 2016-01-25 18:11:02 UTC
  – 1c6c394d0e Merge pull request #30615 from jfindlay/2015.8
  – e4043043e4 add 2015.8.4 release notes
• PR #30612: (rallytime) Back-port #29940 to 2015.8 @ 2016-01-25 17:52:43 UTC
  – PR #29940: (dr4Ke) file.line: better diff (refs: #30612)
  – ec50581aad Merge pull request #30612 from rallytime/bp-29940
  – 3eb8249d7 file.line: better diff
• PR #30613: (basepi) Fix minion/syndic clearfuncs @ 2016-01-25 17:40:59 UTC
  – 48373e0ea9 Merge pull request #30613 from basepi/minion_clearfuncs_2015.8
  – a3c3182f39 Correctly handle clearfuncs on the syndic
  – 098ec4335d Correct handle clearfuncs on the minion
• ISSUE #29601: (seanjnkns) pillars not merging properly with 2015.8.3 (refs: #30062)
• PR #30609: (seanjnkns) Fix documentation for pillar_merge_lists which default is False, not ... @ 2016-01-25 17:15:45 UTC
  – PR #30609: (seanjnkns) Remove recurse_list from pillar_source_merging_strategy and add pilla... (refs: #30609, #30458)
  – 89b4f3de1b Merge pull request #30609 from seanjnkns/backport_30602
  – 9924acdc43 Fix documentation for pillar_merge_lists which default is False, not True. From PR #30062
• PR #30584: (julianbrost) file.line state: add missing colon in docstring @ 2016-01-25 16:37:38 UTC
  – 24ead62c41 Merge pull request #30584 from julianbrost/fix-doc-file-line-missing-colon
  – 2ab367f95b file.line state: add missing colon in docstring
• PR #30589: (terminalmage) Merge 2015.5 into 2015.8 @ 2016-01-25 16:20:41 UTC
  – a7ba2df5e2 Merge pull request #30589 from terminalmage/2015.5-2015.8
  – d649551fbf Merge branch '2015.5' into 2015.5-2015.8
    * a823e21428 Merge pull request #30582 from terminalmage/dnf-repoquery-multiple-targets
• 410da789f9 yumpkg.check_db: run separate repoquery commands when multiple names passed
  • 8e56be7f4c Merge pull request #30548 from jacobhammons/doc-fixes
    • 03e51bb54d Added placeholder release notes for 2015.5.10 Changed old doc links from docs.saltstack.org to docs.saltstack.com
  • 1aafdf45b5 Merge pull request #30530 from terminalmage/yumpkg-dnf-cleanup
    • 25867f71bf 2015.5 tweaks from #30529

• PR #30599: (multani) Documentation formatting fixes @ 2016-01-25 15:37:46 UTC
  – 3a55d11916 Merge pull request #30599 from multani/fix/docs
  – 038ecc4acd For doc formatting of salt.states.module
  – 406263b9f9 Fix doc formatting for yaml_idiosyncrasies
  – 6efb77be04 Fix doc formatting of salt.modules.parted
  – a329adfb21 Add missing salt.queues.* documentation
  – 2465cf4ba5 Remove non-existing documentation
  – 81464c304 Fix documentation markup in salt.modules.osquery
  – d2614d6169 Fix documentation markup for salt.modules.ipmi
  – 276eb3a843 Fix GCE documentation

• ISSUE #10157: (martinb3) salt-cloud actions don't have very useful error messages (refs: #30554)

• PR #30554: (rallytime) Make the salt-cloud actions output more verbose and helpful @ 2016-01-22 20:23:18 UTC
  – b1e604add3 Merge pull request #30554 from rallytime/fix-10157
  – 6fa952f16d Make the salt-cloud actions output more verbose and helpful

• PR #30549: (techhat) Salt Virt cleanup @ 2016-01-22 18:45:18 UTC
  – 2eb5a3803d Merge pull request #30549 from techhat/virtcleanup
  – 9baab73cd0 Fix copy pasta
  – 6413c11f29 Salt Virt cleanup

• PR #30553: (techhat) AWS: Support 17-character IDs @ 2016-01-22 18:41:46 UTC
  – f63b183e43 Merge pull request #30553 from techhat/awsid
  – a95fbf484c Support 17-character IDs

• PR #30532: (whiteinge) Add execution module for working in sls files @ 2016-01-22 17:25:16 UTC
  – 05d05263ab Merge pull request #30532 from whiteinge/sslutil-mod
  – a57d9984e4 Add sslutil to doc index
  – 155966d9d2 Add execution module for working in sls files

• PR #30529: (terminalmage) Merge 2015.5 into 2015.8 (refs: #30530) @ 2016-01-22 17:19:39 UTC
  – 1da1bb9a6c Merge pull request #30529 from terminalmage/2015.5-2015.8
  – e85ad690fb Lint fixes
  – 43829ecee6 Docstring tweaks
  – 92d5a2a49c Fix spelling
- fdc60cf04a Modify pkg.group_installed to reflect changes in yumpkg.py
- a118eb5d2e Merge branch '2015.5' into 2015.5-2015.8
- 7798d42272 Merge pull request #30484 from terminalmage/dnf-yumpkg-2015.5
  - 330e26d1da8 Hide get_locked_packages
  - 5a637420e8 Backport DNF support to 2015.5 branch
- PR #30526: (twangboy) Added FlushKey to make sure its changes are saved to disk @ 2016-01-22 02:33:13 UTC
  - e366f6a7fd Merge pull request #30526 from twangboy/reg_flushkey
  - 23085ffbb Added FlushKey to make sure its changes are saved to disk
- PR #30521: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-01-21 23:05:03 UTC
  - cdc731b8c5 Merge pull request #30521 from basepi/merge-forward-2015.8
  - f225ff851 Fix lint
  - 117fb205de Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
    - b348f804b1 Merge pull request #30512 from jfindlay/repo_test
      - 6606f2bd3 disable pkgrepo test for ubuntu 15.10+
    - a9348d6ef8 Merge pull request #30478 from jand/pip_8_update
      - 6227368830 Convert version to int, instead of comparing strings to ints
      - 20384a4810 Added InstallationError to except block
      - baa274bca9 Updated pip_state to work with pip 8.0
    - a30147c64f Merge pull request #30482 from borgstrom/pyobjects_recursive
      - 2c55a7580b Fixup lint errors
      - b46df0e4b5 Allow recursive salt:// imports
      - 51bfa16173 Add test to prove that recursive imports are currently broken
    - 5c7cc51937 Merge pull request #30459 from jfindlay/pkg_tests
      - fb9972f590 modules.pkg: disable repo int test for ubuntu 15.10
    - dd2cbe4c07 Merge pull request #30443 from jand/boto_vpc_5
      - 2f77152479 Boto uses False for is_default instead of None
    - 62d9ddc6ced Merge pull request #30420 from attiasr/patch-1
      - 4de343c5a1 Backport #26853
- PR #30485: (justinta) Updated pip_state to work with pip 8.0 on 2015.8 @ 2016-01-21 22:55:38 UTC
  - 019af349af Merge pull request #30485 from jand/pip_8_update_2015.8
  - 9cb17332fa Updated pip_state to work with pip 8.0 on 2015.8
- PR #30494: (isbm) Zypper: info_installed — 'errors' flag change to type 'boolean' @ 2016-01-21 22:55:05 UTC
  - 3259fde362 Merge pull request #30494 from isbm/isbm-zypper-nfoinst-bool-fix
  - 4d7659270e Place the boolean check
  - 58db1c5b16 Fix typo
  - 43254aa993 Update docstring according to the boolean flag

30.2. Previous Releases 2857
- a7d3e0d5ad Change 'errors' flag to boolean.
- **PR #30506:** (jacksontj) Properly remove newlines after reading the file @ 2016-01-21 22:53:57 UTC
  - 596892326d Merge pull request #30506 from jacksontj/2015.8
  - e1dea6f843 Properly remove newlines after reading the file
- **ISSUE #30444:** (dnd) Cloning linode server with salt-cloud fails trying to create disk config (refs: #30508)
- **ISSUE #30432:** (dnd) Cloning linode server with salt-cloud requires payment term (refs: #30508)
- **PR #30508:** (rallytime) Fix Linode driver cloning functionality @ 2016-01-21 22:53:36 UTC
  - 15c7aedd46 Merge pull request #30508 from rallytime/linode-clone-fixes
  - d26ed74bde Make sure the correct profile parameters are being checked when cloning
  - 1d7e229377 Fix Linode driver cloning functionality.
- **PR #30522:** (terminalmage) Update git.list worktree tests to reflect new return data @ 2016-01-21 22:34:20 UTC
  - 79528c59c3 Merge pull request #30522 from terminalmage/fix-worktree-tests
  - ea0ca70187 Add git.list_worktrees unit test
  - 393015edbb Remove git.list_worktrees tests
- **ISSUE #30465:** (alandrees) Nested imports with pyobjects (refs: #30483, #30482)
- **PR #30483:** (borgstrom) Pyobjects recursive import support (for 2015.8) @ 2016-01-21 15:55:27 UTC
  - 119f025073 Merge pull request #30483 from borgstrom/pyobjects_recursive-2015.8
  - 788b672e3a Fixup lint errors
  - e148ea2d52 Allow recursive salt:// imports
  - 6bbac64d3a Add test to prove that recursive imports are currently broken
- **PR #30491:** (jacksontj) Add multi-IP support to network state @ 2016-01-21 15:51:42 UTC
  - d8d19cf75d Merge pull request #30491 from jacksontj/2015.8
  - 82213555ca Normalize yaml spacing to 2 space
  - 3d146988d9 Add example of multiple addrs/ipv6addrs to docs
  - 91c8ab4e44 Add support for multiple IP addresses per interface to rh_ip
- **PR #30496:** (anlutro) Fix KeyError when adding ignored pillars @ 2016-01-21 15:51:03 UTC
  - 56332ca504 Merge pull request #30496 from alprs/fix-ignored_pillars_keyerror
  - bbbc783621 fix KeyError when adding ignored pillars
- **PR #30359:** (kingsquirrel152) Removes suspected copy/paste error for zmq_filtering functionality @ 2016-01-20 18:42:42 UTC
  - e425cb6d54 Merge pull request #30359 from distil/zmq_filtering_bug_fix
  - 44bb6ef15b Removes suspected copy/paste error.
- **PR #30448:** (cournape) Fix osx scripts location @ 2016-01-20 17:59:29 UTC
  - 13add7d142 Merge pull request #30448 from cournape/fix-osx-scripts-location
  - 3c27ab5310 BUG: fix osx .pkg script locations to match the .plist files.
  - ed9ab68d3b BUG: fix missing sudo when linking certify cert.
• ISSUE #22820: (VynceMontgomery) some docs missing again (cf #22720) (refs: #30457)
• PR #30457: (rallytime) Remove fsutils references from modules list @ 2016-01-20 16:43:50 UTC
  - 2b7d20cee7 Merge pull request #30457 from rallytime/fix-22820
  - 3288f104d Remove fsutils references from modules list
• ISSUE #30442: (ssplatt) salt-cloud linode query only lists private or public IP, not both (refs: #30453)
• PR #30453: (rallytime) Make sure private AND public IPs are listed for Linode driver @ 2016-01-20 16:41:51 UTC
  - e706b71871 Merge pull request #30453 from rallytime/fix-30442
  - a1f82f4fe Make sure private AND public IPs are listed for Linode driver
• ISSUE #29601: (seanjnkns) pillars not merging properly with 2015.8.3 (refs: #30062)
• PR #30458: (rallytime) Back-port #30062 to 2015.8 @ 2016-01-20 16:40:23 UTC
  - PR #30062: (seanjnkns) Remove recurse_list from pillar_source_merging_strategy and add pillar... (refs: #30609, #30458)
  - 73f372dc98 Merge pull request #30458 from rallytime/bp-30062
  - 96659655f Set (pillar_)merge_lists to default for PR #30062
  - 7ea4dfb478 Fix lint for PR30062
  - e44a30620b Remove recurse_list from pillar_source_merging_strategy and add pillar_merge_list (bool) instead
• PR #30468: (timcharper) make note of s3 role assumption in upcoming changelog @ 2016-01-20 16:28:04 UTC
  - c3fb4006b0 Merge pull request #30468 from timcharper/2015.8
  - 721c18c71b make note of s3 role assumption in upcoming changelog
• PR #30470: (whiteinge) Add example of the match_dict format to accept_dict wheel function @ 2016-01-20 16:26:16 UTC
  - c611549196 Merge pull request #30470 from whiteinge/match_dict
  - 5034e13f5d Add example of the match_dict format to accept_dict wheel function
• ISSUE #28017: (ThomasZhou) Using salt-cloud nova driver, raise error: SaltNova' object has no attribute '_discover_extensions' (refs: #30450)
• PR #30450: (gtmanfred) fix extension loading in novaclient @ 2016-01-19 21:16:32 UTC
  - d70e6b312a Merge pull request #30450 from gtmanfred/2015.8
  - 4aa6faaf48 fix extension loading in novaclient
• ISSUE #30150: (rapenne-s) file.line reset permissions to 600 (refs: #30212, #30168)
• PR #30212: (abednarik) Fix incorrect file permissions in file.line @ 2016-01-19 21:15:48 UTC
  - 0af5e16809 Merge pull request #30212 from abednarik/fix_file_line_permissions
  - dec15d1357 Fix incorrect file permissions in file.line
• ISSUE #29918: (WangWenchao) UnicodeDecodeError when saltutil.sync_modules for Windows salt-minion 2015.8.3 (refs: #29947)
• PR #29947: (jfindlay) fileclient: decode file list from master @ 2016-01-19 20:36:32 UTC
  - 3c12b451fe Merge pull request #29947 from jfindlay/remote_decode
Salt Documentation, Release 3002.5

- b9241fb6b0 state: use simple string formatting for messages
- f6162f16f8 fileclient: decode file list from master

• ISSUE #30203: (terminalmage) Update salt.modules.git.list_worktrees() to use 'git worktree list' for Git >= 2.7.0 (refs: #30363)

• PR #30363: (terminalmage) Use native "list" subcommand to list git worktrees @ 2016-01-19 20:35:41 UTC
  - 6e8b1e89a5 Merge pull request #30363 from terminalmage/issue30203
  - ee40f91166 Fix redefined variable
  - 5f95851987 Use native "list" subcommand to list git worktrees
  - 911105f27c Fix incorrect missing gitdir file detection

• PR #30445: (justinta) Boto uses False for is_default instead of None @ 2016-01-19 18:28:18 UTC
  - db99dec84f Merge pull request #30445 from jtand/boto_vpc_8
  - 00943ff1e6 Boto uses False for is_default instead of None

• PR #30406: (frioux) Add an example of how to use file.managed/check_cmd @ 2016-01-19 18:23:49 UTC
  - f9b0f3f038 Merge pull request #30406 from ZipRecruiter/check-cmd-example
  - 92e0d77a9a Add an example of how to use file.managed/check_cmd

• PR #30424: (isbm) Check if byte strings are properly encoded in UTF-8 @ 2016-01-19 17:52:25 UTC
  - 05ad3dce94 Merge pull request #30424 from isbm/isbm-zypper-utf-8-errors
  - a0f26f411 Clarify the error message
  - 12f8e93247 Update documentation accordingly.
  - 1d384f0b8d Add error handling to the RPM broken strings
  - cf0dad3a6c Rename keywords arguments variable to a default name.
  - 26aa801342 Check if byte strings are properly encoded in UTF-8

• ISSUE #30051: (joejulian) glusterfs.status fails with glusterfs 3.7 (refs: #30075)

• PR #30405: (justinta) Updated glusterfs.py for python2.6 compatibility. @ 2016-01-15 22:50:06 UTC
  - PR #30075: (joejulian) Convert glusterfs module to use xml (refs: #30405)
    - 1bace55e45 Merge pull request #30405 from jtand/glusterfs_py26
    - a332e06c4a Fixed lint error
    - 522bf990ef Updated the rest of glusterfs.py for python2.6 compatibility
    - 971ce58c66 updated list_peers to be python2.6 compatible

• PR #30396: (pass-by-value) Remove hardcoded val @ 2016-01-15 22:03:53 UTC
  - cb1c0958bd Merge pull request #30396 from pass-by-value/remove_hardcoded_val
  - dd90b325e7 Get vm info
  - 9430ad1465 Remove hardcoded value

• PR #30391: (justinta) Added else statements @ 2016-01-15 19:17:55 UTC
  - PR #30389: (justinta) Older versions of ipset don't support comments (refs: #30391)
  - 60737c970e Merge pull request #30391 from jand/ipset
– 345b056406 Fixed lint error
– c20f9b6a87 Added else statements

• ISSUE #3077: (webtrekker) [salt-cloud] Error actioning machines: 'ascii' codec can't encode character u'\xa0' in position 20 (refs: #30734)

• PR #30375: (rallytime) Wrap formatted log statements with six.u() in cloud/__init__.py @ 2016-01-15 18:41:55 UTC
  – PR #30374: (rallytime) Wrap formatted log statements with six.u() in the VMware module (refs: #30375)
  – 6ac1f6cf54 Merge pull request #30375 from rallytime/fix-cloud-log-formatting
  – 5e7b0c428 Wrap formatted log statements with six.u() in cloud/__init__.py

• PR #30384: (isbm) Bugfix: info_available does not work correctly on SLE 11 series @ 2016-01-15 18:31:57 UTC
  – c478148b60 Merge pull request #30384 from isbm/isbm-zypper-info-avaialble-fix
  – c7bc20e865 Split information, that is compatible with the Zypper's output on SLE11.

• PR #30376: (pritambaral) Fix FLO_DIR path in 2015.8 @ 2016-01-15 18:25:49 UTC
  – 9fe2df82bd Merge pull request #30376 from pritambaral/flo/flo-dir
  – 534879e79f Revert "Raet Salt broken when config moved to package directory”

• PR #30373: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-01-15 16:23:38 UTC
  – 4cc9422b8 Merge pull request #30373 from basepi/merge-forward-2015.8
  – 5b53bf2597 Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
    * 5a923b3aa9 Merge pull request #30364 from rallytime/fix-30341
      - 79bcf151cb Add TLS version imports and add linode driver documentation notices
    * f037fd9c27 Merge pull request #30184 from rallytime/bp-30166
      - fa6b1b3022 adding split_env call to cp.hash_file to pick up saltenv in file query parameter
    * 1d8413fd2f Merge pull request #30291 from thegoodduke/for_fix_ipset
      - 62d6ccf561 ipset: fix test=true & add comment for every entry
    * 92889db638 Merge pull request #30248 from jfindlay/2015.5
      - 741f7aba31 add 2015.5.9 release notes
    * 7a329d89d7 Merge pull request #30237 from jacobhammons/man-pages-prev
      - 2431e4c5e3 Updated man page and doc conf.py copyright year to 2016
      - fe3da1c174 Updated man pages and doc version for 2015.5.9
    * 2c0b725924 Merge pull request #30207 from rallytime/rabbitmq_states_doc_fix
      - 8d48c24182 Use correct spacing in rabbitmq state examples
    * b49cf910f4 Merge pull request #30191 from jacobhammons/banner-prev
      - c3390955b0 Updated doc site banners

30.2. Previous Releases 2861
• PR #30372: (jacobhammons) Updated man pages for 2015.8.4, updated copyright to 2016 @ 2016-01-14 23:18:40 UTC
  - a9ed19a4 Merge pull request #30372 from jacobhammons/man-pages
  - 891d4fcha Updated man pages for 2015.8.4, updated copyright to 2016
• PR #30370: (rallytime) Remove incomplete function @ 2016-01-14 22:49:45 UTC
  - e77585de17 Merge pull request #30370 from rallytime/remove-incomplete-func
  - e220f6125 Remove incomplete function
• ISSUE #23215: (lichtamberg) Rbenv: gem.installed not using correct ruby version if it's not default on 2015.02 (refs: #28702)
• PR #30366: (rallytime) Back-port #28702 to 2015.8 @ 2016-01-14 21:10:03 UTC
  - PR #28702: (dnd) Pass RBENV_VERSION in env dict, and protect shlex.split (refs: #30366)
  - eb1ecd9732 Merge pull request #30366 from rallytime/bp-28702
  - 4f2274a275 Remove extra line
  - 048b13cf73 Pass RBENV_VERSION in env dict, and protect shlex.split
• PR #30361: (cro) Flip the sense of the test for proxymodule imports, add more fns for esxi proxy @ 2016-01-14 20:54:08 UTC
  - 40594ec0b Merge pull request #30361 from cro/esxi-proxy2
  - 8f7490ca98 Missed return statement.
  - 389ede9e3e Lint
  - 9db34d6ffe Lint
  - b5c7a46f7a Lint
  - 1a3bf2626 Don’t use short variables
  - b80577182a Remove stub functions.
  - 58f7cf3285 Don’t use single character variables.
  - e712664bcf Better comment.
  - 9e9a37d0d4 Indentation.
  - 6c9bf76e19 Revert earlier vmware change for ssl cert checking.
  - db8a281ab8 Flip the sense of the test for items (modules, etc) loaded by the proxy. Now load everything a regular minion would load, and only check to make sure __proxyenabled__ is present for proxymodules and grains
  - 00c4e6ec2 Need a list
  - 0da7a6d6d1 Recreate the pr
• PR #30267: (isbm) Fix RPM issues with the date/time and add package attributes filtering @ 2016-01-14 18:00:01 UTC
  - f4118be6e4 Merge pull request #30267 from isbm/isbm-zypper-isotimefix
  - 18281e7e0b Add "*time_t" as a separate attributes
  - 410515cfd Add *time_t to the docs
  - 78e16a7b00 Construct RPM query dynamically
- Update documentation for the valid package attributes
- Use renamed variable (filter_attrs to attr)
- Remove unnecessary check for the "name" key
- Remove key transformations
- Add zone to the ISO from unix time
- Fix lint: unused import
- Update the documentation for the Zypper module
- Update documentation for lowpkg
- Replace "*_date_iso" with "*_date" and use Unix time as "*_date_time_t"
- Add epoch (note: this is empty on SUSE systems)
- Clarify description
- Fix syntax for the documentation in zypper module
- Fix the documentation syntax
- Update documentation
- Return build date in Unix ticks
- Add package architecture attribute
- Incorporate lowpkg.info into info_installed
- Fix ISO and Unix time of the package for RPM systems on C locale.

- ISSUE #30330: (JensRantil) salt.state.file.absent doesn't document recursiveness (refs: #30360)
- PR #30360: (jfindlay) file.remove, file.absent: mention recursive dir removal @ 2016-01-14 17:30:26 UTC
  - Merge pull request #30360 from jfindlay/remove_doc
  - Fix the documentation syntax
- ISSUE #26845: (maio) Postgres module (user_exists) doesn't work with PostgreSQL 9.5 (refs: #30221)
- PR #30221: (mbarrien) No rolcatupdate for user_exist in Postgres>=9.5 @ 2016-01-14 16:52:49 UTC
  - Merge pull request #30221 from mbarrien/postgres-9.5
- PR #30358: (terminalmage) Add libgit2 version to versions-report @ 2016-01-14 16:37:28 UTC
  - Merge pull request #30358 from terminalmage/libgit2-version
- PR #30346: (pass-by-value) Prevent orphaned volumes @ 2016-01-14 16:37:08 UTC
  - Merge pull request #30346 from pass-by-value/aws_vols_attach
- PR #30349: (rallytime) Back-port #30347 to 2015.8 @ 2016-01-14 16:26:37 UTC
- PR #30347: (rallytime) Merge #30231 with updates to dependency documentation (refs: #30349)
- PR #30231: (nmadhok) Fix issue where pyVmomi 6.0.0 raises SSL Error for systems using Python2.7+ (refs: #30347)
- bccbf83b5b Merge pull request #30349 from rallytime/bp-30347
- df70a6da3 Merge #30231 with updates to dependency documentation
- a7c2ad5505 Fix issue where pyVmomi 6.0.0 raises SSL Error for systems using Python2.7+

- PR #30354: (anlutro) Make sure all ignore_missing SLSes are catched @ 2016-01-14 16:24:19 UTC
  - PR #19429: (rylan) Add new ignore_missing option to pillar top (refs: #30354)
  - 7ee61f0d62 Merge pull request #30354 from alprs/fix-pillar_ignore_missing
  - 2f662b4c8d make sure all ignore_missing slses are catched
- PR #30356: (nmadhok) Adding code author @ 2016-01-14 16:23:08 UTC
  - 4bdade601 Merge pull request #30356 from nmadhok/patch-1
  - 58f4e5f6c7 Adding code author

- PR #30340: (justinta) Updated seed_test.py for changes made to seed module @ 2016-01-13 22:50:34 UTC
  - d5b8776355 Merge pull request #30340 from jand/seed_test_fix
  - ee764ee952 Updated seed_test.py for changes made to seed module

- ISSUE #26478: (rasathus) nested upstart services are not supported (refs: #26511)

- ISSUE #28339: (boboli) salt-call state.highstate fails with ZMQError when minion has no id set
  in /etc/salt/minion (refs: #28423, #28431)

- PR #30343: (rallytime) Fix 2015.8 from incomplete back-port @ 2016-01-13 21:56:26 UTC
  - PR #30187: (rallytime) Back-port #27606 to 2015.8 (refs: #30343)
  - PR #28431: (plastikos) Use a broader test for unset “id” (refs: #30343)
  - PR #28423: (cachedout) Fix issue with empty str as default minion id (refs: #28431)
  - PR #28189: (plastikos) Always get default option settings from salt.config (refs: #30343, #28431)
  - PR #28131: (cachedout) Set a fallback HWM (refs: #30343)
  - PR #27606: (plastikos) RFC: Add additional ZMQ tuning parameters necessary for 1k+ minions per master [WIP] (refs: #30343, #30187)
    - 6079a96e6e Merge pull request #30343 from rallytime/fix-2015.8
    - 5eef9d5067 Use a broader test for unset “id”
    - 460a3c98cc Additional corrections to use option defaults directly from salt.config
    - 4e53ef0bfe6 Always get default option settings from salt.config
    - 94ee6f88af Set a fallback HWM
• **PR #30342**: (eliasp) Correct whitespace placement in error message @ 2016-01-13 21:32:26 UTC
  - 7276d808ff Merge pull request #30342 from eliasp/2015.8-log-message-format
  - 8e37e36ac7 Correct whitespace placement in error message
• **ISSUE #30250**: (mbarrien) npm.bootstrap state runs even when test=True (refs: #30257)
• **PR #30308**: (rallytime) Back-port #30257 to 2015.8 @ 2016-01-13 19:20:13 UTC
  - PR #30257: (abednarik) Add test in npm state. (refs: #30308)
  - 10b5728f84 Merge pull request #30257 from rallytime/bp-30257
  - 0b0d73756e Fix typos in npm module.
  - deeeb71dda Add test in npm state.
• **PR #30187**: (rallytime) Back-port #27606 to 2015.8 (refs: #30343) @ 2016-01-13 19:03:11 UTC
  - PR #27606: (plastikos) RFC: Add additional ZMQ tuning parameters necessary for 1k+ minions per master [WIP] (refs: #30343, #30187)
  - afa61c03db Merge pull request #30187 from rallytime/bp-27606
  - 8ef6d6c6fd Add additional ZMQ tuning parameters necessary for 1,000+ minions per server. Start collecting tuning parameters together in the master config file.
• **PR #30223**: (serge-p) adding support for DragonFly BSD @ 2016-01-13 18:24:29 UTC
  - 7e89a460e4 Merge pull request #30223 from serge-p/patch-11
  - ec798abcd Update pkgng.py
  - 45206dfe3d adding support for DragonFly BSD
• **ISSUE #28396**: (ymote) salt-cloud parallel provisioning (-P option) failed on 2015.8.1 (refs: #30238)
• **ISSUE #23824**: (kiorky) salt.crypt broken in develop (refs: #23825)
• **PR #30238**: (rallytime) Reinit crypto before calling RSA.generate when generating keys. @ 2016-01-13 18:22:11 UTC
  - PR #23825: (kiorky) Fix crypto (refs: #30238)
  - 5a8da62008 Merge pull request #30238 from rallytime/fx-28396
  - 41d9df45bb Reinit crypto before calling RSA.generate when generating keys.
• **ISSUE #24237**: (Grokzen) Minion schedule return data missing some fields (refs: #30246)
• **PR #30246**: (dmacvicar) Add missing return data to scheduled jobs (#24237) @ 2016-01-13 17:51:49 UTC
  - 15707e0ac8 Merge pull request #30246 from dmacvicar/dmacvicar-2015.8-24237
  - c462139dbb lint: E8713(test-for-membership-should-be-not-in)
  - 5a1b2ca486 include the 'success' field in scheduled jobs return data (part of #24237)
  - f72a4ca42d add retcode to scheduled jobs return data (part of #24237)
• **PR #30292**: (thegoodduke) ipset: fix test=true & add comment for every entry @ 2016-01-13 17:49:16 UTC
  - PR #30170: (thegoodduke) ipset: fix comment and test (refs: #30291, #30292)
  - 8706720148 Merge pull request #30292 from thegoodduke/fix_ipset
  - 49d70bff16 ipset: fix test=true & add comment for every entry
• ISSUE #30240: (snw1968) firewalld inconsistent permanent option used for services but not ports - other options required (refs: #30275)

• PR #30275: (abednarik) Add permanent argument in firewalld. @ 2016-01-13 17:44:43 UTC
  - ea607675f5 Merge pull request #30275 from abednarik/fix_firewalld_ports_permanent
  - e3d4bf51da Add permanent argument in firewalld.

• PR #30328: (cachedout) Fix file test @ 2016-01-13 17:42:22 UTC
  - f02db44757 Merge pull request #30328 from cachedout/fix_file_test
  - dcfba51556 Lint
  - b9921128af Kill pointless tests
  - 63c157d0a3 Fix test_managed

• PR #30310: (pass-by-value) Empty bucket fix @ 2016-01-13 17:30:45 UTC
  - edd94aea2c Merge pull request #30310 from pass-by-value/empty_bucket_fix
  - aef5a8998c Add fix for else code path
  - 9398e44945 Check and report empty S3 bucket

• PR #30211: (techhat) Execute choot on the correct path @ 2016-01-13 16:53:40 UTC
  - f23f0f30d4 Merge pull request #30211 from techhat/tmppath
  - 11ac2ff0bf Revert "We're putting the keys directly in place; -c isn't used"
  - e75b48f5ff We're putting the keys directly in place; -c isn't used
  - 5d7a0f6d81 Execute choot on the correct path

• ISSUE #30286: (tkunicki) salt-cloud ec2 spot requests fail with userdata_file in config or profile (refs: #30304)

• PR #30309: (rallytime) Back-port #30304 to 2015.8 @ 2016-01-13 16:41:53 UTC
  - PR #30304: (tkunicki) add spot_prefix to UserData param (refs: #30309)
  - 5154c71127 Merge pull request #30309 from rallytime/bp-30304
  - 4a8cc87b47 add spot_prefix to UserData param

• PR #30278: (nmadhok) If datacenter is specified in the config, then look for managed objects under it @ 2016-01-13 15:29:36 UTC
  - 1624d6cebd Merge pull request #30278 from nmadhok/2015.8-samename-objects-fix
  - b0e86afa00 get_mor_by_property needs container_ref to be a positional parameter
  - 56dfc63f91 If datacenter is specified, start all searches under datacenter
  - fc777b738e If datacenter is specified then look under it instead of looking under inventory root folder

• PR #30305: (jacobhammons) Changed examples to use the "example.com" domain instead of "mycompan... @ 2016-01-12 20:42:10 UTC
  - fc9304f7f8 Merge pull request #30305 from jacobhammons/example-domain
  - 53d17f1f85 Changed examples to use the "example.com" domain instead of "mycompany.com" or "company.com"

• PR #30249: (mpreziuso) Fixes performance and timeout issues on win_pkg.install @ 2016-01-12 20:14:54 UTC
  - 3bd02a898f Merge pull request #30249 from mpreziuso/patch-2
- d6e6e10534 Fixes lint issues
- 3251424838 Fixes performance and timeout issues on win_pkg.install

- **PR #30217**: (pass-by-value) Make sure cloud actions can be called via salt run @ 2016-01-12 20:11:13 UTC
  - 461a741e14 Merge pull request #30217 from pass-by-value/cloud_actions_dispatch
  - 1f68ce05bc Fix pylint error
  - d5b1b60b99 Add CLI Example
  - 526449db Make sure cloud actions can be called via salt run

- **ISSUE #9569**: (clearclaw) How can a binary file, such as a license key, be distributed via Pillar? (refs: #30268)

- **PR #30268**: (terminalmage) Optimize file_tree ext_pillar and update file.managed to allow for binary contents @ 2016-01-12 20:09:19 UTC
  - 4a6b5f3f39 Merge pull request #30268 from terminalmage/issue9569
  - 724b2f36ce Add file_tree/file.managed/contents_pillar example to FAQ
  - 854c7d9978 Remove old FAQ item referencing gitfs bug in 0.16.x
  - e9a6d70f9 salt.states.file.managed: Allow for binary contents
  - 1ba44bf619 salt.pillar.file_tree: Optimizations, deprecate raw_data
  - 650cc0af5c salt.modules.file: Improve docstrings

- **ISSUE #29078**: (Reiner030) boto_secgroup didn't work as expected in Debian Jessie (refs: #30155)

- **PR #30245**: (rallytime) Boto secgroup/iam_role: Add note stating us-east-1 is default region @ 2016-01-12 20:04:31 UTC
  - PR #30155: (rallytime) Update boto_secgroup and boto_iam_role docs to only use region OR profile (refs: #30245)
  - dbe7bdc9a Merge pull request #30245 from rallytime/botosecgroup-docs
  - 406a138f76 Boto secgroup/iam_role: Add note stating us-east-1 is default region

- **PR #30299**: (rallytime) ESXi Proxy minions states are located at salt.states.esxi, not vsphere. @ 2016-01-12 20:03:31 UTC
  - 6b183778f1 Merge pull request #30299 from rallytime/esxi-proxy-doc-fix
  - db68fc48a8 Fix CLI Example syntax
  - 1cb9f29798 ESXi Proxy minions states are located at salt.states.esxi, not vsphere.

- **PR #30202**: (opdude) Fixed the periodic call to beacons @ 2016-01-12 19:58:44 UTC
  - 903289d3fb Merge pull request #30202 from Unity-Technologies/hotfix/beacon_periodic
  - ea7a86e7d Fixed the periodic call to beacons

- **PR #30303**: (jacobhammons) Changed notes to indicate that functions are matched using regular ex... @ 2016-01-12 19:15:16 UTC
  - 48d2bd9e78 Merge pull request #30303 from jacobhammons/pcre-match
  - e5079ab4c9 Changed notes to indicate that functions are matched using regular expressions instead of minions

- **ISSUE #29864**: (snarfmonkey) Upgrade from 2015.8.1 to 2015.8.3 via apt for Ubuntu 14.04 causes Dulwich-backed gitfs to stop working (refs: #30284)
• **PR #30284**: (terminalmage) `salt.utils.gitfs`: Fix Dulwich env detection and submodule handling @ 2016-01-12 19:11:36 UTC
  - 675ac4b43f Merge pull request #30284 from terminalmage/issue29684
  - a746014f7e salt.utils.gitfs: Fix Dulwich env detection and submodule handling

• **PR #30280**: (jfindlay) add state mocking to release notes @ 2016-01-12 19:10:40 UTC
  - 8f6e822d7 Merge pull request #30280 from jfindlay/state_mock_doc
  - 22c1129f02 modules.state.sls,highstate: mock versionadded
  - 934de30939 add state mock to 2015.8.4 release notes

• **ISSUE #30117**: (MadsRC) Service beacons fails with Stacktraces (refs: #30121)

• **PR #30273**: (rallytime) Back-port #30121 to 2015.8 @ 2016-01-12 19:10:16 UTC
  - PR #30121: (MadsRC) Patch for issue #30117 (refs: #30273)
  - e9ade42d10 Merge pull request #30273 from rallytime/bp-30121
  - c8ec0f2105 I fail at linting... Fixed my uppercase/lowercase problem
  - 0877b33026 Fixed some linting issues
  - 8ec36497a1 Added note about systemd and uncleanshutdown. Also fixed line length of comments to max 80 characters as per PEP0008
  - a50428d02c On an unclean shutdown, if oncleanshutdown is given a path, an key:value of shutdown:unclean is added to the returned data. The documentation states that the key should be 'uncleanshutdown' and that the value should either be True or False. This is fixed in the code
  - 51b57f1820 Fixed issue number #30117 - When no parameters are given to a service, the service object is of type None and thus isn't iterable. This is contrary to the documentation which states that there are default values. Default values added as False

• **PR #30301**: (cachedout) Accept whatever comes into highstate mock for state tests @ 2016-01-12 18:33:14 UTC
  - 3a5a84a790 Merge pull request #30301 from cachedout/fix_state_tests
  - 2c62b4d4b1 Accept whatever comes into highstate mock for state tests

• **ISSUE #28586**: (zmalone) file.append does not differentiate between tabs and spaces (refs: #30156)

• **PR #30282**: (cachedout) Fix file.append logic @ 2016-01-12 18:27:30 UTC
  - PR #30156: (abednarik) Add option in file.append to ignore_whitespace. (refs: #30282)
  - 8438d19815 Merge pull request #30282 from cachedout/fix_30156
  - 36f33ff15e Lint
  - 99dd11dec2 Remove debugging
  - 35ef5b2c54 Fix logic error in file.append

• **PR #30289**: (cro) Fix problems with targeting proxies by grains @ 2016-01-12 18:16:57 UTC
  - 530c9ec66c Merge pull request #30289 from cro/proxy_grains_fix
  - 8362d76440 Add comments.
  - 4e50962642 Merge branch 'proxy_grains_fix' of github.com:cro/salt into proxy_grains_fix
    * 61bb6a9a14 Lint.
    * 7c35333509 Force a grains sync after we load the proxy's grains.
• 2855ba7da5 Disallow non-proxyenabled modules and grains
  - 8fd8f3beb7 Lint.
  - 144f8a02e5 Force a grains sync after we load the proxy's grains.
  - 5ecf85017b Disallow non-proxyenabled modules and grains

• PR #30293: (cro) Ensure we don't log stuff we shouldn't @ 2016-01-12 18:04:25 UTC
  - 75b83453cf Merge pull request #30293 from cro/proxy_log_cleanup
  - b358fe370c Merge remote-tracking branch 'origin/proxy_log_cleanup' into proxy_log_cleanup
    • c9a5680427 Add unused 'output_loglevel' kwarg. This is here for when we alias cmd.run_all directly to _run_all_quiet in certain chicken-and-egg situations where modules need to work both before and after the __salt__ dictionary is populated (cf dracr.py).
    • 8c46de12e4 Ensure we don't log stuff we shouldn't.
  - 3267d92216 Add unused 'output_loglevel' kwarg. This is here for when we alias cmd.run_all directly to _run_all_quiet in certain chicken-and-egg situations where modules need to work both before and after the __salt__ dictionary is populated (cf dracr.py).
  - 6a86bd66da Ensure we don't log stuff we shouldn't.

• PR #30279: (cachedout) Allow modules to be packed into boto utils @ 2016-01-12 16:53:54 UTC
  - 46681658e0 Merge pull request #30279 from cachedout/boto_pack
  - 11d27ba694 Mock config module in utils test
  - 62a1812987 Lint
  - cf44036dd Remove unused import
  - 3655ea0ad Allow modules to be packed into boto utils

• ISSUE #29951: (Reiner030) boto_ec2 params needed (refs: #30186)

• PR #30186: (rallytime) Update CLI Examples in boto_ec2 module to reflect correct arg/kwarg positioning @ 2016-01-08 19:00:45 UTC
  - 54b9641330 Merge pull request #30186 from rallytime/fix-29951
  - a943b505cc Update CLI Examples in boto_ec2 module to reflect correct arg/kwarg positioning

• ISSUE #28586: (zmalone) file.append does not differentiate between tabs and spaces (refs: #30156)

• PR #30156: (abednarik) Add option in file.append to ignore_whitespace. (refs: #3082) @ 2016-01-08 16:07:23 UTC
  - 1256fd11e1 Merge pull request #30156 from abednarik/ignore_whitespace_file_append
  - af68086e5c Add option in file.append to ignore_whitespace.

• PR #30189: (rallytime) Back-port #30185 to 2015.8 @ 2016-01-07 23:32:05 UTC
  - PR #30185: (cachedout) Fix #30118 (refs: #30189)
  - PR #30118: (thatch45) State mock (refs: #30185, #30189)
  - ad7522c98d Merge pull request #30189 from rallytime/bp-30185
  - 70681bf03b Fix for mock state PR #30118
  - f9480f6d8 change arg to mocked to try test suite collision fix
  - 2fbdcda703 fix some typos

30.2. Previous Releases
- 6f757b8c81 Add Mock to state.sls
- fb0cbd185e fix issue where the name may be in 2 places
- 5f0326e521 Start on the state mock system

- **ISSUE #9319**: (gravyboat) Update Reactor docs with an example using salt-cloud from the commandline. (refs: #30215)
- **ISSUE #8146**: (basepi) Make implications of extra accepted keys on timeouts more obvious (refs: #30215)
- **ISSUE #6853**: (Psycojoker) Salt formulas should be way more visible in the documentation (refs: #30215)
- **ISSUE #4381**: (mlister2006) peer_run: glob, pcre matching. Better docs (refs: #30215)
- **ISSUE #2229**: (alekibango) how to debug zmq problem with hanging salt communication? (refs: #30215)
- **ISSUE #15042**: (cvrebert) percent signs not escaped in cron commands (refs: #30215)
- **ISSUE #14946**: (ryan-lane) reload_modules not documented in global state arguments documentation (refs: #30215)
- **ISSUE #13777**: (gravyboat) Update top module docs with more concise examples (refs: #30215)
- **ISSUE #13036**: (tminn) salstack tomcat module (refs: #30215)
- **PR #30215**: (jacobhammons) Assorted doc bug fixes @ 2016-01-07 21:53:27 UTC
  - 8f307045a Merge pull request #30215 from jacobhammons/doc-issues
  - 44ce704206 Updated zmq_monitor docs
  - 0d2111d397 Assorted doc bug fixes
- **ISSUE #30204**: (anlutro) salt can't find local cache return file (refs: #30206)
- **PR #30206**: (cachedout) Revert "Fix incorrect file permissions in file.line" @ 2016-01-07 17:55:48 UTC
  - 2000800915 Merge pull request #30206 from cachedout/revert_30168
  - ee786293e7 Revert "Fix incorrect file permissions in file.line"
- **PR #30190**: (jacobhammons) Updated doc site banners @ 2016-01-06 22:37:34 UTC
  - 5632ccb796 Merge pull request #30190 from jacobhammons/banners
  - 266023baf1 Updated doc site banners
- **ISSUE #30171**: (jamusj) Python 2.7 dependency in x509.py (refs: #30180)
- **PR #30180**: (jfindlay) modules.x509._dec2hex: add fmt index for 2.6 compat @ 2016-01-06 19:48:50 UTC
  - 9a83247992 Merge pull request #30180 from jfindlay/2.7x509
  - 907469d04a modules.x509._dec2hex: add fmt index for 2.6 compat
- **PR #30179**: (terminalmage) Backport #26962 to 2015.8 branch @ 2016-01-06 19:48:30 UTC
  - PR #26962: (ctrlrsf) Add --state-verbose command line option to salt cmd (refs: #30179)
  - 6516d5b5d0 Merge pull request #30179 from terminalmage/bp-26962
  - 08f2021f52 Fix pylint warnings: unnecessary parens after if keyword
  - a2ec721661 Add --state-verbose command line option to salt cmd
- **ISSUE #29654**: (schaarsc) ssh_auth should report missing source (refs: #29693)
- **PR #29693**: (abednarik) Handle missing source file in ssh_auth. @ 2016-01-06 17:13:06 UTC
  - 27df7276bc Merge pull request #29693 from abednarik/handle_missing_source_in_ssh_auth
fc02e3cf4 Handle missing source file in ssh_auth.

- **ISSUE #29078**: (Reiner030) boto_secgroup didn't work as expected in Debian Jessie (refs: #30155)

- **PR #30155**: (rallytime) Update boto_secgroup and boto_iam_role docs to only use region OR profile (refs: #30245) @ 2016-01-06 17:09:50 UTC
  
  - f9863d9f Merge pull request #30155 from rallytime/boto-secgroup-docfix
  
  - f0381a95f Update boto_secgroup and boto_iam_role docs to only use region OR profile.

- **ISSUE #29905**: (Reiner030) pillar referencing for boto profiles seems not completely working right / docu missing (refs: #30158)

- **PR #30158**: (rallytime) Move_option(value) calls to __salt__['config.option'] in boto utils @ 2016-01-06 16:35:59 UTC
  
  - e368e2e73 Merge pull request #30158 from rallytime/fix-29905
  
  - 3321c5d408 Move _option(value) calls to __salt__['config.option'] in boto utils

- **ISSUE #29770**: (Ch3LL) disk.usage does not work on AIX (refs: #30160)

- **PR #30160**: (dmurphy18) Fix parsing disk usage for line with no number and AIX values in Kilos @ 2016-01-06 16:34:45 UTC
  
  - ec009a6812 Merge pull request #30160 from saltstack/aix_dskusage
  
  - 8450df0483 Fix parsing disk usage for line with no number and AIX values in Kilos

- **ISSUE #29919**: (abcfy2) State grains.append cannot append to a non-exist grain name. (refs: #30162)

- **PR #30162**: (rallytime) Update list_present and append grains state function docs to be more clear. @ 2016-01-06 16:33:25 UTC
  
  - f808ffbbbd Merge pull request #30162 from rallytime/fix-29919
  
  - 9bbd129c60 Update list_present and append grains state function docs to be more clear

- **ISSUE #28923**: (aabognah) passing argument with ’=no’ to file.line (refs: #30163)

- **PR #30163**: (rallytime) Add warning about using ”=” in file.line function @ 2016-01-06 16:32:39 UTC
  
  - 83245930a6 Merge pull request #30163 from rallytime/fix-28923
  
  - 0e4f91fca2 Add warning about using ”=” in file.line function

- **PR #30164**: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-01-06 16:28:59 UTC
  
  - 106efd258a Merge pull request #30164 from basepi/merge-forward-2015.8
  
  - d73a7ddc4d Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
    
    * 9363d6f5b6 Merge pull request #30125 from abednarik/update_user_home
      
      - 56544a77f6 Update user home event when createhome is set to False
    
    * 1a5d585d91 Merge pull request #30127 from jsutton/clarify-documentation-for-random_master
      
      - 01db385ef Adding random_master to reference and updating master_shuffle. Adding master_shuffle to the minion example config file as it is needed for multi-master PKI.
    
    * 28b1bbbe77 Merge pull request #30110 from markckimball/fix-verify_ssl-in-joyent-cloud
      
      - e1c08cb269 Fixed flag sent to salt.utils.http in order for verify_ssl to work appropriately.
    
    * 040412b0b1 Merge pull request #30093 from zmalone/pillar-notes
Noting that file_roots and "state tree" should both be avoided, because in some environments, the actual states show up another level down. Adding notes about why this is undesirable.

- 25edefc93a Merge pull request #30097 from cachedout/note_on_password_process_list
  - 58aec884ef Note concern about cleartext password in docs for shadow.gen_password
- 6b1c3a6bf2 Merge pull request #30089 from mpreziuso/patch-1
  - 5053add4d0 Fixes terminology and adds more accurate details about the algorithms
- 200d09385d Merge pull request #30086 from cachedout/issue_29921
  - 8c29e2dd6a Document that gitfs needs recent libs
- 40441bf57 Merge pull request #30070 from cachedout/issue_27835
  - 60431e342a Add documentation on debugging salt-ssh

**ISSUE #30150**: (rapenne-s) file.line reset permissions to 600 (refs: #30212, #30168)

**PR #30168**: (abednarik) Fix incorrect file permissions in file.line @ 2016-01-06 16:25:08 UTC
- e5d87a02b9 Merge pull request #30168 from abednarik/2015.8
- 79daa25a15 Fix incorrect file permissions in file.line

**PR #30154**: (Oro) Fix file serialize on windows @ 2016-01-05 18:08:40 UTC
- bed38d1a65 Merge pull request #30154 from Oro/fixed-file-serialize-windows
- 071a6f7f8a Fix file serialize on windows

**PR #30144**: (rallytime) Added generic ESXCLI command ability to ESXi Proxy Minion @ 2016-01-05 16:23:38 UTC
- 7d51d8bb46 Merge pull request #30144 from rallytime/vsphere-esxcli-cmd
- 2f9ec5db96 Added generic ESXCLI command ability to ESXi Proxy Minion

**ISSUE #29994**: (adithep) dockerng.push should not auto tag :latest (refs: #30142)

**ISSUE #29993**: (adithep) Dockerng as a whole is not compatible with v2 registries. (refs: #30142)

**PR #30142**: (terminalmage) Fix dockerng.push, and allow for multiple images @ 2016-01-04 22:53:50 UTC
- 1a21b3d46b Merge pull request #30142 from terminalmage/issue29994
- 66698986e4 Fix dockerng.push, and allow for multiple images

**ISSUE #30051**: (joejulian) glusterfs.status fails with glusterfs 3.7 (refs: #30075)

**PR #30075**: (joejulian) Convert glusterfs module to use xml (refs: #30405) @ 2016-01-04 20:33:58 UTC
- 5419699bd2 Merge pull request #30075 from iodatacenters/2015.8_gluster_usexml
- 01a8e7ee10 Convert glusterfs module to use xml

**PR #30129**: (optix2000) Clean up _uptodate() in git state @ 2016-01-04 20:23:18 UTC
- a6d94358ed Merge pull request #30129 from optix2000/2015.8
- c68ea6332a No point to recast comments to a string. _uptodate() should only accept strings for comments.
- 6c5bac4909 Properly fix concat list issue in git state.

**ISSUE #28814**: (peter-slovak) The "virtual" grain detection with virt-what on LXC incorrectly yields "physical" (refs: #29589)
• **PR #30139**: (rallytime) Back-port #29589 to 2015.8 @ 2016-01-04 20:22:47 UTC
  - **PR #29589**: (abednarik) Added lxc in virt-what list. (refs: #30139)
  - 68fda0f5de Merge pull request #30139 from rallytime/bp-29589
  - 2e73990f2f Added lxc in virt-what list.
• **ISSUE #29833**: (iMilnb) salt minion won’t start: Non valid IP address match on BSD alias format (refs: #30124)
• **PR #30124**: (abednarik) Update regex to detect ip alias in OpenBSD. @ 2016-01-04 19:48:28 UTC
  - dd8d3e6f6b Merge pull request #30124 from abednarik/fix_openbsd_ip_alias
  - 595a12977d Update regex to detect ip alias in OpenBSD.
• **PR #30133**: (stanislavb) Fix typo in gpgkey URL @ 2016-01-04 19:29:57 UTC
  - c3014be84b Merge pull request #30133 from stanislavb/fix-gpg-key-url-typo
  - d81f6f7206 Fix typo in gpgkey URL
• **ISSUE #29912**: (rterbush) s3 ext_pillar fails if key and keyid are not provided (refs: #30126)
• **PR #30126**: (stanislavb) Log S3 API error message @ 2016-01-04 19:22:39 UTC
  - c06671a259 Merge pull request #30126 from stanislavb/2015.8
  - 8c4a101c8f Log S3 API error message
• **PR #30128**: (oeuftete) Log retryable transport errors as warnings @ 2016-01-04 19:15:31 UTC
  - aec21ea65 Merge pull request #30128 from oeuftete/fileclient-attempt-error-to-warning
  - a5d99b13e1 Log retryable transport errors as warnings
• **ISSUE #28171**: (srkunze) cron.rm cannot remove @special entries (refs: #30096)
• **PR #30096**: (cachedout) Add rm_special to crontab module @ 2016-01-01 00:56:08 UTC
  - 941bc9d07 Merge pull request #30096 from cachedout/issue_28171
  - 259a0582ac Add docs
  - ad942820e Add rm_special to crontab module
• **PR #30106**: (techhat) Ensure last dir @ 2016-01-01 00:52:54 UTC
  - cb0f80831f Merge pull request #30106 from techhat/seeddirs
  - 01d1a49937 Ensure last dir
• **PR #30101**: (gtmanfred) fix bug where nova driver exits with no adminPass @ 2015-12-31 13:45:16 UTC
  - 6bc968db9a Merge pull request #30101 from gtmanfred/2015.8
  - 1b98f7a238 fix bug where nova driver exits with no adminPass
• **PR #30090**: (techhat) Add argument to isdir() @ 2015-12-30 22:41:02 UTC
  - 3652db9e7c Merge pull request #30090 from techhat/seeddirs
  - f7c7d9c7c2 Add lstrip
  - c70257163b Add argument to isdir()
• **PR #30094**: (rallytime) Fix doc formatting for cloud.create example in module.py state @ 2015-12-30 22:40:24 UTC
  - a12bda4b30 Merge pull request #30094 from rallytime/module_state_doc_fix
- 8fbee322b9 Fix doc formatting for cloud.create example in module.py state

- **PR #30095**: (rallytime) Add the list_nodes_select function to linode driver @ 2015-12-30 21:06:58 UTC
  - d7f46b5438 Merge pull request #30095 from rallytime/select_query_linode
  - 4731d9442e Add the list_nodes_select function to linode driver

- **ISSUE #28763**: (cybacolt) grain saltversioninfo not returning values by index (refs: #30082)

- **PR #30082**: (abednarik) Fixed saltversioninfo grain return @ 2015-12-30 18:23:17 UTC
  - dce64e0868 Merge pull request #30082 from abednarik/fix_grain_saltversion_index
  - 882e9ac9ed Fixed saltversioninfo grain return.

- **PR #30084**: (rallytime) Back-port #29987 to 2015.8 @ 2015-12-30 18:19:09 UTC
  - PR #29987: (pass-by-value) Make sure output file works for salt cloud (refs: #30084)
  - 5602b8833e Merge pull request #30084 from rallytime/bp-29987
  - 16e1d90e9 Merge pull request #29987 from rallytime/fixed_saltversioninfo grain return.

- **PR #30071**: (rallytime) Merge branch '2015.5' into '2015.8' @ 2015-12-29 23:18:00 UTC
  - PR #30071: (pass-by-value) Make sure output file works for salt cloud (refs: #30084)
  - 394d7548c5 Additional spelling fixes for boto_vpc module
  - f7e58a241c Merge branch '2015.5' into '2015.8'

- **PR #30059**: (mprezioso) Add fix to mpreziuso/patch-1
  - 1cb1c2da07 Fixes wrong function scope

- **PR #30025**: (jtand) Add fix to boto_tests
  - e706642152 Skipping some Boto tests until resolved moto issue

- **PR #29949**: (aletourneau) Add fix to aletourneau/2015.5
  - cf855fe262 Fixed trailing white spaces
  - 64801e002 Fixed version
  - 041d9346c4 Enhanced netscaler docstring

- **PR #29941**: (cachedout) Add fix to_cachedout/boto_spelling
  - b11bf07b8 Fix spelling error in boto_vpc

- **PR #29908**: (cachedout) Add fix to cachedout/issue_29880
  - 4cd77b4118 Allow kwargs to be passed to pacman provide for update func

- **PR #29909**: (abednarik) Add fix to abednarik/freebsd_pkgng_non_interactive_fix
  - 8ac213001a FreeBSD pkgng fix for non-interactive install.

- **PR #30067**: (ryan-lane) Pass in kwargs to boto_secgROUP.convert_to_group_ids explicitly @ 2015-12-29 23:04:33 UTC
  - 1bf9853808 Merge pull request #30067 from lyft/boto-elb-stable-fix
  - ae22edeb1b4 Pass in kwargs to boto_secgroup.convert_to_group_ids explicitly

- **PR #30069**: (techhat) Ensure that pki_dir exists @ 2015-12-29 23:03:23 UTC
  - 0a37c4de1a Merge pull request #30069 from techhat/seeddirs
0f05d49bde Ensure that pki_dir exists

• **ISSUE #30045**: (AkhterAli) salt-cloud make syndic not possible. (refs: #30064)

• **PR #30064**: (rallytime) Add Syndic documentation to miscellaneous Salt Cloud config options @ 2015-12-29 20:15:45 UTC
  
  - 896655602e Merge pull request #30064 from rallytime/fix-30045
  
  - 6176f383e5 Spelling fixes
  
  - 83c05729d6 Add Syndic documentation to miscellaneous Salt Cloud config options

• **PR #30049**: (rallytime) Add some more unit tests for the vsphere execution module @ 2015-12-29 17:07:41 UTC
  
  - bad6dac93 Merge pull request #30049 from rallytime/esxi-unit-tests
  
  - 1a83147986 Remove unnecessary import block
  
  - 695107ae6e Add some more unit tests for the vsphere execution module

• **PR #30060**: (rallytime) Back-port #27104 to 2015.8 @ 2015-12-29 17:06:58 UTC
  
  - PR #27104: (hexedpackets) Remove only the file extension when checking missing cached nodes. (refs: #30060)
  
  - cedee772d7 Merge pull request #30060 from rallytime/bp-27104
  
  - f0566c4b8f Remove only the file extension on cached node files instead of replacing every ‘.p’ substring.

• **ISSUE #28540**: (whiteinge) The rest_cherrypy automodule docs are hard to digest (refs: #30048)

• **PR #30048**: (jacobhammons) Remove internal APIs from rest_cherrypy docs. @ 2015-12-28 23:24:13 UTC
  
  - 87667e2de6 Merge pull request #30048 from jacobhammons/28540
  
  - a04ceb4d8c Remove internal APIs from rest_cherrypy docs.Refs #28540

• **ISSUE #29960**: (anlutro) Circular import in salt.utils.jinja (refs: #30043)

• **PR #30043**: (rallytime) Be explicit about importing from salt.utils.jinja to avoid circular imports @ 2015-12-28 21:35:18 UTC
  
  - 3c63527313 Merge pull request #30043 from rallytime/fix-29960
  
  - a157c78bc8 Be explicit about importing from salt.utils.jinja to avoid circular imports

• **PR #30038**: (rallytime) Back-port #30017 to 2015.8 @ 2015-12-28 20:41:04 UTC
  
  - PR #30017: (anlutro) Change how alternatives states check for installed (refs: #30038)
  
  - 6cdca314c7 Merge pull request #30038 from rallytime/bp-30017
  
  - aab35b883e Add versionadded directive for new check_exists function.
  
  - ca290ec3e1 change how alternatives states check for installed

• **PR #30036**: (rallytime) Back-port #29995 to 2015.8 @ 2015-12-28 20:41:45 UTC
  
  - PR #29995: (ruxandraburtica) Location from profiles not correctly set (refs: #30036)
  
  - c846c7be8c6 Merge pull request #30036 from rallytime/bp-29995
  
  - 129a0d7b9f Added vm_ to the get_location query.
  
  - af8d01a367 Updated ec2 file to correctly propagate location.

• **PR #30035**: (rallytime) Back-port #29895 to 2015.8 @ 2015-12-28 20:20:58 UTC
  
  - PR #29895: (pass-by-value) Do not SSH to the instance if deploy is False (refs: #30035)
- 27b0bd2c34 Merge pull request #30035 from rallytime/bp-29895
- 09f208fe63 Do not SSH to the instance if deploy is False

- **PR #30034**: (rallytime) Back-port #29893 to 2015.8 @ 2015-12-28 20:20:51 UTC
  - PR #29893: (pass-by-value) Add info about VolumeType (refs: #30034)
  - 9e385369b7 Merge pull request #30034 from rallytime/bp-29893
  - 2fcf150b8 Add info about VolumeType

- **PR #30033**: (rallytime) Back-port #29876 to 2015.8 @ 2015-12-28 20:20:42 UTC
  - PR #29876: (abednarik) Updated Cloud msic section. (refs: #30033)
  - 4d4d692a Merge pull request #30033 from rallytime/bp-29876
  - a257249789 Add versionadded to SSH Port docs
  - 0bb83e51aa Updated Cloud msic section.

- **PR #30029**: (terminalmage) git.latest: Fix handling of nonexistant branches @ 2015-12-28 19:39:29 UTC
  - a5f97c26 Merge pull request #30029 from terminalmage/git.latest-nonexistant-branch
  - 0b95894e9f git.latest: Fix handling of nonexistant branches

- **PR #30016**: (anlutro) Properly normalize locales in locale.gen.locale @ 2015-12-28 15:33:48 UTC
  - e7fe24dc6 Merge pull request #30016 from alprs/fix-gen_locale_normalize
  - 75eb4511d3 Properly normalize locales in locale.gen.locale

- **PR #30015**: (anlutro) locale module: don't escape the slash in \n @ 2015-12-28 15:31:20 UTC
  - 90611e95f4 Merge pull request #30015 from alprs/fix-gen_locale_escaped_newline
  - 5799729aee locale module: don't escape the slash in \n
- **PR #30022**: (gqgunhed) Two minor typos fixed @ 2015-12-28 15:22:24 UTC
  - b871ce5310 Merge pull request #30022 from gqgunhed/winrepo_typo
  - a052f016e fixed minor typos and a :ref: link
  - e47db1a076 Merge remote-tracking branch `refs/remotes/saltstack/2015.8` into winrepo_typo
  - 0c4c89b6b5c Merge remote-tracking branch `refs/remotes/saltstack/2015.8` into 2015.8

- **PR #30026**: (anlutro) states.at: fix wrong variable being used @ 2015-12-28 15:21:23 UTC
  - 4b8ac20d45 Merge pull request #30026 from alprs/fix-at_without_tag_job
  - 0fe9c99bd states.at: fix wrong variable being used

- **PR #29966**: (multani) Fix bigip state/module documentation + serializers documentation @ 2015-12-23 15:06:46 UTC
  - a3410fdff41 Merge pull request #29966 from multani/fix/docs
  - e6e36372a4 doc: fix documentation link for salt.serializers
  - 23ef472a07 bigip: fix documentation formatting, remove warnings during doc building

- **PR #29904**: (twangboy) Improvements to osx packaging scripts @ 2015-12-22 21:40:23 UTC
  - PR #29858: (twangboy) Osx build (refs: #29904)
  - 8f8c8cedd0 Merge pull request #29904 from twangboy/osx_build
- 0be53953af Added function to download and check hashes, added hash files
- 7f0b87bf3 Added pre/post flight scripts (not running)
- 9eeb6da7bd Improvements to osx packaging scripts

- **PR #29950**: (multani) boto_iam: fix deletion of IAM users when using delete_keys=true @ 2015-12-22 18:43:07 UTC
  - 9522bdf4a5 Merge pull request #29950 from multani/fix/states.boto_iam-delete-user
  - 516c8661f4 boto_iam: fix deletion of IAM users when using delete_keys=true

- **PR #29937**: (multani) Fix states.boto_iam group users @ 2015-12-22 17:33:02 UTC
  - be95d4d79a Merge pull request #29937 from multani/fix/states.boto_iam-group-users
  - 5c86a78d75 boto_iam: handle group's users empty list by removing all users of the group
  - f3461053df boto_iam: passes connection information down to callees

- **PR #29934**: (multani) Fix state.boto_iam virtual name @ 2015-12-22 17:16:25 UTC
  - 4f2cc5eb3 Merge pull request #29934 from multani/fix/boto_iam
  - 503e64e178 Fix state.boto_iam virtual name

- **ISSUE #29933**: (Reiner030) boto_rds.absent misses pillar variables for final backup (refs: #29943)

- **PR #29943**: (cachedout) Check args correctly in boto_rds @ 2015-12-22 17:15:48 UTC
  - b36302291d Merge pull request #29943 from cachedout/issue_29933
  - 8bab5ea9a Check args correctly in boto_rds

- **PR #29924**: (gqgunhed) fixed: uptime now working on non-US Windows @ 2015-12-22 15:03:17 UTC
  - 02ed5b8fd1 Merge pull request #29924 from gqgunhed/gqgunhed-2015.8
  - b67c3b45e1 removed duplicate datetime line
  - ed8ec91def fixed: uptime now working on non-US Windows

- **PR #29883**: (serge-p) fix for nfs mounts in _active_mounts_openbsd() @ 2015-12-21 18:26:49 UTC
  - 5e44639334 Merge pull request #29883 from serge-p/patch-6
  - dd94332f24 Update mount.py
  - 9d059a1ea5 fix for nfs mounts in _active_mounts_openbsd()

- **ISSUE #29866**: (tony) spm(1) command should obey Saltfile (refs: #29894)

- **PR #29894**: (techhat) Support Saltfile in SPM @ 2015-12-21 18:03:07 UTC
  - 08fd81cc3d Merge pull request #29894 from techhat/spmsaltfile
  - 279ec61274 Support Saltfile in SPM

- **PR #29856**: (rallytime) Added some initial unit tests for the salt.modules.vsphere.py file @ 2015-12-21 17:12:20 UTC
  - 4f46255044 Merge pull request #29856 from rallytime/esxi-unit-tests
  - b908ed123 Added some initial unit tests for the salt.modules.vsphere.py file

- **PR #29855**: (rallytime) Back-port #29740 to 2015.8 @ 2015-12-21 17:11:28 UTC
  - **PR #29740**: (kiorky) Type mess in git.latest (refs: #29855)
  - 096fed6182 Merge pull request #29855 from rallytime/bp-29740
• PR #29890: (multani) Various documentation fixes @ 2015-12-21 16:25:15 UTC
  - 02ab9b8858 Merge pull request #29890 from multani/fix/docs
  - 5aa0e9b1ed Fix documentation typo for pillars
  - f2b41d04d7 Fix rendering issues for CherryPy netapi documentation.
  - 6922da46dc doc: fix warnings + some rendering issues

• PR #29850: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-12-18 21:33:49 UTC
  - 50f48c4bf3 Merge pull request #29850 from basepi/merge-forward-2015.8
  - 7402599c62 Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
  - f43f3d166c Merge pull request #29730 from rallytime/fixed-24698
    * 120fd5df0 Update docker-py version requirement to 0.6.0 for dockerio.py files
    - c393a4175a Merge pull request #29715 from rallytime/fixed-23343
      * a0ed857c37 Install correct package version, if provided, for npm state.
      - 1310afbc2 Merge pull request #29721 from terminalmage/nested-output-multiline-fix
        * 761be9cb93 Fix display of multiline strings when iterating over a list
    - 52cc07ec9 Merge pull request #29646 from rallytime/fixed-29488
      * c5fa9e9351 Don't stacktrace on kwargs.get if kwargs=None

• PR #29811: (anlutro) influxdb: add retention policy module functions @ 2015-12-18 17:19:02 UTC
  - 05d2aae2f2 Merge pull request #29811 from alprs/feature-influxdb_retention
  - 51088d938a add tests, rename a function to more closely mirror influxdb
  - 785da17a67 missing comma
  - 7e9e9a1030 influxdb: add retention policy module functions

• ISSUE #29396: (Ch3LL) Windows 2012 Multi-Master ZMQError (refs: #29814)

• PR #29814: (basepi) [2015.8][Windows] Fix multi-master on windows @ 2015-12-18 17:16:52 UTC
  - 7eeafaca58a Merge pull request #29814 from basepi/multi-master.windows.29396
  - 240501d75 Add documentation for tcp ipc_mode and multi-master
  - 307e867980 For tcp ipc_mode, give each minion different pub/pull ports
  - 5a21893e82 Fix ipc_mode check in windows

• PR #29819: (rallytime) Add esxi module and state to docs build @ 2015-12-18 16:20:27 UTC
  - fb4eb28645 Merge pull request #29819 from rallytime/esxi-docs
  - e7c5863468 Add esxi module and state to docs build

• PR #29832: (jleimbach) Fixed typo in order to use the keyboard module for RHEL without systemd @ 2015-12-18 16:04:57 UTC
  - e865c787a4 Merge pull request #29832 from jleimbach/fix-keyboard.py-for-rhel-without-systemd
  - 7b72b3c12c Fixed typo in order to use the keyboard module for RHEL without systemd

• PR #29803: (rallytime) Add vSphere module to doc ref module tree @ 2015-12-17 18:52:56 UTC
• ISSUE #29751: (ether42) mod_hostname behavior is systemd dependant (refs: #29767)
• PR #29767: (abednarik) Hosts file update in mod_hostname. @ 2015-12-17 18:31:18 UTC
  - 9b4c2194f6 Merge pull request #29767 from abednarik/network_mod_hpstname_fix
  - eebd3e3e4a Hosts file update in mod_hostname.
• ISSUE #29631: (joshughes) pygit2: git submodules cause traceback in file_list (refs: #29772)
• PR #29772: (terminalmage) pygit2: skip submodules when traversing tree @ 2015-12-17 18:23:16 UTC
  - 0c65eeb82b Merge pull request #29772 from terminalmage/issue29631
  - 8c4e64b0d pygit2: skip submodules when traversing tree
• PR #29765: (gtmanfred) allow nova driver to be boot from volume @ 2015-12-17 18:20:33 UTC
  - 1b430b251f Merge pull request #29765 from gtmanfred/2015.8
  - e95f7561c5 cloudnetworks should be making public_ips a list
  - ec7e45fbfb add documentation for boot from volume on nova driver
  - eafcc5e3ac Add boot from volume for openstack nova
• PR #29773: (l2ol33rt) Append missing wget in debian installation guide @ 2015-12-17 17:29:18 UTC
  - c4f226f31e Merge pull request #29773 from l2ol33rt/debian_install_docfix
  - 64cb4b0540 Append missing wget in debian installation guide
• PR #29800: (rallytime) Back-port #29769 to 2015.8 @ 2015-12-17 17:28:52 UTC
  - PR #29769: (pass-by-value) Add documentation about scopes (GCE) (refs: #29800)
  - aca4da3abc Merge pull request #29800 from rallytime/bp-29769
  - 10b6cf8cb0 Add documentation about scopes (GCE)
• PR #29775: (paulnivin) Change listen requisite resolution from name to ID declaration @ 2015-12-16 22:56:03 UTC
  - ab61f78295 Merge pull request #29775 from lyft/listen-id-declaration-resolution-stable
  - ff3a809c11 Change listen requisite resolution from name to ID declaration
• PR #29754: (rallytime) Back-port #29719 to 2015.8 @ 2015-12-16 17:25:51 UTC
  - PR #29719: (gqgunhed) fixed: include all items from kern.disks split (refs: #29754)
  - 5af64b64f2 Merge pull request #29754 from rallytime/bp-29719
  - ed275977e3 fixed: include all items from kern.disks split
• PR #29713: (The-Loeki) Pillar-based cloud providers still forcing use of deprecated ‘provider’ @ 2015-12-16 14:51:31 UTC
  - PR #29753: (The-Loeki) Fix CloudStack cloud for new ‘driver’ syntax (refs: #29713)
  - b3f17daa8 Merge pull request #29713 from The-Loeki/patch-1
  - 35fe2a5c18 lint fix
  - dfab68186 Update __init__.py
  - 65e2d9ac1e Pillar-based cloud providers still forcing use of deprecated ‘provider’

30.2. Previous Releases
• ISSUE #14634: (Sacro) 'unless' documentation isn't logically plausible (refs: #29729)
• PR #29729: (rallytime) Further clarifications on "unless" and "onlyif" requisites. @ 2015-12-16 14:45:06 UTC
  - 1f4810be0f Merge pull request #29729 from rallytime/fix-14634
  - 45b77b288 Add note about shell truthiness vs python truthiness
  - 3bfb7c031 Spelling fixes
  - 15e466ec12 Further clarifications on "unless" and "onlyif" requisites.
• ISSUE #29736: (akissa) Pillar sqlite3 examples incorrect (refs: #29737)
• PR #29737: (akissa) fix pillar sqlite3 documentation examples @ 2015-12-16 14:41:57 UTC
  - 7084f79199 Merge pull request #29737 from akissa/fix-pillar-sqlite3-examples
  - 1c98f8d609 fix pillar sqlite3 documentation examples
• ISSUE #29741: (akissa) Pillar Sqlite3 does not honour database config option when using salt-call (refs: #29743)
• PR #29743: (akissa) fix pillar sqlite not honouring config options @ 2015-12-16 14:40:27 UTC
  - e977096409 Merge pull request #29743 from akissa/fix-pillar-sqlite3-does-not-honour-config
  - 6184fb1ae1 fix pillar sqlite not honouring config options
• ISSUE #29152: (guettli) docs for states.postgres_user.present: name and password twice? (refs: #29723)
• PR #29723: (rallytime) Clarify db_user and db_password kwargs for postgres_user.present state function @ 2015-12-15 23:58:43 UTC
  - 2cea0b0a2d Merge pull request #29723 from rallytime/fix-29152
  - 8d8fd0a27 Clarify db_user and db_password kwargs for postgres_user.present state function
• ISSUE #29154: (guettli) [Docs] for cmd.run. Missing link to details for "stateful" (refs: #29722)
• PR #29722: (rallytime) Link "stateful" kwargs to definition of what "stateful" means for cmd state. @ 2015-12-15 23:25:48 UTC
  - 30eab23c43 Merge pull request #29722 from rallytime/fix-29154
  - 5c045a952f Link "stateful" kwargs to definition of what "stateful" means for cmd state.
• ISSUE #29091: (gravyboat) Salt pillar best practices should show 2 matchers in base (refs: #29724)
• PR #29724: (rallytime) Add examples of using multiple matching levels to Pillar docs @ 2015-12-15 23:02:32 UTC
  - c9ca1a371e Merge pull request #29724 from rallytime/fix-29091
  - 45080f3629 Add examples of using multiple matching levels to Pillar docs
• PR #29726: (cachedout) Disable some boto tests per resolution of moto issue @ 2015-12-15 22:15:35 UTC
  - 4985cc57f1 Merge pull request #29726 from cachedout/disable_moto_2015_8
  - d19827fd3a Disable some boto tests per resolution of moto issue
• ISSUE #25723: (jamesog) file.directory fails in test mode when using recurse ignore_files (refs: #29708)
• PR #29708: (lagesag) Fix test=True for file.directory with recurse ignore_files/ignore_dirs. @ 2015-12-15 19:15:14 UTC
  - aba82abff3 Merge pull request #29708 from lagesag/fix-file-directory-test-mode
  - a872b5eece PyLint fix #25723
- 3e46cb9213 Fix test=True for file.directory with recurse ignore_files/ignore_dirs.

- ISSUE #29199: (hubez) 2015.8.1 and 2015.5.6: salt-minion self-restart doesn't work in daemon mode. Works when not a daemon (refs: #29642)

- PR #29642: (cachedout) Correctly restart daemonized minions on failure @ 2015-12-15 19:02:40 UTC
  - 7c38dec0ad Merge pull request #29642 from cachedout/issue_29199
  - 8b2c6817cf Sleep before restart
  - 4105e2abfb Correctly restart daemonized minions on failure

- PR #29599: (cachedout) Clean up minion shutdown @ 2015-12-15 19:01:35 UTC
  - bd918394c3 Merge pull request #29599 from cachedout/clean_minion_shutdown
  - 0b917971fe Log at debug level instead
  - a04280cebc Re-raise error to preserve restart behavior
  - dc480e332a Clean up warning on failed master ping.
  - 049a3dbbbc Additional fixes.
  - 8a4969b730 Clean up minion shutdown

- PR #29675: (clinta) allow returning all refs @ 2015-12-15 18:55:36 UTC
  - 31eb291caf Merge pull request #29675 from clinta/git-ls-remote-noref
  - f8c34b0c76 version updated
  - 73b169e7dd lint, remove trailing whitespace
  - 8400e68426 allow returning all refs

- PR #29683: (rallytime) Catch more specific error to pass the error message through elegantly. @ 2015-12-15 18:41:54 UTC
  - 7c50533d3f Merge pull request #29683 from rallytime/vsan_fixes
  - afc003079e Catch more specific error to pass the error message through elegantly.

- PR #29687: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-12-15 18:38:46 UTC
  - 30499e4896 Merge pull request #29687 from basepi/merge-forward-2015.8
  - b51cba59c0 Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
    - f606c23ea8 Merge pull request #29673 from rallytime/fix-29661
      - e4af7a1157 Default value should be False and not 'False'
    - f77c8e7baf Merge pull request #29527 from jfindlay/2015.5
      - 1a8044f0c9 2015.5.7 notes: add note about not being released

- ISSUE #27611: (benburkert) PR #26818 broke git.latest with :mirror/:bare (refs: #29681)

- PR #29681: (clinta) fix bare/mirror in git.latest @ 2015-12-15 18:37:16 UTC
  - 3c427e82bf Merge pull request #29681 from clinta/git-mirror
  - b387072a6f fix bare/mirror in git.latest

- PR #29644: (rallytime) Fixed a couple more ESXi proxy minion bugs @ 2015-12-14 18:36:28 UTC
  - fe0778dad5 Merge pull request #29644 from rallytime/esxi-fixes
  - 577d5487a3 Fixed a couple more ESXi proxy minion bugs
- **PR #29645**: (rallytime) Back-port #29558 to 2015.8 @ 2015-12-14 18:11:38 UTC
  - **PR #29558**: (ruxandraburtica) Returning security group when no VPC id is given (refs: #29645)
    - ef2c9e3f61 Merge pull request #29645 from rallytime/bp-29558
    - 2cf9374342 Replaced tabs with spaces.
  - 5e7e3fe682 Returning security group when no VPC id is given, even if the group is not in EC2-classic.

- **ISSUE #29630**: (c4t3l) Fresh minion install (2015.8.3) returns service __virtual__ is False errors on salt-calls (refs: #29632)

- **ISSUE #29581**: (zmalone) Complaints about pyOpenSSL version on Saltstack 2015.8.3 (refs: #29632)

- **PR #29632**: (jfindlay) reduce severity of tls module __virtual__ logging @ 2015-12-11 20:11:32 UTC
  - a2a7f1527b Merge pull request #29632 from jfindlay/tls_virt
  - 3eda05f2fd modules.tls.__virtual__: don’t spam everyone’s error log
  - 76a200c780 modules.tls.__virtual__: refactor cert path comment
  - 0a0532e598 modules.tls.__virtual__: remove redundant parens

- **ISSUE #29598**: (javicacheiro) Duplicated MTU entry added (refs: #29606)

- **PR #29606**: (abednarik) Fixed duplicate mtu entry in RedHat 7 network configuration. @ 2015-12-11 17:24:45 UTC
  - f6f3aa6613 Merge pull request #29606 from abednarik/remove_duplicate_mtu_entry_rh7_net_template
  - ab2f887ba Fixed duplicate mtu entry in RedHat 7 network configuration.

- **PR #29613**: (rallytime) Various ESXi Proxy Minion Bug Fixes @ 2015-12-11 17:18:58 UTC
  - c7e73bc4c8 Merge pull request #29613 from rallytime/esxi-fixes
  - aa5d88b6f Various ESXi Proxy Minion Bug Fixes

- **ISSUE #26364**: (cedwards) [freebsd] TCP transport not working in 2015.8.0rc3 (refs: #29628)

- **PR #29628**: (DmitryKuzmenko) Don’t create io_loop before fork @ 2015-12-11 17:15:11 UTC
  - a56c763423 Merge pull request #29628 from DSRCompany/bug/26364_freebsd_tcp
  - 729ffcae36 Don’t create io_loop before fork

- **PR #29609**: (basepi) [2015.8][salt-ssh] Add ability to set salt-ssh command umask in roster @ 2015-12-10 22:52:27 UTC
  - 41b8817237 Merge pull request #29609 from basepi/salt-ssh.umask.29574
  - 0afa5b0d5d Add cmd_umask to roster docs
  - 5c03f892bc Allow setting the cmd_umask from within the roster

- **ISSUE #29586**: (basepi) Orchestrate doesn’t handle minion error properly (refs: #29603)

- **ISSUE #29546**: (jefferyharrell) Can’t seem to get orchestrate to recognize a failed state (refs: #29603)

- **PR #29603**: (basepi) Fix orchestration failure-checking @ 2015-12-10 21:23:57 UTC
  - 1e3945ab1 Merge pull request #29603 from basepi/orchestrate.failures.29546
  - 2bdccada27 Remove unnecessary and
  - 501f91a388 Fix error in failure checking for salt.state within orchestration

- **ISSUE #29584**: (kwilliams057) dockerng image-present fails when trying to pull from registry (refs: #29597)
• **PR #29597**: (terminalmage) dockerng: Prevent exception when API response contains empty dictionary @ 2015-12-10 19:57:42 UTC
  - b5b80b9324 Merge pull request #29597 from terminalmage/issue29584
  - d68067b5db dockerng: Prevent exception when API response contains empty dictionary
• **ISSUE #29585**: (job) cir argument in salt.modules.network.ip_addrs6() is broken (refs: #29587)
• **PR #29596**: (rallytime) Back-port #29587 to 2015.8 @ 2015-12-10 19:57:18 UTC
  - PR #29597: (job) Fix the 'cir' arg in salt.modules.network.ip_addrs6() (refs: #29596)
  - ffb54cced7 Merge pull request #29596 from rallytime/bp-29587
  - bfb75e363 Fix the 'cir' arg in salt.modules.network.ip_addrs6()
• **PR #29588**: (rallytime) Added ESXi Proxy Minion Tutorial @ 2015-12-10 16:17:51 UTC
  - 08dd663a27 Merge pull request #29588 from rallytime/esxi-proxy-tutorial
  - 5a2bb260d3 Added ESXi Proxy Minion Tutorial
• **ISSUE #29557**: (arthurlogilab) [modules/nova] AttributeError: 'module' object has no attribute 'discover_extensions' when using nova.image_list (refs: #29572)
• **PR #29572**: (gtmanfred) [nova] use old discover_extensions if available @ 2015-12-09 17:35:42 UTC
  - fe5db23863 Merge pull request #29572 from gtmanfred/2015.8
  - d0ffa520f4 use old discover_extensions if available
• **ISSUE #29009**: (LoveIsGrief) git.latest doesn't checkout submodules (refs: #29545)
• **PR #29545**: (terminalmage) git.latest: init submodules if not yet initialized @ 2015-12-09 16:19:42 UTC
  - ecbc60ba05 Merge pull request #29545 from terminalmage/issue29009
  - 6619503aec git.latest: init submodules if not yet initialized
• **PR #29547**: (rallytime) Refactored ESXCLI-based functions to accept a list of esxi_hosts @ 2015-12-09 16:08:03 UTC
  - fd67903bf9 Merge pull request #29547 from rallytime/esxi-proxy
  - 469648dd07 Refactored ESXCLI-based functions to accept a list of esxi_hosts
• **PR #29548**: (rallytime) Back-port #29449 to 2015.8 @ 2015-12-09 16:19:07 UTC
  - PR #29449: (AkhterAli) Adding message for null public IP (refs: #29548)
  - 3b2c93a2e5 Merge pull request #29548 from rallytime/bp-29449
  - 3715ed7d65 Adding message for null public IP
• **PR #29547**: (rallytime) Refactored ESXCLI-based functions to accept a list of esxi_hosts @ 2015-12-09 16:08:03 UTC
  - fd67903bf9 Merge pull request #29547 from rallytime/esxi-proxy
  - 469648dd07 Refactored ESXCLI-based functions to accept a list of esxi_hosts
• **PR #29563**: (anlutro) Fix a call to deprecated method in python-influxdb @ 2015-12-09 16:00:24 UTC
  - 21437f9235 Merge pull request #29563 from alprs/fixed-deprecated_method
  - 7c69c177ed update test
  - 46d7d92069 fix a call to deprecated method in python-influxdb
• **PR #29565**: (bdrung) Fix typos and missing release note @ 2015-12-09 15:59:21 UTC
  - f29e0a7021 Merge pull request #29565 from bdrung/2015.8
  - b96d8ff1d9 Minor update to release notes for missing fix
  - e72354aac4 Fix typo specific -> specific
- 5708355762 Fix typo comparsion -> comparison

- **PR #29540**: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-12-08 21:27:01 UTC
  - 25d3a75d8c Merge pull request #29540 from basepi/merge-forward-2015.8
  - e59364ad1d Fix failing unit test
  - 9673fd0937 Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
  - 867d550271 Merge pull request #29539 from basepi/merge-forward-2015.5
    - 2c9c4ba430 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
    - 85aa70a6cb Merge pull request #29392 from jacobhammons/2014.7
    - d7f0db1dd8 updated version number to not reference a specific build from the latest branch
  - de7f3d5a59 Merge pull request #29504 from rallytime/fix-12072
    - 8357c95dc2 Document userdata_file option for EC2 driver
  - 65deba8bb5 Merge pull request #29507 from rallytime/ec2-doc-fix
    - 90b4823bc2 Switch volumes and del_*_on_destroy example ordering
  - 0918c9294f Merge pull request #29469 from abednarik/doc_note_for_saltcloud_connection_timeout
    - 8e5c3e366a Added Documentation note in salt cloud.
  - e43c7c05a6 Merge pull request #29461 from dmyerscough/fixed-resource-limits
    - 85a8a3b033 Fix resource limits, systemd sets the default number of open files to 4096 causing the master to complain about limits when you have a large number of keys
  - 730f02fbdf Merge pull request #29439 from rallytime/bp-28656
    - 2f11bb021f #28526 fixed yumpkg module
  - 197210d52e Merge pull request #29418 from jacobhammons/dot8
    - 4f51a737f9 Added CVE 2015-8034 to 2015.5.8 release notes
  - b3452f2a1a Merge pull request #29389 from jacobhammons/2015.5
    - 824721ff36 updated version numbers
  - 6a7a95f28a Merge pull request #28501 from twangboy/jmoney_26898
    - c0cf33332c Fixed some Lint...
      - df17fc59d3 Merge pull request #6 from jfindlay/twag_test
      - bc7e0cfe64 add file.symlink unit tests
        - 9381dc7215 orthogonalize file.symlink unit tests
        - 8f462ba044 Merge pull request #5 from cachedout/fix_twangboy_test
        - 5293150d25 Fix tests
        - 7d39091c91 Fixed some more lint
          - 3dbd62af2c Fixed some tests... hopefully
            - f187db3288 Removed unnecessary logic
            - 89ebd268e6 Added file attributes restore on fail
              - 9ec72ca724 fix file state unit tests for win symlink feature
- 69c32a663e Fixed some lint
- 638dec5027 Fixed some tests... let's see if they're really are
- 5ed7a99792 Replaced instances of shutil.rmtree in file state
- 2651ce509f Fix file.remove for windows
  * 760a521603 Merge pull request #29348 from jtand/file_search_fix
  * 04f82bd4fd Fixes an file.search on python2.6
  * 51ea88d489 Merge pull request #29336 from rallytime/bp-29276
    * 3a0e19debb Prevent adding port twice when adding entry in known hosts
  * 28255af52a Merge pull request #29333 from rallytime/bp-29280
    * 722d02f4a Lint
    * 4a0040c1b4 [Doc] Add note for SVN state

- PR #29499: (rallytime) Initial commit of ESXi Proxy Minion @ 2015-12-08 21:10:13 UTC
  - 3ae096b7ac Merge pull request #29499 from rallytime/esxi-proxy
  - d8b1ba3991 Make sure ESXCLI gating is correct in vsphere __virtual__
  - 55589f8021 Provide some more inline comments for longer functions
  - baf2f8ce7a PyLint fix
  - 760a521603 VMotion functions, gate ESXCLI requirement, allow protocol/port for ESXCLI function
  - d909df254e Bug fixes for esxi states
  - 7102677679 Bug fixes and move ntp and ssh service start/stop/restart to single funcs
  - 77be37add84 Added syslog_configured state, and some minor bug fixes
  - d49f533f6 More state functions and a couple of bug fixes
  - a5c74cfec2 Merge pull request #13 from cro/esxi-proxy3
    * 87fc980f33 Add syslog config and network firewall rules enable
  - 42be49f481 Merge pull request #11 from cro/esxi-proxy
    * d85864f05 Add documentation.
    * 43879d1dfe Functions for setting network coredumps
  - 7d7d2afa7f Initial commit of ESXi state and refactored vsan_add_disks to include a get function.
  - bc945a48db Add execution module functions to upload ssh key for root and retrieve ssh key for root.
  - 238b0f5bea Update error return policy and add service running/policy functions
  - 9ba9019419 Initial commit of ESXi proxy work.

- PR #29526: (jfindlay) 2015.8.2 notes: add note about not being released @ 2015-12-08 21:09:50 UTC
  - 873f6a9460 Merge pull request #29526 from jfindlay/2015.8
  - 3de61e3655 Merge pull request #29531 from jfindlay/suse_patch

- ISSUE #29484: (m7v8) patchlevel detection broken for openSuSE (refs: #29531)
- PR #29531: (jfindlay) grains.core: handle undefined variable @ 2015-12-08 21:07:38 UTC

30.2. Previous Releases
- 1ad5a088fc grains.core: handle undefined variable

- **ISSUE #29486**: (m7v8) Pull request breaks our setup (umask) (refs: #29538)
- **ISSUE #29005**: (fcrozat) non-standard umask breaks salt-call call in salt-ssh (refs: #29126)
- **ISSUE #28830**: (fcrozat) non-standard umask breaks salt-ssh deployement (refs: #29126)
- **PR #29538**: (basepi) [2015.8] [salt-ssh] Remove umask around actual execution for salt-ssh @ 2015-12-08 20:45:58 UTC
  - **PR #29126**: (fcrozat) Fix deployment when umask is non-standard (refs: #29538)
  - 1d8014411a Merge pull request #29538 from basepi/salt-ssh.umask.29486
  - 5edf40345f Remove umask around actual execution for salt-ssh

- **ISSUE #28715**: (mlalpho) Tagging Resources with boto_rds (refs: #29505)
- **PR #29505**: (rallytime) Update boto_rds state docs to include funky yaml syntax for "tags" option. @ 2015-12-08 17:05:02 UTC
  - fb02fc1ef1 Merge pull request #29505 from rallytime/fix-28715
  - f43f851a92 Update boto_rds state docs to include funky yaml syntax for "tags" option.
- **PR #29513**: (bdrung) Drop obsolete syslog.target from systemd services @ 2015-12-08 16:05:01 UTC
  - 38888ad5e Merge pull request #29513 from bdrung/2015.8
  - ba1a4ade618 Drop obsolete syslog.target from systemd services
- **PR #29500**: (rallytime) Back-port #29467 to 2015.8 @ 2015-12-07 23:24:00 UTC
  - **PR #29467**: (serge-p) Update module.py (refs: #29500)
  - 148dad674 Merge pull request #29500 from rallytime/bp-29467
  - c40e8bf0 Update module.py
- **ISSUE #29001**: (olfway) debconf.set doesn’t support "prereq" in states (refs: #29463)
- **PR #29463**: (abednarik) Add **kwargs to debconf.set. @ 2015-12-07 19:56:05 UTC
  - 9d11acc7db Merge pull request #29463 from abednarik/debconf_fix_prereq_support
  - b17f1fed43 Add **kwargs to debconf.set.
- **ISSUE #29311**: (Reiner030) Feature Request: System uptime also in seconds (refs: #29399)
- **PR #29399**: (jfindlay) modules.status: add human_readable option to uptime @ 2015-12-07 19:53:52 UTC
  - 7ef8dde140 Merge pull request #29399 from jfindlay/second_up
  - 1903124814 modules.win_status: add reason to virtual ret
  - 35ba7da470 modules.status: add reason to __virtual__ return
  - 4e7eb0eb modules.status: add in_seconds option to uptime
- **PR #29433**: (cro) Files for building .pkg files for MacOS X @ 2015-12-07 19:47:23 UTC
  - 042da91b8 Merge pull request #29433 from cro/mac_native_pkg
  - 8e191ae26a Add web references
  - 5f1459d708 Update mac packaging
  - 092b7dd0a First crack at build files for Mac OS X Native package
ISSUE #29445: (shawnbutts) salt.loaded.int.module.nova.__virtual__() is wrongly returning None. (refs: #29455)

PR #29455: (jfindlay) modules.nova.__init__: do not return None @ 2015-12-07 19:44:00 UTC
- 5ff3749108 Merge pull request #29455 from jfindlay/nova_none
- 19da823ce8 modules.nova.__init__: do not return None

PR #29454: (jfindlay) rh_service module __virtual__ return error messages @ 2015-12-07 19:32:15 UTC
- 289e9d169e Merge pull request #29454 from jfindlay/rh_service
- 9975508f86 modules.rh_service.__virtual__: handle SUSE osrelease as num
- d7ab7bf51f modules.rh_service: __virtual__ error messages

PR #29476: (tbaker57) Doc fix - route_table_present needs subnet_names (not subnets) as a key @ 2015-12-07 18:47:22 UTC
- cb465927d6 Merge pull request #29476 from tbaker57/boto_vpc_docfix
- 369466680b Fix - don’t specify ‘name’ key inside the list - just the subnet names
- 5acb34b775a Doc fix - route_table_present needs subnet_names (not subnets) as a key

PR #29487: (rallytime) Back-port #29450 to 2015.8 @ 2015-12-07 17:25:23 UTC
- PR #29450: (pass-by-value) Raise error if dracr password is above 20 chars (refs: #29487)
- 5696c6eb8f Merge pull request #29487 from rallytime/bp-29450
- 2c55585f11 Raise error if dracr password is above 20 chars

ISSUE #29133: (cedwards) FX2 proxy-minion dellchassis idrac state incomplete (refs: #29441)

PR #29441: (rallytime) Make sure docs line up with blade_idrac function specs @ 2015-12-05 16:30:27 UTC
- a1f5a5aabb Merge pull request #29441 from rallytime/fix-doc-dellchassis
- cf62361830 Make sure docs line up with blade_idrac function specs

PR #29440: (rallytime) Back-port #28925 to 2015.8 @ 2015-12-05 00:21:26 UTC
- PR #28925: (pass-by-value) Fx2 firmware update (refs: #29440)
- 6cc6f6ebf5 Merge pull request #28925 from rallytime/bp-28925
- 2c55585f11 Raise error if dracr password is above 20 chars

ISSUE #29425: (paclat) services for older OEL releases. (refs: #29435)

PR #29435: (galet) Grains return wrong OS version and other OS related values for Oracle Linux @ 2015-12-05 00:19:11 UTC
- 129f45f7c3 Merge pull request #29435 from galet/2015.8
- fdaa81ccf8 Grains return wrong OS version and other OS related values for Oracle Linux
- c494dd5f6c Grains return wrong OS version and other OS related values for Oracle Linux

- **ISSUE** saltstack/salt#29313: (rmatulat) state/host.present and alias-assignment to multiple IPs fails (refs: #29430)
- **PR** #29430: (rmatulat) Fix host.present state limitation @ 2015-12-04 23:08:20 UTC
  - e2b43a3f1e Merge pull request #29430 from rall0r/2015.8
  - d3dacff4a2 Fix host.present state limitation

- **PR** #29417: (jacobhammons) Repo install updates @ 2015-12-04 02:39:41 UTC
  - ab890b632a Merge pull request #29417 from jacobhammons/repo-install-updates
  - d58182c65a updated repo path for RHEL installation
  - 5e54359869 Updated Debian, RHEL / Cent, Ubuntu installation instructions with new repo structure for 2015.8.3. Added CVE-2015-8034 to release notes.

- **PR** #29402: (techhat) Add rate limiting to linode @ 2015-12-03 20:27:10 UTC
  - cb1e2e6e73 Merge pull request #29402 from techhat/ratelimit
  - f04d30977 Add rate limiting to linode

- **ISSUE** #19332: (QuinnyPig) Nondeterminism in Pillar (refs: #29400)
- **PR** #29400: (twangboy) Fix #19332 @ 2015-12-03 20:25:16 UTC
  - 8fe39d0ef8 Merge pull request #29400 from twangboy/fix_19332
  - 7bdddaca53 Fixed grammar
  - d965d00a09 Fix #19332

- **PR** #29398: (cachedout) Lint 29288 @ 2015-12-03 18:03:53 UTC
  - d2c0fcbc97 Merge pull request #29398 from cachedout/lint_29288
  - 3b0033e529 Lint #29288
  - 386459ca6d Merge pull request #1 from jfindlay/glustest
    - 4d6c71aa80 modules.glusterfs: fix start_volume unit test
    - f33644630 Bootstrap failed, retrying
    - bd729cb3ea Set default GlusterFS version to 6
    - 443bf61a81 Fixed volume status for >= 3.7 in glusterfs.py

- **ISSUE** #29116: (johnsocp) Unresolvable masters in the minions masters list cause minion to raise an error (refs: #29331)
- **PR** #29331: (DmitryKuzmenko) Bugfix - #29116 raeq dns error @ 2015-12-03 17:10:40 UTC
  - 5b8e7820ac Merge pull request #29331 from DSRCompany/bug/29116_raet_dns_error_2
  - 8c2b217af5 Make pylint happy
  - e5672ee716 Don't exit if no master found
  - 1c324f5467 Don't fail if can't connect to master

- **PR** #29390: (jacobhammons) updated version numbers in documentation @ 2015-12-03 17:02:05 UTC
- 7bc6b1210d Merge pull request #29390 from jacobhammons/2015.8
- 486935b233 updated version numbers

- ISSUE #25446: (DmitryKuzmenko) Stack overflow on LazyLoader deep copying (refs: #29381)
- PR #29381: (nmadhok) No need to deepcopy since six.iterkeys() creates a copy @ 2015-12-03 15:54:52 UTC
  - fd677e1d58 Merge pull request #29381 from nmadhok/2015.8-runtime-fix
  - f109698196 No need to deepcopy since six.iterkeys() creates a copy
- PR #29349: (cro) Fix mis-setting chassis names @ 2015-12-03 00:56:54 UTC
  - 2973025058 Merge pull request #29349 from cro/fx2_name_fix
  - 95d6d72a5d Fix mis-setting the name of the chassis.

- ISSUE #29236: (sjorge) network.mod_bufsize has wrong docstring (refs: #29237)
- ISSUE #29235: (sjorge) network.get_bufsize has wrong docstring (refs: #29237)
- ISSUE #29234: (sjorge) network.dig should only be available if we have the ‘dig’ binary (refs: #29237)
- ISSUE #29233: (sjorge) network.default_route does not seem to honor the family parameter (refs: #29237)
- ISSUE #29232: (sjorge) network.active_tcp seems linux specific (refs: #29237)
- ISSUE #29231: (sjorge) docstrings in salt/utils/network.py are incorrect (refs: #29237)
- PR #29334: (rallytime) Back-port #29237 to 2015.8 @ 2015-12-02 19:37:31 UTC
  - PR #29237: (sjorge) Module network fixes (refs: #29334)
  - 17d80c051a Merge pull request #29334 from rallytime/bp-29237
  - 598226def1 fix unit test (attempt 1)
  - a461d7bf12 changed from Boron to 2015.8.4, so this can be backported
  - 3892b12514 fix up a few remarks from jfindlay
  - 2f940e22aa also we should keep returning {} for other systems
  - 4953f58894 forgot to remove a debug line, how embarasing
  - e96f3ce03b fix docs in salt/utils/network.py #29231 - looks like this got copied at some point
  - 3888bb403f fixup network.default_route with family set on SunOS #29233
  - c0e6ea98a6 fix network.active_tcp on SunOS (we fake it until we make it) #29232
  - 92f881284e add decorator to network.dig #29234
  - 77950eb55c fix docstring for get_bufsize #29235
  - 52fb80cd18 fix docstring for mod_bufsize #29236

- ISSUE #28990: (adithep) Dockerng volume (refs: #29300)
- PR #29300: (ticosax) [dockerng] Add support for volume management in dockerng @ 2015-12-02 17:48:53 UTC
  - 5ec7947595 Merge pull request #29300 from ticosax/dockerng-volumes
  - 80d085ea92 fix typo
  - cb9cb463b0 Provide states for managing docker volumes
  - df6fa1fb2 Add execution module to manage docker volumes

- PR #29218: (clan) check service enable state in test mode @ 2015-12-02 15:31:00 UTC
99b7d87688 Merge pull request #29218 from clan/service_state
- a1250a9729 check service enable state in test mode

• PR #29315: (jfindlay) dev tutorial doc: fix markup errors @ 2015-12-01 21:42:17 UTC
- 08ced73b13 Merge pull request #29315 from jfindlay/docs
- e8e23dc444 dev tutorial doc: fix markup errors

• PR #29317: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2015-12-01 21:28:30 UTC
- a3a463ff88 Merge pull request #29317 from basepi/merge-forward-2015.8
- 0d90dd3a19 Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
- 14e94b3593 Merge pull request #29316 from basepi/merge-forward-2015.5
  • 33f40b3c47 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  • d2fb2109a3 Merge pull request #29296 from douardda/patch-3
  • d2885390f4 Use process KillMode on Debian systems also
- 6a2f5b57c8c Merge pull request #29216 from clan/file_search_on_proc_file
  • 91a20c07a1 try mmmap first
  • 8aa4f2053e remove extra space to fix lint failure
  • d346b1a9a9 use read only if has read() method
  • 3209c1c6b5 size is 0 doesn't mean no data, e.g. /proc/version
- d6aae57d7b Merge pull request #29261 from attiasr/patch-1
  • 7a99b90596 add log and return if pkg already installed
  • 1843c7ab8e fix incorrect reinstallation of windows pkg
- 9236188867 Merge pull request #29214 from cro/ssl_verify_ssl
  • e9c13c561b Doc bug--salt.utils.http takes verify_ssl not ssl_verify.
- df7b35a86b Merge pull request #29204 from lorengordon/fix-29202
- b1da8e56fe Use os.path.join to return full path to ca bundle

• PR #29240: (clan) handle acl_type [[d]efault:[user|group|mask|other] @ 2015-12-01 17:56:20 UTC
- 39667fda12 Merge pull request #29240 from clan/linux_acl
- 02429aca69 handle acl_type [[d]efault:[user|group|mask|other]

• PR #29305: (lorengordon) Add 'file' as a source_hash proto @ 2015-12-01 17:39:37 UTC
- 027bed6c90 Merge pull request #29305 from lorengordon/source_hash_protos
- 53fd0bf97 Update message for invalid source_hash
- 2d20d71b5 Add file as a source_hash proto

• ISSUE #29251: (adamsewell) status.uptime causes exception on Windows minion 2015.8.1 (refs: #29272)

• PR #29272: (jfindlay) win_status module: handle 12 hour time in uptime @ 2015-12-01 16:33:12 UTC
- 1129ee1d2e Merge pull request #29272 from jfindlay/win_up_time
- 6a2315109e win_status module: python timedelta to find uptime
- b7a535341f win_status module: handle 12 hour time in uptime
• ISSUE #26526: (JensRantil) Managing a file:// source fails (refs: #29289)

• PR #29289: (terminalmage) file.managed: Allow local file sources to use source_hash @ 2015-12-01 16:19:27 UTC
  - 0fd3e8b0fb Merge pull request #29289 from terminalmage/issue26526
  - 64ae3f996c file.managed: Allow local file sources to use source_hash

• ISSUE #29262: (anlutro) ssh_auth.absent removes keys when test=True (refs: #29264)

• PR #29264: (anlutro) Prevent ssh_auth.absent from running when test=True @ 2015-11-30 21:54:15 UTC
  - 8d32d8d43d Merge pull request #29264 from alprs/fix-ssh_auth_absent_test
  - 9193676f9c fix ssh_auth_test
  - febbfa792f prevent ssh_auth.absent from running when test=True

• ISSUE #29071: (eliasp) git_pillar.update runner can't handle >=2015.8.0 configuration (refs: #29277)

• PR #29277: (terminalmage) Update git_pillar runner to support new git ext_pillar config schema @ 2015-11-30 21:39:51 UTC
  - 459d30f27f Merge pull request #29277 from terminalmage/issue29071
  - b981bb3be7 Update git_pillar runner to support new git ext_pillar config schema
  - 293c8e635c Separate repo locking logic into its own function

• PR #29283: (cachedout) Single-quotes and use format @ 2015-11-30 21:34:41 UTC
  - PR #29139: (thomaso-mirodin) [salt-ssh] Add a range roster and range targeting options for the flat roster (refs: #29283)
    - df1f0d93c7 Merge pull request #29283 from cachedout/style_29139
    - d764497b17 Single-quotes and use format

• PR #29139: (thomaso-mirodin) [salt-ssh] Add a range roster and range targeting options for the flat roster (refs: #29283) @ 2015-11-30 21:25:50 UTC
  - 3aa84b6763 Merge pull request #29139 from thomaso-mirodin/salt-ssh-flat-roster-range-filter
  - 56b3302fe9 Pylint fixes for PR #29139
  - e010f2d3b5 Add a range roster for salt-ssh
  - c5ee877ebc Add range support to salt-ssh’s flat roster

• PR #29282: (cachedout) dev docs: add development tutorial (refs: #29282) @ 2015-11-30 21:14:50 UTC
  - dbf7755aa2 Merge pull request #29282 from cachedout/fix_29279
  - 1efaab2dd5 Fix typo in #29279
  - a5ea39132f dev docs: add development tutorial

• ISSUE #28991: (timcharper) allow role-assumption with s3 credentials (refs: #28994)

• PR #28994: (timcharper) add support to s3 for aws role assumption @ 2015-11-30 20:52:18 UTC
  - 87e4a4afae Merge pull request #28994 from timcharper/2015.8.1-dev
  - e060986828 add support to s3 for aws role assumption

• ISSUE #29209: (ssgward) SPM logging level doesn't seem to be functional (refs: #29278)

• PR #29278: (techhat) Add verify_log to SPM @ 2015-11-30 20:48:32 UTC
- 3d16434f14 Merge pull request #29278 from techhat/issue29209
- 759e8c4542 Add verify_log to SPM

• PR #29067: (jacksontj) Fix infinite recursion in state compiler for prereq of SLSs @ 2015-11-30 20:27:09 UTC
  - d651d7167e Merge pull request #29067 from jacksontj/2015.8
  - 64e439cda2 Add test for infinite recursion with sls prerequisites
  - d687682016 No reason to continuously resolve the k, v pair here since it doesn’t change in the inner loop
  - 6d747df5db Correctly resolve requisite_in for SLS requisites

• ISSUE #29161: (jefferyharrell) saltmod.state’s ret argument seems to do nothing (refs: #29207)

• PR #29207: (jfindlay) do not shadow ret function argument @ 2015-11-30 20:14:06 UTC
  - d42bea0905 Merge pull request #29207 from jfindlay/ret_non_shadow
  - 5de0b93ac6 saltutil.cmd module: do not shadow ret function argument
  - 7809f2a389 saltmod.state: do not shadow ret function argument

• PR #29215: (rallytime) Back-port #29192 to 2015.8 @ 2015-11-30 20:12:30 UTC
  - PR #29192: (bastiaanb) fix issue 29191: only try partial matches when a wildcard has been sp... (refs: #29215)
  - 8cc1d8de46 Merge pull request #29215 from rallytime/bp-29192
  - 5226d87f9 remove trailing whitespace fix subdict_match test cases
  - 44713cdb95 fix issue 29191: only try partial matches when a wildcard has been specified

• PR #29217: (clan) show duration only if state_output_profile is False @ 2015-11-30 20:11:18 UTC
  - PR #19320: (clan) add 'state_output_profile' option for profile output (refs: #29217)
  - f48d25911 Merge pull request #29217 from clan/highstate_duration
  - 9bd8ae8325 show duration only if state_output_profile is False

• PR #29221: (ticosax) [dokcerng] Docu network mode @ 2015-11-30 19:22:49 UTC
  - e5bd1c293d Merge pull request #29221 from ticosax/docu-network_mode
  - a0b674a0ea Extend documentation of network_mode parameter.

• ISSUE #29250: (adamsewell) status.cpu_load is not available on Salt 2015.8.1 (refs: #29269)

• PR #29269: (jfindlay) win_status module: fix function names in docs @ 2015-11-30 19:14:24 UTC
  - 7fd02c2145 Merge pull request #29269 from jfindlay/winstatus
  - f2f2db491 win_status module: fix function names in docs

• PR #29213: (rallytime) Move _wait_for_task func from vmware cloud to vmware utils @ 2015-11-30 18:53:24 UTC
  - 6c2e62f7d4 Merge pull request #29213 from rallytime/vmware-utils_wait_for_task
  - 44e7f83686 Move _wait_for_task func from vmware cloud to vmware utils

• PR #29271: (techhat) Pass full path for digest (SPM) @ 2015-11-30 18:35:42 UTC
  - 69cbe09ca0 Merge pull request #29271 from techhat/issue29212
  - 6cdafa0ace0 Pass full path for digest (SPM)

• PR #29244: (isbm) List products consistently across all SLES systems @ 2015-11-30 18:31:42 UTC
- 1efe484309 Merge pull request #29244 from isbm/isbm-zypper-products
- db36a73b16 Remove code duplication
- d62abedbf7 Remove dead code
- 302b5d3bc1 List products consistently across all SLES systems

- **ISSUE #29119**: (mo-mughrabi) salt.modules.consul.catalog_register does not accept address as a string (refs: #29255)

- **PR #29255**: (garethgreenaway) fixes to consul module @ 2015-11-30 18:30:02 UTC
  - 318ad36449 Merge pull request #29255 from garethgreenaway/29119_consul_module_fixes
  - 655b0ec403 various fixes to the consul execution module, in particular a fix to address #29119

- **PR #29208**: (whytwolf) Glance more profile errors @ 2015-11-25 23:50:27 UTC
  - b225263279 Merge pull request #29208 from whytwolf/glance_more_profile_errors
  - c8e514ec1 found 3 more spots where the profile was not being passed through.
  - b2e3c1f8de Merge pull request #1 from saltstack/2015.8

- **ISSUE #29140**: (davidballano) mount.unmounted is not behaving as I would expect (refs: #29200)

- **PR #29200**: (jfindlay) mount state: unmount by device is optional @ 2015-11-25 20:03:22 UTC
  - 6d3c04516f Merge pull request #29200 from jfindlay/singular_umount
  - b54de47b1b mount state: unmount by device is optional

- **ISSUE #29187**: (trevor-h) salt-cloud Windows provisioning on EC2 fails to use winrm (refs: #29205)

- **PR #29205**: (trevor-h) Fixes #29187 - using winrm on EC2 @ 2015-11-25 20:00:01 UTC
  - fffcf9ef6 Merge pull request #29205 from trevor-h/fix-salt-cloud-winrm-ec2
  - 48e0edd0d2 Fixes #29187 - using winrm on EC2

- **PR #29170**: (cachedout) Migrate pydsl tests to integration test suite @ 2015-11-25 19:56:48 UTC
  - 1937a47dec Merge pull request #29170 from cachedout/refactor_pydsl_test
  - 2477ff2eab Add __init__ and pydsl test
  - 063f075a99 Add integration renderer tests to the suite
  - 81bf332be4 Migrate pydsl tests to integration test suite

- **ISSUE #29137**: (Dravu) MTU is output twice when used in network.managed (refs: #29198)

- **PR #29198**: (jfindlay) rh_ip module: only set the mtu once @ 2015-11-25 18:11:09 UTC
  - 11d68f7b1c Merge pull request #29198 from jfindlay/single_mtu
  - 0a8952f6ac rh_ip module: only set the mtu once

- **ISSUE #29111**: (eliasp) Backtrace in state ssh_known_hosts.present when ssh-keygen is not available (refs: #29135)

- **PR #29135**: (jfindlay) ssh_known_hosts.present state: catch not found exc @ 2015-11-25 18:10:43 UTC
  - f1935e0bb Merge pull request #29135 from jfindlay/ssh_except
  - 363add7131 ssh_known_hosts.present state: catch not found exc

- **PR #29196**: (s0undt3ch) We need novaclient imported to compare versions @ 2015-11-25 17:16:27 UTC
  - 6a12197e13 Merge pull request #29196 from s0undt3ch/2015.8

30.2. Previous Releases
- 78a7c34f2b We need novaclient imported to compare versions

- **ISSUE #28072**: (jchv) pygit 0.23.2 is not supported in Salt 2015.8.1 (refs: #29059)

- **PR #29059**: (terminalmage) Work around upstream pygit2 bug @ 2015-11-25 16:39:30 UTC
  - 0c0e15d4e9 Merge pull request #29059 from terminalmage/issue28072
  - 82e223087e Work around upstream pygit2 bug

- **PR #29112**: (eliasp) Prevent backtrace (KeyError) in ssh_known_hosts.present state @ 2015-11-25 16:25:57 UTC
  - cc69c87dd2 Merge pull request #29112 from eliasp/ssh_known_hosts.present-backtrace-test
  - 3f19c311e8 Prevent backtrace (KeyError) in ssh_known_hosts.present state

- **PR #29178**: (whytewolf) Profile not being passed to keystone.endpoint_get in _auth. so if a p... @ 2015-11-25 16:09:49 UTC
  - 7775d65089 Merge pull request #29178 from whytewolf/glance_keystone_profile_fix
  - 807dd426a6 Profile not being passed to keystone.endpoint_get in _auth. so if a profiles are being used, then keystone.endpoint_get will not be able to authenticate causing glance to not be able to get its endpoint.

## 30.2.81 Salt 2015.8.5 Release Notes

Version 2015.8.5 is a bugfix release for 2015.8.0.

**Important**: About this Release Salt 2015.8.5 is identical to the 2015.8.4 release with the addition of a fix for issue #30820, fixed by PR #30833. See [here](#) for the 2015.8.4 release notes.

### Known Issue in boto_* execution modules

This release contains an issue that causes the boto_* execution modules to display a __salt__ not defined error (issue #30300). This issue will be fixed in an upcoming release, but can be manually resolved by completing the following:

1. Download the boto_* execution modules that you would like to update from the 2015.8 branch of Salt. A complete list of affected modules with the specific changes is available in :pull`30867`. A simple way to get the updated modules is to [download](#) a zip file of the 2015.8 branch from GitHub. The updated modules are in the salt\modules directory.

2. Place the boto_* modules into salt://_modules.

3. Run the following command to sync these modules to all Salt minions:

   ```
   salt '*' saltutil.sync_modules
   ```
Changelog for v2015.8.4..v2015.8.5


- c7db4350d5 Fix regression in scanning for state with 'name' param

30.2.82 Salt 2015.8.7 Release Notes

Version 2015.8.7 is a bugfix release for 2015.8.0.

Note: Salt 2015.8.4, 2015.8.5, and 2015.8.7 were all released within a short period due to regressions found soon after the releases of 2015.8.4 and 2015.8.5. See here for the 2015.8.4 release notes, and here for the 2015.8.5 release notes.

Statistics

- Total Merges: 2
- Total Issue References: 1
- Total PR References: 5
- Contributors: 4 (gtmanfred, justinta, pass-by-value, terminalmage)

Change to Epoch Support for YUM/DNF

For pkg.installed states, on Linux distributions which use yum/dnf, packages which have a non-zero epoch in the version number now require this epoch to be included when specifying an exact version for a package. For example:

```
vim-enhanced:
pkg.installed:
   - version: 2:7.4.160-1.el7
```

The pkg.latest_version and pkg.list_repo_pkgs functions can be used to get the correct version string to use, as they will now contain the epoch when it is non-zero.

Changelog for v2015.8.5..v2015.8.7

Generated at: 2018-05-28 00:17:59 UTC

- PR #31111: (justinta) Fixes failing npm test on arch. @ 2016-02-10 21:51:47 UTC
  - 8d84e636cf Merge pull request #31111 from jtand/8_4_npm_fix
  - b0a48e5ef2 Fixes failing npm test on arch.
  - PR #30217: (pass-by-value) Make sure cloud actions can be called via salt run

- ISSUE #31014: (gtmanfred) [2015.8] pkg breaks for yum pkgs.latest if the packages has an epoch (refs: #31031, #31015)

- PR #31092: (terminalmage) Apply PR #31031 to 2015.8.4.follow_up @ 2016-02-10 20:54:37 UTC
  - PR #31031: (terminalmage) More complete fix for #31014 (refs: #31092)
  - PR #31015: (gtmanfred) include possible epoch in version for rpm (refs: #31031)

30.2. Previous Releases
Salt Documentation, Release 3002.5

- 5a6a93e98b Merge pull request #31092 from terminalmage/issue31014-2015.8.4.follow_up
  - 2767a4e519 Don't handle epoch specially for dnf
  - e5dfcc0ef2 More efficient way to add the epoch before version number
  - ed7462793c include possible epoch in version for rpm
- 6c6b66aedd Comment multiprocessing line in minion config
- 1f7dfe4c4a Set multiprocessing to true in config.py
- 433c645c20 Fix remove placeholder files
- 71037560d4 Remove placeholder files
- 20b381fd7 Set overwrite to off
- ca50f56d6c Fix boto_secgroup
- fd571d23de Fix boto test failures
- cfb6588744 Fix regression when contents_pillar/contents_grains is a list.
- 881d869e3 utils.aws: use time lib to convert to epoch seconds
- 31412920fc The call to cp.get_url needs the saltenv, if you're using environments other than base, it will fail.
- a8694014a9 Fix regression in git_pillar when multiple remotes are configured
- 2243f25be5 Properly set the default value for pillar_merge_lists
- c7472ff6aa Lint
- d868711a83 Fix failing boto_vpc module unit tests
- ed09516469 Fix failing state module tests
- fd0e940088 Pylint fix
- bc780a7c25 Don't use pack=pack. Just pass in pack=__salt__ always.
- 1ae022dbfe Pass in 'pack' variable to utils.boto.assign_funcs function from ALL boto modules.
- 1efaff107d Remove bad symlinks in osx pkg dirs

### 30.2.83 Salt 2015.8.8 Release Notes

Version 2015.8.8 is a bugfix release for 2015.8.0.

**Important:** Version 2015.8.8.2 was released shortly after 2015.8.8 to fix several known issues. If you installed 2015.8.8 before 03/30/2016, you likely have installed 2015.8.8 and can optionally upgrade (find out which version you have installed using `salt --version`).
Statistics

- Total Merges: 313
- Total Issue References: 146
- Total PR References: 312
- Contributors: 74 (Ch3LL, DmitryKuzmenko, JohannesEbbe, RabidCicada, Talkless, The-Loeki, abednarik, anlutro, basepi, bdrung, cachedout, captaininspiration, clarkperkins, clinta, cro, darix, dmacvicar, dr4Ke, dschaller, edencrane, garethgreenaway, gladiatr72, gtmanfred, iacopo-papalin, isbm, jacksontj, jacobhammons, jakehilton, jespada, jfindlay, joejulian, justinta, kiorky, kraney, llua, mcalmer, mchugh19, mew1033, mlalpho, moltob, multani, myii, opdude, paiou, pass-by-value, peripatetic-sojourner, pprince, rallytime, redmcg, replicant0wnz, rhansen, rmtmckenzie, s0undt3ch, sakateka, sbreidba, seanjnks, sjmh, sjorge, skizunov, szeestraten, tbaker57, techhat, terminalmage, thusoy, ticosax, twangboy, virtualguy, vutny, whiteinge, xmj, xopher-mc, yannis666, youngnick, zygiss)

Security Fix

CVE-2016-3176 Insecure configuration of PAM external authentication service

This issue affects all Salt versions prior to 2015.8.8/2015.5.10 when PAM external authentication is enabled. This issue involves passing an alternative PAM authentication service with a command that is sent to LocalClient, enabling the attacker to bypass the configured authentication service. Thank you to Dylan Frese <dmfrese@gmail.com> for bringing this issue to our attention.

This update defines the PAM eAuth service that users authenticate against in the Salt Master configuration.

Read Before Upgrading Debian 7 (Wheezy) from 2015.8.7 to 2015.8.8

Before you upgrade from 2015.8.7 on Debian 7, you must run the following commands to remove previous packages:

```
sudo apt-get remove python-pycrypto
sudo apt-get remove python-apache-libcloud
```

Note that python-pycrypto will likely remove python-apache-libcloud, so the second command might not be necessary. These have been replaced by python-crypto and python-libcloud with ~bpo70+1 moniker.

Read Before Upgrading Debian 8 (Jessie) from Salt Versions Earlier than 2015.8.4

Salt systemd service files are missing the following statement in these versions:

```
[Service]
KillMode=process
```

This statement must be added to successfully upgrade on these earlier versions of Salt.
Changelog for v2015.8.7..v2015.8.8

Generated at: 2018-05-28 00:23:11 UTC

- PR #31964: (jfindlay) update 2015.8.8 release notes @ 2016-03-17 21:22:04 UTC
  - b9d0336cf8 Merge pull request #31964 from jfindlay/2015.8
  - b984659678 update 2015.8.8 release notes

- ISSUE #31586: (frogunder) Proxy minion service.modules fails (refs: #31601)

- ISSUE #31585: (frogunder) Proxy minion commands causing exceptions (refs: #31601)

- PR #31947: (cro) Move proxymodule assignment earlier in proxy minion init @ 2016-03-17 18:14:23 UTC
  - PR #31601: (cro) Proxy fixes for #31585 and #31586
  - feb6941a04 Merge pull request #31947 from cro/bp-31601
  - 4eb193ed7 Lint, unrelated but fixed anyway.
  - d661081016 Lint.
  - 59e0a6f923 Don't add this file
  - c68b968403 Old-style proxymodules need to be setup earlier in minion init. Also include more correct comments in config.py

- PR #31948: (rallytime) Revert "not not" deletion and add comment as to why that is there @ 2016-03-17 17:00:22 UTC
  - a86490ee68 Merge pull request #31948 from rallytime/disable-pylint-error
  - 86196cd59d Revert "not not" deletion and add comment as to why that is there

- PR #31952: (rallytime) Fix lint for 2015.8 branch @ 2016-03-17 16:59:49 UTC
  - db3af864ae Merge pull request #31952 from rallytime/lint-2015.8
  - 3e964ec9d4 Fix lint for 2015.8 branch

- PR #31933: (rallytime) Fix linking syntax in testing docs @ 2016-03-17 14:44:13 UTC
  - 9ab4d164b Merge pull request #31933 from rallytime/fix-test-links
  - 06dd2c0411 Fix linking syntax in testing docs

- ISSUE #31586: (frogunder) Proxy minion service.modules fails (refs: #31601)

- ISSUE #31585: (frogunder) Proxy minion commands causing exceptions (refs: #31601)

- PR #31930: (cro) Backport changes from 2016.3 @ 2016-03-16 22:12:29 UTC
  - PR #31601: (cro) Proxy fixes for #31585 and #31586
  - 723d0ca19f Merge pull request #31930 from cro/bp-31601
  - aa9a288b5a Add these files back in
  - 916ef26957 Remove .orig file mistakenly added, reformat example.
  - 3c8185571d Lint.
  - 9de9b9e86d Missin import
  - d571f3b8fe Backport PR`#31601`

- PR #31924: (jfindlay) update 2015.8.8 release notes @ 2016-03-16 22:10:15 UTC
- ce765ad2df Merge pull request #31924 from jfindlay/2015.8
- 64dd8aeb8b update 2015.8.8 release notes

- **ISSUE #31890**: (damon-atkins) salt/fileclient.py get_url should include the URL in any error message (refs: #31922)

- **PR #31922**: (cachedout) For 2015.8 head @ 2016-03-16 19:07:11 UTC
  - 390ef9fca7 Merge pull request #31922 from cachedout/issue_31890_1
  - da075d9341 For 2015.8 head

- **PR #31904**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-03-16 17:23:54 UTC
  - 03e8b72655 Merge pull request #31904 from rallytime/merge-2015.8
  - f8b4b1b211 last pylint!
  - 892591a93c More pylint fixes
  - 35b2076584 Pylint fixes
  - 1a1ce05186 Merge branch '2015.5' into '2015.8'
    - 440e0dcb2e Merge pull request #31825 from jfindlay/update_pylintrc
      - 9a14e02766 Updated beacons/sh.py to work with enumerate()
      - 0cece691a0 Adjusted beacons to work with enumerate better
      - f509b4113e Fixed final lint error
      - 5945b3f11f Fix and disable pylint errors
      - 06ae6ef55 Fixed pylint errors on jboss state and module
      - de96db97c8 Fixed more pylint errors, and disabled some more
      - c07b0a2b55 Merge branch 'lint_fixes' into udpate_pylintrc
      - 2e6a152308 Fixed lint error in lxc.py
      - 908ca1a439 Fixed lint error in ssh_py_shim
      - 404c1b50f7 Changed range(len()) to enumerate()
      - 1e13586546 Changed range(len()) to enumerate()
      - 9ccee7a9a5 Added more disables
      - 9c1a83b4e Updated .testing.pylintrc to match newer versions of pylint
    - 471e9444a3 Merge pull request #31900 from rallytime/fix-psutil-warning
      - 22403d69ae Add "python module" clarification to ps __virtual__ warning.
    - c44c55e59 Merge pull request #31878 from rallytime/fix-psutil-warning
      - 4wb29f72a1 Make sure __virtual__ error message is helpful when psutil is missing
    - 5eb592b6768 Merge pull request #31852 from rallytime/merge-2015.5
      - 1470de17fa Merge branch '2014.7' into '2015.5'
      - 218c902091 Merge pull request #31834 from jfindlay/2014.7
      - 358fdd0c8 add 2014.7.8 release notes
      - a423c6cd04 Merge pull request #31833 from jfindlay/2014.7

### 30.2. Previous Releases
- 6910fcc584 add 2014.7.9 release notes
- c5e7c03953 Merge pull request #31826 from gtmanfred/2014.7
- d73f70eb2b Remove ability of authenticating user to specify pam service
  - 0cc1d5db03 Merge pull request #31827 from gtmanfred/2015.5
  - 979173b78a Remove ability of authenticating user to specify pam service
- 8cf0b9eb3d Merge pull request #31810 from whiteinge/saltenv-jinja-var
  - cb72b19240 Fix outdated Jinja 'env' variable reference

- **PR #31906:** (sbridba) Win_dacl module: fix FULLCONTROL / FILE_ALL_ACCESS definition @ 2016-03-16 15:20:19 UTC
  - a4b3462346 Merge pull request #31906 from sbridba/win_dacl_fixes
  - 54d81b9b42 Fix FULLCONTROL / FILE_ALL_ACCESS definition (bugfix and code simplification). Use consistent mechanism for obtaining user SID. Allow wildcarding (via optional parameters) for a variety of methods (get, rm_ace, check_ace).

- **PR #31745:** (isbm) Fix the always-false behavior on checking state @ 2016-03-15 23:02:20 UTC
  - b068ea9963 Merge pull request #31745 from isbm/isbm-always-minion-errcode-2-fix
  - 1882ec960 Adjust test
  - f96c8f9b5e Keep first level away from lists.
  - baaf605b8 Fix PEP8 continuation
  - 1dbd1ea59a Fix the always-false behavior on checking state (there are always lists at some point!)

- **PR #31911:** (rallytime) Merge #31903 with pylint fix @ 2016-03-15 20:35:35 UTC
  - PR #31903: (terminalmage) Use remote_ref instead of local_ref to see if checkout is necessary (refs: #31911)
  - d05c3ee9a9 Merge pull request #31911 from rallytime/merge-31903-with-pylint
  - 8se5ac11a Merge #31903 with pylint fix

- **PR #31883:** (paioiu) Fix scaleway cloud provider and manage x86 servers @ 2016-03-15 20:31:18 UTC
  - 819a4aa8b54 Merge pull request #31883 from mvpstars/scaleway-x86
  - 1662a080e1 Update scaleway cloud provider to manage x86 servers

- **PR #31903:** (terminalmage) Use remote_ref instead of local_ref to see if checkout is necessary (refs: #31911) @ 2016-03-15 20:04:56 UTC
  - 142c47c50d Merge pull request #31903 from terminalmage/fix-git-pillar
  - af29940e1c Use remote_ref instead of local_ref to see if checkout is necessary

- **PR #31845:** (sakateka) Now a check_file_meta deletes temporary files when test=True @ 2016-03-15 19:55:21 UTC
  - ffd65c36e5 Merge pull request #31845 from sakateka/check_file_meta_clean_tmp
  - 5b30336b89 Now a check_file_meta deletes temporary files when test=True

- **ISSUE #31791:** (alexbleotu) Proxy minion starts spinning after running state.highstate (refs: #31846)

- **ISSUE #31728:** (bgridley) Custom grains syncing problem with proxy minion which causes high CPU utilization (refs: #31846)
• PR #31901: (rallytime) Back-port #31846 to 2015.8 @ 2016-03-15 19:12:43 UTC
  - PR #31846: (cro) Proxy infinite loop (refs: #31901)
  - 7428c73724 Merge pull request #31901 from rallytime/bp-31846
  - 1ed6ce302 Extra comment.
  - 6c2ef03b11 Fix event bus flood caused by unexpected recursive call.
• PR #31905: (terminalmage) Update versionadded directive @ 2016-03-15 18:43:06 UTC
  - 37f1ce9be2 Merge pull request #31905 from terminalmage/update-versionadded
  - dcc196c9e1 Update versionadded directive
• PR #31902: (rallytime) Update versionadded tag for new funcs @ 2016-03-15 18:41:08 UTC
  - PR #31857: (sjorge) gen_password and del_password missing from solaris_shadow (refs: #31902)
  - 35f6407d11 Merge pull request #31902 from rallytime/update-version-31857
  - 5cd09150cd Update versionadded tag for new funcs
• PR #31888: (terminalmage) Fix salt.utils.decorators.Depends @ 2016-03-15 17:09:54 UTC
  - 1be9c91761 Merge pull request #31888 from terminalmage/fix-depends-decorator
  - 394410e2b0 Add integration test for depends decorator
  - caa3cc1007 Fix salt.utils.decorators.Depends
• PR #31857: (sjorge) gen_password and del_password missing from solaris_shadow (refs: #31902) @ 2016-03-14 20:29:51 UTC
  - d357e4ea44 Merge pull request #31857 from sjorge/solarish_shadow
  - 3823130f3.9 release as mentioned by rallytime
  - 3e25f70968 fix version added
  - d768ed25b4 develop, 2016.3 and 2015.8 has missing gen_password and del_password for shadow module
• PR #31879: (cro) Clarify some comments @ 2016-03-14 19:59:35 UTC
  - 1b0b2d3f1a Merge pull request #31879 from cro/idrac_fixes_0314
  - 42ef3a7970 Extra comment.
• ISSUE #8927: (brutasse) file state: unable to use contents_pillar with template: jinja (refs: #31815)
• ISSUE #26944: (boltronics) file.managed contents and contents_pillar should support a template rendering engine (refs: #31815)
• ISSUE #14664: (jacksontj) Unable to have a template with file.managed contents (or contents_pillar) (refs: #31815)
• PR #31815: (dr4Ke) Fix template on contents 2015.8 @ 2016-03-14 17:41:46 UTC
  - fb81b07a23 Merge pull request #31815 from dr4Ke/fix_template_on_contents_2015.8
  - dcd6f5a5a9 test for file.apply_template_on_contents
  - 10df82296d file.managed: templating contents, not just files
• PR #31818: (anlutro) Prevent event logs from writing huge amounts of data @ 2016-03-14 17:27:47 UTC
  - aa120cb716 Merge pull request #31818 from alprs/fix-event_logging_spam
  - 83fa136da7 work on event logging
• ISSUE #31293: (deuscapturus) Git Pillars lose HEAD reference over time (refs: #31836)

• ISSUE #29239: (timwsuqld) Occasionaly git_pillar pull fails causing incorrect results of highstate (when running highstate for multiple minions) (refs: #31836)

• PR #31836: (terminalmage) Fix git_pillar race condition @ 2016-03-14 15:48:28 UTC
  - f2445bd6c Merge pull request #31836 from terminalmage/issue31293
  - 5048fa857c Fix duplicate output
  - 155b84b88a salt.fileserver: Add ability to clear checkout locks
  - af410d8d1 Pass through the lock_type
  - 3d7796d5dd salt.runners.cache: Add ability to clear checkout locks
  - 8e086099f5 salt.utils.gitfs: rewrite locking code
  - 06b212519c Add GitLockError exception class
  - ad04ccf93 Strip whitespace when splitting

• PR #31824: (rallytime) Back-port #31819 to 2015.8 @ 2016-03-13 19:59:32 UTC
  - PR #31819: (mchugh19) raise error on unsupported distro (refs: #31824)
  - 5464be07b1 Merge pull request #31824 from rallytime/bp-31819
  - 4d516adade raise error on unsupported distro

• ISSUE #24559: (iacopo-papalini) salt-cloud - Azure - should be possible to specify virtual network & subnet in profile (refs: #31856, #24569)

• PR #31856: (szeestraten) Adds missing docs for Virtual Network and Subnet options in salt-cloud Azure cloud profile @ 2016-03-13 19:06:52 UTC
  - PR #24569: (iacopo-papalini) Fix Issue #24559 - salt-cloud - Azure - should be possible to specify... (refs: #31856)
  - 7781b357e0 Merge pull request #31856 from szeestraten/add-missing-docs-for-azure-cloud-profile
  - a1a229405 Adds missing docs for Azure cloud profile

• PR #31839: (jfindlay) add 2015.8.8 release notes @ 2016-03-11 23:23:34 UTC
  - 3f88f3a8cf Merge pull request #31839 from jfindlay/2015.8
  - 47ac41ba27 add 2015.8.8 release notes

• PR #31828: (gtmanfred) Remove ability of authenticating user to specify pam service @ 2016-03-11 20:40:37 UTC
  - 46bd110a56 Merge pull request #31828 from gtmanfred/2015.8
  - 7c3134a3d3 Remove ability of authenticating user to specify pam service

• ISSUE #30489: (chris-martin) influxdb_user.present fails: "InfluxDBClient' object has no attribute 'get_list_cluster_admins" (refs: #31787, #31770)

• PR #31787: (anlutro) Fix user_create and db_create for new versions of influxdb @ 2016-03-11 15:19:22 UTC
  - 3d370b471c Merge pull request #31787 from alprs/fx-influxdb_user
  - 6a5211c8d8 don’t swallow exceptions
  - a7e9c1e381 fix db_create for influxdb 0.9+
  - 5a8a645d4b fix create_user for new versions of influxdb
• **PR #31800**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-03-10 20:49:53 UTC
  - 7fb2331ebc Merge pull request #31800 from rallytime/merge-2015.8
  - 44c15f0b16 Merge branch '2015.5' into '2015.8'
  - 970ef0e445 Merge pull request #31744 from brejoc/fix-attribute-error-with-older-libcloud/2015.5
    * bb29dc2283 Added version to libcloud depends statement
    * 87f9534fce Added log message with update suggestion for libcloud
    * 72eab406cd Fix for AttributeError with libcloud <0.15
  - df2d23ba5d Merge pull request #31740 from terminalmage/issue31666
    * aeaf5864cd Fall back to False when pillar_opts not set
    * fe19d77eb4 Add default value for pillar_opts on minion
  - e2f5c0a26 Merge pull request #31750 from rallytime/bp-26170
    * 3c11234a05 Make sure variable is a dictionary before popping something from it.
    * 9162925dd0 Merge pull request #31689 from rallytime/bp-29467
    * 1f84cb99b Update module.py

• **PR #31797**: (Ch3LL) Change pkg name to less for suse pkg.info_installed test @ 2016-03-10 19:08:16 UTC
  - 75db2ed40 Merge pull request #31797 from Ch3LL/fix_pkginfo_test
  - 910f09dffe change pkg name to less for suse

• **ISSUE #31617**: (tampakrap) service.running fails on sle11 sp3 and sp4 (refs: #31629, #31793)

• **PR #31793**: (xopher-mc) fixing init system detection on sles 11, refs #31617 @ 2016-03-10 18:42:27 UTC
  - 1386b72bcb Merge pull request #31793 from xopher-mc/fix_sles_state_service_module
  - d242cb19b4 fixing init system dectection on sles 11, refs #31617

• **PR #31786**: (isbm) Bugfix: zypper doesn't detect base product on SLE11 series @ 2016-03-10 18:12:46 UTC
  - 2f2c166dd Merge pull request #31786 from isbm/isbm-zypper-list-products-sles11
  - ee1a002673 Update test case to cover SLE11 and SLE12
  - 4b134fb2ab Add SLE11 product info snapshot, rename previous
  - 3c5fc857b2 Bugfix: on SLE11 series base product reported as additional

• **ISSUE #31776**: (gtmanfred) ProxyMinion does not close connections (at least with esxi proxy) (refs: #31780)

• **PR #31780**: (gtmanfred) use already created vsphere connection @ 2016-03-10 17:41:53 UTC
  - d6f669623c Merge pull request #31780 from gtmanfred/2015.8
  - 070eaf07f0 use already created vsphere connection

• **ISSUE #31772**: (sbreidba) win_dacl state causes state.apply output to be YAML, not highstate (refs: #31779)

• **PR #31779**: (sbreidba) win_dacl state & module: return comment field as strings, not lists. @ 2016-03-10 17:41:08 UTC
  - a067dc3712 Merge pull request #31779 from sbreidba/win-dacl-highstate-output-2015.8
  - aeb2bfcf46 win_dacl state & module: return comment field as strings, not lists.

• **ISSUE #31563**: (sjorge) regression in 2016.3 from today? (refs: #31723, #31707)
• PR #31723: (sjorge) file_ignore_regex is a list, not bool @ 2016-03-09 23:36:10 UTC
  – PR #31707: (sjorge) Fix incorrect default types for master_tops and file_ignore_regex (refs: #31723)
  – baefac252 Merge pull request #31723 from sjorge/2015.8-file_ignore_regex
  – df1ba94cbb file_ignore_regex is a list, not bool
• ISSUE #27960: (The-Loeki) salt-cloud CLI 2015.8 borks out with SaltClientError: ‘timeout’ (refs: #31747)
• PR #31747: (techhat) Use get_local_client with MASTER opts, not MINION @ 2016-03-09 23:14:58 UTC
  – cd43cf919c Merge pull request #31747 from techhat/issue27960
  – df1ba94cbb file_ignore_regex is a list, not bool
• ISSUE #27960: (The-Loeki) salt-cloud CLI 2015.8 borks out with SaltClientError: ‘timeout’ (refs: #31747)
• PR #31688: (whiteinge) Various SMTP returner fixes @ 2016-03-09 22:40:37 UTC
  – 286ea1f61b Merge pull request #31688 from whiteinge/smtp-renderer
  – 76671b6a81 Check if we have a StringIO and grab the string instead
  – 17b8cd755f Add a default for the subject
  – 26479bee24 Clean up the SMTP returner docstring and show an actual config example
  – 74563f17ed Make sure the email subject and body are strings
  – fc69d08e8e Default to just ‘jinja’ for the SMTP renderer
  – 2a7cd2789 Add missing ‘port’ to smtp options
• PR #31752: (rallytime) Back-port #31686 to 2015.8 @ 2016-03-09 21:23:01 UTC
  – PR #31686: (myii) Fix typo in example for section winrepo_dir_ng (refs: #31752)
  – 1d6d98e5c Merge pull request #31752 from rallytime/bp-31686
  – e4df5d9a55 Fix typo in example for section winrepo_dir_ng
• PR #31733: (jacobhammons) docs to clarify cloud configuration @ 2016-03-09 20:54:10 UTC
  – ec90294442 Merge pull request #31733 from jacobhammons/cloud-docs
  – 209c641a41 Made udpates as suggested by @rallytime
  – 26d4991cb3 moved previous intro to new quick start topic (topics/cloud/qs.rst) added new intro that explains the salt cloud configuration files added an inheritance and minion startup state example to topics/cloud/config.rst
• ISSUE #26498: (rallytime) [salt-cloud] Able to create multiple VMs with the same name across providers (refs: #31754, #31775)
• PR #31775: (techhat) Show correct provider/driver name @ 2016-03-09 20:53:10 UTC
  – 92ba7f3495 Merge pull request #31775 from techhat/correctmsg
  – c1433650b4 Show correct provider/driver name
• ISSUE #26498: (rallytime) [salt-cloud] Able to create multiple VMs with the same name across providers (refs: #31754, #31775)
• PR #31754: (techhat) Check all providers, not just the current one @ 2016-03-09 18:38:19 UTC
  – 249a3602eb Merge pull request #31754 from techhat/issue26498
  – 08c61446b7 Check all providers, not just the current one
• ISSUE #31639: (mshirley) salt-cloud digital ocean api v2 doesn’t implement all available actions (refs: #31735)
- **PR #31735**: ([rallytime](https://github.com/rallytime)) Add reboot, start, and stop actions to digital ocean driver @ 2016-03-09 17:57:58 UTC
  - 7ad521f7a5 Merge pull request #31735 from rallytime/fix-31639
  - 67d1aa6740 Remove experimental/incomplete function
  - b209623ca9 Add reboot, start, and stop actions to digital ocean driver
- **ISSUE #30489**: ([chris-martin](https://github.com/chris-martin)) influxdb_user.present fails: "InfluxDBClient object has no attribute 'get_list_cluster_adms'" (refs: #31787, #31770)
- **PR #31770**: ([anlutro](https://github.com/anlutro)) Fix influxdb user functionality for version 0.9+ @ 2016-03-09 17:09:26 UTC
  - fd3610c6a4 Merge pull request #31770 from alprs/fix-influxdb_user
  - 1349b2d2e8 fix influxdb user functionality for version 0.9+
- **PR #31743**: ([Talkless](https://github.com/Talkless)) Fix parentheses mismatch in documentation @ 2016-03-08 18:01:23 UTC
  - c0865307df Merge pull request #31743 from Talkless/patch-1
  - 26ff46db66 Fix parenthesis mismatch in documentation
- **PR #31162**: ([isbm](https://github.com/isbm)) Remove MD5 digest from everywhere and default to SHA256 @ 2016-03-07 19:11:36 UTC
  - 826fe6a6582 Merge pull request #31162 from isbm/isbm-md5-to-sha1
  - 9d64abed0c Fix PyLint
  - 327eaa1139 Add daemons unit test to verify hash_type settings
  - f3acc9b22 Standardize logging
  - 51f56f6243 Verify if hash_type is using vulnerable algorithms
  - 95ec634f00 Report environment failure, if any
  - 63ee5defb4 Use mixin for the daemon classes
  - 82dd385630 Create a mixin class that will be reused in the similar instances (daemons)
  - 36da8f56fa Use MD5 hash algorithm by default (until deprecated)
  - 5843257978 Remove SHA1 in favor of SHA256
  - 373499c13f Remove SHA1 for SHA256
  - d5cb4a4d24 Remove sha1 to sha265
  - 73b8d35e01 Add note to the Tomcat module for SHA256
  - ebf78f1055 Remove SHA1 to SHA265 by default
  - 6198976ed6 Use SHA1 by default instead of MD5
  - 3f2f8756ce Use SHA1 hash by default in Tomcat module, refactor for support different algorithms
  - 04ae4e31f8 Use SHA1 hash by default
  - 785717703b Use configurable hash_type for general Key fingerprinting
  - f0d931f4d0 Use hash_type configuration for the Cloud
  - 95cb59dece Set default hash as SHA1 in config and explain why.
  - 8f9543c292 Set config hash_type to SHA1
  - 413eca124 Set default checksum for key fingerprint to SHA1
- **ISSUE #30528**: ([UtahDave](https://github.com/UtahDave)) Missing Minion notifications missing from job cache (refs: #31670)
**PR #31670: (terminalmage)** Write lists of minions targeted by syndic masters to job cache @ 2016-03-07 18:51:53 UTC

- a1f32b71bd Merge pull request #31670 from terminalmage/issue30528
- 65e5a3c53e Pass syndic_id to save_minions()
- c994c2597a Add argument to save_minions() to pass a syndic ID
- cb92114377 Add syndic_id param for API compatibility
- 1d39ee69b Skip events with minion lists but no jid
- 651e3926f7 lint fixes
- 0f175a4edf salt.returners.sqlite3_return: add no-op save_minions() func for API compatibility
- f8664103b1 salt.returners.redis_return: add no-op save_minions() func for API compatibility
- 0ea1b76c22 salt.returners.postgres_local_cache: add no-op save_minions() func for API compatibility
- d6d794b484 salt.returners.postgres: add no-op save_minions() func for API compatibility
- 82750ab699 salt.returners.pgjsonb: add no-op save_minions() func for API compatibility
- d8f90f6578 salt.returners.odbc: add no-op save_minions() func for API compatibility
- a1957c3706 salt.returners.mysql: add no-op save_minions() func for API compatibility
- ef6aa5de1c salt.returners.multi_returner: add no-op save_minions() func for API compatibility
- 5b4eb58d99 salt.returners.mysql return: add no-op save_minions() func for API compatibility
- da1acbb8f2 salt.returners.mongo_future_return: add no-op save_minions() func for API compatibility
- c13b6549c salt.returners.memcache_return: add no-op save_minions() func for API compatibility
- 4322ad9ef3 salt.returners.influxdb_return: add no-op save_minions() func for API compatibility
- 1dd106183c salt.returners.etcd_return: add no-op save_minions() func for API compatibility
- 8e80535516 salt.returners.couchdb_return: add no-op save_minions() func for API compatibility
- 44538dfced salt.returners.cassandra_cql_return: add no-op save_minions() func for API compatibility
- 084a78407a salt.returners.mongo_future_return: move minion list updates to new save_minions() func
- f731dc5d32 Update a job's minion list to include minion lists forwarded by syndic
- 504f7df460 Add utils function to invoke a returner's save_minions() func
- 0b4616a3eb Separate writing of serialized minion list into its own function
- 214fedc3f6 Simplify jobs.get_jobs logic, generally improve jobs runner docs
- 3f527be748 Add an exception class for errors encountered while locking files.
- 1e6b43ee8 Add a contextmanager for file locking
- 978b6cb32f Add missing RST file for slsutil module
- 2ad8e6ff2 Add salt.utils.split_input()

**ISSUE #31595: (dverbeek84)** dockerng ports specified in Dockerfile must be in sls file otherwise salt gives an error (refs: #31711)

**PR #31711: (ticosax)** [dockerng] Port and Volume comparison should consider Dockerfile @ 2016-03-07 18:25:19 UTC

- 24568b1a5d Merge pull request #31711 from ticosax/fix-port-and-volume-discovery
• ISSUE #31579: (bradthurber) salt-cloud delete with a map file fails when multiple providers defined (refs: #31719)
• PR #31719: (techhat) Don’t worry about KeyErrors if the node is already removed @ 2016-03-07 18:16:40 UTC
  – b936e09fb3 Merge pull request #31719 from techhat/issue31579
  – 88905095c9 Don’t worry about KeyErrors if the node is already removed
• PR #31713: (ticsax) [dockerng] Fix dockerng.network_present when container is given by name @ 2016-03-07 15:14:41 UTC
  – 604eb87e82 Merge pull request #31713 from ticsax/fixedockerng-network_present
  – 3837cf44ca Fix network_present by dealing with containers ID’s instead of names.
• ISSUE #31704: (peripatetic-sojourner) Foreman external pillar doesn’t load (refs: #31705)
• PR #31705: (peripatetic-sojourner) Foreman pillar @ 2016-03-07 14:24:58 UTC
  – 8f28e4510d Merge pull request #31705 from peripatetic-sojourner/foreman_pillar
  – ba3d75949 passing lint test
  – 63e39a8999 refactored parameter population for foreman pillar
  – c3325bc15d add return of virtualname
• PR #31702: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-03-06 19:24:47 UTC
  – aa5c13f0b8 Merge pull request #31702 from rallytime/merge-2015.8
  – 6559ea15b0 Merge branch '2015.5' into '2015.8'
  – d7914cdb14 Merge pull request #31687 from cachedout/rm_gpg_test
    * 8b00513ebb Removed useless tests
    * da954d7b92 Add integration test for packages with epoch in version
    * 4fa7e4defe Move epoch removal
    * 290192af56 Remove epoch from version string if present when installing with yum
  – e33c1f456a Merge pull request #31683 from rallytime/bp-31578
    * 8fe46789b7 allow queueing of state runs through saltmod
  – 27f443895d Merge pull request #31682 from cachedout/cache_meaning
    * a75e146125 Add definition of job cache to glossary
  – bd04c964d1 Merge pull request #31658 from rallytime/add-style-to-contrib
    * 6b526b5878 Add mentioned of Salt’s Coding Style docs to the Contributing docs
  – 10658dfe6 Merge pull request #31655 from rallytime/pylint-docs
    * 6e0377d376 Make note of pylint dependencies in docs
  – 6b075774a01 Merge pull request #31440 from cachedout/master_tops_type
    * 49cc75049 Set correct type for master_tops config value
• PR #31700: (s0undt3ch) It’s a function! @ 2016-03-06 17:33:58 UTC
  – ace290629e Merge pull request #31700 from s0undt3ch/2015.8
1ca2beea3e It's a function!

- **PR #31679** (cro) Fix bad link to the sample REST endpoint in salt-contrib. @ 2016-03-04 21:05:50 UTC
- cf438aa873 Merge pull request #31679 from cro/proxy_contrib_doc_fix
- d638971b73 Correct url to salt-contrib

- **ISSUE #21932** (clinta) Salt Coding Style docs should list requirements for salt pylintrc (refs: #31655)

- **PR #31668** (rallytime) Some more testing documentation improvements @ 2016-03-04 20:48:57 UTC
  - **PR #31658** (rallytime) Add mentioned of Salt's Coding Style docs to the Contributing docs (refs: #31668)
  - **PR #31655** (rallytime) Make note of pylint dependencies in docs (refs: #31668)
  - **PR #31641** (rallytime) Improve Salt Testing tutorial to be a more comprehensive intro (refs: #31668)
  - 97127a8b83 Merge pull request #31668 from rallytime/testing-docs
  - beb9d0fe84 Ensure all integration test classes and funcs are documented w/examples
  - 7fbef7c97 Found another spelling error
  - c8c18835f Spelling fix
  - f260c51762 Some more testing documentation improvements

- **ISSUE #29753** (jakehilton) New minion fails to authenticate properly to multi-master setup (refs: #31653)

- **PR #31653** (DmitryKuzmenko) Don’t attempt to verify token if it wasn’t sent to master. @ 2016-03-03 17:39:35 UTC
  - 2ed7286af1 Merge pull request #31653 from DSRCompany/issues/29753_multimaster_auth_fail
  - 2557707cc7 Don’t attempt to verify token if it wasn’t sent to master.

- **ISSUE #31617** (tampakrap) service.running fails on sle11 sp3 and sp4 (refs: #31629, #31793)

- **PR #31629** (darix) Fix services on sles @ 2016-03-03 16:41:27 UTC
  - 118fcd425 Merge pull request #31629 from darix/fix-services-on-sles
  - 9b8d6cb72 make the suse check consistent with rh_service.py
  - c0c8a77242 Fix numerical check of osrelease

- **PR #31641** (rallytime) Improve Salt Testing tutorial to be a more comprehensive intro (refs: #31668) @ 2016-03-03 16:08:47 UTC
  - 4d1701de60 Merge pull request #31641 from rallytime/testing-tutorial
  - dbab39f1748 Improve Salt Testing tutorial to be a more comprehensive intro

- **ISSUE #30651** (sjorge) salt.states.grains.list_present should not show changes if none are made! (refs: #31651, #30689)

- **PR #31651** (dr4Ke) test case: test_list_present_nested_already @ 2016-03-03 16:02:55 UTC
  - **PR #30689** (sjorge) fix for #30651 grains.list_present and grains.list_absent (refs: #31651, #31271)
  - 584f8401b8 Merge pull request #31651 from dr4Ke/test_case_for_30689
  - fc9dd356e8 test case: test_list_present_nested_already

- **PR #31643** (opdude) Make sure we are really updating the mercurial repository @ 2016-03-03 14:30:53 UTC
  - 5566f1f2a7 Merge pull request #31643 from Unity-Technologies/hotfix/hg-fix-repo-updated
  - ca41c4b8c1 Make sure we are really updating the mercurial repository
• ISSUE #30761: (sjmh) Cannot target subsets of minions when using pillar and external_auth (refs: #31598)

• PR #31598: (terminalmage) Remove limitations on validation types for eauth targets @ 2016-03-02 22:14:41 UTC
  - 36c790e8e Merge pull request #31598 from terminalmage/issue30761
  - 5dedaa2d90 Remove limitations on validation types for eauth targets

• PR #31627: (jakehilton) Handling error from using gevent 1.1. @ 2016-03-02 22:01:22 UTC
  - cc4c31cf7f Merge pull request #31627 from jakehilton/2015.8
  - 02f3ed61f6 Handling error from using gevent 1.1.

• PR #31630: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-03-02 20:49:52 UTC
  - 191241e71a Merge pull request #31630 from rallytime/merge-2015.8
  - 75bb692990 Merge branch '2015.5' into '2015.8'
  - 6d31b9918f Merge pull request #31622 from jfindlay/query_doc
    * 4e48fec806 doc/topics/tutorials/http: update query decoding docs
  - dbf6e0786c Merge pull request #31558 from cachedout/ensure_ssh_installed
    * cecc6e0a5f Don't stacktrace if ssh binary is not installed with salt-ssh

• PR #31594: (rallytime) Back-port #31589 to 2015.8 @ 2016-03-02 16:33:24 UTC
  - PR #31589: (techhat) Ensure that the latest node data is returned (refs: #31594)
    - 38d3d62aef Merge pull request #31594 from rallytime/bp-31589
    - 6cd8945c7 Ensure that the latest node data is returned

• ISSUE #31596: (joejulian) gluster --xml does not always produce xml with legacy versions (refs: #31604)

• PR #31604: (joejulian) Workaround for non-xml output from gluster cli when not tty @ 2016-03-02 15:53:44 UTC
  - 86a0fc46b4 Merge pull request #31604 from joejulian/2015.8_31596_workaround_no_xml_when_not_tty
  - c567a823a9 Workaround for non-xml output from gluster cli when not tty

• PR #31583: (vutny) Remove trailing white spaces @ 2016-03-02 15:38:01 UTC
  - 36ce420596 Merge pull request #31583 from vutny/remove-trailing-white-spaces
  - bbeda938d Fix trailing white spaces in Salt PRM spec file
  - 86433f2378 Revert changes in files used by roots_test.py integration test
  - e7a8dbf498 Remove trailing white spaces in tests files
  - 776b2ea9a6 Remove trailing white spaces in files under salt/ dir
  - fbfc3abcff Remove trailing white spaces in files under pkg/ dir
  - aefc48163d Remove trailing white spaces in documentation files
  - 7ef778695 Remove trailing white spaces in conf dir file

• PR #31592: (rallytime) Back-port #31546 to 2015.8 @ 2016-03-01 23:51:02 UTC
  - PR #31546: (terminalmage) Rework of PR #31529 (refs: #31592)
  - PR #31529: (llua) nspawn.py: Fix bad keyword assignment (refs: #31546)
    - c9f88d87f3 Merge pull request #31592 from rallytime/bp-31546
- 9a296d1bf Use clean_kwargs and invalid_kwargs utils funcs to handle invalid kwargs
- 43099a2b63 nspawn.py: Fix bad keyword assignment

- ISSUE #30866: (kevinquinnyo) WheelClient cmd returns None but wheel functions called directly work (refs: #31570)
- ISSUE #26415: (CaesarC) salt.wheel.WheelClient doesn't work follow the python api(AttributeError: 'None-Type' object has no attribute 'get') (refs: #28087)

- PR #31593: (rallytime) Back-port #31570 to 2015.8 @ 2016-03-01 23:50:05 UTC
  - PR #31570: (cro) Need to return the value (refs: #31593)
  - PR #28087: (DmitryKuzmenko) Revert "Update __init__.py" (refs: #31570)
  - c8dbc93ac6 Merge pull request #31593 from rallytime/bp-31570
  - b294d0a28 Need to return the value

- ISSUE #28585: (robthralls) FIPS compliance (2015.8.1-1) (refs: #31567)

- PR #31567: (cachedout) Restore FIPS compliance when using master_finger @ 2016-03-01 19:50:03 UTC
  - 068807558a Merge pull request #31567 from cachedout/issue_28585
  - 7006a1eeec Fix failed unit test
  - 10cd328dda Lint
  - 174337d020 Restore FIPS compliance when using master_finger

- PR #31568: (twangboy) Grant permissions using SID instead of name @ 2016-03-01 04:22:53 UTC
  - 77d9aae8bb Merge pull request #31568 from twangboy/fix_perms
  - 1f6a95694d Grant permissions using SID instead of name

- ISSUE #31516: (justinta) beacons.enable_beacon does not write to beacons.conf on some OS's (refs: #31561)

- PR #31561: (justinta) Skipped test @ 2016-03-01 04:11:22 UTC
  - ada5ab344d Merge pull request #31561 from jtand/beacons_test_fix
  - 196dd4db99 Skipped test

- ISSUE #31041: (fredrikaverpil) Reading about win_service in 2015.8.5 docs, but it's not available in 2015.8.5 (refs: #31550, #31049)

- PR #31550: (rallytime) Correct versionadded tag for win_service.config @ 2016-02-29 21:11:24 UTC
  - PR #31049: (twangboy) Fix versionadded in win_service.config (refs: #31550)
  - 658c1865ab Merge pull request #31550 from rallytime/win_service-docs
  - 51aa26334c Correct versionadded tag for win_service.config

- PR #31549: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-02-29 18:46:35 UTC
  - 9bb9a54f8d Merge pull request #31549 from rallytime/merge-2015.8
  - b683df9b82 Pylint fix
  - 24505d2dcf Merge branch '2015.5' into '2015.8'
    - 060a60fd90 Merge pull request #31521 from terminalimage/issue24753
      - 0d352bb16 Add fileclient tests
      - d9370a0841 Update cp module salt-ssh wrapper to use new cachedir param
· 0320494b1d Update the SSH state module wrappers to pass an alternate cachedir
· 65bdcb3afa Accept and pass through the alternate cachedir when prepping the thin tar
· c3f7a2f2e5 Add ability to specify an alternate base dir for file caching
  * 92f8f9218 Merge pull request #31497 from rallytime/remove-timeout-dup
  * 83e6480d20 Remove duplicate "timeout" definition in Roster docs
  * da001bcb49 Merge pull request #31472 from rallytime/update-contributing-docs
  * 5871e4d1e0 Update contributing docs
  ** 92f8f89218 Merge pull request #31497 from rallytime/remove-timeout-dup
  ** da001bcb49 Merge pull request #31472 from rallytime/update-contributing-docs
  ** 5871e4d1e0 Update contributing docs

• ISSUE #29701: (tonyyang132) Running salt-call on salt master would crash the master node with code level 2015.8.3 (refs: #31544)
• ISSUE #27063: (lorenrgordon) 2015.8.0: Error writing to /var/log/salt/minion? (refs: #31544)
• PR #31544: (DmitryKuzmenko) Protect getattr from recursion @ 2016-02-29 17:48:15 UTC
  – 5a6af1791 Merge pull request #31544 from DSRCompany/issues/29701_getattr_recursion_protection
  – b7a45b8fae Protect getattr from recursion
• ISSUE #30643: (Ch3LL) multi-master failover stack trace when minion fails over to other master (refs: #31512, #31525)
• ISSUE #30181: (jakehilton) Minion failover only works once (refs: #31512)
• ISSUE #29567: (freebsdly) multi master failover successful but execute command 'salt * test.ping' on second master return 'Minion did not return. [No response]' (refs: #31512)
• PR #31525: (DmitryKuzmenko) Issues/30643 merge forward fixes @ 2016-02-29 16:08:47 UTC
  – PR #31512: (DmitryKuzmenko) Don't fork in try with critical finally logic. (refs: #31525)
  – PR #30796: (skizunov) Fix minion failover after disconnect (refs: #31512, #31525)
  – d5a4daa17b Merge pull request #31525 from DSRCompany/issues/30643_merge_forward_fixes
  – a50b33d96a Don't fork in try with critical finally logic.
  – 877bc25381 Fix minion failover after disconnect
• ISSUE #24955: (damonnk) Minion fails to start after bootstrap on Raspberry PI (refs: #31536)
• PR #31536: (virtualguy) Remove debian repo from raspbian installation @ 2016-02-29 15:32:52 UTC
  – 95af21325f Merge pull request #31536 from virtrnd/remove-jessie-backports-from-raspbian-install
  – e48900ac55 Use python-tornado from jessie-backports for pure debian
  – 6e338e2601 Remove debian repo from raspbian installation
• ISSUE #31193: (gwaters) RHEL7 gpg key problem (refs: #31528)
• PR #31528: (vutny) Correct Salt Cloud documentation about updating Salt Bootstrap script @ 2016-02-29 15:30:59 UTC
  – 5965319600 Merge pull request #31528 from vutny/cloud-bootstrap-doc
  – f7beeb69f2 Correct Salt Cloud documentation about updating Salt Bootstrap script
• ISSUE #31365: (cwicklein) osrelease_info broken for CentOS 7 (refs: #31539)
- **PR #31539**: (DmitryKuzmenko) Added temporary workaround for CentOS 7 os-release id bug. @ 2016-02-29 15:30:34 UTC
  - 96c0926298 Merge pull request #31539 from DSRCompany/issues/31365_centos7_osrelease_fix
  - a3b806d126 Added temporary workaround for CentOS 7 os-release id bug.
- **PR #31508**: (mcalmer) Zypper correct exit code checking @ 2016-02-26 15:21:23 UTC
  - 95db870325 Merge pull request #31508 from mcalmer/zypper-correct-exit-code-checking
  - 66e8f6aa37 restructure the code a bit
  - fc3c5a57c4 remove new lines between zypper command and check result
  - 14256496c use specialized assert functions for tests
  - f266cfdac1 test _zypper_check_result()
  - aff6467782 adapt tests to new zypper_check_result() output
  - edad780cfc use _zypper_check_result()
  - 7c5d5a2b7a add _zypper_check_result() to raise and error or return stdout
  - a678ef7a9 check zypper exit code everywhere
  - 935b0510c9 add function to check zypper exit codes

- **ISSUE saltstack/salt-bootstrap#695**: (mtippett) Install Failures With Raspbian Jessie (refs: #31510, #31477, #31458)

- **PR #31510**: (vutny) Add installation guide for Raspbian (Debian on Raspberry Pi) @ 2016-02-26 15:06:57 UTC
  - e51126179c Merge pull request #31510 from vutny/debian-raspbian-install-guide
  - 50f3e072b1 Add instruction how to install salt-minion on Debian Jessie from Stretch
  - abcd505178 Update Debian installation guide with information about Raspbian

- **PR #31498**: (Ch3LL) rename methods in pkg states test @ 2016-02-25 23:29:51 UTC
  - 9d458bb420 Merge pull request #31498 from Ch3LL/rename_test
  - 29a53f4353 rename methods in pkg states test

- **ISSUE #31427**: (githubcdr) salt.states.grains.list_present adds duplicates names (refs: #31471)

- **PR #31471**: (cachedout) Correct issue where duplicate items in grains list during state run will result in duplicate grains @ 2016-02-25 20:15:20 UTC
  - 625da0d261 Merge pull request #31471 from cachedout/issue_31427
  - 74e3053e91 Remove debugging
  - 30eb5f07c7 Additional tests, but disable the test for distinct lists, because of a problem with context in test suite
  - 3d2ae05e5 Check for duplicate grains during list insertion

- **ISSUE #29727**: (oeuftete) dockerng.running does not pull image as documented (refs: #31352, #31455)

- **PR #31455**: (ticsax) [dockerng] Disable notset check @ 2016-02-25 19:15:09 UTC
  - e85e2341a Merge pull request #31455 from ticsax/diable-NOTSET-check
  - e072937243 dockerd returns sometimes None or [] for ports.
  - 5630401889 _api_mismatch was a good idea
- PR #31488: (isbm) Unit Test for Zypper's "remove" and "purge" @ 2016-02-25 17:52:33 UTC
  - e68a0947b7 Merge pull request #31488 from isbm/isbm-zypper-ut-removepurge
  - d30f2e4627 Implement unit test for remove and purge
  - 4ca201052 Refactor code (a bit)
  - df89da4d15 Fix the docstring
- PR #31485: (jacobhammons) Fixed transport description in minion / master config @ 2016-02-25 17:04:15 UTC
  - cd87760c87 Merge pull request #31485 from jacobhammons/2015.8
  - 748acab8b5 Fixed zeromq casing in transport settings
  - 765a226907 Fixed transport description in minion / master config
- PR #31411: (justinta) Added some beacons execution module integration tests @ 2016-02-25 16:16:26 UTC
  - fb1ef92e2b Merge pull request #31411 from jtand/beacons_tests
  - 7d32b56015 Added some more checks to verify beacon changes were actually happening
  - 2da5285c03 Added codeauthor
  - fd1e2838ea Lint
  - 421a112914 Added config_dir to test minion config
  - bf6a4c0983 Fixed lint error
  - 3566fbcba5 More updates to beacons test
  - 37c4bf22d2 Updated beacons integration test
  - 6db628be1a Basic integration tests for beacons execution module
  - 3b238c2e68 Started adding beacons execution module tests
- ISSUE #31216: (oliver-dungey) pkg.installed documentation not consistent with implementation (refs: #31475)
- ISSUE #30464: (sjmh) pillar_env minion config option needs to be documented (refs: #31475)
- ISSUE #30261: (MadsRC) Add ability to define custom beacons (refs: #31475)
- ISSUE #29636: (ronnix) Documentation for the refresh_password arg in postgres_user.present is confusing (refs: #31475)
- ISSUE #29520: (arthurlogilab) [doc] transport option not in default master configuration nor in the example file of the documentation (refs: #31475)
- ISSUE #10330: (jhenry82) exclude keyword not working (refs: #31475)
- PR #31475: (jacobhammons) Assorted doc issues @ 2016-02-25 16:03:54 UTC
  - 2e9a70e75 Merge pull request #31475 from jacobhammons/2015.8
  - a72dc15720 Assorted doc issues Fixes #10330 Fixes #31216 Fixes #30464 Fixes #29520 Fixes #30261 Fixes #29636 Fixes #29528
- ISSUE saltstack/salt-bootstrap#695: (mtippett) Install Failures With Raspbian Jessie (refs: #31510, #31477, #31458)
- PR #31477: (vutny) Correct installation documentation for Ubuntu @ 2016-02-25 16:01:38 UTC
  - 3905dd81d3 Merge pull request #31477 from vutny/correct-doc-install-ubuntu
- 172f34a6ca Correct headers in Debian/Ubuntu/SUSE install instructions
- 42489ea0a Add common packages installation section to Debian install guide
- 8c6e179870 Add note about amd64 packages to Ubuntu install guide
- afaa24723a Update Ubuntu install guide:
  - PR #31479: (isbm) Zyper unit tests & fixes @ 2016-02-25 15:58:15 UTC
    - f027dc0cf8 Merge pull request #31479 from isbm/isbm-zypper-unitest
    - 96f4333cbb Do not use Zyperpurge (reason: too dangerous)
    - bc05acfc7c3 Fix PyLint
    - c0ab8b549 Add space before "assert" keyword
    - 6bcc8a8f6 Implement list packages test
    - 78837d2926 Add mocking data
    - 0b64b8137f Implement test for version compare, where python fall-back algorithm is called
    - 18b30a3274 Implement test for version compare, where RPM algorithm is called
    - 59eca53441 Adjust test case for the third package in the test static data
    - 8034cf0b91 Add third test package static info
    - 90f209569a Implement test for the upgrade_available
    - ad87e719d6 Bugfix: when only one package, no dict is returned. Still upgrade_available should return boolean.
    - 7eb5f19cb4 Implement test for latest_available
    - e372c0b596 Implement test for the info_available
    - 447771e0fc Add Zyper static data for the available packages
    - 6989871d27 Implement test for info_installed
    - 0cc6ce4aa Use strings instead of unicode strings
    - 3342c03987 Implement list upgrades test
    - 8862d7af65 Add list upgrades Zyper static data
    - 4d38d318f4 Implement error handling test for listing upgrades
    - 08b4ee617 Do not strip the output
    - 53338402a5 Use renamed zypper products data file
    - c6135975b0 Rename Zyper products static test data file
    - ab3f53d89 Reimplement list_upgrades to use XML output from Zyper instead
    - e87864986d Add Zyper unit test: test_list_products and test_refresh_db
    - cd6419fc9c Add Zyper Unit Test installed products sample data
- **ISSUE #31370: (Ch3LL) pkg.info_installed on ubuntu12 does not output info and stack trace (refs: #31439)**
- **ISSUE #31366: (Ch3LL) pkg.info_installed on centos5 does not output info (refs: #31445)**
- **PR #31445: (rallytime) Only use LONGSIZE in rpm.info if available. Otherwise, use SIZE. @ 2016-02-24 18:35:31 UTC**
- **PR #31439**: (rallytime) Fix lowpkg.info function for Ubuntu 12 - make sure we have a pkg name (refs: #31445)
- 987dd89979 Merge pull request #31445 from rallytime/fix-31366
- 42415a4a7b Make rpm_tags query more concise
- 9965fe188a Added to pkg.info_installed test for RedHat and Suse systems
- 47cc7c3466 Add error check when retcode is 0, but stderr is present
- 294371243d Only use LONGSIZE in rpm.info if available. Otherwise, use SIZE.

- **PR #31464**: (Ch3LL) integration test: ensure decorator only runs on one method and not class @ 2016-02-24 18:35:00 UTC
  - 979c8b4faa Merge pull request #31464 from Ch3LL/fix_int_test
  - a387d175d8 integration test- ensure decorator only runs on one method and not entire class

- **ISSUE** saltstack/salt-bootstrap#695: (mtippett) Install Failures With Raspbian Jessie (refs: #31510, #31477, #31458)

- **PR #31458**: (vutny) Correct installation documentation for Debian @ 2016-02-24 17:01:09 UTC
  - aa0a9a03dd Merge pull request #31458 from vutny/correct-doc-install-debian
  - 42aa7eeaf6 Add section about installation from the Debian Main Repository
  - 07dece2f8f Remove duplicate post-installation section for Debian install guide
  - 10c05f6943 Add install section for Debian Stretch (Testing) from community repository
  - b2c78e08dc Add note about supported Debian architectures on SaltStack corp repo

- **PR #31457**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-02-24 16:42:17 UTC
  - 330c4d8b0f Merge pull request #31457 from rallytime/merge-2015.8
  - 94b3cf08c7 Merge branch '2015.5' into '2015.8'
    - 26733ce988 Merge pull request #31442 from sastorsl/salt-modules-file.py-copy-check-src
      - 0a4132866d removed lint in the exception string
      - f8b5d498c3 Add os.path.exists(src) to file.py, def copy
    - e480727d27 Merge pull request #31441 from cachedout/issue_30739
      - ffcfad1570 Include localhost minions in presence detection for runner
    - 91ff95f093 Merge pull request #31416 from carlwgeorge/selinux_doc_fix
      - 0e6846d72e selinux module documentation fix
    - 7d01979898 Merge pull request #31336 from terminalmage/config-validation-logging
      - 795008bad1 Improve config validation logging
    - fed096a29d Merge pull request #31374 from sjorge/solarish_hwaddr
      - bdf2576dfb missed a .format and messed up the join
      - bbd2fde96d fix for illumos/solaris hwaddr
    - 6ee17f905b Merge pull request #31339 from jacobhammons/dot7prev
      - 07120a8d48 changed latest release to 2015.8.7

- **ISSUE #31370**: (Ch3LL) pkg.info_installed on ubuntu12 does not output info and stack trace (refs: #31439)
• PR #31439: (rallytime) Fix lowpkg.info function for Ubuntu 12 - make sure we have a pkg name (refs: #31445) @ 2016-02-24 16:24:46 UTC
  - e553f18dc4 Merge pull request #31439 from rallytime/fixed
  - 1931ec61563 Only run this pkg.info_installed test on distros that have that func
  - 0488668a00 Fix lowpkg.info function for Ubuntu 12 - make sure we have a pkg name

• PR #31456: (RabidCicada) Clarified the form of requisite targets/requisite-references @ 2016-02-24 16:24:00 UTC
  - fc612bdc9e Merge pull request #31456 from RabidCicada/clarify-requisites-doc
  - 87f4843a49 Clarified the form of requisite targets/requisite-references

• ISSUE #30431: (nbow) cp.get_url with large files results in an Uncaught Exception (refs: #30704)

• ISSUE #27093: (TheBigBear) 2015.8.0 winrepo downloader corrupts some installers (refs: #30704)

• PR #31453: (DmitryKuzmenko) Backport cp_geturl fix for large files into 2015.8 @ 2016-02-24 15:38:24 UTC
  - PR #30704: (DmitryKuzmenko) Issues/30431 get_url large file (refs: #31453)
  - 7dac1db55d Merge pull request #31453 from DSRepositor/Issues/30431_get_url_large_file_2015.8_backport
  - 64b71d6b23 Backport cp_geturl fix for large files into 2015.8

• PR #31444: (jacobhammons) Documentation updates - dns state, file.line state/exe function, installation dependencies @ 2016-02-23 22:40:05 UTC
  - 8f64c0be618 Merge pull request #31444 from jacobhammons/ddns-docs
  - 08f68e164d Fixes #31402 Added arguments to state file.line to fix issue where exe module uses line and state module uses name. Reformatted parameters in exe module file.line placeholder release notes for 2015.5.8
  - 0b1fd7e21 Added note clarifying when dnspython is not required

• PR #31341: (twangboy) Clarification on Windows Package Manager docs @ 2016-02-23 16:09:18 UTC
  - 42027e0d72 Merge pull request #31341 from twangboy/package_manager_docs
  - c16cfc6360 Fix typos
  - 8dff06dcec Fix some formatting issues
  - dfe24f15b3 Merge branch '2015.8' of https://github.com/saltstack/salt into 2015.8
  - 807257b138 Add unit test for Windows Package Manager

• PR #31380: (kiorky) Bring up ext_pillar rendering errors as well @ 2016-02-23 16:08:39 UTC
  - 30d968e0a7 Merge pull request #31380 from kiorky/p
  - e3e97a243e Bring up ext_pillar rendering errors as well

• ISSUE #31410: (terminalmage) Debian GNU/Linux grains broken in head of 2015.8 branch (refs: #31418)

• PR #31418: (terminalmage) Fix core grains when Debian OS detected as 'Debian GNU/Linux' @ 2016-02-23 15:49:49 UTC
  - 64ed9fcd01 Merge pull request #31418 from terminalmage/fixed-debian-grains
  - 5c833ef01 Support running grains tests
  - 0e0cd17160 Rename core.py to core_test.py
  - d3cd1b596d Add unit test for core grains
- e3d549d376 Fix debian grains setup

- **PR #31429**: (mcalmer) fix argument handling for pkg.download @ 2016-02-23 15:48:23 UTC
  - ec01b994bd Merge pull request #31429 from mcalmer/fix-refresh-arguments
  - 299c07fae7 fix argument handling for pkg.download

- **PR #31432**: (ticosax) [dockerng] Hotfix docker 1.10.2 @ 2016-02-23 15:39:04 UTC
  - 05c12b9ba1 Merge pull request #31432 from ticosax/hotfix-docker-1.10.2
  - 1e9f6f324 handle inconsistencies in dockerd API
  - 8484815f58 pep8

- **PR #31420**: (twangboy) Handle Unversioned Packages @ 2016-02-22 23:46:24 UTC
  - fb81e905e4 Merge pull request #31420 from twangboy/unversioned_pkgs
  - 816e991e87 Fix version check
  - 85d8b938ad Match unversioned packages to winrepo

- **PR #31417**: (jacobhammons) ddns state docs updated with notes regarding the name, zone, and keyfile. @ 2016-02-22 23:16:48 UTC
  - 19d7810478 Merge pull request #31417 from jacobhammons/ddns-docs
  - 5c4cbbb572 Added notes regarding the name, zone, and keyfile.

- **PR #31391**: (redmcg) Added sanity check: is 'pillar' in self.opts @ 2016-02-22 20:05:27 UTC
  - ac6af79abc Merge pull request #31391 from redmcg/master_schedule_fix
  - 91e74feaf3 Added sanity check: is 'pillar' in self.opts

- **PR #31376**: (cro) Some distros don't have a /lib/systemd @ 2016-02-22 18:11:39 UTC
  - c7bd13ec9e Merge pull request #31376 from cro/suse_service2
  - f3fece556e We need one more mocked return from listdir.
  - ab9de7008 Can't add a tuple and a string.
  - 8f12bd1a0 Check to see if a path is a link, because it's likely that if it IS a link, one of the other paths points to it. Ignore so we don't get duplicates.
  - 80e866f1b Some distros do not seem to have a /lib/systemd, but do have a /usr/lib/systemd

- **ISSUE #29727**: (oeuftete) dockerng.running does not pull image as documented (refs: #31352, #31455)

- **ISSUE #27976**: (syphermil) Module dockerng.inspect_image always returns 404 (refs: #31352)

- **PR #31352**: (ticosax) [dockerng] Pull missing images when calling dockerng.running @ 2016-02-22 16:54:10 UTC
  - 105821efc7 Merge pull request #31352 from ticosax/pull-image-on-running
  - 8c86eeb4dc Pull missing images when calling dockerng.running

- **PR #31378**: (mcalmer) Zypper refresh handling @ 2016-02-22 16:50:28 UTC
  - 83294e4f3a Merge pull request #31378 from mcalmer/zypper-refresh-handling
  - 274e6467be do not change kwargs in refresh while checking a value
  - 644b14c273 simplify checking the refresh paramater
  - db0e0de2fd add refresh option to more functions

30.2. Previous Releases
- 5836be3f59 unify behavior of refresh

- **ISSUE #31229**: (eykd) git.latest broken behavior in 2015.8.x on older Git (refs: #31373)
- **PR #31373**: (terminalmage) Use --set-upstream instead of --track to set upstream on older git @ 2016-02-22 16:46:00 UTC
  - e24685b89a Merge pull request #31373 from terminalmage/issue31229
  - 28f0a75cc1 Use --set-upstream instead of --track to set upstream on older git

- **ISSUE #31137**: (jeffreycyntang) logrotate creates .bak files in /etc/logrotate.d which logrotate reads. (refs: #31390)
- **PR #31390**: (abednarik) Fix Logrotate module. @ 2016-02-22 16:09:15 UTC
  - c5790bc4d6 Merge pull request #31390 from abednarik/remove Deprecated_psed_in_lorgotate
  - c1e0ff7785 Fix Logrotate module.

- **ISSUE #28004**: (warden) dockerng.image_present should allow public repository pulling by default (refs: #31354)
- **PR #31354**: (ticosax) [dockerng] Dont require auth for all registries @ 2016-02-20 05:45:10 UTC
  - 174ee10fc2 Merge pull request #31354 from ticosax/dont-require-auth-for-all-registries
  - 4a9f661d66 It exists public registries where auth is not required.

- **PR #31368**: (whiteinge) Update list of netapi clients for autoclass @ 2016-02-19 20:57:28 UTC
  - 8d0498eff4 Merge pull request #31368 from whiteinge/netapi-client-list
  - 0cfe5d89a0 Update list of netapi clients for autoclass

- **PR #31367**: (techhat) Add docs on how to actually use SDB @ 2016-02-19 20:07:17 UTC
  - 9be0e29107b Merge pull request #31367 from techhat/sdbdocs
  - eea192a545 Add docs on how to actually use SDB

- **PR #31357**: (ticosax) [dockerng] Support docker inconsistencies @ 2016-02-19 20:02:08 UTC
  - 7e599f0e27 Merge pull request #31357 from ticosax/support-docker-inconsistencies
  - 3672bb87b1 docker daemon returns sometimes empty list and sometimes None

- **PR #31353**: (ticosax) [dockerng] Fix when ports are integers @ 2016-02-19 19:55:30 UTC
  - PR #31326: (ticosax) [dockerng] Detect settings removal (refs: #31353)
  - 18bd78260d Merge pull request #31353 from ticosax/fix-when-port-are-integers
  - 20fc43968 Follow up for #31326

- **PR #31346**: (ticosax) Backport #31130 to 2015.8 @ 2016-02-19 19:46:48 UTC
  - **PR #31130**: (ticosax) Saltnao: provide also get parameters to the context (refs: #31346)
  - dec254a7a2 Merge pull request #31346 from ticosax/backport-31130-to-2015.8
  - a8dc33a5e3 Saltnao provide also get parameters to the context

- **PR #31332**: (terminalmage) Clarify documentation for gitfs/hgfs/svnfs mountpoint and root options @ 2016-02-19 18:31:29 UTC
  - d639d65381 Merge pull request #31332 from terminalmage/issue31167
  - eeeb325040 Clarify documentation for gitfs/hgfs/svnfs mountpoint and root options

- **PR #31305**: (mcalmer) call zypper with option --non-interactive everywhere @ 2016-02-19 18:14:57 UTC
- d067e77fee Merge pull request #31305 from mcalmer/zypper-non-interactive-everywhere
- 75e776761c write a zypper command builder function
- 3df302fcb7 call zypper with option --non-interactive everywhere

- **PR #31337**: (jacobhammons) Release notes and versioning for 2015.8.7 @ 2016-02-19 00:20:30 UTC
  - 98a14f8090 Merge pull request #31337 from jacobhammons/dot7
  - d4fb3399e Release notes and versioning for 2015.8.7

- **PR #31326**: (ticosax) [dockerng ] Detect settings removal (refs: #31353) @ 2016-02-18 22:02:50 UTC
  - f0ba9c1eca Merge pull request #31326 from ticosax/2015.8-dockerng-detect-settings-removal
  - 7bedd86ebe Add detection of removed settings.

- **PR #31292**: (twangboy) Fix dunder virtual to check for Remote Administration Tools @ 2016-02-18 18:57:26 UTC
  - 130f515391 Merge pull request #31292 from twangboy/win_servermanager
  - 89b47ab3c5 Update return documentation for install/remove
  - a0be43120b Fix cmd_quote error
  - 13cd57a890 Remove repeating Import ServerManager command
  - 3270a2859f Add check for server manager module
  - 4bdae47a44 Added checks for Windows 2008 R2

- **ISSUE #30932**: (johje349) Glusterfs peered fails on secondary host in 2015.8.4 (refs: #31287)

- **PR #31287**: (joejulian) Rework tests and fix reverse peering with gluster 3.7 @ 2016-02-18 17:57:23 UTC
  - 5d31714b44 Merge pull request #31287 from joejulian/2015.8_30932_peer_probe_by_ip
  - 783e9b2e13 Rework tests and fix reverse peering with gluster 3.7

- **PR #31196**: (sakateka) Here are a few fixes util.network @ 2016-02-18 17:27:00 UTC
  - a2f6447f8d Merge pull request #31196 from sakateka/utilis-network-fix
  - a7b11024dd fix typo
  - 92fd48fcf7 Do not Fallback to use lsof if proc available

- **ISSUE #29795**: (vutny) Unable to override state-output setting in command line (refs: #31299)

- **PR #31299**: (rallytime) Allow state-output and state-verbose default settings to be set from CLI @ 2016-02-18 17:25:23 UTC
  - d20a30b8be Merge pull request #31299 from rallytime/fx-29795
  - 483f31922b Allow state-output and state-verbose default settings to be set from CLI

- **PR #31317**: (termimalmage) Fix versionadded directive @ 2016-02-18 16:56:32 UTC
  - 25d8af21e9 Merge pull request #31317 from termimalmage/git-version-audit
  - acc3b54621 Fix versionadded directive

- **ISSUE #30999**: (orymate) git.latest rev=tag fails with old git(1) (refs: #31245, #31301)

- **PR #31301**: (termimalmage) Corrected fix for #30999 @ 2016-02-18 15:59:40 UTC
  - PR #31245: (jespada) fix git state for git version older than 1.9.2 (refs: #31301)
  - f2b662371c Merge pull request #31301 from termimalmage/issue30999
- 625af70e08 Fix --unset-upstream handling
- 7940881797 fix git state github issue #30999

• **PR #31302: (terminalmage) Audit CLI opts used in git states @ 2016-02-18 15:58:48 UTC**
  - 408d89e174 Merge pull request #31032 from terminalmage/git-version-audit
  - ca410c0a94 Audit CLI opts used in git states

• **PR #31312: (terminalmage) Merge 2015.5 into 2015.8 @ 2016-02-18 15:57:08 UTC**
  - 098f05eb3c Merge pull request #31312 from terminalmage/merge-forward-2015.5-2015.8
  - 808d150fe4 Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.5-2015.8
  - cd3400e67e Merge pull request #31288 from notpeter/ssh_known_hosts_docs
    * 3f573d89a2 Improve salt.states.ssh_known_hosts documentation.
  - 875d9925fa Merge pull request #31183 from heyfife/fix-gce-named-static-ip-reservation
    * 26774e2323 Fixed named external_ip reservation/re-use code.
  - e56c402c0c Merge pull request #31032 from terminalmage/issue31001
    * 42daea4509 yumpkg.py: Remove repoquery usage everywhere but check_db
    * 50befbc149 backport salt.utils.rpm to 2015.5
    * a1ad14994a Move salt.utils.itersplit() to salt.utils.terminalmage.split()
    * 5b8646ce64 Ignore failure to install new enough dnf-plugins-core
    * defe0859fd Ensure that dnf-plugins-core 0.1.15 is installed
  - cec69b74f0 Merge pull request #31264 from sjorge/if_missing-155-fix
    * 545edb5e1 fix if_missing gets appended to dirs list, take III

• **ISSUE #31223: (pprince) file_tree pillar: fails when data files at root end in '\n' (refs: #31225)**

• **PR #31225: (pprince) Fix in file_tree pillar (Fixes #31223.) @ 2016-02-18 06:06:12 UTC**
  - c58fe654bc3 Merge pull request #31225 from pprince/PR/bugfix/file_tree
  - d592d8636b Fix regression in file_tree pillar (Fixes #31223.)

• **PR #31233: (mcalmer) implement version_cmp for zypper @ 2016-02-17 20:20:19 UTC**
  - fe9e5d27e6 Merge pull request #31233 from mcalmer/2015.8-zypperpy-add-version_cmp
  - 389a4b2548 Check if rpm-python can be imported
  - 6ada90955 pylint changes
  - 7beaf26068 implement version_cmp for zypper

• **PR #31273: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-02-17 20:14:05 UTC**
  - 93c03a400b Merge pull request #31273 from rallytime/merge-2015.5
  - 11c6b636fb Pylint fix
  - 023ad4635c Merge branch '2015.5' into '2015.8'
    * fa3f474de9 Merge pull request #31110 from cachedout/fixup_30730
      - 5bf584be04 Fixup unit test
      - f558f6e0a Fixes pylint warnings
- 56a975ec43 Attempt to fix pylint warnings
- 55d71be057 Make documentation and code examples consistent with code
- 1f04fed6f8 Change parameter name from includes to skips
- ccf5e13e7d Adding support for skipHidden in SetInclude
- 4f2d4af2e7 Variable names standardization
- f5917ac1e8 Fixes typo
- 26e5236073 Invert RebootRequired logic
- 8065a7abf6 Add basic documentation and define how the skips parameter works.
- 389fea7508 Change parameter name from includes to skips
- 30e1fef906 Adding support for skipHidden in SetInclude
- 1244ea5be Variable names standardization, consistent if/else logic with states.win_update

- **PR #31253:** (gtmanfred) allow for nova servers to be built with premade volumes @ 2016-02-17 17:55:39 UTC
  - dc2e7c8956 Merge pull request #31253 from gtmanfred/2015.8
  - 36bf06e539 fix doc for boot_volume
  - 9660c91b57 allow for nova servers to be built with premade volumes

- **ISSUE #30651:** (sjorge) salt.states.grains.list_present should not show changes if none are made! (refs: #31651, #30689)

- **PR #31271:** (rallytime) Back-port #30689 to 2015.8 @ 2016-02-17 16:52:36 UTC
  - **PR #30689:** (sjorge) fix for #30651 grains.list_present and grains.list_absent (refs: #31651, #31271)
  - 29e3dd091d Merge pull request #31271 from rallytime/bp-30689
  - 3dae79d516 fix nested grains always show update due to __grains__.get() not supporting the ":" seperator

- **ISSUE #30461:** (jfndlay) update documentation on bootstrap-supported platforms (refs: #31255)

- **PR #31255:** (jacobhammons) Fixes #30461 @ 2016-02-17 02:23:46 UTC
  - ffc6f4fd3 Merge pull request #31255 from jacobhammons/doc-fixes
  - 3c4f8215c3 Fixes #30461 Credited Sebastian Kramer for finding CVE 2016-1866 in release notes
  - Added note about salt virt not working on KVM in a VM

- **ISSUE #31106:** (rvandegrift) Exception from scheduled runner (refs: #31189)

- **PR #31189:** (dmacvicar) Fix crash with scheduler and runners (#31106) @ 2016-02-16 18:49:36 UTC
  - 62d76902ce Merge pull request #31189 from dmacvicar/dmacvicar-2015.8-31106
  - 9ad8cb1e6b Fix crash with scheduler and runners (#31106)

- **ISSUE #30962:** (fantasy86) Targeting by matching ip address doesn’t work (refs: #31201)

- **ISSUE #30169:** (colinlabs) Can’t use Subnet/IP Address Matching (refs: #31201)

- **ISSUE #29733:** (roshan3133) salt -S <ipaddress> test.ping command output getting list of minions which did not return. (refs: #31201)

- **ISSUE #29188:** (bergemalm) Unable to target minions via ipcidr in 2015.8 (refs: #31201)

- **PR #31201:** (The-Loeki) Utilize prepared grains var in master-side ipcidr matching @ 2016-02-16 18:36:10 UTC
  - dc78d0a504 Merge pull request #31201 from The-Loeki/patch-1
- 318689d728 Correct ordering of address/network matching, improve performance of master-side cidr matching
- 4e4e09f26da Utilize prepared grains var in master-side ipcidr matching

- **PR #31239** (terminalmage) Improve logging when master cannot decode a payload @ 2016-02-16 16:35:46 UTC
  - 60bbac366a Merge pull request #31239 from terminalmage/better-bad-load-logging
  - 1f8e3cb141f Merge logging when master cannot decode a payload

- **ISSUE #31185** (twangboy) pkg.refresh_db leaves old sls files if the name changes (refs: #31190)

- **PR #31190** (twangboy) Clear minion cache before caching from master @ 2016-02-16 16:11:26 UTC
  - 80f1c3553b Merge pull request #31190 from twangboy/refresh_db
  - 860437665d Fix some lint
  - 79df93d60a Clear minion cache before caching from master

- **PR #31226** (pprince) Minor docs fix: file_tree pillar (Fixes #31124) @ 2016-02-16 15:25:33 UTC
  - **PR #31124** (zygiss) Make load beacon cross-platform (refs: #31226)
  - 88a2b8097b Merge pull request #31226 from pprince/PR/docfix/file_tree
  - c3982fbbf5 Minor docs fix: file_tree pillar (Fixes #31124)

- **PR #31234** (mcalmer) improve doc for list_pkgs @ 2016-02-16 15:25:06 UTC
  - 9afad1336 Merge pull request #31234 from mcalmer/zypperpy-comment-list_pkgs
  - e3b86a32 Improve doc for list_pkgs

- **PR #31237** (mcalmer) add handling for OEM products @ 2016-02-16 15:12:21 UTC
  - e8f3a707ae Merge pull request #31237 from mcalmer/zypper_py-add-OEM-product-handling
  - d773b7317b Add handling for OEM products

- **PR #31182** (rallytime) Back-port #31172 to 2015.8 @ 2016-02-13 21:36:07 UTC
  - **PR #31172** (techhat) Use correct deploy directory (refs: #31182)
  - 415654ee9e Merge pull request #31172 from rallytime/bp-31172
  - a743778e98 Use correct deploy directory

- **ISSUE #27498** (arthurlogilab) [runner] salt-run cache.clear_mine_func broken, can't take clear_mine_func (refs: #31191)

- **PR #31191** (rallytime) Make sure doc example matches kwarg @ 2016-02-13 21:36:07 UTC
  - 434e05667a Merge pull request #31191 from rallytime/fix-27498
  - 0b2da49d1 Make sure doc example matches kwarg

- **PR #31171** (Ch3LL) added logic to check for installed package @ 2016-02-12 22:10:21 UTC
  - c5e5a95827c Merge pull request #31171 from Ch3LL/megan-20158
  - a12e5f66b fix lint error
  - a1235e2f4ef added logic to check for installed package

- **ISSUE #30934** (marnovdm) contents_pillar no longer works with lists in 2015.8.5 (refs: #31026, #31177)

- **PR #31177** (Ch3LL) add integration test for issue #30934 @ 2016-02-12 22:09:31 UTC
  - a024d3536 Merge pull request #31177 from Ch3LL/test_content_pillars
- 9204c3f562 add integration test for issue 30934w

- **PR #31181**: (cachedout) Lint 2015.8 branch @ 2016-02-12 21:57:02 UTC
  - 1f22335ec28 Merge pull request #31181 from cachedout/lint_20158
  - 4c0be11627 Lint 2015.8 branch

- **ISSUE #29423**: (l13t) iptables and match-set with two parameters (refs: #29718)

- **PR #31169**: (rallytime) Back-port #29718 to 2015.8 @ 2016-02-12 18:28:13 UTC
  - **PR #29718**: (thusoy) Support match-sets in iptables module (refs: #31169)
  - 4d1b49c1e7 Merge pull request #31169 from rallytime/bp-29718
  - ceae2a16f8 Support match-sets in iptables module

- **PR #31170**: (rallytime) Back-port #31157 to 2015.8 @ 2016-02-12 18:27:49 UTC
  - **PR #31157**: (captaininspiration) Fix locale generation on Ubuntu (refs: #31170)
  - f2ef93e6c1 Merge pull request #31170 from rallytime/bp-31157
  - 27776b5f4e Fix locale generation on Ubuntu

- **PR #31147**: (cro) Documentation clarifications. @ 2016-02-12 17:16:27 UTC
  - 7f49fbb70d Merge pull request #31147 from cro/fx2_doc
  - a0054a4f55 Documentation clarifications.

- **PR #31153**: (edencrane) Fixed invalid host causing 'reference to variable before assignment' @ 2016-02-12 16:30:19 UTC
  - 7986b9e033 Merge pull request #31153 from edencrane/fix-network-connect-invalid-hostname
  - a14c4bb5f2 Fixed invalid host causing 'reference to variable before assignment'

- **ISSUE #30994**: (onorua) beacon enable from state is failing (refs: #31152)

- **PR #31152**: (garethgreenaway) fixes to beacon module, state module and friends @ 2016-02-12 16:27:40 UTC
  - f5ab76801b Merge pull request #31152 from garethgreenaway/30994_beacon_add_failing_and_other_fixes
  - 91b14dca40 fixing the beacon module and state module to handle passing enabled properly. Also reworking how what is returned from the validating functions is handled to ensure when beacon configurations aren't validate the results indicate exactly why.

- **PR #31149**: (jfindlay) add 2015.8.7 release notes @ 2016-02-12 06:06:15 UTC
  - c8047d979d Merge pull request #31149 from jfindlay/2015.8
  - b58783b895 add 2015.8.7 release notes

- **PR #31134**: (isbm) Fix types in the output data and return just a list of products @ 2016-02-11 20:19:22 UTC
  - 5c394ac49c Merge pull request #31134 from isbm/isbm-zypper-list-products
  - 670a326e3d Fix types in the output data and return just a list of products

- **ISSUE #31115**: (nfillot) 2015.8.5 salt-cloud nova valid ip address was not found (refs: #31120)

- **ISSUE #29758**: (zaide) 2015.8.3 salt-call runners.cloud : local variable 'access_ip' referenced before assignment (refs: #31120)

- **ISSUE #29666**: (tminn) Nova driver broken for 2015.8.[1-3] (refs: #31120)

- **PR #31120**: (gtmanfred) Clean up some bugs in the nova driver @ 2016-02-11 20:17:41 UTC
- 8f2e3a26e5 Merge pull request #31120 from gtmanfred/2015.8
- 4a411c0817 fix comment
- 47ecb7a150 include all ips in public_ips or private_ips
- b2e8202f5d dont exit on a missing server
- 8ad1ee6db4 clean up references to access_ip extra network

• ISSUE #31099: (Ch3LL) Cannot specify size in map file in 2015.8 (refs: #31132)

• PR #31132: (rallytime) Make sure required profile configurations passed in a map file work @ 2016-02-11 20:16:46 UTC
  - 2d592a398e Merge pull request #31132 from rallytime/fix-31099
  - 1da03da9df Pylint fix
  - 337592ec56 Make sure required profile configurations passed in a map file work

• ISSUE #31014: (gtmanfred) [2015.8] pkg breaks for yum pkgs.latest if the packages has an epoch (refs: #31131, #31015, #31031)

• PR #31131: (Ch3LL) integration test for issue #31014 @ 2016-02-11 17:33:23 UTC
  - b831e0a865 Merge pull request #31131 from Ch3LL/megan-20158
  - af82b1233a integration test for issue #31014

• PR #31133: (cachedout) Fixup 31121 @ 2016-02-11 17:32:24 UTC
  - e378afdb891 Merge pull request #31133 from cachedout/fixup_31121
  - a4040da46d Fix bad unit test
  - 0e68fafa74 Fix alternative module and state.

• PR #31125: (isbm) Force-kill websocket's child processes faster than default two minutes. @ 2016-02-11 16:50:57 UTC
  - 4a40262f8 Merge pull request #31125 from isbm/isbm-salt-api-service
  - f73f70375c Force-kill websocket's child processes faster than default two minutes.

• PR #31119: (sakateka) fixes for ipv6-only multi-master failover @ 2016-02-11 16:21:45 UTC
  - 79c85859bc Merge pull request #31119 from sakateka/fix-for-ipv6only-failover
  - 2c45d151d1 fix unintentional breaking changes
  - 043a5e6fd7 fixes for ipv6-only multi-master failover

• PR #31107: (techhat) Don't try to add a non-existent IP address @ 2016-02-10 21:52:42 UTC
  - 825b510030 Merge pull request #31107 from techhat/nebulaprivip
  - 1fa69992c4 Don't try to add a non-existent IP address

• PR #31108: (justinta) Changed npm integration test to install request. @ 2016-02-10 21:52:02 UTC
  - c56a819fd8 Merge pull request #31108 from jtid/npm_test_fix
  - a5eac47b25 Changed npm integration test to install request.

• PR #31105: (cachedout) Lint 30975 @ 2016-02-10 21:11:21 UTC
  - de1aba9d1 Merge pull request #31105 from cachedout/lint_30975
  - 446b4c2aff Lint #30975
- b4fe9aaa11 fixes issue in which s3.role_arn was defaulting to "

- **ISSUE #31069**: (symphorien) Wrong filename in documentation for x509 state (refs: #31100)

- **PR #31100**: (jfindlay) states.x509: docs: peer.sls -> peer.conf @ 2016-02-10 20:47:45 UTC
  - 2e5499748a Merge pull request #31100 from jfindlay/x509_sls
  - 6c303b99c2 states.x509: docs: peer.sls -> peer.conf

- **PR #31103**: (twangboy) Point to reg.delete_key_recursive @ 2016-02-10 20:46:53 UTC
  - f2bede1e00 Merge pull request #31103 from twangboy/fix_reg_state
  - fe1ca906d2 Point to reg.delete_key_recursive

- **PR #31093**: (techhat) Ensure double directories don't get created @ 2016-02-10 18:53:47 UTC
  - 94fa76831f Merge pull request #31093 from techhat/spmfix
  - 4f4c8877ad Ensure double directories don't get created

- **ISSUE #31056**: (JensRantil) file.symlink documentation improvement (refs: #31095)

- **PR #31095**: (jfindlay) modules.file, states.file: explain symbolic links @ 2016-02-10 18:53:24 UTC
  - c015ca865c Merge pull request #31095 from jfindlay/link_doc
  - 7d9d6b26c modules.file, states.file: explain symbolic links

- **ISSUE #31059**: (mfn-collinmayden) salt-cloud rename fails in 2015.8.5 (refs: #31061)

- **ISSUE #30950**: (tmaulik) Salt-cloud create_snapshot is not recognizing snapshot_name parameter in salt 2015.8.5 (refs: #31061)

- **PR #31061**: (rallytime) Revert #30217 - was causing salt-cloud -a breakage @ 2016-02-10 18:13:59 UTC
  - PR #30217: (pass-by-value) Make sure cloud actions can be called via salt run (refs: #31061, #30691)
  - 4d6706b3e7 Merge pull request #31061 from rallytime/revert-breakage
  - ced2d9f22 Revert #30217

- **ISSUE #31088**: (gladiatr72) request for color logging fix backport (refs: #31090)

- **PR #31090**: (rallytime) Back-port #30542 to 2015.8 @ 2016-02-10 18:06:38 UTC
  - PR #30542: (gladiatr72) address color log dict lookup exceptions w/ non-posix log level names (refs: #31090)
  - 482eea9883 Merge pull request #31090 from rallytime/bp-30542
  - 67a713f2f6 Some 3rd-party modules (e.g. gnupg) define custom log levels that emit at INFO level and above. This patch sets the color data lookups to default to TextFormat('reset') rather than producing a stack trace every time a log message is generated from an affected module.

- **PR #31085**: (jacksontj) Correctly remove path we added after loader is completed @ 2016-02-10 17:47:22 UTC
  - 5dcaaa8d387 Merge pull request #31085 from jacksontj/2015.8
  - 6370ddd9f6 Correctly pop the path we added after loader is completed.

- **ISSUE #28142**: (zmalone) Deprecate or update the copr repo (refs: #31037)

- **PR #31037**: (vutny) Update RHEL installation guide to reflect latest repo changes @ 2016-02-10 17:36:04 UTC
  - 27bf83fa59 Merge pull request #31037 from vutny/correct-doc-install-on-rhel
  - 6370ddd9f6 Update RHEL installation guide
– afdaefbf3d Add `systemctl` examples for RHEL 7 to the installation guide
– 069a661eb1 Correct ZeroMQ4 repo install guide for RHEL
– d2a9d67b5b Update installation instruction for community repos on RHEL
– bbdf2523c8 Add workaround for RHEL 7 systems mentioned in the issue #29094

• PR #31050: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-02-09 20:13:34 UTC
  – 8704750cf9 Merge pull request #31050 from basepi/merge-forward-2015.8
  – d86e014a39 Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
    * 1c699a1664 Merge pull request #30974 from rallytime/bp-30949
      * ff6542f593 Replace cfdisk with sfdisk
    * c7f87cc371 Merge pull request #30942 from rallytime/bp-30897
      * 885e00a54 Only remove the word linux from distroname when its not part of the name
    * 35b76f062669 Merge pull request #30922 from jacobhammons/prev-rel-notes
      * 57c1ec637a Rev latest version to 2015.8.5
    * 2488bb902e Merge pull request #30865 from abednarik/better_boto_elb_error
      * 3561e8c19b Better boto elb error message.
    * 4da04f828e Merge pull request #30831 from jacobhammons/readme-update
      * 01a92f5d98 Updated readme
    * 90c1ea9f6c Merge pull request #30829 from jacobhammons/release-2015.5
      * c95bb60148 Version to 2015.8.4
    * 80a36793cb Merge pull request #30784 from rallytime/bp-24952
      * a07908bde6 Don't split the string on a single line
    * e9785392f Merge pull request #30764 from terminalmage/issue30560
      * 39736afcd7 Work around yum versionlock's inability to remove holds by package name alone
    * 6f565c0d76 Merge pull request #30760 from toanju/2015.5
      * dc4256f7df Changed output format of arp_ip_target from list to comma delimited string
    * 1c205b4898 Merge pull request #30757 from yannis666/fix-for-mine-update-merge
      * 61bb23e256 Fix to mine update to merge configuration
    * f96de8f6a7 Merge pull request #30749 from abednarik/fixed_network_system_test
      * 1e9e97d59 Fix Netwotk hostname Module in Debian systems.

• PR #31053: (cachedout) Fix boto test failures @ 2016-02-09 20:02:16 UTC
  – f13fd4608 Merge pull request #31053 from cachedout/boto_test_fix
  – c73b5a4a66 Fix boto_secgroup
  – 25bce68357 Fix boto test failures

• ISSUE #30938: (lorentgordon) Windows: Upgrade overwrites minion config file (refs: #31029, #31028)

• PR #31029: (twangboy) Windows defaults to multiprocessing true @ 2016-02-09 18:20:36 UTC
- 87f2816ef5 Merge pull request #31029 from twangboy/win_defaults
- baffbbdb74 Comment multiprocessing line in minion config
- 933544b8c8 Set multiprocessing to true in config.py

- **ISSUE #27796**: (onsmrribah) IOError: [Errno 13] Permission denied: '/var/cache/salt/master/.dfn' when using python salt.wheel module (refs: #30998)
- **PR #30998**: (dmacvicar) add_key/reject_key: do not crash w/Permission denied: '/var/cache/salt/master/.dfn' (#27796) @ 2016-02-09 17:57:36 UTC
  - 0dcd0a2a7 Merge pull request #30998 from dmacvicar/dmacvicar-2015.8-27796
  - 9602fe2aeb Do not crash on add_key/reject_key if the previous one set the drop file. (#27796)

- **ISSUE #31041**: (fredrikaverpil) Reading about win_service in 2015.8.5 docs, but it's not available in 2015.8.5 (refs: #31550, #31049)
- **PR #31049**: (twangboy) Fix versionadded in win_service.config (refs: #31550) @ 2016-02-09 17:55:07 UTC
  - e773fc822a Merge pull request #31049 from twangboy/win_svc_docs
  - 9800525d1 Fix versionadded in win_service.config
- **PR #30987**: (youngnick) Changed glusterfs.peer() module so state can handle localhost peering attempts. @ 2016-02-09 17:51:58 UTC
  - c3f115724a Merge pull request #30987 from youngnick/add-back-localhost-peer-handling
  - 730b5e2 Update tests to cover new peering return val.
  - b2407305e8 Changed glusterfs.peer() module call return val so state can handle localhost peering attempts.
- **PR #31042**: (moltob) Allow using Windows path in archive.extracted name attribute @ 2016-02-09 17:47:20 UTC
  - 8518655bf8 Merge pull request #31042 from moltob/fix-archive-winpath
  - 9dc6617a53 Allow using Windows path in archive.extracted name attribute, including drive letter colon and backslashes.
- **PR #31012**: (terminalmage) Fix gitfs/git_pillar/winrepo provider to allow lowercase values @ 2016-02-09 17:24:25 UTC
  - 1950359580 Merge pull request #31012 from terminalmage/fix-gitfs-provider-lc
  - 763581798b Add unit tests to ensure a valid provider
  - 49661d58b Fix gitfs/git_pillar/winrepo provider to allow lowercase values

- **ISSUE #30983**: (JensRantil) salt.modules.aptpkg.upgrade does not necessarily do apt-get dist-upgrade (refs: #31024)
- **PR #31024**: (jfindlay) modules.aptpkg.upgrade: clarify dist-upgrade usage @ 2016-02-09 17:20:57 UTC
  - 3d8681b63e Merge pull request #31024 from jfindlay/dist_upgrade
  - 3d1be80ad modules.aptpkg.upgrade: clarify dist-upgrade usage

- **ISSUE #30938**: (lorencegordon) Windows: Upgrade overwrites minion config file (refs: #31029, #31028)
- **PR #31028**: (twangboy) Fix config overwrite by windows installer @ 2016-02-09 17:20:24 UTC
  - a0454f600 Merge pull request #31028 from twangboy/fix_installer
  - 88768935e5 Fix remove placeholder files
- 788855cc94 Remove placeholder files
- c834a95e5 Set overwrite to off

- ISSUE #31014: (gtmanfred) [2015.8] pkg breaks for yum pkgs.latest if the packages has an epoch (refs: #31131, #31015, #31031)

- PR #31031: (terminalmage) More complete fix for #31014 @ 2016-02-09 17:04:42 UTC
  - PR #31015: (gtmanfred) include possible epoch in version for rpm (refs: #31031)
  - 071b9d4904 Merge pull request #31031 from terminalmage/issue31014
  - 6d15a17d6b Fix yumpkg _get_branch_option()
  - 4bb855a85ee Don’t handle epoch specially for dnf
  - 5244e2fae More efficient way to add the epoch before version number
  - e1211e89f include possible epoch in version for rpm

- ISSUE #30934: (marnovdm) contents_pillar no longer works with lists in 2015.8.5 (refs: #31026, #31177)

- PR #31026: (terminalmage) Fix regression when contents_pillar/contents_grains is a list. @ 2016-02-09 00:03:15 UTC
  - 2b8fa12e7 Merge pull request #31026 from terminalmage/issue30934
  - f43aaf4df Fix regression when contents_pillar/contents_grains is a list.

- ISSUE #30472: (sjorge) KeyError with schedule (refs: #30978)

- PR #30978: (garethgreenaway) fixes to state.py in 2015.8 @ 2016-02-08 18:49:05 UTC
  - de215bd0cd Merge pull request #30978 from garethgreenaway/30472_state_functions_no_default_retcode
  - e33b5140f6 removing extra spaces.
  - f668c017f7 removing duplicate code, just set the default in the _set_retcode function
  - 5f2f8f60c The functions in the state module that return a retcode when something goes wrong, eg. a 1 or a 2, do not return a 0 when things go the way they’re supposed to go. With the recent changes to the scheduler to ensure that the retcode is returned this is problematic and results in exceptions when a state function is run from the schedule. This simple fix ensures a default retcode of 0 exists, it is then override in the _set_retcode function if there is an issue with the run

- PR #30893: (bdrung) Make build reproducible @ 2016-02-08 18:44:35 UTC
  - 65fbf980cf Merge pull request #30893 from bdrung/reproducible
  - 089ec869ec3 Make build reproducible

- PR #30945: (cachedout) Note that pillar cli args are sent via pub @ 2016-02-08 18:43:59 UTC
  - 5b0c7649c7 Merge pull request #30945 from cachedout/note_pillar_cli
  - 3ff7d49555 Note that pillar cli args are sent via pub

- ISSUE #31000: (rmtmckenzie) Salt-cloud profile state fails to create LXC minion (refs: #31002)

- PR #31002: (rmtmckenzie) Fix lxc cloud provided minion reporting present @ 2016-02-08 18:14:50 UTC
  - 3b7b6f2398 Merge pull request #31002 from rmtmckenzie/cloud-lxc-provide-fix
  - 9b17fde5e5 Fix lxc cloud provided minion reporting present

- PR #31007: (justinta) Fixed rabbitmq_vhost test failure. @ 2016-02-08 17:48:00 UTC
  - c48122ae9a Merge pull request #31007 from jtid/rabbitmq_vhost_test_fix
• ISSUE #30993: (fredrikaverpil) Overstate: "This documentation has been moved here" (dead end) (refs: #31004)

• PR #31004: (rallytime) Remove overstate docs and a few references. @ 2016-02-08 17:08:24 UTC
  - 811461e4b4 Merge pull request #31004 from rallytime/fix-30993
  - 33eb6ba125 Remove overstate docs and a few references.

• PR #30965: (anlutro) Fix rabbitmq_vhost.present result when test=True @ 2016-02-08 04:34:45 UTC
  - 64125de6c7 Merge pull request #30965 from alprs/fix-rabbitmq_vhost_present_test
  - 2313747958 return changes when test=True
  - 95c8e74b72 make the code a bit simpler
  - aba29a73c4 fix rabbitmq_vhost.present result when test=True

• PR #30955: (Ch3LL) docs: add clarification when source is not defined @ 2016-02-06 18:29:33 UTC
  - ef02779391 Merge pull request #30955 from Ch3LL/clarify_file_doc
  - 97b57ed2b1 docs: add clarification when source is not defined

• PR #30941: (rallytime) Back-port #30879 to 2015.8 @ 2016-02-05 21:15:20 UTC
  - PR #30879: (rhansen) Don’t delete a Docker volume if the volume’s driver differs (refs: #30941)
  - d9785451c0 Merge pull request #30879 from rallytime/bp-30879
  - eb6f289fc1 change default for volume_present()'s force parameter to False
  - 34f3057e04 add 'force' to replace (or not) volumes with driver mismatch
  - d6db15783e typo fixes

• PR #30940: (twangboy) Fix Build Process for OSX @ 2016-02-05 18:44:34 UTC
  - 21a83065aa Merge pull request #30940 from twangboy/mac_build_3
  - 3654a0e0c2 Change 2015 to 2016 in license file
  - aa7d060a8 Update instructions in readme.md for shasum
  - 6f1af4146 Added code to add /opt/salt/bin to the path
  - 1e7468a08c Disable master, syndic, and api in postinstall
  - d49b5da5f1b Re-added start on load and keep alive
  - 3f50a2254 Removed keepalive option
  - eb5004bd1f Remove autostart for api, master, and syndic
  - 3c0ce34e9 Added minimum requirements for installation
  - 1dce23c85b Fix error on kickstart command
  - 7a163c4ed8 Change to new way of starting and stopping services
  - 23d47722b7 Fix preinstall and postinstall scripts
  - 7ef7239815 Upgrade to latest pip
  - 0f09ad517f Updated pip dependencies
  - d3f4d1d3f Removed GPL Licensed software from build

• PR #30944: (jacobhammons) 2015.8.5 release notes linking and clean up @ 2016-02-05 17:40:10 UTC
- 183b500055 Merge pull request #30944 from jacobhammons/rel-notes
- fbb7605366 2015.8.5 release notes linking and clean up

**ISSUE #30882:** (hoonetorg) lvm.vg_present broken with pv on devicemapper-dev (centos 7.2) (refs: #30905)

**ISSUE #26867:** (joejulian) lvm pv's can show as not belonging to their vg if symlink is used (refs: #30905)

**PR #30905:** (joejulian) Add realpath to lvm.pvdisplay and use it in vg_present @ 2016-02-05 17:05:32 UTC
- 91806b03b9 Merge pull request #30905 from joejulian/2015.8_fix_lvm_pv_mapper
- f96650f3c3 Add realpath to lvm.pvdisplay and use it in vg_present

**ISSUE #30923:** (youngnick) Starting a glusterfs volume after creation fails with an exception in 2015.8 and after. (refs: #30924)

**PR #30924:** (youngnick) Fix small bug with starting volumes after creation. @ 2016-02-05 16:58:22 UTC
- af2832b69d Merge pull request #30924 from youngnick/glusterfs-start-volume-bug
- be5295c7f7b Fix small bug with starting volumes after creation.

**PR #30910:** (cro) fix iDRAC state @ 2016-02-05 16:49:06 UTC
- 3a6666ad25 Merge pull request #30910 from cro/fx2_idrac
- 68af2ab185 Lint.
- c274c7ef6c Lint.
- 3e38b762bf Add generic command for executing racadm commands on individual blades in a chassis.
- 05979010f5 Finish the idrac state, fix problem with grains not loading sometimes.

**PR #30919:** (garethgreenaway) Fixes to ssh_auth state module @ 2016-02-05 16:15:28 UTC
- 101fa12479 Merge pull request #30919 from garethgreenaway/ssh_auth_cp_get_url_needs_saltenv
- c9ba038553 The call to cp.get_url needs the saltenv, if you're using environments other than base, it will fail.

**ISSUE #30300:** (AkhterAli) boto_route53 __salt__ not defined. (refs: #30867, #30920)

**PR #30920:** (jacobhammons) Versioned to 2015.8.5, added known issue #30300 to release notes @ 2016-02-05 01:12:17 UTC
- 6d4fd11dd0 Merge pull request #30920 from jacobhammons/release-notes
- 93d47f8615 Versioned to 2015.8.5, added known issue #30300 to release notes

**PR #30894:** (terminalmage) git module/state: Handle identity files more gracefully @ 2016-02-04 23:55:01 UTC
- 3d3321ab92 Merge pull request #30894 from terminalmage/issue30858
- 08741eb969 Update versionadded/versionchanged
- 8909d430e1 salt.states.git.latest(): Prevent tracebacks when git ssh auth fails
- c961cf1c7d git: only use passphrase-protected key if invoked using salt-call
- 0b286f1bc3 Add global ssh_config path to git ssh wrapper
- f813ce4ad Add salt.modules.ssh.key_is_encrypted()
- 1ae7c53e17 Add salt.utils.files.process_read_exception()

**ISSUE #30694:** (pankajghadge) Tomcat war deployment version issue in new SALT version (refs: #30750)
• PR #30750: (jfindlay) extract whole war version @ 2016-02-04 21:41:01 UTC
  - 2415b3e62e Merge pull request #30750 from jfindlay/war_version
  - 4b01c28f9 modules,states.tomcat: allow specifying war version
  - 6deecda0f states.tomcat: _extract_war_version parses path
  - 8dd3b6de9 modules.war._extract_war_version: allow non-semver

• ISSUE #30817: (bogdann) If the private_key filespecified in the provider is missing then the driver will be disabled (refs: #30884)

• PR #30884: (rallytime) Move checks for private_key file existence and permissions to create function @ 2016-02-04 21:03:23 UTC
  - 6a6456eaa6 Merge pull request #30884 from rallytime/fix-30817
  - 086ddae476 We need to check for a key_filename before looking for the path
  - e79321b418 Move checks for private_key file existence and permissions to create function

• PR #30888: (ticosax) Backport #30797 to 2015.8 @ 2016-02-04 21:02:25 UTC
  - PR #30797: (rhansen) don't delete existing Docker volume if driver unspecified (refs: #30888)
  - 4ae2d829f0 Merge pull request #30888 from ticosax/backport-30797
  - 413c47a45f don't delete existing Docker volume if driver unspecified
  - 68b51be869 add additional states.dockerng.volume_present() unit tests
  - 849b94ed73 document the behavior if the driver is unspecified

• PR #30895: (bdrung) Fix various typos @ 2016-02-04 20:55:10 UTC
  - 4372851ad9 Merge pull request #30895 from bdrung/2015.8
  - 708f27d8ea Fix typo reponse -> response
  - 72c4eb6ed7 Fix typo propogate -> propagate
  - 4912e365cb Fix typo directores -> directories
  - 74c8aba03e Fix typo exeption -> exception
  - 4692d84b07 Fix typos of improvement
  - 213fc2d858 Fix typo occurring -> occurring
  - fe6124003b Fix typo nonexistent -> nonexistent
  - 56ce7479b1 Fix typo caught -> caught
  - 821e690e65 Fix typo devolopment -> development
  - b51279e086 Fix typo override -> override
  - 4f2f04e0b7 Fix typo relevnet -> relevant
  - fe8be562c5 Fix typo exisance -> existence
  - 4a2f4de1a8 Fix typo accross -> across
  - 9ae50c993e Fix typo Lenth -> Length
  - 20c79981e1 Fix typo preferrably -> preferably
  - f8d9f608dd Fix typo address -> address
  - a7f12a13ff0 Fix typo keyword -> keyword

30.2. Previous Releases
- bf92c3663b Fix typo formatting -> formatting
- ca4450d881 Fix typo wont -> won't
- cd72b12161 Fix typo thats -> that's
- 6db9724ec7 Fix typo doesn't -> doesn't
- 58d46a7e98 Fix typo certificate -> certificate
- ISSUE #30887: (anlutro) salt-ssh fails on import msgpack - 2015.8 (refs: #30889)
- PR #30889: (anlutro) Make msgpack an optional dependency in salt.utils.cache @ 2016-02-04 20:53:39 UTC
  - cdca33021a Merge pull request #30889 from alprs/fix-cache_msgpack_optional
  - ab7aae3221 make msgpack an optional dependency in salt.utils.cache
- ISSUE #6602: (corywright) Add ability to match on nodegroups to the compound matcher (refs: #30896)
- ISSUE #25292: (lichtamberg) Nodegroup matching in pillars via salt-SSH? (refs: #30896)
- PR #30896: (vutny) Update nodegroups parameter examples in master config example and docs @ 2016-02-04 20:52:35 UTC
  - 0dff45b4ac Merge pull request #30896 from vutny/nodegroups-in-master-config-example
  - 936c1ff6c8 Add explanation about N@ classifier. Inspired by #25292
  - 8bc2426816 Update example in master config documentation reference
  - ca80b8dc3f Update nodegroups section example in master config according to docs
- ISSUE #30792: (bender-the-greatest) Specifying version in pkgs list returns failure even though it succeeds (on Ubuntu) (refs: #30989)
- PR #30898: (abednarik) Fix pkg install with version. @ 2016-02-04 20:52:14 UTC
  - 33a400e943 Merge pull request #30898 from abednarik/fix_pkg_version_debian_family
  - b15c0df799 Fix pkg install with version.
- ISSUE #30843: (HeathNaylor) SALT.STATES.BOTO_ELB register_instances error (refs: #30867)
- ISSUE #30808: (Reiner030) Nice2have: better boto error handling when AWS service isn't available (here: some authentication problems) (refs: #30867)
- ISSUE #30300: (AkhterAli) boto_route53 __salt__ not defined. (refs: #30867, #30920)
- PR #30867: (rallytime) Pass in 'pack' variable to utils.boto.assign_funcs function from ALL boto modules @ 2016-02-04 18:37:05 UTC
  - PR #30279: (cachedout) Allow modules to be packed into boto utils (refs: #30867)
  - 89bae9076a Merge pull request #30867 from rallytime/boto-utils-fix
  - 6ad76426fd Lint
  - 58778dc88 Fix failing boto_vpc module unit tests
  - adb85892de Fix failing state module tests
  - b5ec0991b0 Pylint fix
  - c26c01568f Don't use pack=pack. Just pass in pack=___salt___always.
  - 6146209c53 Pass in 'pack' variable to utils.boto.assign_funcs function from ALL boto modules.
- ISSUE #30798: (tbaker57) salt/utils/aws.py has Python 2.7 dependency (refs: #30849)
PR #30849: (jfindlay) utils.aws: use time lib to convert to epoch seconds @ 2016-02-03 22:47:31 UTC
  - 276cf626b0 Merge pull request #30849 from jfindlay/aws_seconds
  - 17ae74dab1 utils.aws: use time lib to convert to epoch seconds

ISSUE #30869: (Ch3LL) git pillar: do not see all pillar data with multiple repos in 2015.8.4 (refs: #30874)

PR #30874: (terminalmage) Fix regression in git_pillar when multiple remotes are configured @ 2016-02-03 22:24:02 UTC
  - 4cbe8a8250 Merge pull request #30874 from terminalmage/issue30869
  - 9cf0c8126d Fix regression in git_pillar when multiple remotes are configured

ISSUE #30814: (gpenin) [2015.8.*][Ubuntu 12.04 LTS][dpkg.py] Invalid "$[binary:Package]" field in dpkg-query (refs: #30850)

PR #30850: (jfindlay) modules.dpkg._get_pkg_info: allow for ubuntu 12.04 @ 2016-02-03 16:33:26 UTC
  - 8410842aea Merge pull request #30850 from jfindlay/dpkg_var
  - d53a88762e modules.dpkg._get_pkg_info: handle older ubuntu
  - d3c6732539 modules.dpkg._get_pkg_info: use pythonic initializers

PR #30852: (replicant0wnz) Added more descriptive error message @ 2016-02-03 16:30:15 UTC
  - 9a3ec9d028 Merge pull request #30852 from replicant0wnz/error-message-libgit
  - c3649023b5 Added more descriptive error message

PR #30847: (terminalmage) Backport #30844 to 2015.8 branch @ 2016-02-03 16:26:46 UTC
  - PR #30844: (terminalmage) Perform initial gitfs/git_pillar fetch when init'ing remotes on masterless minion (refs: #30847)
  - PR #30703: (kraney) Fix for gitfs ext_pillar on standalone minion (refs: #30844)
  - 0338f445d9 Merge pull request #30847 from terminalmage/bp-30844
  - 58ace01743 Add __role to master opts for gitfs integration tests
  - 17defc20d4 Only perform initial fetch when running on a minion
  - 53c4b4aa4 gitfs: add initial fetch to pygit2 and dulwich
  - 78f92e9ab2 Fix for gitfs ext_pillar on standalone minion

PR #30860: (vutny) Correct installation documentation for RHEL-based distributions @ 2016-02-03 16:13:09 UTC
  - e51182495c Merge pull request #30860 from vutny/correct-doc-install-on-rhel
  - 6648fd4c62 Correct links to Fedora COPR repositories
  - 083037fccc Remove duplicate post-installation tasks section

PR #30841: (jacobhammons) Release notes for 2015.8.5 @ 2016-02-03 00:04:05 UTC
  - f1cf027308 Merge pull request #30841 from jacobhammons/release-notes
  - 6d056ef86 Release notes for 2015.8.5

ISSUE #30820: (Supermathie) State runs involving watch_in or extending break on 2015.8.4 (refs: #30837, #30835, #30833)

PR #30835: (terminalmage) Integration test for #30820 @ 2016-02-02 23:51:53 UTC
  - f8ac6002d3 Merge pull request #30835 from terminalmage/issue30820

30.2. Previous Releases
- ef14956db0 Integration test for #30820

- **ISSUE #30820**: (Supermathie) State runs involving watch_in or extending break on 2015.8.4 (refs: #30837, #30835, #30833)

- **PR #30837**: (jacobhammons) Added known issue #30820 to release notes @ 2016-02-02 22:33:43 UTC
  - e0901854c Merge pull request #30837 from jacobhammons/release-notes
  - 29e12a7fef Added known issue #30820 to release notes

- **ISSUE #28790**: (jfindlay) add grains (and others?) to salt modindex (refs: #30832)

- **PR #30832**: (rallytime) Add grains modules to salt modindex @ 2016-02-02 21:47:46 UTC
  - b512c7757a Merge pull request #30832 from rallytime/fix-28790
  - ca044dd201 Add grains modules to salt modindex

- **ISSUE #28971**: (belt-ascendlearning) if the user exists, but has no permissions, rabbitmq_user.list_user_permissions() blows (refs: #30822)

- **PR #30822**: (rallytime) Make sure setting list_user_permissions to ['", ", "'] doesn't stacktrace @ 2016-02-02 21:42:26 UTC
  - 75db37a97d Merge pull request #30822 from rallytime/rabbitmq-user-state-fixes
  - 272cc653ca Make sure setting list_user_permissions to ['", ", "'] doesn't stacktrace
  - a7afa7a368 Don't return a set() when checking for new tags in rabbitmq_user state

- **ISSUE #30820**: (Supermathie) State runs involving watch_in or extending break on 2015.8.4 (refs: #30837, #30835, #30833)

- **PR #30833**: (terminalmage) Fix regression in scanning for state with 'name' param @ 2016-02-02 21:25:09 UTC
  - 557766f20b Merge pull request #30833 from terminalmage/issue30820
  - be3b8e2be6 Fix regression in scanning for state with 'name' param

- **ISSUE #30722**: (yannis666) mine config is not merged from minion config and pillar (refs: #30757, #30823)

- **PR #30823**: (yannis666) Fix for mine to merge configuration on update. @ 2016-02-02 20:21:24 UTC
  - ec4e2bb9b6 Merge pull request #30823 from yannis666/fix-for-mine-update-merge2
  - 99c7c12aba Fix for mine to merge configuration on update. This fix was previously applied to 2015.5. It fixes #30722

- **PR #30827**: (jacobhammons) Version to 2015.8.4, added CVE 2016-1866 to release notes @ 2016-02-02 20:03:31 UTC
  - d24b9f1ea1 Merge pull request #30827 from jacobhammons/release-2015.8
  - dfc1f7a57d Version to 2015.8.4, added CVE 2016-1866 to release notes

- **ISSUE #30809**: (anlutro) Master configuration "pillar_merge_lists" has no effect (refs: #30813)

- **ISSUE #29601**: (seanjnkns) pillars not merging properly with 2015.8.3 (refs: #30062)

- **PR #30813**: (anlutro) Properly set the default value for pillar_merge_lists @ 2016-02-02 19:53:52 UTC
  - PR #30458: (rallytime) Back-port #30662 to 2015.8 (refs: #30813)
  - PR #30062: (seanjnkns) Remove recurse_list from pillar_source_merging_strategy and add pill... (refs: #30813, #30458)
  - f83845d7c3 Merge pull request #30813 from alprs/fix-pillar_merge_list_default
• PR #30826: (cachedout) Fix 30682 @ 2016-02-02 19:40:05 UTC
  - a3feba4a26 Merge pull request #30826 from cachedout/fix_30682
  - 3b246db0b0 Fix stupid test
  - 12dc677628 Changed list conversion to use correct method and return whole set
  - 97eb4b8bf7 Pop values from new_tags set before loading into dict value

• PR #30818: (rallytime) Back-port #30790 to 2015.8 @ 2016-02-02 18:57:55 UTC
  - PR #30790: (xmj) salt/modules/sysrc.py: Fix documentation for set_ (refs: #30818)
  - b25b845d05 Merge pull request #30818 from rallytime/bp-30790
  - c7c66af0d0 salt/modules/sysrc.py: Fix documentation for set_

• ISSUE #30604: (vutny) Reactor overwrites user argument when calling runner or wheel module (refs: #30815)

• PR #30815: (vutny) Pick right user argument for updating reactor function’s low data @ 2016-02-02 16:50:23 UTC
  - 3cb7a9ee54 Merge pull request #30815 from vutny/reactor-low-data-fix
  - 4d4d67f9ac Pick right user argument for updating reactor function’s low data

• ISSUE #30676: (bwillcox) testsystemd.sh tries to use ‘which’ that does not exist in centos 7 lxc rootfs (refs: #30747)

• PR #30747: (jfindlay) modules.lxc.running_systemd: use command -v not which @ 2016-02-02 14:54:17 UTC
  - 36752906c4 Merge pull request #30747 from jfindlay/lxc_which
  - f8f867570f modules.lxc.running_systemd: use command -v not which

• PR #30800: (twangboy) Ability to handle special case installations @ 2016-02-02 14:25:44 UTC
  - 8abb5b30ad Merge pull request #30800 from twangboy/chrome
  - fe0747c14e Fix another typo
  - 2815efc522 Fixes spelling
  - 6027e1ec53 Updates documentation to reflect new features
  - 1444ab1a48 Adds return success/failure for reg.broadcast_change
  - f2a36904d2 Fixes problem with missing key in old
  - 581a4df523 Added logic for dealing with latest in remove
  - c4357a6d80 Adds more logic for detecting latest
  - 40a66a2501 Logic for handling version: latest
  - b7dadd3b9b Fixes message formatting
  - a305c8ceae Added more descriptive failure message
  - fe49dcb57c Added broadcast change to force registry update

• PR #30794: (rallytime) A spelling fix and some spacing fixes for the boto_ec2 module docs @ 2016-02-01 21:45:33 UTC
  - 7b4a0844d Merge pull request #30794 from rallytime/boto_ec2-mod-doc-fix
  - 5188bc4b96 A spelling fix and some spacing fixes for the boto_ec2 module docs
• ISSUE #23789: (hoonetorg) log output of salt orchestrate run changed between 2014.7.5 and 2015.5.0 significantly - hard to debug (refs: #30756)

• PR #30756: (basepi) [2015.8] Fix two error conditions in the highstate outputter @ 2016-02-01 21:39:23 UTC
  - 1f87ad0387 Merge pull request #30756 from basepi/highstate.outputter.23789
  - 16ad24d42c Import the logger
  - 1b5c6a240c Handle non-string types in comment
  - 11e34d47b Ensure rdurations are all floats for the highstate outputter

• PR #30788: (rallytime) Fix incorrect doc example for dellchassis blade_idrac state @ 2016-02-01 21:20:29 UTC
  - 46adb21af Merge pull request #30788 from rallytime/fix-dellchassis-doc-example
  - bfc169f7a Fix incorrect doc example for dellchassis blade_idrac state

• ISSUE #29161: (jefferyharrell) saltmod.state's ret argument seems to do nothing (refs: #30791, #29207)

• PR #30791: (Ch3LL) do not shadow ret function argument for salt.function @ 2016-02-01 20:07:31 UTC
  - PR #29207: (jfindlay) do not shadow ret function argument (refs: #30791)
  - 33304aeb1 Merge pull request #30791 from Ch3LL/2015.8
  - d54f220c0a do not shadow ret function argument for salt.function

• ISSUE #30706: (carsonoid) minion traceback when Log4mongo installed but not configured (refs: #30726)

• PR #30726: (sjmh) Fix improper use of yield in generator @ 2016-02-01 18:13:24 UTC
  - ce3be26e8f Merge pull request #30726 from sjmh/fix/log4mongo
  - d501f1cc03 Fix improper use of yield in generator

• PR #30752: (terminalmage) Backport systemd and yum/dnf optimizations from develop into 2015.8 @ 2016-02-01 18:11:42 UTC
  - a49b75e065 Merge pull request #30752 from terminalmage/zh459
  - 8a836c8f4 Update systemd tests
  - 54dbb92474 Backport yum/dnf optimizations from develop into 2015.8
  - 1ec1369b6 Backport systemd optimizations from develop into 2015.8

• PR #30759: (thusoy) Allow managing empty files @ 2016-01-31 19:06:37 UTC
  - ea15628446 Merge pull request #30759 from thusoy/empty-files
  - c624ab646c Allow managing empty files

• PR #30758: (thusoy) Support mounting labelled volumes with multiple drives @ 2016-01-31 19:04:03 UTC
  - 120d834ae4 Merge pull request #30758 from thusoy/multi-device-mount
  - 9a6dc089f Support mounting labelled volumes with multiple drives

• PR #30686: (cachedout) Master-side pillar caching @ 2016-01-31 18:52:47 UTC
  - 9e8af2f994 Merge pull request #30686 from cachedout/pillar_cache_2015_8
  - 02d9f626a Pillar cache for master

• ISSUE #30662: (JoaquinVeira) UnicodeDecodeError on 2015.8 (refs: #30675)

• PR #30675: (jfindlay) handle non-ascii minion IDs @ 2016-01-29 23:12:10 UTC
  - 4008e1719a Merge pull request #30675 from jfindlay/decode_id
- 8f6737b6c4 output.key: decode minion ids to unicode
- 7a16f1c941 config: decode id to unicode

**ISSUE #29602**: (multani) cloud.action start raises "got an unexpected keyword argument 'kwargs'" (refs: #30691)

**PR #30691**: (rallytime) Make sure we use the "instance" kwarg in cloud.action. @ 2016-01-29 23:11:37 UTC
- PR #30217: (pass-by-value) Make sure cloud actions can be called via salt run (refs: #31061, #30691)
- 5ca75fbd9e Merge pull request #30691 from rallytime/cloud-action-instance
- 0873a41601 Make note of empty dict return in docstring
- 6a473502ed Make sure we just the "instance" kwarg in cloud.action.

**PR #30713**: (rallytime) Fix-up autodoc proxy modules for consistency @ 2016-01-29 23:10:54 UTC
- 7e1632d61d Merge pull request #30713 from rallytime/proxy-module-docs
- 86c3f2016e Fix-up autodoc proxy modules for consistency

**ISSUE #30654**: (Horgix) Misleading locale(mod) module behavior (refs: #30741)

**PR #30741**: (jfindlay) states.locale.__virtual__: return exec mod load err @ 2016-01-29 23:00:41 UTC
- 1f5f41cc07 Merge pull request #30741 from jfindlay/locale_state
- a3a244735 states.locale.__virtual__: return exec mod load err

**PR #30751**: (basepi) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-01-29 22:43:41 UTC
- 716c2bb7c8 Merge pull request #30751 from basepi/merge-forward-2015.8
- 84eeab7720 Merge remote-tracking branch 'upstream/2015.5' into merge-forward-2015.8
- 07626809a9 Merge pull request #30699 from abednarik/save_load_retry_time
  - 186872cf49 Add Retry to save_load.
- 8d79d1b9c7 Merge pull request #30659 from sjmh/fix-scsi
  - 3544dd995e Fix lsscsi issues for certain platforms

**PR #30720**: (clinta) x509.pem_managed does not return changes dict @ 2016-01-29 17:07:26 UTC
- 1fd0d592c8 Merge pull request #30720 from clinta/fix-pem-managed-changes
- 5c8ef9d3 return changes on test as well
- e61f0269c fix typos and no changes returned for pem_managed

**PR #30687**: (clarkperkins) Setting 'del_root_vol_on_destroy' changes the root volume type to 'standard' @ 2016-01-28 00:02:26 UTC
- PR #30677: (clarkperkins) Fix EC2 volume creation logic (refs: #30687)
- 36db0f99ed Merge pull request #30687 from clarkperkins/bugfix/del-root_vol-loses-type
- a71e181c18 Don't set on a volume when creating from a snapshot
- 8c4f43c68d When setting del_root_vol_on_destroy, preserve the existing volumeType on the AMI

**ISSUE #28257**: (peterzalewski) git_pillar remote with multiple branches yields conflicting cachedirs or checkout conflict (refs: #30673)

**PR #30673**: (terminalmage) Properly derive the git_pillar cachedir from the id instead of the URL @ 2016-01-27 23:52:01 UTC
– 690b8d26b9 Merge pull request #30673 from terminalmage/issue28257
– 8b5933fab4 Properly derive the git_pillar cachedir from the id instead of the URL
– 6265ade1d Add additional reason for pillar env being found

• PR #30666: (cachedout) Fix grains cache @ 2016-01-27 22:23:12 UTC
  – 9f0e97693c Merge pull request #30666 from cachedout/grains_cache_fix
  – 52716694f5 Fix grains cache

• PR #30623: (twangboy) Added service.config function @ 2016-01-27 21:08:12 UTC
  – 8b17c77d72 Merge pull request #30623 from twangboy/add_config
  – c70e182cdf Fixed indenting... got messed up somehow...
  – 246f75f2dd Renamed variables, updated docs, added tag
  – a4534ee94c Fixed documentation
  – 54b50236a6 Fixed another error
  – 76a0cf33e5 Fixed syntax error
  – 3937380b79 Added service.config function

• PR #30678: (rallytime) Back-port #30668 to 2015.8 @ 2016-01-27 20:39:25 UTC
  – PR #30668: (multani) Fix salt.modules.mount documentation (refs: #30678)
  – 6af1927bd3 Merge pull request #30678 from rallytime/bp-30668
  – 7c7076e6af Fix salt.modules.mount documentation

• PR #30677: (clarkperkins) Fix EC2 volume creation logic (refs: #30687) @ 2016-01-27 18:09:29 UTC
  – 6c71b29f25 Merge pull request #30677 from clarkperkins/bugfix/ec2-volume-logic
  – bfcf052e7d Added some extra documentation
  – ed2ee8e39 Allow volume params to be set even when specifying a snapshot

• ISSUE #18980: (lrhazi) salt-cloud: ExtraData: unpack(b) received extra data. (refs: #30671)

• PR #30680: (cro) Merge forward from 2015.5, primarily for #30671 @ 2016-01-27 17:56:48 UTC
  – PR #30671: (techhat) Add file locking to cloud index (refs: #30680)
  – 36142390d4 Merge pull request #30680 from cro/mf20155-20158-20160127
  – f8ae3a20ff Merge remote-tracking branch 'upstream/2015.5' into mf20155-20158-20160127 Merge-forward from 2015.5.
  – 516919525a Merge pull request #30671 from techhat/lockcloud
    • 4719f8d4ea Whitespace
    • 8e7eca23e4 Add file locking to cloud index

• PR #30663: (isbm) Zypper: latest version bugfix and epoch support feature @ 2016-01-27 17:10:42 UTC
  – f6feddecb4 Merge pull request #30663 from isbm/isbm-zypper-latest-versionfail
  – 4336487765 Add support for epoch in Zypper
  – 12d515f0a0c Fix package status filtering on latest version

• PR #30652: (mew1033) Fix sh beacon @ 2016-01-27 17:00:29 UTC
- 9d8ddeb525 Merge pull request #30652 from mew1033/fix-sh-beacon
- 256d037e0f Fix sh beacon

- **ISSUE #29678**: (dschaller) NPM Install Forces Silent (refs: #29650)
- **PR #30657**: (jfindlay) [2015.8] Backport #30378 and #29650 @ 2016-01-27 00:34:00 UTC
  - PR #30378: (dschaller) Adding silent flag to npm.bootstrap (refs: #30657)
  - PR #29650: (dschaller) Adding ability to disable npm install silent flag (refs: #30657)
  - 1fa1963895 Merge pull request #30657 from jfindlay/backport_quiet
  - ca4adbf382 Adding ability to disable npm install silent flag
  - afe149eb6d Adding ability to disable npm install silent flag
  - c1101b5f0b Adding ability to disable npm install silent flag
  - d29ad8bbf6 Adding ability to disable npm install silent flag
  - 7a21dbf0d9 Adding silent flag to npm.bootstrap
  - 354c0bdf26 Adding silent flag to npm.bootstrap

- **PR #30656**: (rallytime) [2015.8] Merge 2015.5 into 2015.8 @ 2016-01-27 00:33:30 UTC
  - 3621651bf8 Merge pull request #30656 from rallytime/merge-forward-2015.8
  - 76ab6981a5 Merge branch '2015.5' into 2015.8
  - 643c9c9616 Merge pull request #30586 from abednarik/fix_comment_line_perms
  - 8b395a42cb Fix comment_line permissions.

- **PR #30644**: (tbaker57) Another go at fixing 30573 @ 2016-01-26 20:18:41 UTC
  - 30e03a8b0c Merge pull request #30644 from tbaker57/another_go_at_30573
  - 267b8827fd Another go at fixing 30573

- **PR #30611**: (isbm) Bugfix: Zypper pkg.latest crash fix @ 2016-01-26 16:35:47 UTC
  - 7d307e2a04 Merge pull request #30611 from isbm/isbm-zypper-latest
  - a7141be651 Put 'kwargs' on its own line according to the common pattern
  - ee9b3f859b Bugfix: do not treat SLS id as a package name if an empty 'pkgs' list specified.
  - d3cf8ed41 Cleanup formatting
  - 1bdbaac658 Add error handling
  - 2ec5ec88a4 Add a new line before the last return
  - 4243838c4 Remove unnecessary complexity and string increment
  - 48e8d90343 Avoid backslashes where they are not needed
  - 6df5d500f0 Use regexp type for the string.
  - c2ca141956 Get version as an explicit parameter
  - 9e944db706 Check the version of the package, instead of the package name
  - 59ea758efb Fix formatting
  - 514f6349d4 Bugfix: crash on "key not found" error
  - ea75f55a1a Fix PEP8: line continuation
- ece35ebc26 Replace old fashion string memcopy with the list
- 716445e588 Fix PEP8: line continuation
- 0f11079f9 Fix PEP8 for the operator

• ISSUE #7811: (kiall) RabbitMQ Cluster/Plugins/Policy etc states do not track changes, preventing "watch" from working (refs: #30631)

• PR #30631: (rallytime) Refactor rabbitmq_cluster states to use test=true functionality correctly @ 2016-01-26 16:23:49 UTC
  - 5bc11d7539 Merge pull request #30631 from rallytime/fix-7811
  - b9f9f6ed6d Refactor rabbitmq_cluster states to use test=true functionality correctly

• ISSUE #25658: (tsaridas) rabbitmq_policy.present state (refs: #30628)

• PR #30628: (rallytime) Refactor rabbitmq_policy states to use test=true functionality correctly @ 2016-01-26 00:21:03 UTC
  - ef6c4e8377 Merge pull request #30628 from rallytime/fix-25658
  - 1e8e86007c Refactor rabbitmq_policy states to use test=true functionality correctly

• PR #30624: (cro) Remove bad symlinks from osx pkg dir @ 2016-01-26 00:02:25 UTC
  - 80d0e428aa Merge pull request #30624 from cro/remove_bad_symlinks
  - 5f5d38624e Remove bad symlinks in osx pkg dirs

• ISSUE #30621: (zer0def) Current latest (2015.8.3) list of builtin states docu doesn't list 'glance' (refs: #30622)

• PR #30622: (rallytime) Add glance state to list of state modules @ 2016-01-25 23:55:54 UTC
  - 330ea9a292 Merge pull request #30622 from rallytime/fix-30621
  - 57b7e6ce93 Add glance state to list of state modules

• ISSUE #19288: (oba11) AssociatePublicIpAddress doesnt work with salt-cloud 2014.7.0 (refs: #20972, #30591)

• PR #30618: (rallytime) Back-port #30591 to 2015.8 @ 2016-01-25 23:55:20 UTC
  - PR #30591: (mlalpho) salt-cloud-clouds-ec2 AssociatePublicIpAddress fix (refs: #30618)
  - PR #20972: (JohannesEbke) Fix interface cleanup when using AssociatePublicIpAddress in #19288 (refs: #30591)
  - f00d8f398a Merge pull request #30618 from rallytime/bp-30591
  - 2e9d59fa42 looks like a re-merge of PR #20972 which relates to #19288

• ISSUE #30587: (sjorge) [docs] docs confusing on client_acl and external_auth usage (refs: #30625)

• PR #30625: (jfindlay) doc.topics.eauth: clarify client_acl vs eauth @ 2016-01-25 23:03:24 UTC
  - 6b94d9655 Merge pull request #30625 from jfindlay/eauth_acl
  - b5e2c0f028 doc.topics.eauth: clarify client_acl vs eauth
30.2.84 Salt 2015.8.8.2 Release Notes

Version 2015.8.2 is a bugfix release for 2015.8.0.

Fixes to 2015.8.8

Salt 2015.8.8.2 includes fixes for the following known issues in 2015.8.8:

- Key master with value [...] has an invalid type of list Error (issue #32044)
- Failed to import module win_dacl Error (issue #32004)
- Wrong validation type for file_ignore_glob key (issue #32114)
- Fix file.managed for windows (issue #31969)

Important: issue #32183 prevents Salt Cloud from installing the Salt minion on new systems. To workaround this issue, call `salt-cloud -u` to update the bootstrap script to the latest version.

Changelog for v2015.8.8..v2015.8.8.2

Generated at: 2018-05-28 00:29:12 UTC

- 403563e441 Change type check errors to debug loglevel
- 8323005b3d Support multiple valid option types when performing type checks
- 2f95082a96 Fixed validation type for file_ignore_glob Fixes #32114
- 2685e61d9e Move constant declaration into member variable to avoid issues when modules can’t be loaded.
- bc10d7dede Add apply_template_on_contents for windows

30.2.85 Salt 2015.8.9 Release Notes

Version 2015.8.9 is a bugfix release for 2015.8.0.

Statistics

- Total Merges: 145
- Total Issue References: 110
- Total PR References: 264
- Contributors: 71 (Ch3LL, DmitryKuzmenko, DylanFrese, Ferbla, Kurocon, Lothiraldan, RuriRyan, Talkless, The-Loeki, UtahDave, Xiami2012, abednarik, afletch, ahammond, ahus1, aletourneau, alxf, amontalan, anluto, arthurlogilab, atengler, basepi, bdrung, bradhurber, cachedout, captaininspiration, cedwards, clarkperkins, clinta, cro, dmurphy18, exowaucka, garethgreenaway, guettli, idonin, isbm, jacobhammons, jbonachera, jfindlay, jfray, junster1, justinta, krak3n, lalmeras, lloydoliver, lomereoe, mcalmer, mitar, mrproper, multani, nmadhok, notpeter, onoruza, paclat, papertigers, rallytime, rkgrunt, sakateka, sbridba, schancel, sjorge, stk0vrf0lw, techhat, terminalmage, thatch45, ticosax, tomlaredo, twangboy, twellspring, vutny, whiteinge)
Important Post-Upgrade Instructions for Linux Mint

As a result of some upstream changes, the os grain on Mint Linux is now being detected as LinuxMint (issue #33295). Run the following command after you upgrade to 2015.8.9 to reset the os grain to Mint and the os_family grain to Debian:

```bash
salt -G 'os:LinuxMint' grains.setvals "{'os': 'Mint', 'os_family': 'Debian'}"
```

Changelog for v2015.8.8.2..v2015.8.9

Generated at: 2018-05-28 00:36:04 UTC

- **PR #33310**: (jfindlay) update 2015.8.9 release notes
- **PR #33293**: (twangboy) Fix minion start retry on Windows (2015.8) @ 2016-05-17 17:03:41 UTC
  - e3eff27c55 Merge pull request #33293 from twangboy/fix_33277_2015_8
  - 652f0079db Fix minion start retry on Windows
- **ISSUE #31270**: (4001982248998) acl.present: TypeError on subsequent runs (refs: #33172)
  - PR #33305: (rallytime) Back-port #33172 to 2015.8
  - PR #33172: (Kurocon) linux_acl: Allow '-' as a separation character in ACL permissions. Fix... (refs: #33005)
- **ISSUE #33299**: (jbonachera) salt-cloud: scp_file() and sftp_file() don’t work with ipv4-only hosts (refs: #33300)
  - PR #33300: (jbonachera) Handle more ipv6 error as an exception #3299
- **ISSUE #26062**: (silenius) service.status is broken under FreeBSD (refs: #33294)
- **ISSUE #23435**: (JaseFace) service.status currently reports an error on FreeBSD if the service isn’t running (refs: #33294)
  - PR #33294: (terminalmage) Ignore retcode when checking service’s status
- **PR #33274**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-05-16 16:41:32 UTC
  - 06edba448e Merge pull request #33274 from rallytime/merge-2015.8
  - bf641d3a66 Merge branch '2015.5' into '2015.8'
  - 8fa72f6588 Clarify file.replace MULTILINE flag interaction with regex anchors (#33137)
  - 4b1f460256 update 2015.5.11 release notes (#33236)
- **ISSUE #30258**: (rallytime) Changes dictionary return should be mentioned in test state docs (refs: #33254)
  - PR #33254: (rallytime) Add comment for test=true w/o changes ret and add changes dict example
- **ISSUE #30946**: (rallytime) Update SaltStack Git Policy Documentation (refs: #33252)
  - PR #33252: (rallytime) Update Git Policy docs to match Contribution guide
- **ISSUE #33238**: (clinta) x509 CSR fails if the csr does not contain any extensions (refs: #33239)
  - PR #33239: (clinta) Fix #33238
  - PR #33245: (terminalmage) Backport #33244 to 2015.8
  - PR #33244: (terminalmage) Properly report on invalid gitfs/git_pillar/winrepo repos (refs: #33245)
Salt Documentation, Release 3002.5

- **PR #32238**: (ticosax) [gitfs] only 2 argument are passed to this template when render error message (refs: #33244, #33245)

- **ISSUE #30605**: (eyj) Update development/conventions/release.rst docs - they're out of date with the current process. (refs: #33253)

- **PR #33253**: (rallytime) Update the release process docs @ 2016-05-13 21:28:11 UTC
  - 94a53da92e Merge pull request #33253 from rallytime/fix-30605
  - a129d05b6d Update the release process docs
  - **PR #33251**: (jfindlay) update 2015.8.9 release notes

- **ISSUE #33243**: (jbonachera) salt-cloud: wait_for_port() doesn’t work with ipv4-only hosts (refs: #33246, #33300)
  - **PR #33246**: (techhat) Handle ipv6 error as an exception

- **ISSUE #33073**: (robnagler) TypeError: unhashable type: 'dict' (refs: #33213)
  - **PR #33213**: (terminalmage) Check rendered YAML for invalid keys

- **ISSUE #21903**: (basepi) Document _file.conf pattern for master.d/ and minion.d/ (refs: #33224)
  - **PR #33224**: (rallytime) Make note of files that begin with ‘_’ in master.d or minion.d dirs

- **ISSUE #31975**: (rajvidhimar) Docstrings not reflected in the salt documentation. (refs: #33150)
  - **PR #33150**: (rallytime) Gate jnpr imports in salt.proxy.junos.py

- **ISSUE #21315**: (ryan-lane) No example documentation for http.query state (refs: #33222)
  - **PR #33222**: (rallytime) Add docs for the http state

- **ISSUE #29796**: (vutny) Fail to use ‘highstate’ outputter explicitly (refs: #33215)
  - **PR #33215**: (rallytime) Don’t stacktrace when using --out=highstate at CLI during state run.
  - **PR #33219**: (lalmeras) propagate opts to salt.util.http call
  - **PR #33154**: (lalmeras) propagate opts to salt.util.http call (refs: #33219)
  - **PR #33237**: (jfindlay) update 2015.8.9 release notes

- **PR #33217**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-05-12 22:45:39 UTC
  - 6dc5d605b1 Merge pull request #33217 from rallytime/merge-forward-2015.8
  - 4655607b58 Merge branch '2015.5' into '2015.8'
  - 69bf1eb657 Merge pull request #33211 from cachedout/user_kill
    - df42e5baa7 Don't try to kill a parent proc if we can't
    - f86832911e Resolve issue with pkg module on Mint Linux (#33205)
    - a08e1b6335 Add pip installed and removed test (#33178)
    - 96e3586f12 update 2015.5.11 release notes (#33197)
    - 09b072a412 Fix file.managed for Windows (#33181)
    - **PR #33207**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8

- **ISSUE #32917**: (bradthurber) standalone minion pygit2 pillar data doesn’t refresh without manual git fetch (refs: #33204)
  - **PR #33204**: (terminalmage) Add a fetch when compiling git_pillar for masterless minions

30.2. Previous Releases

2943
• ISSUE #33162: (jfindlay) Key error with salt.utils.cloud.cache_node and EC2 (refs: #33164)
  - PR #33164: (jfindlay) cloud.clouds.ec2: cache each named node
• ISSUE #32385: (aronneagu) git.latest throws expected string or buffer (refs: #33203)
  - PR #33203: (terminalmage) Properly handle failed git commands when redirect_stderr=True
• ISSUE #32685: (gidantribal) git state does not take into account ssh config file (refs: #33152)
  - PR #33152: (terminalmage) Don't force use of global ssh_config when git identity file is specified
  - PR #33198: (jfindlay) update 2015.8.9 release notes
• PR #33188: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-05-11 22:32:29 UTC
  - 6177a6a36f Merge pull request #33188 from rallytime/merge-2015.8
  - f12ba6bebc Merge branch '2015.5' into '2015.8'
  - 30868ab06c [2015.5] Update to latest bootstrap script v2016.05.11 (#33185)
  - 264ad34b3b Pip fix (#33180)
  - 43288b268d add 2015.5.11 release notes (#33160)
  - e0da8da7d [2015.5] Update to latest bootstrap script v2016.05.10 (#33155)
  - PR #33161: (jfindlay) add 2015.8.9 release notes
  - PR #33156: (rallytime) [2015.8] Update to latest bootstrap script v2016.05.10
• ISSUE #25040: (yi9) grains.get can't get minion's /etc/salt/grains value in multi-master set up (refs: #33142)
  - PR #33142: (cachedout) Hash fileclients by opts
• ISSUE #22142: (multani) State acl.present doesn't allow to set "default" ACLs (refs: #31769)
  - PR #33139: (rallytime) Back-port #31769 to 2015.8
  - PR #31769: (DylanFrese) Fix acl.present and acl.absent when adding default ACLs (refs: #33139)
• PR #33144: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-05-10 19:40:31 UTC
  - 2800762b44 Merge pull request #33144 from rallytime/merge-2015.8
  - 449176f06e Merge branch '2015.5' into '2015.8'
  - 6cd1641840 Merge pull request #33141 from jtand/disable_local_pkg_install_test
  * 8b1e34fb17 Skipping salt-call --local test
• PR #33140: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-05-10 16:57:55 UTC
  - 72d075e14e Merge pull request #33140 from rallytime/merge-2015.8
  - c732e8104b Merge branch '2015.5' into '2015.8'
  - 878d34a865 Doc mock decorators (#33132)
• ISSUE #32834: (beardedeagle) Masterless Minion - Unable to query job cache (refs: #33017, #33100)
  - PR #33100: (rallytime) If cache_jobs: True is set, populate the local job cache when running salt-call
  - PR #33135: (stk0vrfl0w) Fix broken parsing of usermgmt.conf on OpenBSD
  - PR #33129: (rallytime) Back-port #33101 to 2015.8
  - PR #33101: (thatch45) Add a check that the cmdline of the found proc matches (refs: #33129)
  - PR #33064: (terminalmage) salt.utils.gitfs: fix formatting for warning messages
• ISSUE #33058: (aclemetson) Unable to run "win_servermanager.list_available" on minion. (refs: #33099)
  - PR #33099: (twangboy) Fix 33058

• ISSUE #32999: (basepi) Stacktrace for master_finger mismatch on minion (refs: #33106)

• PR #33106: (abednarik) Moved _finger_fail method to parent class. @ 2016-05-09 16:31:09 UTC
  - 8acc3147d6 Merge pull request #33106 from abednarik/abednarik_master_Finger_stacktrace
  - 91a69ba54a Moved _finger_fail method to parent class.
  - PR #33102: (Ch3LL) clarify docs that map is designed to be run once. is not stateful
  - PR #33098: (rallytime) Back-port #33061 to 2015.8
  - PR #33061: (ahammond) cloud.query needs to define mapper.opts (refs: #33098)

• PR #33096: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-05-06 19:27:57 UTC
  - c1f7aed8a5 Merge pull request #33096 from rallytime/merge-2015.8
  - 0fd5e9d157 Merge branch '2015.5' into '2015.8'
  - 30edefadfd Lower display of msgpack failure msg to debug (#33078)
  - d4928c5a22 Use saltstack repo in buildpackage.py on CentOS 5 (#33080)
  - 61d126cb98 add test for installing package while using salt-call --local (#33025)
  - 6d3e4e8935 File and User test fixes for 2015.5 on Fedora23 (#33055)
  - d48b28b52 test pillar.items output (#33060)
  - 398793bf0 Fix minor document error of test.assertion (#33067)
  - f8757631b2 Saltfile with pillar tests (#33045)
  - 1d7892421e Backport #33021 manually to 2015.5 (#33044)
  - f00b5f91b3 Add run_on_start docs to schedule.rst (#32958)
  - PR #32865: (idonin) salt-cloud: fix ipv6-only virtual machines
  - PR #33084: (jfindlay) modules.npm: do not log npm --version at info level

• ISSUE #33068: (pythonwood) salt-ssh do not support centos5 because old-version-python ? (refs: #33081)

• PR #33081: (jfindlay) ssh docs: install py-2.6 for RHEL 5 @ 2016-05-06 15:18:39 UTC
  - 3808d05838 Merge pull request #33081 from jfindlay/ssh_doc
  - a2c927b173 ssh docs: install py-2.6 for RHEL 5

• PR #33088: (isbm) Bugfix: Restore boolean values from the repo configuration @ 2016-05-06 15:13:27 UTC
  - 6d604926d3 Merge pull request #33088 from isbm/isbm-zypper-fix-boolenese
  - 3ca203eb8e Bugfix (follow-up): setting priority requires non-positive integer
  - 79a46e091c Add repo config test
  - 222b8369ca Add test data for repos
  - b746fa35f0 Bugfix: Restore boolean values from the repo configuration

• ISSUE #12422: (creaky) Bug: file.blockreplace inserts additional blank line on multi-line content (refs: #33049)
  - PR #33082: (Ch3LL) Fix tests for file.blockplace to remove newline
– **PR #33049:** (thatch45) Don't append a newline when creating new content with blockreplace (refs: #33082)

• **PR #32892:** (isbm) Resolve Zypper locks on asynchronous calls @ 2016-05-05 14:34:59 UTC
  
  – fb89877cf2 Merge pull request #32892 from isbm/isbm-zypper-env-variables
  – 1601a7e07a Prevent the use of "refreshable" together with "nolock" option.
  – 52e1be2fa9 Remove unused variable in a constructor. Adjust the docstring accordingly.
  – 7e00f566ef Move log message down to the point where it actually sleeps. Rephrase the message.
  – 4b7dab83ff Fix PID file path for SLE11
  – 7f37961d4b Rename tags
  – c55b0fab58 Test DOM parsing
  – c54e928e4f Add exception handling test
  – 3d245bbe84 Parse DOM out of the box, when XML mode is called
  – 6a98f523ac Add Zypper caller test suite
  – f189f90124 Bugfix: always trigger __getattr__ to reset and increment the configuration before the call.
  – 7e1712dd80 Fix tests according to the new calling model
  – 3a30b7fbcd Remove an obsolete test case
  – 6e5877a2ee Add Zypper Call mock
  – bb5540cb4a Bugfix: inverted logic on raising (or not) exceptions
  – ce9262fe71 Make Zypper caller module-level reusable
  – 77dc8695af Update docstrings according to the bugfix
  – 46d86b21d5 Bugfix: accept refresh override param
  – cb40618262 Fire an event about released Zypper with its result
  – 0728f0bc00 Replace string values with the constants
  – 6af3f7141b Check if zypper lock exists and add more debug logging
  – 0167b30a75 Add Zypper lock constant
  – 370ff21d36 Fire an event to the Master about blocked Zypper.
  – 1727ca3de2 Use new Zypper call implementation
  – 485164aa5c Remove blocking-prone Zypper call implementation
  – f161f0612c Implement block-proof Zypper call implementation
  – baf35ed708 Remove one-char variables
  – 2c94eb016f Remove an unused variable
  – 6869ebc557 Remove an empty line
  – 7e06489da9 Remove verbose wrapping
  – 2131ff04af Standarize zypper call to "run_all"
  – 046ef44ca3 Bugfix: version_cmp crashes in CLI if there are versions, that looks like integer or float.
  – b869a92eea Change Zypper calls to a single point
• ISSUE #2437: (Grokzen) Minion schedule return data missing some fields (refs: #33039)
  - PR #33039: (The-Loeki) Add fun_args to scheduled return data (part of #24237)
• ISSUE #12422: (creaky) Bug: file.blockreplace inserts additional blank line on multi-line content (refs: #33049)
  - PR #33049: (thatch45) Don’t append a newline when creating new content with blockreplace (refs: #33082)
• ISSUE #24996: (danlsgiga) --failhard option not working as expected (refs: #33048)
  - PR #33048: (rallytime) Pass all data to batch.run() call when using --failhard
• ISSUE #12422: (creek) Bug: file.blockreplace inserts additional blank line on multi-line content (refs: #33049)
  - PR #33049: (thatch45) Don’t append a newline when creating new content with blockreplace (refs: #33082)
• ISSUE #32452: (nicholascapo) cmd.run_all with --batch and --failhard gives no output on failure (refs: #33050)
  - PR #33050: (rallytime) Display command output when command fails with batch + failhard options
• ISSUE #33041: (anitakrueger) boto_elb.present security_groups kwarg is a list - needs documentation (refs: #33053)
  - PR #33053: (rallytime) Allow security_groups kwarg for boto_elb.present to be string or list
  - PR #33054: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8
  - PR #33056: (justinta) File and User test fixes for 2015.8 on Fedora23
• ISSUE #32472: (esn89) salt-minion is stuck in a restart loop with not much info: (refs: #33030)
  - PR #33040: (rallytime) Back-port #33030 to 2015.8
  - PR #33030: (thatch45) When we restart the minion we should show the error that caused it (refs: #33040)
• ISSUE #32834: (beardedeagle) Masterless Minion - Unable to query job cache (refs: #33017, #33100)
  - PR #33017: (rallytime) Update the docs for saltutil.find_job to be more clear/accurate
  - PR #33031: (rallytime) Back-port #33002 to 2015.8
  - PR #33002: (whiteinge) Add saltenv to the cmd.script state function (refs: #33031)
  - PR #33021: (UtahDave) Fix syndic regression (refs: #33044)
• ISSUE #11801: (slai) Salt does not match user names properly under Windows (refs: #32674)
  - PR #32674: (twangboy) Compare uid and gid instead of name and group
• ISSUE #32856: (DeanScothern) jid not shown when running the salt command line with --batch-size using either --verbose or --show-jid with certain salt versions (refs: #32996)
• ISSUE #31738: (igorwidlinski) salt --show-jid does not show job id when run in batch mode (refs: #32450)
  - PR #32996: (rallytime) Allow batch mode to use verbose option, as well as show_jid.
  - PR #32450: (cachedout) Pass parser options into batch mode (refs: #32996)
• ISSUE #32954: (atengler) glusterfs.peered fails with 'NoneType' object is not iterable (refs: #32955)
  - PR #32955: (atengler) Fixed glusterfs.peered output
• ISSUE #26011: (rodriguezsergio) states.virtualenv != modules.virtualenv (refs: #32994)
  - PR #32994: (rallytime) Clarify some arg docs for virtualenv state
  - PR #32986: (justinta) Fix boto.secgrouop_test
• ISSUE #32777: (sjorge) cron.present broken on Solarish systems if user specified (refs: #32970)
  - PR #32970: (sjorge) fix user cron on solarish operating systems
  - PR #32796: (jfindlay) salt.log.setup: process user args before format
ISSUE #32891: (guettli) docs: Note "This document represents behavior exhibited by Salt requisites as of version 0.9.7 of Salt." (refs: #32934)
  - PR #32934: (jfindlay) doc.ref.states.ordering: clarify requisite change

ISSUE #32882: (papertigers) carbon_return is missing a default value. (refs: #32883)
  - PR #32928: (rallytime) Back-port #32883 to 2015.8
  - PR #32883: (papertigers) mode should default to 'text' (refs: #32928)

ISSUE #32646: (deamen) FileClient Class ( client = salt.minion.FileClient(__opts__) ) does not exist (refs: #32925)
  - PR #32925: (rallytime) Remove FileClient class references from docs - it doesn’t exist.

ISSUE #23683: (gravyboat) contents_grains should have an example (refs: #32922)
  - PR #32922: (rallytime) Update contents_grains option with relevant docs

PR #32926: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-04-28 19:47:52 UTC
  - e60c12640d Merge pull request #32926 from rallytime/merge-2015.8
  - 5a18881be Merge branch '2015.5' into '2015.8'
  - edce22a143 backport PR #32732 to 2015.5 fixes #23714 (#32848)
  - PR #32908: (Ch3LL) Specify EBS volume tags in profile configuration in aws

ISSUE #23952: (neogenix) iptables state append doesn't honor position -1 (refs: #32906)
  - PR #32906: (rallytime) Update docs to warn users that -1 isn't valid for iptables insert state

ISSUE #32510: (Ch3LL) Cannot specify image in provider file when using map file (refs: #32900)
  - PR #32900: (rallytime) Allow profile options to be specified in provider file when using maps

ISSUE #30855: (guettli) Docs: does salt.states.service support systemd? (refs: #32880)
  - PR #32880: (rallytime) Clarify service state opening docs - uses 'service' virtualname

PR #32884: (terminalmage) Fix incorrect deprecation notice @ 2016-04-27 15:47:35 UTC
  - e1b40b3b76 Merge pull request #32884 from terminalmage/fix-incorrect-deprecation-notice
  - b307c5452a Fix incorrect deprecation notice

PR #32878: (jacobhammons) added note about updating the bootstrap script in salt-cloud using th... @ 2016-04-26 21:09:51 UTC
  - a2921b9da0 Merge pull request #32878 from jacobhammons/salt-cloud
  - 3887938727 added note about updating the bootstrap script in salt-cloud using the -u flag. removed the saltconf banner.

ISSUE #32861: (bradthurber) Is it master_syndic or syndic_master? (refs: #32869)

PR #32869: (rallytime) Use correct config setting in cloud syndic docs @ 2016-04-26 19:13:21 UTC
  - 71db10fd2c Merge pull request #32869 from rallytime/fix-32861
  - 0e73daad26 Use correct config setting in cloud syndic docs

PR #32844: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-04-26 17:38:08 UTC
  - 02c681311f Merge pull request #32844 from rallytime/merge-2015.8
  - 1fc9de1d04 Add 'file.source_list' mock to archive state unit tests
• 9064d3bbf Merge branch '2015.5' into '2015.8'
  * 9b5c14c37c salt-cloud -u downloads stable version from bootstrap.saltstack.com by default (#32837)
  * 9725804448 update bootstrap to 2016.04.18 release (#32667)
  * c842e1e437 Merge pull request #32776 from rallytime/merge-2015.5
    - 7ecbf9f885 Merge pull request #14 from whiteinge/runner-asyc-low
    - 211f7b4af1 Format low data correct for runner_async
    - ce72851861 Merge branch '2014.7' into '2015.5'
    - 2775edc176 Saltnado /run fix (#32590)
    - b19c5a5ce7 Verify auth in saltnado run (#32552)
  * 67d0c81184 Support remote sources in a source list (#32691)
  * bd542d768 Merge pull request #32686 from cachedout/issue_32661
    - f704df90bc Fix stacktrace in batch with dup minion ids
  * 3ec9502a86 Update "Low Hanging Fruit" to "Help Wanted" (#32675)
  * 77bea56b68 Addional documentation on calling exec modules from templates (#32657)
  * c910b8dd51 Fixing critical bug to remove only the specified Host instead of the entire Host cluster (#32639)
  * 4568565d45 Add _syspaths.py to .gitignore (#32638)
• ISSUE #32799: (belt) ssh_auth.present creates ~/.ssh (refs: #32868)
  - PR #32868: (rallytime) Back-port #31139 to 2015.8
  - PR #31139: (exowaucka) Improve %h and %u handling in SSH module (refs: #32868)
• ISSUE #23714: (naemono) file.copy force ignored during highstate, but not with 'salt-call state.sls_id' (refs: #32732, #32847, #32848)
  - PR #32847: (lomeroe) backport PR #32732 for issue #23714
  - PR #32732: (lomeroe) correct use of force flag in file.copy #23714 (refs: #32847, #32848)
• ISSUE #32824: (bradthuber) salt-cloud vmware: wrong pyvmomi installed for RHEL/CentOS 6 (refs: #32845)
  - PR #32845: (rallytime) Add pyvmomi version warning to Getting Started with VMware docs
• ISSUE #25492: (hernanc) "docker-py mem_limit has been moved to host_config in API version 1.19" error (refs: #26518, #32818)
  - PR #32841: (rallytime) Back-port #32818 to 2015.8
  - PR #32818: (mitar) Pass None as memory limit (refs: #32841)
  - PR #26518: (krak3n) Fix for #25492 (refs: #32818)
• ISSUE #32605: (Talkless) pkgrepo.managed with apt does not add comments value later (refs: #32813)
  - PR #32839: (rallytime) Back-port #32813 to 2015.8
  - PR #32813: (abednarik) Add comments as an option for apt in pkgrepo.managed. (refs: #32839)
  - PR #32659: (anlutro) Various improvements on cloud deploy script docs
  - PR #32668: (jfindlay) [2015.8] update bootstrap to 2016.04.18 release
• PR #32785: (rallytime) Back-port #29322 to 2015.8
  - PR #29322: (mrproper) add http proxy support for tornado (refs: #32785)

• ISSUE #32710: (bradhurber) conf/master missing many gitfs and git_pillar parameters (refs: #32722)

• PR #32787: (rallytime) Back-port #32722 to 2015.8 @ 2016-04-25 15:19:21 UTC
  - PR #32722: (bradhurber) Catch up the conf/master file to include gitfs/git_pillar params from ...
    (refs: #32787)
  - 96a3d4e556 Merge pull request #32787 from rallytime/bp-32722
  - 8d7148d41b Catch up the conf/master file to include gitfs/git_pillar params from recent releases

• PR #32786: (rallytime) Back-port #32703 to 2015.8 @ 2016-04-25 15:19:13 UTC
  - PR #32703: (schancel) Make example top file match templated version (refs: #32786)
  - 36f705847 Merge pull request #32786 from rallytime/bp-32703
  - baa4df25c9 Make example top file match templated version
  - 227e4aabb Fix unnecessary capitalization
  - 73cd9f26c3 Merge branch 'gitfs_perremote_doc_updates' of https://github.com/l2ol33rt/salt into pr-32775
  - b69d406ada Including name per-remote config option in example
  - PR #32779: (terminalmage) Improve documentation on pygit2 versions

• ISSUE #32609: (anlutro) Tornado ioloop fails when master disconnects? (refs: #32749)
  - PR #32749: (DmitryKuzmenko) Properly handle minion failback failure.

• ISSUE #32144: (vutny) Pillar targeting starts to work only after calling saltutil.refresh_pillar (refs: #32643)
  - PR #32643: (vutny) Document pillar cache options

• ISSUE #32705: (joakimkarlsson) win_dacl.present: Specifying propagations for a directory fails (refs: #32720)
  - PR #32720: (jfindlay) modules.win_dacl: consistent case of dacl constants

• ISSUE #30761: (sjmh) Cannot target subsets of minions when using pillar and external_auth (refs: #31598)

• ISSUE #21303: (Lothiraldan) Explicit and document ACL rules format (refs: #32733)
  - PR #32733: (Lothiraldan) Update external auth documentation to list supported matcher.
  - PR #31598: (terminalmage) Remove limitations on validation types for eauth targets (refs: #32733)
  - PR #32693: (techhat) Check dependencies type before applying str operations
  - PR #32692: (garethgreenaway) Handle when beacon not configured and we try to enable/disable them

• PR #32718: (garethgreenaway) Fixes to schedule.list in 2015.8 @ 2016-04-20 19:51:24 UTC
  - f52af5a596 Merge pull request #32718 from garethgreenaway/2015_8_schedule_list_fix
  - 7fa5d809d2 backporting a fix from develop where the use of splay would result in seconds=0 in the
    schedule.list when there was no seconds specified in the origina schedule

• PR #32684: (captaininspiration) Fix routes for redhat < 6 @ 2016-04-19 19:18:20 UTC
  - PR #32682: (captaininspiration) Fix routes for redhat < 6 (refs: #32684)
  - f63566e452 Merge pull request #32684 from captaininspiration/2015.8
  - 640c7a90da Fix routes for redhat < 6
- PR #32683: (techhat) Handle a couple of arguments better (Azure)

- ISSUE #32523: (junster1) network.py/loader.py failing because cfn variable is not defined before use. (refs: #32672)
  - PR #32672: (junster1) Fix for issue 32523

- ISSUE #32517: (Ch3LL) Minion restarting and erroring when cannot reach the masters in multi-master failover (refs: #32555, #32556)
  - PR #32556: (DmitryKuzmenko) Don't access deprecated Exception.message attribute.
  - PR #32555: (cachedout) Lower log level for pillar cache

- ISSUE #31542: (duk3luk3) jinja stringifies dict before passing it to execution module (maybe salt-ssh specific?) (refs: #32588)

- PR #32588: (anlutro) Fix salt-ssh module function call argument type juggling by JSON encoding them @ 2016-04-18 15:57:14 UTC
  - a6a427463d Merge pull request #32588 from alprs/fix-salt_ssh_module_types
  - d912f1c3c6 json encode arguments passed to an execution module function call

- ISSUE #32229: (seanjnkns) 2015.8.8.2: pkg.installed fails to update packages with epoch (refs: #32563)
  - PR #32563: (terminalmage) yumpkg: Ignore epoch in version comparison for explicit versions without an epoch
  - PR #32640: (nmadhok) [2015.8] - Fixing critical bug to remove only the specified Host instead of the entire Host cluster
  - PR #32649: (mcalmer) align OS grains from older SLES with current one
  - PR #32652: (isbm) Prevent crash if pygit2 package is requesting re-compilation of the e...

- PR #32614: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-04-15 19:27:47 UTC
  - 05a41a13cd Merge pull request #32614 from rallytime/merge-2015.8
  - 046e401dd8 Merge branch '2015.5' into '2015.8'
    * 027b502335 Merge pull request #32561 from gtmanfred/user_passwords
      3db5e78d5d redact passwords and hashes from user.present updates

- PR #32616: (rallytime) Back-port #32547 to 2015.8 @ 2016-04-15 19:27:36 UTC
  - PR #32547: (cro) Expand on the open-source vs open-core FAQ (refs: #32616)
  - ef17bde054 Merge pull request #32616 from rallytime/bp-32547
  - 4242bc7399 Language clarification.
  - 965e3bc1d1 Expand on the open-source vs open-core FAQ

- PR #32604: (Talkless) Fix comments value in salt.states.pkgrepo example
  - PR #32558: (terminalmage) Revert PR #32480 and apply #32314 with fixes / documentation
  - PR #32480: (terminalmage) Clear VCS fsbackend and git_pillar locks on master start (refs: #32558)
  - PR #32314: (onorua) prevent eternal gifs lock due to process crash (refs: #32480, #32558)

- ISSUE #32519: (Ch3LL) Minion restarting and erroring when cannot reach the master (refs: #32576)
  - PR #32576: (DmitryKuzmenko) Better log message on minion restart if master couldn’t be reached.
• ISSUE #32517: (Ch3LL) Minion restarting and erroring when cannot reach the masters in multi-master failover
   (refs: #32555, #32556)
   – PR #32555: (DmitryKuzmenko) Don’t return None from eval_master
• PR #32536: (rallytime) Back-port #31898 to 2015.8 @ 2016-04-13 18:49:05 UTC
   – PR #31898: (afletch) Ensure rh_service not used on CloudLinux 7 (refs: #32536)
   – 27e91e40cc Merge pull request #32536 from rallytime/bp-31898
   – 60d80c4dee Ensure rh_service not used on CloudLinux 7
   – PR #32542: (twangboy) Fix binary search and replace
• PR #32539: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-04-13 15:10:08 UTC
   – cce7de76b0 Merge pull request #32539 from rallytime/merge-2015.8
   – fbab165c9 Merge branch '2015.5' into merge-2015.8
   – 7307bcb88e Merge pull request #32538 from rallytime/bp-32528
     • 46a4e8a310 Remove merge conflict line
     • e0d947c707 Document "grains" setting in the minion configuration reference
• ISSUE #32493: (bberberov) dockerng.volume_present fails when no volumes already exist on the system (refs: #32531)
• PR #32531: (ticosax) [dockerng] Fix support of dockerng.volume_present when no volume is on present. @ 2016-04-13 14:42:13 UTC
   – 1834bdefe3 Merge pull request #32531 from ticosax/support-no-volumes
   – 958b2ec749 Fix support of dockerng.volume_present when no volume is on present.
   – PR #32475: (ticosax) [dockerng] Enhance dockerng.wait() to control success on exit_code and on already stopped containers
   – PR #32436: (isbm) Bugfix: salt-key crashes if tries to generate keys to the directory w/o write access
   – PR #32515: (terminalmage) Turn on exc_info when logging failed minion startup
   – PR #32520: (terminalmage) Add ignore_epoch option to pkg.installed/removed/purged states
   – PR #32505: (isbm) Isbm zypper list products sles11 crash
   – PR #32480: (terminalmage) Clear VCS fsbackend and git_pillar locks on master start (refs: #32558)
   – PR #32314: (onorua) prevent eternal gitfs lock due to process crash (refs: #32480, #32558)
• ISSUE #32327: (joakimkarlsson) salt-minion fails to start on Windows (refs: #32491)
   – PR #32491: (twangboy) Use win32api to get Total System Memory
• ISSUE #31927: (afletch) pkg.installed compares version including package epoch (pkg.version problem?) (refs: #32487)
• PR #32487: (terminalmage) Add explanation of nonzero epoch requirement to pkg.installed state documentation @ 2016-04-11 20:48:57 UTC
   – e335e313fe Merge pull request #32487 from terminalmage/epoch-documentation
   – e04cf879b6 Document new behavior of pkg.installed for yum/dnf packages with non-zero epoch
   – 61e9761224 Add explanation of nonzero epoch requirement to pkg.installed state documentation
• PR #32482: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-04-11 20:12:26 UTC
- e8de50ff37 Merge pull request #32482 from rallytime/merge-2015.8
- 1b04f0dde3 Merge branch '2015.5' into '2015.8'
- 29333e533e Add documentation for some master/minion configs (#32454)
- 100c6e1b25 Merge pull request #32458 from terminalmage/clarify-providers-docs
  - 500d3ebbaa Add link to provider override docs to all group providers
  - 83ca0f620 dd link to provider override docs to all shadow providers
  - c5fe38789d Add link to provider override docs to all user providers
  - 5c1c1dda59 Add link to provider override docs to all service providers
  - 736f2befc9 Add link to provider override docs to all package providers
  - f9306347cc Clarify the scope of the provider param in states.
  - af24c82ab0 Add documentation on virtual module provider overrides to the module docs
  - 0bc6c97a63 Improve docstrings
  - 1948920674 Add external ref to windows package manager docs
  - e7fa21438c Add new doc pages to toctree
  - f0de1236ec Move the tables of virtual modules to individual documentation pages

- ISSUE #30183: (jakehilton) Minion startup extremely delayed when first master in failover multi master setup is down (refs: #31364, #31382, #32143)
- ISSUE #29643: (matthayes) Can't get batch mode and --failhard to work as expected (refs: #31164)
- ISSUE #28569: (andrejohansson) Reactor alert on highstate fail (refs: #31164)
  - PR #32474: (DmitryKuzmenko) Backport 31164 and 31364
  - PR #32441: (cachedout) Backport 31164 31364 (refs: #32474)
  - PR #31364: (DmitryKuzmenko) Don't send REQ while another one is waiting for response. (refs: #32441, #32474)
  - PR #31164: (DmitryKuzmenko) Issues/29643 fix invalid retcode (refs: #32441, #32474)
- ISSUE #31738: (igorwidlinski) salt --show-jid does not show job id when run in batch mode (refs: #32450)
- PR #32450: (cachedout) Pass parser options into batch mode (refs: #32996) @ 2016-04-08 23:03:49 UTC
  - 7bf44ae772 Merge pull request #32450 from cachedout/issue_31738
  - 74d0f3a6b4 Pass parser options into batch mode
- ISSUE #28706: (kkaig) user.present:groups vs group.present:members (refs: #30824, #32448)
  - PR #32448: (rallytime) Back-port #30824 to 2015.8
  - PR #30824: (alxf) Issue #28706: Fix state user.present behavior. (refs: #32448)
- ISSUE #31851: (rhansen) error using module.run -> saltutil.runner -> state.orchestrate: "The following arguments are missing: _fun" (refs: #32445)
  - PR #32445: (rallytime) Argument name in docs should match actual arg name
  - PR #26676: (rallytime) Back-port #26648 to 2015.5 (refs: #32445)
  - PR #26648: (whiteinge) Free 'fun' from the function signature namespace (refs: #26676)
• **ISSUE #32033**: (timcharper) SaltStack `modules.dockerng _compare` does not handle docker implicit Domain-name properly (issue when using network_mode: host) (refs: #32116, #32432)

• **PR #32432**: (ticosax) [dockerng] Fix Domainname introspection @ 2016-04-08 16:12:19 UTC
  - a36f9499fc Merge pull request #32432 from ticosax/dockerng-domainname-introspection
  - 505b5b0168 Fix Domainname introspection

• **PR #32427**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-04-08 15:39:13 UTC
  - def911974c Merge pull request #32427 from rallytime/merge-2015.8
  - 9531ea6ef5 Merge branch '2015.5' into '2015.8'
  - 0809126d8e Merge #32293 with test fixes (#32418)
  - bbd8260a42 Ignore Raspbian in service.py __virtual__ (#32421)
  - 69af4bb0b4 FreeBSD supports packages in format java/openjdk7 so the prior commit broke that functionality. Check freebsd/pkg#1409 for more info.
  - a3686d7db Merge pull request #32399 from amontalban/2015.5
    - e1fbbd615a Fixes saltstack/salt#28262 for 2015.5 branch
  - 3f03c5ff9 Merge pull request #32374 from cachedout/issue_32066
    - 62389d14da Update proxmox documentation
  - 8578089beb Merge pull request #32339 from Ch3LL/fx_doc_multi-master
    - 2774da288d remove reference to master_alive_check

• **ISSUE #32311**: (rkgrunt) glusterfs module incorrectly indexes into name of bricks (refs: #32312)

• **PR #32423**: (justinta) Update glusterfs_test to be inline with #32312 @ 2016-04-07 21:53:03 UTC
  - PR #32312: (rkgrunt) Fixed glusterfs module (refs: #32423)
  - 5bc8c326ce Merge pull request #32423 from jtand/glusterfs_test_fix

• **ISSUE #31632**: (zieba88) salt-cloud map parallel provisioning -P option failed on 2015.8.5 (refs: #32425)

• **PR #32425**: (cachedout) Fix salt-cloud paralell provisioning @ 2016-04-07 21:52:06 UTC
  - c07e02bacb Merge pull request #32425 from cachedout/issue_31632
  - 127c0829ee Fix salt-cloud paralell provisioning

• **PR #32323**: (mcalmer) fix sorting by latest version when called with an attribute @ 2016-04-07 06:24:35 UTC
  - 2cc054bb0c Merge pull request #32323 from mcalmer/salt-stack-salt#28262: fix sorting by latest version when called with an attribute
  - cb1f30ee10 fix sorting by latest version when called with an attribute

• **ISSUE saltstack/salt#28262**: (palica) FreeBSD pkgng provider raising error for minion (refs: #32376)

• **ISSUE #28262**: (palica) FreeBSD pkgng provider raising error for minion (refs: #32376, #32399)

• **PR #32376**: (amontalban) Fixes saltstack/salt#28262 (refs: #32399) @ 2016-04-06 20:30:10 UTC
  - 80580ee1a Merge pull request #32376 from amontalban/2015.8
  - 823d0c362b Fixes saltstack/salt#28262

• **ISSUE #32375**: (truescotw) Jinja template copying file but not replacing tags (refs: #32393)

• **PR #32393**: (jfindlay) modules.win_timezone: don't list all zones in debug log @ 2016-04-06 18:10:43 UTC
- ad77d76cad Merge pull request #32393 from jfindlay/win_zone
- c01c1b9da2 modules.win_timezon: don't list all zones in debug log

**PR #32372:** (rallytime) Back-port #32358 to 2015.8 @ 2016-04-06 16:35:05 UTC
- PR #32358: (arthurlogilab) outputter virt_list does not exist anymore (refs: #32372)
- 76ae95863d Merge pull request #32372 from rallytime/bp-32358
- 95e0fe7744 outputter virt_list does not exist anymore

**PR #32392:** (multani) Fix documentation on boto_asg and boto_elb modules and states @ 2016-04-06 16:34:36 UTC
- c612baa119 Merge pull request #32392 from multani/2015.8
- 77c4772752 Fix documentation on boto_asg and boto_elb modules and states

**ISSUE #32201:** (boltronics) salt-minion memory leak waiting on master to accept key (refs: #32373)

**PR #32373:** (cachedout) Resolve memory leak in authentication @ 2016-04-06 15:19:55 UTC
- b706d3aa4d Merge pull request #32373 from cachedout/issue_32201
- d9e4a0f372 Resolve memory leak in authentication

**PR #32126:** (cro) Add a couple CLI examples for the highstate outputter. @ 2016-04-05 17:23:29 UTC
- 097aa7ccfe Merge pull request #32126 from cro/outputter_terse_docs
- dafe279e60 Lint
- abc2de0119 More clarification.
- 85221e515b Expand docs for highstate outputter. Add CLI examples for when 'state_output: filter' is set.

**PR #32353:** (mcalmer) Prevent metadata download when listing installed products @ 2016-04-05 17:02:15 UTC
- eab3b99be2 Merge pull request #32353 from mcalmer/prevent-refresh-on-list-installed-products
- e3221ad53 Prevent metadata download when listing installed products

**ISSUE #32255:** (jakosky) Salt-minion 2015.8.8 should display helpful error when regular file /var/log/salt/minion exists but a directory is expected. (refs: #32321)

**PR #32321:** (abednarik) Better message when minion fail to start @ 2016-04-05 16:28:06 UTC
- 64abec94e7 Merge pull request #32321 from abednarik/minion_start_fail_log
- 4c72adc03a Better message when minion fail to start

**ISSUE #30147:** (anandnevase) salt.cloud.CloudClient method create() not working for VMware driver (refs: #32344)

**PR #32345:** (nmadhok) [2015.8] Check if profile key exists in vm_ dict @ 2016-04-05 16:16:36 UTC
- PR #32344: (nmadhok) Check if profile key exists in vm_ dict (refs: #32345)
- 59aca733ea Merge pull request #32345 from nmadhok/patch-4
- 42d7a54240 Check if profile key exists in vm_ dict

**PR #32343:** (Ferbla) Fixed win_wua example documentation @ 2016-04-05 16:14:37 UTC
- bb03c238d Merge pull request #32343 from Ferbla/2015.8
- e2f0f16564 Fixed win_wua example documentation
• **ISSUE #32354**: (elsmorian) Incorrect capitalisation when telling users to change hash_type to SHA256 (refs: #32360)

• **PR #32360**: (rallytime) Make sure hash_type is lowercase in master/minion config files @ 2016-04-05 16:10:46 UTC
  
  - 3219a8d176 Merge pull request #32360 from rallytime/fix-32354
  
  - 8b47e205df Make sure hash_type is lowercase in master/minion config files

• **PR #32361**: (cro) SDB is no longer experimental @ 2016-04-05 16:10:23 UTC
  
  - fb530256f6 Merge pull request #32361 from cro/remove_sdb_exp_flag
  
  - 3bbe284d89 Remove 'experimental' warning from SDB docs.

• **PR #32336**: (rallytime) Back-port #28639 to 2015.8 @ 2016-04-04 20:53:11 UTC
  
  - PR #28639: (RuriRyan) Fixed handling of the disabled option for yumpkg (refs: #32336)
  
  - e1ef4a9d66 Merge pull request #32336 from rallytime/bp-28639
  
  - 0829143dd1 Fixed handling of the disabled option for yumpkg

• **ISSUE #32305**: (Ch3LL) Receiving NoResponse Errors when running commands that take a longer time (refs: #32332)

• **PR #32332**: (rallytime) Don’t unsubscribe from open events on the CLI too early on long-running commands @ 2016-04-04 20:39:39 UTC
  
  - PR #32145: (paclat) fixes 29817 (refs: #32332)
  
  - 6ee5a9729c Merge pull request #32332 from rallytime/fix-32305
  
  - 8dc1161c8a Don’t unsubscribe from open events on the CLI too early on long-running commands

• **PR #32333**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-04-04 20:06:02 UTC
  
  - 22b296d2fd Merge pull request #32333 from rallytime/merge-2015.8
  
  - d7b4b8b081 Merge branch '2015.5' into '2015.8'
  
  - fbdc47cc55 Merge pull request #32284 from rallytime/config-audit
    
    - 0491513204 Don't be so explicit. Just use string_types.
    
    - 083c477fd3 Use six.string_types in config default tuples
    
    - 7e642b8381 Audit config.py default types and values - first sweep
  
  - 0a6d44e57b Merge pull request #32302 from terminalmage/fix-missing-release
    
    - 413c371ccd Properly support packages with blank "Release" param in pkg.latest_version

• **ISSUE #32246**: (danlsgiga) IMPORTANT: Do not use md5 hashing algorithm! Please set "hash_type" to SHA256 in Salt Minion config! (refs: #32289)

• **PR #32289**: (rallytime) New salt-cloud instances should not use old hash_type default. @ 2016-04-04 17:52:09 UTC
  
  - PR #31162: (isbm) Remove MD5 digest from everywhere and default to SHA256 (refs: #32289)
  
  - 28cc054244 Merge pull request #32289 from rallytime/fix-32246
  
  - 66acc00c71 New salt-cloud instances should not use old hash_type default.

• **ISSUE #14277**: (Sacro) Chocolatey.version doesn't tell you anything informative. (refs: #32291)

• **PR #32291**: (twangboy) Fix bad output for chocolatey.version (fixes #14277) @ 2016-04-04 17:50:54 UTC
- 5fb90a1040 Merge pull request #32291 from twangboy/fix_14277
- 53f6a28297 Fix problem with return on installed packages
- 5fbd004a0b Fix chocolatey.version function

**ISSUE #32183**: (llamallama) Salt Cloud 2015.8.8 not installing salt minions on new nodes (refs: #32295)

**PR #32295**: (rallytime) Test the contents of 'deploy_scripts_search_path' in salt.config.cloud_config @ 2016-04-04 17:38:47 UTC
- edbab99164 Merge pull request #32295 from rallytime/test-cloud-deploy-dir
- 4037476f40 Patch call to os.path.isdir so we know both search paths are in tuple
- 49a4e3ec051 Test the contents of 'deploy_scripts_search_path' in salt.config.cloud_config

**ISSUE #23617**: (porterjamesi) file.managed with proxy broken in 2015.5 (refs: #32315)

**PR #32315**: (ahus1) fixing file.managed with requests lib @ 2016-04-04 17:20:11 UTC
- 4389680bc5 Merge pull request #32315 from ahus1/fix_file.managed_http_requests
- a867d23383 ensure streaming mode (use for example by file.managed) will works for requests backend

**ISSUE saltstack/salt-bootstrap#782**: (ninjada) Bootstrap and Links & Documentation still broken due to fedora redirect to fedorainfracloud.org (refs: #32316)

**ISSUE saltstack/salt-bootstrap#742**: (dennisfpconnor) Non-Development Script Broken on Amazon Linux (refs: #32316)

**ISSUE saltstack/salt-bootstrap#695**: (mtippett) Install Failures With Rapsbian Jessie (refs: #32316)

**PR #32316**: (vutny) Update Salt Bootstrap tutorial @ 2016-04-04 17:18:12 UTC
- 9065201761 Merge pull request #32316 from vutny/update-bootstrap-tutorial
- b9698015d1 Update Salt Bootstrap tutorial

**PR #32325**: (bdrung) Re-add shebang to ssh-id-wrapper shell script @ 2016-04-04 17:08:41 UTC
- 352f3c01d1 Merge pull request #32325 from bdrung/fix-shebang
- ffe585f078 Re-add shebang to ssh-id-wrapper shell script

**PR #32326**: (bdrung) Fix typos @ 2016-04-04 16:41:41 UTC
- f16e332b3a Merge pull request #32326 from bdrung/fix-typos
- a7db152333 Fix typo dont -> don't
- d4c037301b Fix typo mismatch -> mismatch
- 70dba70f00 Fix typo additionl -> addition
- 68c60903aa Fix typo multple -> multiple
- 0f2c779b90 Fix typo function -> function
- 0c9e4c8ce0 Fix typo available -> available
- 920abe2e2c7 Fix typo formated -> formated
- e56dd4bb23 Fix typo ommitted -> omitted
- f99e6f1f13 Fix typo ouptut -> output
- d3804094f2 Fix typo wether -> whether
- 538fb6fae2 Fix typo perfomed -> performed
– db7af998ee Fix typo santized -> sanitized
– d7af01da2b Fix typo coresponding -> corresponding
– 301e78b5be Fix typo vaules -> values
– 8cada9573f Fix typos of retrieve
– b484d69e9 Fix typo directorys -> directories

• PR #32300: (twangboy) Add documentation to disable winrepo/winrepo_ng @ 2016-04-01 21:23:09 UTC
  – 664043d7e7 Merge pull request #32300 from twangboy/fix_28767
  – c971a3b054 Add documentation for disabled the winrepos

• ISSUE #18429: (somenick) Pillars passed from command-line override pillar subtrees instead of merging (refs: #32288)

• PR #32288: (terminalmage) use dictupdate.merge instead of dict.update to merge CLI pillar overrides @ 2016-04-01 16:30:30 UTC
  – 42a25f6b9d Merge pull request #32288 from terminalmage/issue18429
  – db31732137 use dictupdate.merge instead of dict.update to merge CLI pillar overrides

• PR #32243: (isbm) Ensure latest pkg.info_installed ensure latest @ 2016-03-31 16:09:59 UTC
  – 3e374e7ec6 Merge pull request #32243 from isbm/isbm-zypper-list-installed-ensure-latest
  – fba3d509ac Fix the documentation
  – 73ad8a2bfc Fix lint
  – f07c7ea792 Add lowpkg tests for version comparison
  – afd451d87 Remove tests from the zypper_test that belongs to rpm_test
  – 3706a21c29 Fix condition from returning None on 0
  – 0a6ebf16 Remove use/redhat checks, refactor code.
  – 30c8f7216b Move "string to EVR" function to the utilities
  – fb014a40b0 Sort installed pkgs data by version_cmp
  – b57e439d57 Merge yumpkg's and zypper's version_cmp for a common use
  – ebd13a283c Remove version_cmp from Zypper module and use just lowpkg alias
  – b46d5b526a Remove version_cmp from the yumpkg and use just a lowpkg alias
  – f4d881e61 Force-sort the RPM output to ensure latest version of the multi-package on top of the list.

• ISSUE #32261: (arthurlogilab) dockerng : AttributeError: 'module' object has no attribute 'version_info' (refs: #32262, #32268)

• PR #32268: (ticosax) [dockerng] Improve detection for older versions of docker-py @ 2016-03-31 14:51:46 UTC
  – PR #32262: (arthurlogilab) Catch Attribute Error when docker.version_info doesn't exist (refs: #32268)
  – 88fa3c5f71 Merge pull request #32268 from ticosax/handle-dockerpy-old
  – 05116aaa40 Improve detection for older versions of docker-py

• PR #32258: (jacobhammons) Replaces incorrect reference to master_alive_check @ 2016-03-31 14:41:09 UTC
  – a491897a3b Merge pull request #32258 from jacobhammons/alive-interval-docs
  – ff8ca5ac2e Replaces incorrect reference to master_alive_check with master_alive_interval in docs
• **PR #32254**: (twangboy) Fix Display Name with spaces in win_servermanager @ 2016-03-31 14:38:22 UTC
  - 8c68d8ac41 Merge pull request #32254 from twangboy/fix_31334
  - e5f02c52be Fix a pylint error
  - 5ca4ad6675 Fix unit tests for state
  - 12d530f8f0 Fix win_servermanager state
  - b26cb76abb Fix unit tests
  - 1d5bcee390 Fix 31344

• **PR #32248**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-03-30 21:10:01 UTC
  - 0f5e67de5d Merge pull request #32248 from rallytime/merge-2015.8
  - d743f8cc4e Merge branch '2015.5' into '2015.8'
    * 5d08db7c92 Merge pull request #32162 from terminalmage/issue31963
      - 5c1db812c Fix pkgrepo integration test
      - e7fb3095ce Properly handle yum/zypper repositories in pkgrepo.managed
      - add2111fec Use six.iteritems instead of dict.items
      - 6c21881c38 Docstring tweaks
      - ecb878b649 Remove useless function
      - 06f3309552 Normalize variable naming to match other functions
      - 690537ca8b Look for apt-add-repository in PATH instead of assuming it's there
      - 709d80bb1b aptpkg: Accept **kwargs instead of a dict for pkg.expand_repo_def
    * 4fcdaa4b28 Merge pull request #32223 from twangboy/fix_31976
      - b7fca97cfe Create minion.d directory, fixes #31976
    * 3309f6a29 Merge pull request #32218 from cachedout/issue_31501
      - 6795d6aef0 Only display error when tty is True in salt-ssh
    * 6ae0cb22c96 Merge pull request #32196 from jand/cherrypy_pam_test_lint_fix
      - bd394e0fd Fixed pylint error in app_pam_test.py

• **ISSUE #32169**: (sknutsonsf) CommandNotFoundError: update-rc.d during service.enabled on Centos 7 (refs: #32230)

• **PR #32230**: (terminalmage) systemd.py: Support both update-rc.d and chkconfig as managers of sysv services @ 2016-03-30 21:09:43 UTC
  - 6216c37885 Merge pull request #32230 from terminalmage/issue32169
  - 45af3e902a systemd.py: Support both update-rc.d and chkconfig as managers of sysv services

• **PR #32249**: (jacobhammons) Fixes windows download paths to account for patch @ 2016-03-30 20:26:53 UTC
  - 3de2a1fe98 Merge pull request #32249 from jacobhammons/dot8
  - 503d1f2482 Fixes windows download paths to account for patch

• **PR #32221**: (dmurphy18) Fix version check, fix extracting Major and Minor versions from __ver__ @ 2016-03-30 14:50:31 UTC
  - 18d321d043 Merge pull request #32221 from dmurphy18/fix_version_check

30.2. Previous Releases
- 96cf024e63 Fix version check, fix extracting Major and Minor versions from __version__

- **ISSUE #32031**: (travispaul) Unable to manage Windows services that contain a space in the service name (refs: #32227)

- **PR #32227**: (twangboy) Remove list2cmdline usage from win_service.py @ 2016-03-30 14:43:17 UTC
  - 22bd1e6b29 Merge pull request #32227 from twangboy/fix_32031
  - 58772b036d Remove list2cmdline usage

- **PR #32239**: (anlutro) Add state file name to warning log line @ 2016-03-30 14:37:54 UTC
  - 7fce438b67 Merge pull request #32239 from alprs/fix-file_log_warning
  - 72adae3702 add state file name to log line

- **ISSUE #31365**: (cwicklein) osrelease_info broken for CentOS 7 (refs: #32215)

- **PR #32215**: (DmitryKuzmenko) rhel oscodename @ 2016-03-29 19:14:50 UTC
  - 3c3028f347 Merge pull request #32215 from DSRCompany/issues/rhel_oscodename
  - dc2a3b81ac Ignore lsb codename from os-release for newest RHEL

- **PR #32217**: (jacobhammons) 2015.8.8.2 release notes @ 2016-03-29 17:53:22 UTC
  - bf5906733 Merge pull request #32217 from jacobhammons/dot8
  - 596444e2b4 2015.8.8.2 release notes Adds banner notifying user when they are viewing release notes for an old release

- **ISSUE #31844**: (Talkless) slspath is not documented (refs: #32197)

- **PR #32212**: (rallytime) Back-port #32197 to 2015.8 @ 2016-03-29 15:50:58 UTC
  - PR #32197: (twellspring) documentation fix issue 31844 (refs: #32212)
  - ab8b70d985 Merge pull request #32212 from rallytime/bp-32197
  - 5fd881ac9 documentation fix issue 31844

- **ISSUE #31931**: (gravyboat) Ordering States documentation should note top.sls adheres to this rule (refs: #32193)

- **PR #32211**: (rallytime) Back-port #32210 to 2015.8 @ 2016-03-29 15:50:42 UTC
  - PR #32210: (rallytime) Merge #32193 with pylint fix (refs: #32211)
  - PR #32193: (twellspring) Documentation fix 31931 (refs: #32210, #32211)
  - 200d82cc3e Merge pull request #32211 from rallytime(bp-32210
  - 7b9c05487c Whitespace fix.
  - abd432746c documentation-fix-31931
  - 79086f0f04 service.py documentation update for 32084

- **ISSUE #32084**: (guettli) Docs: Please provide a link from "service.running" to "watch" (refs: #32192)

- **PR #32209**: (rallytime) Back-port #32208 to 2015.8 @ 2016-03-29 15:50:27 UTC
  - PR #32208: (rallytime) Merge #32192 with pylint fix (refs: #32209)
  - PR #32192: (twellspring) service.py documentation update for 32084 (refs: #32208, #32209)
  - 32da8d4c57 Merge pull request #32209 from rallytime(bp-32208
  - 777a2c4e83 Whitespace fix.
- e3db0640ec service.py documentation update for 32084

- **ISSUE #31595**: (dverbeek84) dockerng ports specified in Dockerfile must be in sls file otherwise salt gives an error (refs: #32204)

- **PR #32204**: (ticosax) [dockerng] Consider labels carried by the image when comparing user defined labels. @ 2016-03-29 14:39:22 UTC
  - 7154104591 Merge pull request #32204 from ticosax/label-from-image
  - e989ae5a7e Merge user defined labels with one carried by the image

- **PR #32186**: (rallytime) Add some "best practices" information to test documentation @ 2016-03-29 00:22:48 UTC
  - 5877a19f59 Merge pull request #32186 from rallytime/testing-docs
  - 40d9c822e Add some "best practices" information to test documentation

- **PR #32176**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-03-28 23:16:09 UTC
  - b44adffec12 Merge pull request #32176 from rallytime/merge-2015.8
  - e8658697a6 Pylint fix for integration import
  - 527bc9e491 Pylint fix
  - e9abd2d420 Merge branch '2015.5' into '2015.8'
  - 6b888b51c0 Merge pull request #32154 from Ch3LL/ch3ll_pam_2015.5
    - ba605b0128 fix more pylint and add ability to close cherrypy engine
    - 2d4dc4da05 add teardown call
    - d115878714 fix pylint error
    - 4c1ab082b6 add pam salt-api tests
  - 230443be6c Merge pull request #32170 from gtmanfred/lxc_cloud_name
    - eb7d82e7be add name for lxc for use with cloud cache
  - 32b0421a34 Merge pull request #32164 from terminalmage/issue31731-2015.5
    - 18439c4f89 Make __virtual__ for rhservice.py more robust (2015.5 branch)
  - 6212e9a56 Merge pull request #32141 from paclat/issue_32108
    - 72c5d12d43 fixes 32108

- **ISSUE #27605**: (jmcook1) nacl module documentation/possible bug (refs: #32163)

- **PR #32163**: (rallytime) Update nacl.config docs to use key value instead of 'None' @ 2016-03-28 14:46:40 UTC
  - 1af048801 Merge pull request #32163 from rallytime/fix-27605
  - e2d9f57dc Update nacl.config docs to use key value instead of 'None'

- **PR #32166**: (vutny) **salt.states.file**: correct examples with multiline YAML string @ 2016-03-28 14:45:32 UTC
  - c08ba3f8a9 Merge pull request #32166 from vutny/fix-multiline-yaml-string-example
  - 34aae93b4 Another indentation fix in salt.states.alternatives
  - 85d0576583 salt.states.file: correct examples with multiline YAML string

- **PR #32168**: (rallytime) Lint 2015.8 @ 2016-03-27 18:26:50 UTC
  - f2e986cf65 Merge pull request #32168 from rallytime/lint-2015.8

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30.2. Previous Releases
- ba6b19d72c Lint 2015.8

- **ISSUE #31731**: (sjorge) rh_service references osrelease before it is available, also does not return bool (refs: #32165)

- **PR #32165**: (terminalmage) Make __virtual__ for rhservice.py more robust (refs: #32165) @ 2016-03-27 18:21:16 UTC
  - **PR #32164**: (terminalmage) Make __virtual__ for rhservice.py more robust (2015.5 branch) (refs: #32165)
  - ae472617af Merge pull request #32165 from terminalmage/issue31731
  - 559eb7da52 Make __virtual__ for rhservice.py more robust

- **ISSUE #31944**: (Inveracity) traceback in _determine_beacon_config(...) in beacon/__init__.py line 105 (refs: #32160)

- **PR #32160**: (cachedout) Fix beacon tutorial docs @ 2016-03-25 22:32:51 UTC
  - 63c8bf3542 Merge pull request #32160 from cachedout/issue_31944
  - 104ada5b6f Fix beacon tutorial docs

- **PR #32145**: (paclat) fixes 29817 (refs: #32332) @ 2016-03-25 16:55:47 UTC
  - bff94a5160 Merge pull request #32145 from paclat/issue_29817
  - 5d970ca031 fixes 29817

- **PR #32133**: (basepi) Pass eauth user/groups through salt-api to destination functions @ 2016-03-25 16:49:46 UTC
  - 245249d347 Merge pull request #32133 from basepi/api_user_passthrough
  - 41ba309839 Change the kwarg names to be more specific
  - 40f7e596d8 Pass eauth user/groups through salt-api to destination functions

- **PR #32127**: (rallytime) Add runners to __salt__ docs @ 2016-03-25 15:54:02 UTC
  - a09aa18036 Merge pull request #32127 from rallytime/dunder-docs
  - 482690ef33 Add note to docs about __salt__ referencing runner modules
  - a11d2e413a Add runners to __salt__ docs

- **ISSUE #30183**: (jakehilton) Minion startup extremely delayed when first master in failover multi master setup is down (refs: #31364, #31382, #32143)

- **PR #32143**: (DmitryKuzmenko) Set auth retry count to 0 if multimaster mode is failover. @ 2016-03-25 15:23:09 UTC
  - **PR #31382**: (DmitryKuzmenko) Set auth retry count to 0 if multimaster mode is failover (refs: #32143)
  - cc224b877a Merge pull request #32143 from DSRCompany/issues/30183_failover_fix
  - 93d34a2573 Set auth retry count to 0 if multimaster mode is failover.

- **PR #32134**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-03-25 15:22:08 UTC
  - 0679a61871 Merge pull request #32134 from rallytime/merge-2015.8
  - 6886681410 Fix test failures
  - 7554d0f42d Merge branch '2015.5' into '2015.8'
    - bdd7ea89d5 Merge pull request #32129 from terminalmage/issue32044
      - 34ca1ea12e Change type check errors to debug loglevel

2962  Chapter 30. Release Notes
• 5462081488 Support multiple valid option types when performing type checks
  • c42014eb54 Merge pull request #32056 from bstevenson/fix-list_absent
    • 1500aae027 set deleted value to list
    • 1dcbf5f289 unit test update
    • 39adf86fec Fixed negation logic
    • be9388173b Removed has_key in lieu of in
    • e48593ed81 Comments and Changes output fixes
    • b9f5517de Updated to conform to proper ret values
    • d18b4be80b remove whitespace end of line 186:q
    • d2b89c85ad fix formating
    • 103cee9e29 cleaned up formating
    • 7a4d7f0bff added whitespace
    • 8ea5b545b0 Loop through list values in list_absent
  • 848ce5647f Merge pull request #32096 from ralllytime/bp-32065
    • 36a9d6a374 Fix an issue with the minion targeting example
  • 9b332d48b9 Merge pull request #32104 from jacobhammons/dot10
    • b9f882a1e One additional known issue for 2015.5.10 release notes
  • ff51d548e1 Merge pull request #32100 from jacobhammons/dot10
    • 544a1661ce 2015.5.10 release docs
  • 72a20f9799 Merge pull request #32038 from terminalmage/issues32037
    • 8b2d983324 Add reference to state tutorial to state.apply docstring
    • 9b4fe8443e Move highstate usage details to top of state.apply docstring
    • 74ee8c54bc Clarify prior role of state.highstate in states tutorial
    • 1b97e4a3df Improve state module docs, replace references to state.highstate/state.sls with state.apply

• ISSUE #26129: (GreatSnoopy) salt yumpkg implementation painfully slow in some circumstances (refs: #32091)
• PR #32091: (clarkperkins) Fixed the regression in 410da78 @ 2016-03-25 14:53:08 UTC
  - ad924226ca Merge pull request #32091 from clarkperkins/bugfix/yumpkg-repoquery
  - d2119ea608 Added comment so this issue doesn't regress again
  - 145f5ab9e3 Fixed the regression in 410da78
• ISSUE #32044: (ScoreUnder) Multiple masters throwing warnings? "Key master with value [...] has an invalid type of list, a str is required for this value" (refs: #32129)
• PR #32135: (rallytime) [2015.8] Support multiple valid option types when performing type checks @ 2016-03-24 22:42:28 UTC
  - PR #32129: (terminalmage) Support multiple valid option types when performing type checks (refs: #32135, #32284)
  - b84908d51f Merge pull request #32135 from rallytime/32129-to-2915.8
- 7d43bdd721 Change type check errors to debug loglevel
- ed5abf4381 Support multiple valid option types when performing type checks

- **PR #31760**: (sakateka) SMinion need wait future from eval_master @ 2016-03-24 22:08:56 UTC
  - b23a08f3f4 Merge pull request #31760 from sakateka/fix_master_switch
  - 3d7874029a Run self.eval_master in self.io_loop.run_sync
  - 3b4425652b SMinion need wait future from eval_master

- **PR #32106**: (jfindlay) update suse master service patch @ 2016-03-24 21:34:01 UTC
  - 5efe37ddc8 Merge pull request #32106 from jfindlay/suse_patch
  - 8de84b4251 update suse master service patch

- **PR #32130**: (jacobhammons) Added known issues 32004 and 32044 to 2015.8.8 release notes @ 2016-03-24 19:59:41 UTC
  - 939c1b17d5 Merge pull request #32130 from jacobhammons/dot8
  - 21eee08842 Added known issues 32004 and 32044 to 2015.8.8 release notes

- **PR #32105**: (clarkperkins) Fixed invalid deploy_scripts_search_path @ 2016-03-24 17:36:27 UTC
  - 2d8abf4717 Merge pull request #32105 from clarkperkins/bugfix/invalid-deploy-script-path
  - 5a9f4e947e Fixed invalid deploy_scripts_search_path

- **ISSUE #32114**: (tomlaredo) Wrong validation type for file_ignore_glob key (refs: #32117)

- **PR #32117**: (tomlaredo) Fixed validation type for file_ignore_glob @ 2016-03-24 17:28:22 UTC
  - fe4112d7f9 Merge pull request #32117 from rodacom/fix_32114
  - c6f83ba00b Fixed validation type for file_ignore_glob Fixes #32114

- **PR #32113**: (sakateka) Fix log message for AsyncAuth initialization @ 2016-03-24 17:27:04 UTC
  - 71148d77ab Fix log message for AsyncAuth initialization

- **ISSUE #32033**: (timcharper) SaltStack modules.dockerng _compare does not handle docker implicit Domain-name properly (issue when using network_mode: host) (refs: #32116, #32432)

- **PR #32116**: (ticosax) Obtain default value of memory_swap from the container. @ 2016-03-24 15:56:54 UTC
  - 294177f428 Merge pull request #32116 from ticosax/memory_swap-default-from-container
  - fe439db4d3 Obtain default value of memory_swap from the container.

- **PR #32098**: (rallytime) Back-port #32083 to 2015.8 @ 2016-03-23 21:49:01 UTC
  - **PR #32083**: (guettli) "Fire Event Notifications" moved down (refs: #32098)
  - d5bb86372 Merge pull request #32083 from rallytime/bp-32083
  - 4a3a6629ce "Fire Event Notifications" moved down

- **PR #32099**: (jacobhammons) 2015.8.8 release docs @ 2016-03-23 20:02:40 UTC
  - e45107ce96 Merge pull request #32099 from jacobhammons/dot8
  - 8ec5d989ad 2015.8.8 release docs

- **PR #32088**: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-03-23 17:52:37 UTC
  - 9e11f3aac5 Merge pull request #32088 from rallytime/merge-2015.8
- 908a7bf5cd Merge pull request #32051 from terminalmage/fix-state-apply-output
  - 7d7cb45565 Fix outputter for state.apply
- 0e66f678d4 Merge pull request #32002 from abednarik/pkg_manjaron_issue31788
  - 1b052d0a66 Added Manajro Linux to virtual. List extended with ManajaroLinux in order su load pacman module.
- ba5bf62c1a Merge pull request #31957 from rallytime/merge-2015.5
  - 1b6ec5d445 Merge branch '2014.7' into '2015.5'
    - ba73dee646 Merge pull request #31929 from twangboy/fix_build_script
    - 2c5599d2bc Backport build script from 2015.8
    - ce74991dd0 Fix nsi script to work with new build process
- a52e3ad7a1 Merge pull request #31972 from terminalmage/zh-584
  - 1e5639e495 Make lack of python-ldap module more explicit when LDAP eauth is enabled

- PR #32074: (Xiami2012) Fix code for proto args in modules.iptables @ 2016-03-23 16:37:58 UTC
  - bc9a899bc8 Merge pull request #32074 from Xiami2012/fix_iptables
- PR #32053: (basepi) [2015.8] Fix rabbitmq_user.present tag handling @ 2016-03-22 20:33:51 UTC
  - 3e08dd0a93 Merge pull request #32053 from basepi/fix_rabbitmq
  - 95c0f55e9 Tear out useless unit test
  - bed048e1e7 Remove leftover arg (lint)
  - 08868cb32a Fix tag handling code for rabbitmq_user.present
  - 3b6d25b4e9 Remove leading whitespace on tags

- ISSUE #32004: (sjorge) win_dacl module stacktrace: NameError: name 'ntsecuritycon' is not defined (refs: #32023)

- PR #32023: (sbreidba) Move constant declaration into member variable to avoid issues when m... @ 2016-03-21 20:18:23 UTC
  - 553ecaca25 Merge pull request #32023 from sbreidba/bugfix_32004
  - 711a0a9844 Move constant declaration into member variable to avoid issues when modules can't be loaded.

- PR #32026: (techhat) Don't require the decode_out file to already exist @ 2016-03-21 20:17:05 UTC
  - 65c634d197 Merge pull request #32026 from techhat/decodeout
  - f27da41b71 Don't require the decode_out file to already exist

- PR #32019: (rallytime) Back-port #32012 to 2015.8 @ 2016-03-21 15:54:31 UTC
  - PR #32012: (jfray) There were two identical blocks concerning Windows Deploy Timeouts. This (refs: #32019)
  - 1d4246bfd7 Merge pull request #32019 from rallytime/bp-32012
  - 26eee1505f There were two identical blocks concerning Windows Deploy Timeouts. This pull request removes the extra block of text.
• ISSUE #32013: (timcharper) SaltStack dockerng.running state ports configuration responding to Docker's injection of UDP params (refs: #32015)
• PR #32015: (ticsax) [dockerng] Fix ports exposition when protocol is passed. @ 2016-03-21 15:22:19 UTC
  – d117db5efb Merge pull request #32015 from ticsax/fix-port-comparison-udp
  – e511864a55 Fix ports exposition when protocol is passed.
• PR #31999: (jacobhammons) Fixes a doc build exception caused by missing mocks for modules.win_dacl @ 2016-03-19 15:49:40 UTC
  – c72ab6a073 Merge pull request #31999 from jacobhammons/mock-modules2
  – 31bb573abc Fixes a doc build exception caused by missing mocks for modules.win_dacl
• PR #31992: (notpeter) salt-cloud: add D2 and G2 EC2 instance types @ 2016-03-18 21:37:21 UTC
  – 398ab909f0 Merge pull request #31992 from notpeter/2015.8
  – e3854c8569 D2 and G2 EC2 instance types.
• PR #31981: (lloydoliver) include rotational disks in grains under linux @ 2016-03-18 15:54:00 UTC
  – ad8ada7eeef Merge pull request #31981 from lloydoliver/linux-disk-grain-fix
  – 9c44604438 include rotational disks in grains under linux
• PR #31970: (twangboy) Add apply_template_on_contents for windows @ 2016-03-18 15:37:29 UTC
  – 9be508e8f0 Merge pull request #31970 from twangboy/fix_win_file
  – dfae191c1 Add apply_template_on_contents for windows
• PR #31960: (aletourneau) fixed ec2 get_console_output @ 2016-03-18 15:13:48 UTC
  – 810c6dbcbe Merge pull request #31960 from aletourneau/2015.8_ec2-getconsoleoutput
  – 8305978879 fixed ec2 get_console_output
• PR #31958: (rallytime) [2015.8] Merge forward from 2015.5 to 2015.8 @ 2016-03-18 15:12:44 UTC
  – 1c7dc364ad Merge pull request #31958 from rallytime/merge-2015.8
• PR #31935: (twangboy) Back port nullsoft build script from 2015.8 @ 2016-03-17 14:54:50 UTC
  – 2df1f2a0c2e Merge pull request #31935 from twangboy/fix_build_script2
  – 4af8c9dbfc Back port nullsoft build script from 2015.8
• PR #31912: (jfindlay) log.mixins: remove extemporaneous .record @ 2016-03-16 01:56:46 UTC
  – 43240dc566 Merge pull request #31912 from jfindlay/logMixin
  – 9f9c694654 log.mixins: remove extemporaneous .record

30.2.86 Salt 2015.5.0 Release Notes - Codename Lithium

The 2015.5.0 feature release of Salt is focused on hardening Salt and mostly on improving existing systems. A few major additions are present, primarily the new Beacon system. Most enhancements have been focused around improving existing features and interfaces.

As usual the release notes are not exhaustive and primarily include the most notable additions and improvements. Hundreds of bugs have been fixed and many modules have been substantially updated and added.
Warning: In order to fix potential shell injection vulnerabilities in salt modules, a change has been made to the various cmd module functions. These functions now default to `python_shell=False`, which means that the commands will not be sent to an actual shell.

The largest side effect of this change is that "shellisms", such as pipes, will not work by default. The modules shipped with salt have been audited to fix any issues that might have arisen from this change. Additionally, the cmd state module has been unaffected, and use of `cmd.run` in jinja is also unaffected. `cmd.run` calls on the CLI will also allow shellisms.

However, custom execution modules which use shellisms in cmd calls will break, unless you pass `python_shell=True` to these calls.

As a temporary workaround, you can set `cmd_safe: False` in your minion and master configs. This will revert the default, but is also less secure, as it will allow shell injection vulnerabilities to be written in custom code. We recommend you only set this setting for as long as it takes to resolve these issues in your custom code, then remove the override.

Note: Starting in this version of salt, `pillar_opts` defaults to False instead of True. This means that master opts will not be present in minion pillar, and as a result, `config.get` calls will not include master opts.

We recommend pillar is used for configuration options which need to make it to the minion.

Beacons

The beacon system allows the minion to hook into system processes and continually translate external events into the salt event bus. The primary example of this is the `inotify` beacon. This beacon uses inotify to watch configured files or directories on the minion for changes, creation, deletion etc.

This allows for the changes to be sent up to the master where the reactor can respond to changes.

Sudo Minion Settings

It is now possible to run the minion as a non-root user and for the minion to execute commands via sudo. Simply add `sudo_user: root` to the minion config, run the minion as a non-root user and grant that user sudo rights to execute `salt-call`.

Lazy Loader

The Lazy Loader is a significant overhaul of Salt's module loader system. The Lazy Loader will lazily load modules on access instead of all on start. In addition to a major performance improvement, this "sandboxes" modules so a bad/broken import of a single module will only affect jobs that require accessing the broken module. (issue: 20274)
Enhanced Active Directory Support

The eauth system for LDAP has been extended to support Microsoft Active Directory out of the box. This includes Active Directory and LDAP group support for eauth.

Salt LXC Enhancements

The LXC systems have been overhauled to be more consistent and to fix many bugs.
This overhaul makes using LXC with Salt much easier and substantially improves the underlying capabilities of Salt’s LXC integration.

Salt SSH

- Additional configuration options and command line flags have been added to configure the scan roster on the fly
- Added support for state.single in salt-ssh
- Added support for publish.publish, publish.full_data, and publish.runner in salt-ssh
- Added support for mine.get in salt-ssh

New Windows Installer

The new Windows installer changes how Salt is installed on Windows. The old installer used bbfreeze to create an isolated python environment to execute in. This made adding modules and python libraries difficult. The new installer sets up a more flexible python environment making it easy to manage the python install and add python modules.

Instead of frozen packages, a full python implementation resides in the bin directory (C:\salt\bin). By executing pip or easy_install from within the Scripts directory (C:\salt\bin\Scripts) you can install any additional python modules you may need for your custom environment.

The .exe's that once resided at the root of the salt directory (C:\salt) have been replaced by .bat files and should function the same way as the .exe's in previous versions.

The new Windows Installer will not replace the minion config file and key if they already exist on the target system. Only the salt program files will be replaced. C:\salt\conf and C:\salt\var will remain unchanged.

Removed Requests Dependency

The hard dependency on the requests library has been removed. Requests is still required by a number of cloud modules but is no longer required for normal Salt operations.

This removal fixes issues that were introduced with requests and salt-ssh, as well as issues users experienced from the many different packaging methods used by requests package maintainers.
Python 3 Updates

While Salt does not YET run on Python 3 it has been updated to INSTALL on Python 3, taking us one step closer. What remains is getting the test suite to the point where it can run on Python 3 so that we can verify compatibility.

RAET Additions

The RAET support continues to improve. RAET now supports multi-master and many bugs and performance issues have been fixed. RAET is much closer to being a first class citizen.

Modified File Detection

A number of functions have been added to the RPM-based package managers to detect and diff files that are modified from the original package installs. This can be found in the new pkg.modified functions.

Reactor Update

Fix an infinite recursion problem for runner/wheel reactor jobs by passing a "user" (Reactor) to all jobs that the reactor starts. The reactor skips all events created by that username -- thereby only reacting to events not caused by itself. Because of this, runner and wheel executions from the runner will have user "Reactor" in the job cache.

Misc Fixes/Additions

- SDB driver for etcd. (:issue: 22043)
- Add only_upgrade argument to apt-based pkg.install to only install a package version if the package is already installed. (Great for security updates!)
- Joyent now requires a keyname to be specified in the provider configuration. This change was necessitated upstream by the 7.0+ API.
- Add args argument to cmd.script_retcode to match cmd.script in the cmd module. (:issue: 21122)
- Fixed bug where TCP keepalive was not being sent on the defined interval on the return port (4506) from minion to master. (issue: 21465)
- LocalClient may now optionally raise SaltClientError exceptions. If using this class directly, checking for and handling this exception is recommended. (issue: 21501)
- The SAuth object is now a singleton, meaning authentication state is global (per master) on each minion. This reduces sign-ins of minions from 3->1 per startup.
- Nested outputter has been optimized, it is now much faster.
- Extensive filesystem backend updates.
Deprecations

- Removed parameter keyword argument from `eselect.exec_action` execution module.
- Removed `runas` parameter from the following `pip` execution module functions: `install`, `uninstall`, `freeze`, `list_`, `list_upgrades`, `upgrade_available`, `upgrade`. Please migrate to `user`.
- Removed `runas` parameter from the following `pip` state module functions: `installed`, `removed`, `uptodate`. Please migrate to `user`.
- Removed `quiet` option from all functions in `cmdmod` execution module. Please use `output_loglevel=quiet` instead.
- Removed parameter argument from `eselect.set_state`. Please migrate to `module_parameter` or `action_parameter`.
- The `salt_events` table schema has changed to include an additional field called `master_id` to distinguish between events flowing into a database from multiple masters. If `event_return` is enabled in the master config, the database schema must first be updated to add the `master_id` field. This alteration can be accomplished as follows:

  ```sql
  ALTER TABLE salt_events ADD master_id VARCHAR(255) NOT NULL;
  ```

Known Issues

- In multi-master mode, a minion may become temporarily unresponsive if modules or pillars are refreshed at the same time that one or more masters are down. This can be worked around by setting 'auth_timeout' and 'auth_tries' down to shorter periods.

30.2.87 Salt 2015.5.1 Release Notes

release 2015-05-20

Version 2015.5.1 is a bugfix release for 2015.5.0.

Statistics

- Total Merges: 203
- Total Issue References: 30
- Total PR References: 177
- Contributors: 49 (Arabus, Lothiraldan, Snergster, TaiSHiNet, The-Loeki, UtahDave, aboe76, ahus1, basepi, bastiaanb, bradthurber, cachedout, cellscape, corywright, cro, dennisjac, dmyerscough, galet, garethgreenaway, gladiator72, gtmanfred, iggy, ionutbalutoiu, jacobhammons, jayeshka, jfindlay, joeljulian, jpic, justinta, kaidokert, kaithar, kiorky, lisa2lisa, msciciel, nleib, notpeter, optix2000, rahulhan, rallytime, rubic, ryan-lane, s0undt3ch, slimu3d, steverweber, techhat, terminalmage, ticosax, twangboy, whiteinge)
Cloud Runner Changes

The `fun` argument to the `cloud.action` runner has changed to `func`. Please update any calls to this runner.

Changelog for v2015.5.0..v2015.5.1

* PR #23998: (rallytime) Update release note for 2015.5.1 @ 2015-05-20 20:58:55 UTC
  - 2422760ebd Merge pull request #23998 from rallytime/release_notes
  - 113c6049f5 Update release note for 2015.5.1
* PR #23989: (rallytime) Backport #23980 to 2015.5 @ 2015-05-20 19:33:41 UTC
  - PR #23980: (iggy) template: jinja2 -> jinja (refs: #23989)
  - 117ecb1fe0 Merge pull request #23989 from rallytime/bp-23980
  - 8f8557c47d template: jinja2 -> jinja
* PR #23988: (rallytime) Backport #23977 to 2015.5 @ 2015-05-20 19:13:36 UTC
  - PR #23977: (ionutbalutoiu) Fixed glance image_create (refs: #23988)
  - d4f1ba02d7 Merge pull request #23988 from rallytime/bp-23977
  - 46fc7c6b69 Fixed glance image_create
* PR #23986: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-05-20 18:41:33 UTC
  - 956667d412 Merge pull request #23986 from basepi/merge-forward-2015.5
  - 0b78156592 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
    * 314e4db512 Merge pull request #23965 from hvnsweeting/20147-fix-gitfs-gitpython-exception
      - 2576301631 handle all exception gitpython can raise
* PR #23985: (UtahDave) Add 2014.7.5-2 and 2015.5.0-2 Windows installer download links @ 2015-05-20 18:32:44 UTC
  - 9d1130ef8e Merge pull request #23985 from UtahDave/2015.5local
  - 10338d0c54 Add links to Windows 2015.5.0-2 install downloads
  - b84f9756c5 updated Windows 2014.7.5-2 installer download link
* PR #23983: (rallytime) Versionadded tags for https_user and https_pass args new in 2015.5.0 @ 2015-05-20 18:05:27 UTC
  - ca7729d023 Merge pull request #23983 from rallytime/versionadded_git_options
  - 14ae22c91 Versionadded tags for https_user and https_pass args new in 2015.5.0
* PR #23970: (jayeshka) adding system unit test case @ 2015-05-20 17:12:57 UTC
  - b06df57e03 Merge pull request #23970 from jayeshka/system-unit-test
  - 89eb0815e adding system unit test case
* PR #23967: (jayeshka) adding states/memcached unit test case @ 2015-05-20 17:12:26 UTC
  - 38df75756 Merge pull request #23967 from jayeshka/memcached-states-unit-test
  - 8ef9240e25 adding states/memcached unit test case
• **PR #23966**: (jayeshka) adding states/modjk unit test case @ 2015-05-20 17:11:48 UTC
  - 868e807d8 Merge pull request #23966 from jayeshka/modjk-states-unit-test
  - 422a96497d adding states/modjk unit test case

• **PR #23942**: (jacobhammons) Updates to sphinx saltstack2 doc theme @ 2015-05-20 15:43:54 UTC
  - 63164900bd Merge pull request #23942 from jacobhammons/2015.5
  - 31023c8915 Updates to sphinx saltstack2 doc theme

• **ISSUE #23872**: (joejulian) create_ca_signed_cert can error if dereferenced dict is used for args (refs: #23874)

• **PR #23874**: (joejulian) Validate keyword arguments to be valid @ 2015-05-20 04:53:40 UTC
  - 587957bade Merge pull request #23874 from joejulian/2015.5_tls_validate_kwargs
  - 30102acd04 Fix py3 and ordering inconsistency problems.
  - 493f7ad5f0 Validate keyword arguments to be valid

• **PR #23960**: (rallytime) Backport #22114 to 2015.5 @ 2015-05-20 04:37:09 UTC
  - PR #22114: (dmyerscough) Fixing KeyError when there are no additional pages (refs: #23960)
  - 00c5e22867 Merge pull request #23960 from rallytime/bp-22114
  - f3e1d6f3ce Catch KeyError
  - 3061e1e6b8 Fixing KeyError
  - 6b2ca2861 Fix PEP8 complaint
  - 239e50f30d Fixing KeyError when there are no additional pages

• **PR #23961**: (rallytime) Backport #23944 to 2015.5 @ 2015-05-20 04:35:41 UTC
  - PR #23944: (ryan-lane) Add missing loginclass argument to _changes call (refs: #23961)
  - 4648b46e05 Merge pull request #23961 from rallytime/bp-23944
  - 970d19a31e Add missing loginclass argument to _changes call

• **PR #23948**: (jfindlay) augeas.change state now returns changes as a dict @ 2015-05-20 04:00:10 UTC
  - 0cb5ed938 Merge pull request #23948 from jfindlay/augeas_changes
  - f09b80a8b5 augeas.change state now returns changes as a dict

• **PR #23957**: (rallytime) Backport #23951 to 2015.5 @ 2015-05-20 03:04:24 UTC
  - PR #23951: (ryan-lane) Do not check perms in file.copy if preserve (refs: #23957)
  - 2d185f78f7 Merge pull request #23957 from rallytime/bp-23951
  - 996b431252 Update file.py
  - 85d461f748 Do not check perms in file.copy if preserve

• **ISSUE #23839**: (gladiatr72) wonky loader syndrome (refs: #23906)

• **ISSUE #23373**: (tnypex) reactor/orchestrate race condition on salt['pillar.get'] (refs: #23906)

• **PR #23956**: (rallytime) Backport #23906 to 2015.5 @ 2015-05-20 03:04:14 UTC
  - PR #23906: (gladiatr72) Added exception handler to trap the RuntimeWarning raised when (refs: #23956)
  - ebf1f967 Merge pull request #23956 from rallytime/bp-23906
  - 9d87fd335c add proper marker for format argument
19768ef0c Added exception handler to trap the RuntimeError raised when Depends.enforce_dependency() class method fires unsuccessfully. There appears to be no synchronization within the Depends decorator class wrt the class global dependency_dict which results in incomplete population of any loader instantiation occurring at the time of one of these exceptions.

- **ISSUE #19852**: (TaiSHiNet) DigitalOcean APIv2 can’t delete machines when there is only 1 page (refs: #23955)
- **ISSUE #19304**: (TaiSHiNet) DigitalOcean API v2 cannot delete VMs on 2nd page (refs: #19305)
- **PR #23955**: (rallytime) Backport #19305 to 2015.5 @ 2015-05-20 03:03:55 UTC
  - **PR #19305**: (TaiSHiNet) Fixes droplet listing past page 1 (refs: #23955)
  - da3f9197d3 Merge pull request #23955 from rallytime/bp-19305
  - bbf2429bce Fixes droplet listing past page 1
- **PR #23940**: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-05-19 22:37:58 UTC
  - 02a78fcec3d Merge pull request #23940 from basepi/merge-forward-2015.5
  - 36f0065faf Merge remote-tracking branch ‘upstream/2014.7’ into merge-forward-2015.5
    - 913391207a Merge pull request #23939 from basepi/v2014.7.6release
      - 32b65dc2a9 Add extended changelog to 2014.7.6 release notes
    - 0031ca2631 Merge pull request #23881 from garethgreenaway/23820_2014_7_schedule_list_issue
      - 63bd21ecd2 Merge pull request #23908 from garethgreenaway/23820_2014_7_schedule_list_issue
    - bc84502f46 Bring salt-ssh pillar.get in line with mainline pillar.get
- **PR #23932**: (rallytime) Backport #23908 to 2015.5 @ 2015-05-19 21:41:28 UTC
  - **PR #23908**: (aleib) fix connection function to mongo (refs: #23932)
  - ee4c01bf30 Merge pull request #23932 from rallytime/bp-23908
  - 5d520c9377 fix connection function to mongo
- **PR #23931**: (rallytime) Backport #23880 to 2015.5 @ 2015-05-19 21:41:18 UTC
  - **PR #23880**: (bastiaanb) if setting client_config_dir to ‘~’, expand path (refs: #23931)
  - 70bd47920 Merge pull request #23931 from rallytime/bp-23880
  - 8ce59a2e16 if setting client_config_dir to ‘~’, expand path
- **ISSUE #23847**: (kiorky) lxc: systemd containers can’t be seeded (refs: #23806, #23898, #23897, #23808)
- **ISSUE #23833**: (kiorky) lxc.set_dns fails intermittently (refs: #23807, #23898, #23897, #23808)
- **ISSUE #23772**: (cheuschober) lxc.init fails to bootstrap container (refs: #23806, #23808, #23807, #23898, #23897)
- **ISSUE #23658**: (arthurlogilab) [salt-cloud lxc] too verbose, shows host: True multiple times when starting (refs: #23898, #23897)
- **ISSUE #23657**: (arthurlogilab) [salt-cloud lxc] NameError: global name '__salt__' is not defined (refs: #23898, #23727, #23897)
- **PR #23898**: (kiorky) Lxc profiles (refs: #23897) @ 2015-05-19 21:08:28 UTC
  - **PR #23897**: (kiorky) Lxc seed and prof ports (refs: #23898)
  - **PR #23808**: (kiorky) Lxc seed and prof ports (refs: #23807, #23897)
  - **PR #23807**: (kiorky) Lxc profiles (refs: #23898)
- **PR #23806**: (kiorky) Lxc seeding (refs: #23807)
- 5bdbf0af9b Merge pull request #23898 from makinacorpus/lxc_profiles
- d9051a047a lxc: systemd support
- e8d674fed4 lxc: chroot fallback toggle
- e2887a0d44 lxc: sync func name with develop
- e96e345799 lxc more fixes (lxc.set_dns)
- fdb64245d4 lxc: Fix salt config (no more a kwarg)
- 63e63fa527 repair salt cloud lxc api on develop
- 80eabe2703 lxc salt cloud doc
- 73f229d966 lxc: unificate saltconfig/master/master_port
- 0bcf08a6b lxc: refactor a bit saltcloud/lxc interface
- 7a80370da9 lxc: get networkprofile from saltcloud
- 47acb2e159 lxc: default net profile has now correct options
- 7eaf4863c lxc: select the appropriate default bridge

- **ISSUE #23900**: (hashi825) salt ubuntu network building issue 2015.5.0 (refs: #23922)

- **PR #23922**: (garethgreenaway) Fixes to debian_ip.py @ 2015-05-19 18:50:53 UTC
  - b818f72dce Merge pull request #23922 from garethgreenaway/23900_2015_5_bonding_interface_fixes
  - 0bba536d6d Fixing issue reported when using bonded interfaces on Ubuntu. Attributes should be bond-,
  but the code was attempting to split just on bond_. Fix accounts for both, but the debian_ip.py module
  will write out bond attributes with bond-

- **PR #23925**: (jpic) Fixed wrong path in LXC cloud documentation @ 2015-05-19 18:23:56 UTC
  - **PR #23924**: (jpic) Fixed wrong path in LXC cloud documentation (refs: #23925)
  - b1c98a38ed Merge pull request #23925 from jpic/fix/wrong_lxc_path
  - a4bcd75171 Fixed wrong path in LXC cloud documentation

- **PR #23894**: (whiteinge) Add __all__ attribute to Mock class for docs @ 2015-05-19 17:17:35 UTC
  - 7f6a716a8a Merge pull request #23894 from whiteinge/doc-mock__all__
  - 6eeac46158 Add __all__ attribute to Mock class for docs

- **ISSUE #23767**: (chrimi) Salt system.locale fails on non existent default locale (refs: #23884)

- **PR #23884**: (jfindlay) Fix locale.set_locale on debian @ 2015-05-19 15:51:22 UTC
  - 8108a9bd19 Merge pull request #23884 from jfindlay/fix_locale
  - 91cd51400 use append_if_not_found in locale.set_locale
  - e63260391c (re)generate /etc/default/locale

- **PR #23866**: (jfindlay) backport #23834, change portage.dep.strip_empty to list comprehension @ 2015-05-19 15:56:43 UTC
  - **PR #23834**: (Arabus) Avoid deprecation warning from portage.dep.strip_empty() (refs: #23866)
  - 6bae12fa88 Merge pull request #23866 from jfindlay/flag_strip
  - aa032ccf8f replace portage.dep.strip_empty() with list comprehension
- 7576872280 Proper replacement for portage.dep.strip_empty() with list comprehension, pep8fix
- 2851a5cf13 Switch portage.dep.strip_empty(...) to filter(None,...) to avoid deprecation warning and do essentially the same

• ISSUE #23904: (mbrgm) Network config bonding section cannot be parsed when attribute names use dashes (refs: #23917)

• PR #23917: (corywright) Split debian bonding options on dash instead of underscore @ 2015-05-19 15:44:35 UTC
  - a67a008913 Merge pull request #23917 from corywright/issue23904
  - c06f8cf831 Split debian bonding options on dash instead of underscore

• PR #23909: (jayeshka) 'str' object has no attribute 'capitalized' @ 2015-05-19 15:41:53 UTC
  - e8fcd0994d Merge pull request #23909 from jayeshka/file-exe-module
  - e422d9d200 'str' object has no attribute 'capitalized'

• PR #23903: (garethgreenaway) Adding docs for missing schedule state module parameters. @ 2015-05-19 06:29:34 UTC
  - c73bf38927 Merge pull request #23903 from garethgreenaway/missing_docs_schedule_state
  - acd8ab9e1d Adding docs for missing schedule state module parameters.
  - a56697bd6e Merge branch '2015.5' of https://github.com/saltstack/salt into 2015.5
  - 1c2af5e685 Merge branch '2015.5' of https://github.com/saltstack/salt into 2015.5
  - ef581283fa Merge branch '2015.5' of https://github.com/saltstack/salt into 2015.5
  - 8664e8bc8d Merge branch '2015.5' of https://github.com/saltstack/salt into 2015.5-2
  - 46eb2655ee saltstack2 sphinx theme updates
  - e7442d3b1e Merge branch '2015.5' of https://github.com/saltstack/salt into 2015.5
  - ee3c1bd4a7 missed one
  - 3872921dd0 More updates to sphinx2 theme
  - fcd48657ef Merge branch '2015.5' of https://github.com/saltstack/salt into 2015.5
  - 8c32152be0 removed TOC numbering, additional tweaks to layout.html
  - 73dfaeff28 Merge branch '2015.5' of https://github.com/saltstack/salt into 2015.5
  - 16d8a753ad saltstack2 sphinx theme and build settings

• ISSUE #23847: (kiorky) lxc: systemd containers cant be seeded (refs: #23806, #23898, #23897, #23808)

• ISSUE #23772: (cheuschober) lxc.init fails to bootstrap container (refs: #23806, #23808, #23807, #23898, #23897)

• PR #23806: (kiorky) Lxc seeding (refs: #23807) @ 2015-05-18 23:18:33 UTC
  - ff3cc7d331 Merge pull request #23806 from makinacorpus/lxc_seeding
  - 61b7aad308 runners/lxc: optim

• PR #23892: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-05-18 23:07:57 UTC
  - 5f1a93d966 Merge pull request #23892 from basepi/merge-forward-2015.5
  - c2eed77691 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - 17c5810e04 Merge pull request #23891 from basepi/releasenotes
• dec153bcea Update the release notes index page
  – a93e58f80f Merge pull request #23888 from basepi/v2014.7.6release
  – 499216cb2 Update the 2014.7.6 release notes with CVE details
  – 50730287bb Merge pull request #23871 from rallytime/bp-23848
  – 379ce0c3a5 Updated for SLES 12.

• PR #23875: (rallytime) Backport #23838 to 2015.5 @ 2015-05-18 22:28:55 UTC
  – PR #23838: (gtmanfred) add refresh_beacons and sync_beacons (refs: #23875)
  – 66d13356b3 Merge pull request #23875 from rallytime/bp-23838
  – 3174227e8e Add versionadded directives to new beacon saltutil functions
  – 4a94b2c17b add refresh_beacons and sync_beacons

• PR #23876: (rallytime) Switch digital ocean tests to v2 driver @ 2015-05-18 22:17:13 UTC
  – d294cf260b Merge pull request #23876 from rallytime/switch_digital_ocean_tests_v2
  – dce9b540a6 Remove extra line
  – 4ac5f8e758 Switch digital ocean tests to v2 driver

• ISSUE #23792: (neogenix) Salt Scheduler Incorrect Response (True, should be False) (refs: #23882)

• PR #23882: (garethgreenaway) Fixes to scheduler in 2015.5 @ 2015-05-18 22:09:24 UTC
  – b97a48c7f5 Merge pull request #23882 from garethgreenaway/23792_2015_5_wrong_return_code
  – 37dbde6d57 Job already exists in schedule, should return False.

• PR #23868: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-05-18 18:35:54 UTC
  – 61c922ea1a Merge pull request #23868 from basepi/merge-forward-2015.5
  – c9ed23394c Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  – aee063834b Merge pull request #23810 from rallytime/bp-23757
    – * fb32c3206b use abspath, do not eliminating symlinks
  – 6b3352bb1a Merge pull request #23809 from rallytime/virt_get_nics_fix
    – 0616fb7884 Fix virtualport section of virt.get_nics loop
  – 188f03f567 Merge pull request #23823 from gtmanfred/2014.7
    – 5ef006d59d add link local for ipv6
  – f3ca682f92 Merge pull request #23802 from gtmanfred/2014.7
    – 2da98b58c8 if it is ipv6 ip_to_int will fail

• PR #23863: (rahulhan) Adding states/timezone.py unit test @ 2015-05-18 17:02:19 UTC
  – 433f87372c Merge pull request #23863 from rahulhan/states_timezone_unit_test
  – 72fcabc690 Adding states/timezone.py unit test

• PR #23862: (rahulhan) Adding states/tomcat.py unit tests @ 2015-05-18 17:02:10 UTC
  – 37b3ee5421 Merge pull request #23862 from rahulhan/states_tomcat_unit_test
  – 65d7752d2a Adding states/tomcat.py unit tests

• PR #23860: (rahulhan) Adding states/test.py unit tests @ 2015-05-18 17:01:49 UTC
- dde7207acb Merge pull request #23860 from rahulhan/states_test_unit_test
- 1f4cf86500 Adding states/test.py unit tests

* PR #23859: (rahulhan) Adding states/sysrc.py unit tests @ 2015-05-18 17:01:46 UTC
  - 3e9b8139e8 Merge pull request #23859 from rahulhan/states_sysrc_unit_test
  - 6a903b054d Adding states/sysrc.py unit tests

* PR #23812: (rallytime) Backport #23790 to 2015.5 @ 2015-05-18 15:30:34 UTC
  - PR #23790: (aboe76) updated suse spec file to version 2015.5.0 (refs: #23812)
  - 4cf30a7ff8 Merge pull request #23812 from rallytime/bp-23790
  - 3f65631cb6 updated suse spec file to version 2015.5.0

* PR #23811: (rallytime) Backport #23786 to 2015.5 @ 2015-05-18 15:30:27 UTC
  - PR #23786: (kaithar) Log the error generated that causes returns.mysql.returner to except. (refs: #23811)
  - c6f939ad6f Merge pull request #23811 from rallytime/bp-23786
  - 346f30bda6 Log the error generated that causes returns.mysql.returner to except.

* PR #23850: (jayeshka) adding sysbench unit test case @ 2015-05-18 15:28:04 UTC
  - ce60582de4 Merge pull request #23850 from jayeshka/sysbench-unit-test
  - 280abdec7c adding sysbench unit test case

* PR #23843: (The-Loeki) Fix erroneous virtual:physical core grain detection @ 2015-05-18 15:24:22 UTC
  - 060902fefa Merge pull request #23843 from The-Loeki/patch-1
  - 9e2cf606eb Fix erroneous virtual:physical core grain detection

* ISSUE #23815: (Snrgster) [beacons] inotify errors on subdir creation (refs: #23816)

* ISSUE #23685: (Snrgster) inotify beacon on file. 'change' event to reactor to reset file to known state will cause loop (refs: #23816)

* PR #23816: (Snrgster) Doc for #23685 Added prereq, caution, and additional mask information @ 2015-05-18 15:18:03 UTC
  - 3257a9bead Merge pull request #23816 from Snrgster/23685-doc-fix
  - 0fca49d52a Added prereq, caution, and additional mask information

* PR #23832: (ahus1) make saltify provider use standard bootstrap procedure @ 2015-05-18 02:18:29 UTC
  - PR #23829: (ahus1) make saltify provider use standard bootstrap procedure (refs: #23832)
  - 3d3b850900 Merge pull request #23832 from ahus1/ahus1_saltify_bootstrap_2015.5
  - f5b1734782 fixing problem in unit test
  - cba47f6856 make saltify to use standard bootstrap procedure, therefore providing all options like master_sign_pub_file

* PR #23791: (optix2000) Psutil compat @ 2015-05-16 04:05:54 UTC
  - 8ec4fb2a73 Merge pull request #23791 from optix2000/psutil_compat
  - 5470cf58db Fix pylint errors and sloppy inline comments
  - 64634b6349 Update psutil.pid_list to use psutil.pids
  - 5dd6d69192 Fix imports that aren't in __all__
- 8a1da33ada Fix test cases by mocking psutil_compat
- 558798df1f Fix net_io_counters deprecation issue
- 8140f92ba8 Override unnecessary pylint errors
- 7d02ad4f06 Fix some of the mock names for the new API
- 9b3023e851 Fix overloaded getters/setters. Fix line lengths
- 180eb87a46 Fix whitespace
- f8ef72f98 Use new psutil API in ps module
- e48982ff9c Fix version checking in psutil_compat
- 93ee411fd5 Create compatability psutil. psutil 3.0 drops 1.0 API, but we still support old psutil versions.

• PR #23782: (terminalmage) Replace "command -v" with "which" and get rid of spurious log messages @ 2015-05-16 04:03:10 UTC
  - 405517be8b Merge pull request #23782 from terminalmage/issue23772
  - 0f6f239052 More ignore_retcode to suppress spurious log msgs
  - b4c48e62ea Ignore return code in lxc.attachable
  - 08658c077 Replace "command -v" with "which"

• PR #23783: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-05-15 21:38:51 UTC
  - cb2eb40f13 Merge pull request #23783 from basepi/merge-forward-2015.5
  - 9df51caf28 __opts__.get
  - 64250a67e5 Remove profile from opts after creating LXC container
  - c40472a7a7 Set destroy=True in opts when destroying cloud instance
  - 9e1311a7cd Store instance names in opts when performing cloud action
  - 934bc57c73 Correctly pass custom env to lxc-attach
  - 7fb85f7be1 Preserve test=True option in cloud states
  - 9771b5a313 Fix detection of absent LXC container in cloud state
  - fb240cf02 Report failure when failed to create/clone LXC container
  - 2d9aa2bb9f Avoid shadowing variables in lxc module
  - 792e1021f2 Allow to override profile options in lxc.cloud_init_interface
  - 42bd4b99b3 Return changes on successful lxc.create from salt-cloud
  - 4409eab883 Return correct result when creating cloud LXC container
  - 377015c881 Issue #16424: List all providers when creating salt-cloud instance without profile

- 808bbe1cb2 Merge pull request #23748 from basepi/salt-ssh.roster.host.check
  - bc53e049e0 Log entire exception for render errors in roster
  - 753de6a621 Log render errors in roster to error level
  - e01a7a90b3 Always let the real YAML error through

2978 Chapter 30. Release Notes
72cf360255 Merge pull request #23731 from twangboy/fix_22959
   - 88e5495b2d Fixes #22959: Trying to add a directory to an unmapped drive in windows
2610195262 Merge pull request #23730 from rallytime/bp-23729
   - 1877caeba adding support for nested grains to grains.item
3e9df883d6 Merge pull request #23688 from twangboy/fix_23415
   - 6a91169bae Fixed unused-import pylint error
   - 5e25bf355 fixed pylint errors
   - 1a9676626f Added inet_pton to utils/validate/net.py for ip.set_static_ip in windows

PR #23781: (jfindlay) fix unit test mock errors on arch @ 2015-05-15 19:40:07 UTC
   - 982f87316d Merge pull request #23781 from jfindlay/fix_locale_tests
   - 14c711ebe3 fix unit test mock errors on arch

ISSUE #23566: (rks2286) Salt-cp corrupting the file after transfer to minion (refs: #23740)

PR #23740: (jfindlay) Binary write @ 2015-05-15 18:10:44 UTC
   - 916b1c4f7c Merge pull request #23740 from jfindlay/binary_write
   - 626930a4e5 update incorrect comment wording
   - a978fc091 always use binary file write mode on windows

PR #23682: (chrish42) Pip module requires system pip, even when not used (with env_bin) (refs: #23736)

PR #23736: (jfindlay) always load pip execution module @ 2015-05-15 18:10:16 UTC
   - 348645cd5 Merge pull request #23736 from jfindlay/fix_pip
   - b8867a8c23 update pip tests
   - 040bb42d2 only check pip version in one place
   - 6c453a5a2a check for executable status of bin_env
   - 3337257833 always load the pip module as pip could be anywhere

PR #23770: (cellscape) Fix cloud LXC container destruction @ 2015-05-15 17:38:59 UTC
   - 10cedb174 Merge pull request #23770 from cellscape/fix-cloud-lxc-destruction
   - 4f6021c884 Fix cloud LXC container destruction

PR #23759: (lisa2lisa) fixed the problem for not beable to revoke ., for more detail https… @ 2015-05-15 17:38:38 UTC
   - ddea82bb02 Merge pull request #23759 from lisa2lisa/iss23664
   - a29f16a58 fixed the problem for not beable to revoke ., for more detail https://github.com/saltstack/salt/issues/23201, fixed mysql cannot create user with pure digit password, for more info https://github.com/saltstack/salt/issues/23664

PR #23769: (cellscape) Fix file_roots CA lookup in salt.utils.http.get_ca_bundle @ 2015-05-15 16:21:49 UTC
   - 10615ff5a7 Merge pull request #23769 from cellscape/utils-http-ca-file-roots
   - 8e90f3929B Fix file_roots CA lookup in salt.utils.get_ca_bundle

PR #23765: (jayeshka) adding states/makeconf unit test case @ 2015-05-15 14:29:43 UTC
   - fd8a1b797f Merge pull request #23765 from jayeshka/makeconf_states-unit-test

30.2. Previous Releases 2979
- 26e31afa31 adding states/makeconf unit test case

- **PR #23760**: (ticosax) [doc] document refresh argument @ 2015-05-15 14:23:47 UTC
  - ee13b08027 Merge pull request #23760 from ticosax/2015.5
  - e3ca859ba6 document refresh argument

- **PR #23766**: (jayeshka) adding svn unit test case @ 2015-05-15 14:23:18 UTC
  - a017f725ad Merge pull request #23766 from jayeshka/svn-unit-test
  - 19939cfa98 adding svn unit test case

- **ISSUE #23734**: (bradthurber) 2015.5.0 modules/archive.py ZipFile instance has no attribute '.__exit__' - only python 2.6? (refs: #23737)

- **PR #23751**: (rallytime) Backport #23737 to 2015.5 @ 2015-05-15 03:58:37 UTC
  - **PR #23737**: (bradthurber) fix for 2015.5.0 modules/archive.py ZipFile instance has no attribute... (refs: #23751)
  - 0ed9d45114 Merge pull request #23751 from rallytime/bp-23737
  - 8d1eb326d0 fix for 2015.5.0 modules/archive.py ZipFile instance has no attribute '__exit__' - only python 2.6? #23734

- **ISSUE #23709**: (kiorky) cmdmod: enhancement is really needed for stateful commands (refs: #23710)

- **PR #23710**: (kiorky) Get more useful output from stateful commands @ 2015-05-14 21:58:10 UTC
  - d73984ec9c Merge pull request #23710 from makinacorpus/i23709
  - c7069096e9 Get more useful output from stateful commands

- **ISSUE #23608**: (kaidokert) salt-cloud file_map with non-root user (refs: #23609)

- **PR #23724**: (rallytime) Backport #23609 to 2015.5 @ 2015-05-14 19:34:22 UTC
  - **PR #23609**: (kaidokert) file_map: chown created directories if not root #23608 (refs: #23724)
  - cdf421b9ed Merge pull request #23724 from rallytime/bp-23609
  - fe3a762673 file_map: chmod created directories if not root

- **PR #23723**: (rallytime) Backport #23568 to 2015.5 @ 2015-05-14 19:34:11 UTC
  - **PR #23568**: (techhat) Allow Salt Cloud to use either SCP or SFTP, as configured (refs: #23723)
  - 94f9099307 Merge pull request #23723 from rallytime/bp-23568
  - bbec34abdd3 Allow Salt Cloud to use either SCP or SFTP, as configured

- **PR #23725**: (rallytime) Backport #23691 to 2015.5 @ 2015-05-14 19:32:30 UTC
  - **PR #23691**: (dennisjac) add initial configuration documentation for varstack pillar (refs: #23725)
  - 137e5eefd0 Merge pull request #23725 from rallytime/bp-23691
  - 28a846eb88 add initial configuration documentation for varstack pillar

- **PR #23722**: (rallytime) Backport #23472 to 2015.5 @ 2015-05-14 19:31:52 UTC
  - **PR #23472**: (techhat) Allow neutron network list to be used as pillar data (refs: #23722)
  - 0c00995db9 Merge pull request #23722 from rallytime/bp-23472
  - c3d0f39515 Change versionadded tag for backport
  - 023e88264 Allow neutron network list to be used as pillar data
• ISSUE #23657: (arthurlogilab) [salt-cloud lxc] NameError: global name '__salt__' is not defined (refs: #23898, #23727, #23897)

• PR #23727: (jfindlay) fix npm execution module stacktrace @ 2015-05-14 18:14:12 UTC
  – cbf4ca8d91 Merge pull request #23727 from jfindlay/npm_salt
  – 05392f282e fix npm execution module stacktrace

• PR #23718: (rahulhan) Adding states/user.py unit tests @ 2015-05-14 17:15:38 UTC
  – ef536d58de Merge pull request #23718 from rahulhan/states_user_unit_tests
  – aad27db513 Adding states/user.py unit tests

• PR #23720: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-05-14 17:13:02 UTC
  – a529d74079 Merge pull request #23720 from basepi/merge-forward-2015.5
  – 06a3ebd9d1 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  – 1b86460d73 Merge pull request #23680 from cachedout/issue_23403
    * d5986c21b4 Rename kwarg in cloud runner
  – cd64af0ce4 Merge pull request #23674 from cachedout/issue_23548
    * da8a2f5cb3 Handle lists correctly in grains.list_presen
  – d322a19213 Merge pull request #23672 from twangboy/fix_user_present
    * 731e7a3f3dd Merge branch '2014.7' of https://github.com/saltstack/salt into fix_user_present
    * d6f70a4545 Fixed user.present to create password in windows
  – 43f7025000 Merge pull request #23670 from rallytime/bp-23607
    * ed30dc4642 Fix for #23604. No error reporting. Exitcode !=0 are ok

• PR #23704: (jayeshka) adding states/lvs_server unit test case @ 2015-05-14 14:22:10 UTC
  – 13facb077 Merge pull request #23704 from jayeshka/lvs_server_states-unit-test
  – da323db0b adding states/lvs_server unit test case

• PR #23703: (jayeshka) adding states/lvs_service unit test case @ 2015-05-14 14:21:23 UTC
  – f95ca3188f Merge pull request #23703 from jayeshka/lvs_service_states-unit-test
  – 66717c8133 adding states/lvs_service unit test case

• PR #23702: (jayeshka) Remove superfluous return statement. @ 2015-05-14 14:20:42 UTC
  – 07e987e327 Merge pull request #23702 from jayeshka/fix_lvs_service
  – ecf2181e4 fix lvs_service

• PR #23686: (jfindlay) remove superflous return statement @ 2015-05-14 14:20:18 UTC
  – 39973d4095 Merge pull request #23686 from jfindlay/fix_lvs_server
  – 5aeb73532 remove superflous return statement

• PR #23690: (rallytime) Backport #23424 to 2015.5 @ 2015-05-13 23:04:36 UTC
  – PR #23424: (justinta) Added python_shell=True for refresh_db in pacman.py (refs: #23690)
    – be7c7ef3fd Merge pull request #23690 from rallytime/bp-23424
    – 94574b7367 Added python_shell=True for refresh_db in pacman.py
• **PR #23681:** (cachedout) Start on 2015.5.1 release notes @ 2015-05-13 19:44:22 UTC
  - 1a0db43097 Merge pull request #23681 from cachedout/2015_5_1_release_notes
  - bdbbfa6ee7 Start on 2015.5.1 release notes

• **PR #23679:** (jfindlay) Merge #23616 @ 2015-05-13 19:03:53 UTC
  - **PR #23616:** (Snergster) virtual returning none warning fixed in dev but missed in 2015.5 (refs: #23679)
  - b54075a2ac Merge pull request #23679 from jfindlay/merge_23616
  - 6e15e19907 appease pylint's blank line strictures
  - 875068d9e virtual returning none warning fixed in dev but missed in 2015.5

• **PR #23675:** (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-05-13 18:35:54 UTC
  - e480f13688 Merge pull request #23675 from basepi/merge-forward-2015.5
  - bd635488ef Merge remote-tracking branch ‘upstream/2014.7’ into merge-forward-2015.5
    * 0f006ac1d8 Merge pull request #23661 from rallytime/merge-23640
      - 4427f42bb6 Whitespace fix
      - dd9115466e Add warning to get_or_set_hash about reserved chars
    * 84e2ef88fc Merge pull request #23639 from cachedout/issue_23452
      - d418b49a77 Syntax error!
      - 45b4015d7d Handle exceptions raised by __virtual__
    * bd9b94ba8c Merge pull request #23637 from cachedout/issue_23611
      - 56cb1f52e3 Fix typo
      - f6fcf19a7f Convert str master to list
    * f20c0e42ce Merge pull request #23595 from rallytime/bp-23549
      - 6efcac09ad Update __init__.py
    * 1aca86da7 Merge pull request #23594 from rallytime/bp-23496
      - d5ae1d268a Fix for issue #23110 This resolves issues when the freshly created directory is removed by fileserv.update.
    * 2c221c7332 Merge pull request #23593 from rallytime/bp-23442
      - 39869a15bd check w/ low['name'] only
      - 304cc499e9 another fix for file defined w/ id, but require name
      - 8814d4180e add directory itself to keep list
    * fadd1ef63c Merge pull request #23606 from twangboy/fix_installer
      - 038331edab Fixed checkbox for starting service and actually starting it
    - acdd3fc6bd Fix lint
    - 680e88f058 Merge remote-tracking branch ‘upstream/2014.7’ into merge-forward-2015.5
      * 10b3f0f643 Merge pull request #23592 from rallytime/bp-23389
        - 734cc43801 Correct fail_hard typo
      * cd34b9b6c4 Merge pull request #23573 from techhat/novaquery
- f92db5e92f Linting
- 26e00d3ccc Scan all available networks for public and private IPs
- 2a72cd71c2 Merge pull request #23558 from jfindlay/fix_ebuild
  - 45404fb2a6 reorder emerge command line
- a664a3c6fd Merge pull request #23530 from dr4Ke/fix_salt-ssh_to_include_pkg_sources
  - 5df6a8008c fix pylint warning
  - d0549e56ba salt-ssh state: fix including all salt:// references
- 55c3869861 Merge pull request #23433 from twangboy/list_pkgs_fix
  - 8ab5b1b86f Fix pylint error
  - 2d11d6545e Obtain all software from the registry
- 755bed0abd Merge pull request #23554 from jleroy/debian-hostname-fix
  - 5ff749e487 Debian: Hostname always updated
- 6ec87ce9f5 Merge pull request #23551 from dr4Ke/grains.append_unit_tests
  - ebf9df5b2 fix pylint errors
  - c4954046ad unit tests for grains.append module function
  - 0c9a32326c use MagickMock
  - c838a2377 unit tests for grains.append module function
- e96c5c5bf3 Merge pull request #23474 from dr4Ke/fix_grains.append_nested
  - a01a5bb51e grains.get, parameter delimititer, versionadded: 2014.7.6
  - b39f50475d remove debugging output
  - b6e15e295c fix grains.append in nested dictionary grains #23411
- ab7e1ad8e Merge pull request #23537 from t0rrant/patch-1
  - 8e03cc99d3 Update changelog

- **PR #23669** (rallytime) Backport #23586 to 2015.5 @ 2015-05-13 18:27:11 UTC
  - **PR #23586** (Lothiraldan) Fix salt.state.file._unify_sources_and_hashes when sources is used without sources_hashes (refs: #23669)
  - 0dad6be0fc Merge pull request #23669 from rallytime/bp-23586
  - ef4c6adae3 Remove another unused import
  - 73cfdafa51 Remove unused import
  - 52b68d695a Use the zip_longest from six module for python 3 compatibility
  - 18d5ff9a8e Fix salt.state.file._unify_sources_and_hashes when sources is used without sources_hashes

- **PR #23662** (rallytime) Merge #23642 with pylint fix @ 2015-05-13 15:46:51 UTC
  - **PR #23642** (cachedout) Let saltmod handle lower-level exceptions gracefully (refs: #23662)
  - fabe759e0 Merge pull request #23662 from rallytime/merge-23642
  - aa7bbd84fa Remove unused import
  - 9e66d4c88e Let saltmod handle lower-level exceptions gracefully
- **PR #23622**: (jfindlay) merge #23508 @ 2015-05-13 15:36:49 UTC
  - **PR #23508**: (cro) Port mysql returner to postgres using jsonb datatype (refs: #23622)
  - 072b92733d Merge pull request #23622 from jfindlay/pgjsonb
  - 454322c7e4 appease pylint's proscription on blank line excess
  - 57c617136d Get time with timezone correct also in job return.
  - e109d0f643 Get time with timezone correct.
  - 21e06b9112 Fix SQL, remove unneeded imports.
  - 653f360723 Stop making changes in 2 places.
  - d6daaa0292 Typo.
  - 7d748bf75 SSL is handled differently by Pg, so don't set it here.
  - cc7c377bcd Fill alter_time field in salt_events with current time with timezone.
  - 43defe9b20 Port mysql module to Postgres using jsonb datatypes

- **PR #23651**: (jayeshka) adding solr unit test case @ 2015-05-13 15:26:15 UTC
  - c1bdd4d377 Merge pull request #23651 from jayeshka/solr-unit-test
  - 6e05148962 adding solr unit test case

- **PR #23649**: (jayeshka) adding libvirt unit test case @ 2015-05-13 15:24:48 UTC
  - ee43411677 Merge pull request #23649 from jayeshka/libvirt_states-unit-test
  - 0fb923a283 adding libvirt unit test case

- **PR #23648**: (jayeshka) adding states/linux_acl unit test case @ 2015-05-13 15:24:11 UTC
  - c7fc466f1e Merge pull request #23648 from jayeshka/linux_acl_states-unit-test
  - 3f0ab29eb0 removed error.
  - 11081c121c adding states/linux_acl unit test case

- **PR #23650**: (jayeshka) adding states/kmod unit test case @ 2015-05-13 15:09:18 UTC
  - 4cba7ba35c Merge pull request #23650 from jayeshka/kmod_states-unit-test
  - 1987015033 adding states/kmod unit test case

- **PR #23633**: (jayeshka) made changes to test_interfaces function. @ 2015-05-13 06:51:07 UTC
  - bc8faf1543 Merge pull request #23633 from jayeshka/win_network-2015.5-unit-test
  - 0936ed386e made changes to test_interfaces function.

- **PR #23619**: (jfindlay) fix kmod.present processing of module loading @ 2015-05-13 01:16:56 UTC
  - 7df3579b0c Merge pull request #23619 from jfindlay/fx_kmod_state
  - 73facb61f fix kmod.present processing of module loading

- **PR #23598**: (rahulhan) Adding states/win_dns_client.py unit tests @ 2015-05-12 21:47:36 UTC
  - d4f30955fa Merge pull request #23598 from rahulhan/states_win_dns_client_unit_test
  - d08d885828 Adding states/win_dns_client.py unit tests

- **PR #23597**: (rahulhan) Adding states/vbox_guest.py unit tests @ 2015-05-12 21:46:30 UTC
  - 811c6a1d89 Merge pull request #23597 from rahulhan/states_vbox_guest_unit_test
- 6a2909eeea Removed errors
- 4cde78a58a Adding states/vbox_guest.py unit tests

- **PR #23615**: (rallytime) Backport #23577 to 2015.5 @ 2015-05-12 21:19:11 UTC
  - PR #23577: (msciciel) Fix find and remove functions to pass database param (refs: #23615)
  - 029ff1103d Merge pull request #23615 from rallytime/bp-23577
  - 6f74477129 Fix find and remove functions to pass database param

- **PR #23603**: (rahulhan) Adding states/winrepo.py unit tests @ 2015-05-12 18:40:12 UTC
  - b8589532d1 Merge pull request #23603 from rahulhan/states_winrepo_unit_test
  - a66e7e7f1f Adding states/winrepo.py unit tests

- **PR #23602**: (rahulhan) Adding states/win_path.py unit tests @ 2015-05-12 18:39:37 UTC
  - 3cbbd6d277 Merge pull request #23602 from rahulhan/states_win_path_unit_test
  - 122c9f71a Adding states/win_path.py unit tests

- **PR #23600**: (rahulhan) Adding states/win_network.py unit tests @ 2015-05-12 18:39:01 UTC
  - 3c904e8739 Merge pull request #23600 from rahulhan/states_win_network_unit_test
  - b418404eb7 removed lint error
  - 1be802300b Adding states/win_network.py unit tests

- **PR #23599**: (rahulhan) Adding win_firewall.py unit tests @ 2015-05-12 18:37:49 UTC
  - 10243a7742 Merge pull request #23599 from rahulhan/states_win_firewall_unit_test
  - 6cda890517 Adding win_firewall.py unit tests

- **PR #23601**: (basepi) Add versionadded for jboss module/state @ 2015-05-12 17:22:59 UTC
  - e73071dbdf Merge pull request #23601 from basepi/jboss.version.added
  - 0174c8fe58 Add versionadded for jboss module/state

- **PR #23469**: (s0undt3ch) Call the windows specific function not the general one @ 2015-05-12 16:47:22 UTC
  - 9beb7be529 Merge pull request #23469 from s0undt3ch/hotfix/call-the-win-func
  - 83e88a3eb1 Call the windows specific function not the general one

- **PR #23583**: (jayeshka) adding states/ipset unit test case @ 2015-05-12 16:31:55 UTC
  - d2f097584c Merge pull request #23583 from jayeshka/ipset_states-unit-test
  - 4330cf4a6 adding states/ipset unit test case

- **PR #23582**: (jayeshka) adding states/keyboard unit test case @ 2015-05-12 16:31:17 UTC
  - 82a47e8cbf Merge pull request #23582 from jayeshka/keyboard_states-unit-test
  - fa94d7ab5c adding states/keyboard unit test case

- **PR #23581**: (jayeshka) adding states/layman unit test case @ 2015-05-12 16:30:36 UTC
  - 77e5b28566 Merge pull request #23581 from jayeshka/layman_states-unit-test
  - 297b055b1c adding states/layman unit test case

- **PR #23580**: (jayeshka) adding smf unit test case @ 2015-05-12 16:29:58 UTC
  - cbe32828ef Merge pull request #23580 from jayeshka/smf-unit-test
- 4f9719157b adding smf unit test case

- **ISSUE #21603**: (ipmb) ssh_auth.present fails on key without comment (refs: #23572)
- **PR #23572**: (The-Loeki) Fix regression of #21355 introduced by #21603 @ 2015-05-12 16:28:05 UTC
  - **PR #21355**: (The-Loeki) Fix for comments containing whitespaces (refs: #23572)
  - 16a333832a Merge pull request #23572 from The-Loeki/ssh_auth_fix
  - d8248dd368 Fix regression of #21355 introduced by #21603

- **ISSUE #23490**: (lichtamberg) salt.modules.aptpkg.upgrade should have default "dist_upgrade=False" (refs: #23565)
- **PR #23565**: (garethgreenaway) fix to aptpkg module @ 2015-05-12 16:25:46 UTC
  - f843f89cd7 Merge pull request #23565 from garethgreenaway/2015_2_aptpkg_upgrade_default_to_upgrade
  - 97ae514641 aptpkg.upgrade should default to upgrade instead of dist_upgrade.

- **ISSUE #23473**: (terminalmage) unit.modules.rh_ip_test.RhipTestCase.test_build_bond is not properly mocked (refs: #23550)
- **PR #23550**: (jfindlay) additional mock for rh_ip_test test_build_bond @ 2015-05-12 15:17:16 UTC
  - c1157cdaee Merge pull request #23550 from jfindlay/fix_rh_ip_test
  - e9b94d36d3 additional mock for rh_ip_test test_build_bond

- **PR #23552**: (garethgreenaway) Fix for an issue caused by a previous pull request @ 2015-05-11 21:54:59 UTC
  - b593328176 Merge pull request #23552 from garethgreenaway/2015_5_returner_fix_broken_previous_pr
  - 7d70e2b334 Passed argumentes in the call _fetch_profile_opts to were in the wrong order

- **PR #23547**: (slinu3d) Added AWS v4 signature support for 2015.5 @ 2015-05-11 21:52:24 UTC
  - d0f96825dd Merge pull request #23547 from slinu3d/2015.5
  - f3bfdb56b5 Fixed urlparse and urlencode calls
  - 802dbdb965 Added AWS v4 signature support for 2015.5

- **PR #23544**: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-05-11 18:02:06 UTC
  - 06c6a1f44a Merge pull request #23544 from basepi/merge-forward-2015.5
  - f8a36bc155 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
    - b79fed3a92 Merge pull request #23538 from cro/licupdate
      - 345e25c9 Update date in LICENSE file
    - a123a36f05 Merge pull request #23505 from aneeshsa/remove-unused-ssh-config-validator
      - 90af1672ca Remove unused ssh config validator. Fixes #23159.
    - ca2c21a63c Merge pull request #23467 from slinu3d/2014.7
      - 0b4081d8f4 Fixed pylint error at line 363
      - 5be5eb5b14 Fixed pylink errors
      - e64f374ff8 Fixed lint errors
      - b9d1ac4f1f Added AWS v4 signature support
    - e69e02e Merge pull request #23444 from techhat/novacreateattach
      - ebdb7ae2d Add create_attach_volume to nova driver
• e331463319 Merge pull request #23460 from s0undt3ch/bootstrap-script-2014.7
  • edced0c41f2 Update to latest stable bootstrap script v2015.05.07
• 7a8ce1a954 Merge pull request #23439 from techhat/maxtries
  • 0ad3ff2c88 Add wait_for_password_maxtries variable

• ISSUE #23426: (twangboy) Can't restart salt-minion on 64 bit windows (2015.5.0) (refs: #23470)
• PR #23470: (twangboy) Fixed service.restart for salt-minion @ 2015-05-11 17:54:47 UTC
  – aa5bb96d3e Merge pull request #23470 from twangboy/fixed_svc_restart
  – b3f284e517 Fixed tests
  – ad44d79f26 Fixed service.restart for salt-minion
• PR #23539: (rahulhan) Adding states/virtualenv_mod.py unit tests @ 2015-05-11 17:02:31 UTC
  – 67988b21ee Merge pull request #23539 from rahulhan/states_virtualenv_mod_unit_test
  – 750bb07d1c Adding states/virtualenv_mod.py unit tests
  – c96619653e Merge pull request #23423 from cachedout/remove_jid_event_from_orch
    • f81aab7627 Remove jid_event from state.orch
  – 2bb09b7ee7 Merge pull request #23509 from keesbos/Catch_empty_environment
    • 6dedefacc2 Catch the unset (empty/None) environment case
  – 6d42f30271 Merge pull request #23245 from freimer/issue_23244
    • 24cf6ebad5 Add Caller functionality to reactors.
• PR #23513: (gladiatr72) short-circuit auto-failure of iptables.delete state @ 2015-05-11 15:18:33 UTC
  – c3f03d827d Merge pull request #23513 from gladiatr72/RFC_stop_iptables.check_from_short-circuiting_position-only_delete_rule
  – c71714c364 short-circuit auto-failure of iptables.delete state if position argument is set without the other accoutrements that check_rule requires.
• PR #23534: (jayeshka) adding states/ini_manage unit test case @ 2015-05-11 14:32:06 UTC
  – 4e77f6f8c4 Merge pull request #23534 from jayeshka/ini_manage_states-unit-test
  – 831223c31c adding states/ini_manage unit test case
• PR #23533: (jayeshka) adding states/hipchat unit test case @ 2015-05-11 14:30:22 UTC
  – 11ba9ed99b Merge pull request #23533 from jayeshka/hipchat-states-unit-test
  – 41d14b322d adding states/hipchat unit test case
• PR #23532: (jayeshka) adding states/ipmi unit test case @ 2015-05-11 14:28:15 UTC
  – e5421139d3 Merge pull request #23532 from jayeshka/ipmi-states-unit-test
  – fc3e64a8a4 adding states/ipmi unit test case
• PR #23531: (jayeshka) adding service unit test case @ 2015-05-11 14:27:12 UTC
  – 9baa85f31a Merge pull request #23531 from jayeshka/service-unit-test
  – 3ad5314ee0 adding service unit test case
• ISSUE #23512: (mostafahussein) hipchat_returner / slack_returner not work correctly (refs: #23517)
• PR #23517: (garethgreenaway) fix to returners @ 2015-05-11 14:20:51 UTC
- 32838cd888 Merge pull request #23517 from garethgreenaway/23512_2015_5_returns_with_profiles
- 81e31e27cf fix for returners that utilize profile attributes. code in the if else statement was backwards. #23512

- **PR #23502:** (rahulhan) Adding states/win_servermanager.py unit tests @ 2015-05-08 19:47:18 UTC
  - 6be7d8d13b Merge pull request #23502 from rahulhan/states_win_servermanager_unit_test
  - 2490074aa2 Adding states/win_servermanager.py unit tests

- **PR #23495:** (jayeshka) adding seed unit test case @ 2015-05-08 17:30:38 UTC
  - 604857811e Merge pull request #23495 from jayeshka/seed-unit-test
  - 3f134bc573 adding seed unit test case

- **PR #23494:** (jayeshka) adding sensors unit test case @ 2015-05-08 17:30:18 UTC
  - 70bc3c1415 Merge pull request #23494 from jayeshka/sensors-unit-test
  - 1fb48a31a8 adding sensors unit test case

- **PR #23493:** (jayeshka) adding states/incron unit test case @ 2015-05-08 17:29:59 UTC
  - b981b20d44 Merge pull request #23493 from jayeshka/incron-states-unit-test
  - cc7bc170f3 adding states/incron unit test case

- **PR #23492:** (jayeshka) adding states/influxdb_database unit test case @ 2015-05-08 17:29:51 UTC
  - 4019c493a1 Merge pull request #23492 from jayeshka/influxdb_database-states-unit-test
  - e1fca815d adding states/influxdb_database unit test case

- **PR #23491:** (jayeshka) adding states/influxdb_user unit test case @ 2015-05-08 16:24:07 UTC
  - d317a77af8 Merge pull request #23491 from jayeshka/influxdb_user-states-unit-test
  - 9d4043f9ff adding states/influxdb_user unit test case

- **PR #23477:** (galet) LDAP auth: Escape filter value for group membership search @ 2015-05-07 22:04:48 UTC
  - e0b2a73eb4 Merge pull request #23477 from galet/ldap-filter-escaping
  - 33038b9f86 LDAP auth: Escape filter value for group membership search

- **PR #23476:** (cachedout) Lint becaon @ 2015-05-07 19:55:36 UTC
  - **PR #23431:** (UtahDave) Beacon fixes (refs: #23476)
    - e1719fe26b Merge pull request #23476 from cachedout/lint_23431
    - 8d1ff209eb Lint becaon

- **PR #23431:** (UtahDave) Beacon fixes (refs: #23476) @ 2015-05-07 19:53:47 UTC
  - 1e299ed4f Merge pull request #23431 from UtahDave/beacon_fixes
  - 152f2235c2 remove unused import
  - 81198f999 fix interval logic and example
  - 5504778d update to proper examples
  - 6890439d58 fix list for mask
  - eee7b579e90 remove custom interval code.

- **PR #23468:** (rahulhan) Adding states/win_system.py unit tests @ 2015-05-07 19:20:50 UTC
- ea55c44bbb Merge pull request #23468 from rahulhan/states_win_system_unit_test
- 33f8c12e9f Adding states/win_system.py unit tests

**PR #23466:** (UtahDave) minor spelling fix @ 2015-05-07 19:19:06 UTC
- e6e11147af Merge pull request #23466 from UtahDave/2015.5local
- b2c399a137 minor spelling fix

**ISSUE #529:** (rubic) run salt in user space (refs: #543)
- PR saltstack/salt-bootstrap#563: (notpeter) Ubuntu alternate ppas (refs: #23461, #23460)
- PR #543: (rubic) updated documentation for user, fixed configuration template links (refs: #saltstack/salt-bootstrap#563)

**PR #23461:** (s0undt3ch) [2015.5] Update to latest stable bootstrap script v2015.05.07 @ 2015-05-07 19:16:18 UTC
- 4eeb1e627a Merge pull request #23461 from s0undt3ch/hotfix/bootstrap-script
- 638c63d635 Update to latest stable bootstrap script v2015.05.07

**PR #23450:** (jayeshka) adding scsi unit test case @ 2015-05-07 19:00:28 UTC
- 865127844a Merge pull request #23450 from jayeshka/scsi-unit-test
- e7269ff29b adding scsi unit test case

**PR #23449:** (jayeshka) adding s3 unit test case @ 2015-05-07 18:59:45 UTC
- 8b374ae64d Merge pull request #23449 from jayeshka/s3-unit-test
- 85786bf7f adding s3 unit test case

**PR #23448:** (jayeshka) adding states/keystone unit test case @ 2015-05-07 18:58:59 UTC
- 49b431c8e4 Merge pull request #23448 from jayeshka/keystone-states-unit-test
- a3050eb3e2 adding states/keystone unit test case

**PR #23447:** (jayeshka) adding states/grafana unit test case @ 2015-05-07 18:58:20 UTC
- 23d7e7ef92 Merge pull request #23447 from jayeshka/grafana-states-unit-test
- 7e90a44aca adding states/grafana unit test case

**PR #23438:** (techhat) Gate requests import @ 2015-05-07 07:22:58 UTC
- 1fd0bc2011 Merge pull request #23438 from techhat/gaterquests
- d5b15fc6cc Gate requests import

**PR #23429:** (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-05-07 05:35:13 UTC
- 3c4f734332 Merge pull request #23429 from basepi/merge-forward-2015.5
- 7729834d92 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
- 644eb75f2c Merge pull request #23422 from cro/gce_sh_home
  - 4ef9e6ba06 Don't use $HOME to find user's directory, some shells don't set it
  - ef17ab4b2a Merge pull request #23425 from basepi/functionwrapper_typo
    - c390737f3e Fix typo in FunctionWrapper
  - 1b13ec04c2 Merge pull request #23385 from rallytime/bp-23346
    - 9efc13c810 more linting fixes
Salt Documentation, Release 3002.5

• PR #23396: (basepi) [2015.2] Merge forward from 2014.7 to 2015.2 @ 2015-05-06 21:42:35 UTC
  – 1fb84450f4 Merge pull request #23396 from basepi/merge-forward-2015.2
  – 2766c8cb4b Fix typo in FunctionWrapper
  – fd09cdae6f Merge remote-tracking branch `upstream/2014.7` into merge-forward-2015.2
    • 0c76dd4d8a Merge pull request #23368 from kaithar/bp-23367
      • 577f41972e Pylint fix
      • 8d9acd1f89 Put the sed insert statement back in to the output.
    • 3493cc1fca Merge pull request #23350 from lorengordon/file.replace_assume_line
      • b60e224beb Append/prepend: search for full line
    • 7be5c48ad5 Merge pull request #23341 from cachedout/issue_23026
      • e98e65e787 Fix tests
      • 6011b437ca Fix syndic pid and logfile path
    • ea61abfa68 Merge pull request #23272 from basepi/salt-ssh.minion.config.19114
      • c223309bb7 Add versionadded
      • be7407f3ea Lint
      • c2c337567e Missing comma
      • 8e3e8e073a Pass the minion_opts through the FunctionWrapper
      • cb69cd07de Match the master config template in the master config reference
      • 87fc3161f9 Add Salt-SSH section to master config template
      • 91dd9dcbdc Add ssh_minion_opts to master config ref
      • c273ea14c6 Add minion config to salt-ssh doc
      • a0b6b760c3 Add minion_opts to roster docs
      • 5212c35260 Accept minion_opts from the target information
      • e2099b6e1b Process `ssh_minion_opts` from master config
      • 3b64214377 Revert "Work around bug in salt-ssh in config.get for gpg renderer"
- 494953a208 Remove the strip (embracing multi-line YAML dump)
- fe87f0fe39 Dump multi-line yaml into the SHIM
- b751a7281c Inject local minion config into shim if available
  - 4f760dd9cb Merge pull request #23347 from basepi/salt-ssh.functionwrapper.contains.19114
  - 30595e3ff7 Backport FunctionWrapper.__contains__
- 02658b1e60 Merge pull request #23344 from cachedout/issue_22742
  - 5ade96ce7f Explicitly set file_client on master
- ba7605d1cb Merge pull request #23318 from cellscape/honor-seed-argument
  - 228b1be299 Honor seed argument in LXC container initialization
- 4ac4509c57 Merge pull request #23307 from jfindlay/fix_locale_gen
  - 101199ac14 check for /etc/locale.gen
- f790f42ed6 Merge pull request #23324 from s0undt3ch/hotfix/bootstrap-script-2014.7
- 6643e47ce5 Update to the latest stable release of the bootstrap script v2015.05.04
- PR #23412: (rahulhan) Adding states/win_update.py unit tests @ 2015-05-06 18:31:09 UTC
  - b3c16720f6 Merge pull request #23412 from rahulhan/states_win_update_unit_test
  - 9bc1519ee7 Removed unwanted imports
  - f12bfcf248 Adding states/win_update.py unit tests
- PR #23413: (terminalmage) Update manpages for 2015.2 -> 2015.5 @ 2015-05-06 17:12:57 UTC
  - f2d7646a58 Merge pull request #23413 from terminalmage/update-manpages
  - 23fa4402dc Update manpages to reflect 2015.2 rename to 2015.5
  - 0fdaa73c84 Fix missed docstring updates from 2015.2 -> 2015.5
  - 4flea5ba477 Add missing RST file
- PR #23410: (terminalmage) Update Lithium docstrings in 2015.2 branch @ 2015-05-06 15:53:52 UTC
  - PR #23409: (terminalmage) Update Lithium docstrings in 2014.7 branch (refs: #23410)
  - bab76bca7 Merge pull request #23410 from terminalmage/update-lithium-docstrings-2015.2
  - 395565bf7 Update Lithium docstrings in 2015.2 branch
- PR #23407: (jayeshka) adding rsync unit test case @ 2015-05-06 15:52:23 UTC
  - 02ef41a549 Merge pull request #23407 from jayeshka/rsync-unit-test
  - a4ddd36125 adding rsync unit test case
- PR #23406: (jayeshka) adding states/lxc unit test case @ 2015-05-06 15:51:50 UTC
  - 58e2a24c1e Merge pull request #23406 from jayeshka/lxc-states-unit-test
  - 32a0d03093 adding states/lxc unit test case
- PR #23395: (basepi) [2015.2] Add note to 2015.2.0 release notes about master opts in pillar @ 2015-05-05 22:15:20 UTC
  - 8837d0038e Merge pull request #23395 from basepi/2015.2.masteropts
  - b261c95cd6 Add note to 2015.2.0 release notes about master opts in pillar
Salt Documentation, Release 3002.5

- PR #23393: (basepi) [2015.2] Add warning about python_shell changes to 2015.2.0 release notes @ 2015-05-05 22:12:46 UTC
  - f79aed5fe1 Merge pull request #23393 from basepi/2015.2.0python_shell
  - b2f033f485 Add CLI note
  - 48c7b3ee4f Add warning about python_shell changes to 2015.2.0 release notes
- PR #23380: (gladiatr72) Fix for double output with static salt cli/v2015.2 @ 2015-05-05 21:44:28 UTC
  - a9777761d8 Merge pull request #23380 from gladiatr72/fix_for_double_output_with_static__salt_CLI/v2015.2
  - c47fdd79c7 Actually removed the static bits from below the else: fold this time.
  - 4ee367956c Fix for incorrect output with salt CLI --static option
- PR #23379: (rahulhan) Adding states/rabbitmq_cluster.py @ 2015-05-05 21:44:06 UTC
  - 5c9543c1d2 Merge pull request #23379 from rahulhan/states_rabbitmq_cluster_test
  - 04c22d1acf Adding states/rabbitmq_cluster.py
- PR #23377: (rahulhan) Adding states/xmpp.py unit tests @ 2015-05-05 21:43:35 UTC
  - 430f080a3a Merge pull request #23377 from rahulhan/states_xmpp_test
  - 3292b53c3 Adding states/xmmp.py unit tests
- PR #23335: (steverweber) 2015.2: include doc in master config for module_dirs @ 2015-05-05 21:28:58 UTC
  - 8c057e6794 Merge pull request #23335 from steverweber/2015.2
  - 5e3b9e5d8 help installing python pysphere lib
  - 97513b060a include module_dirs
  - 36b1e87dd2 include module_dirs
- PR #23362: (jayeshka) adding states/zk_concurrency unit test case @ 2015-05-05 15:50:06 UTC
  - 1648253675 Merge pull request #23362 from jayeshka/zk_concurrency-states-unit-test
  - f60da4b1d adding states/zk_concurrency unit test case
- PR #23363: (jayeshka) adding riak unit test case @ 2015-05-05 14:23:05 UTC
  - 1cdaed868 Merge pull request #23363 from jayeshka/riak-unit-test
  - f9da6db459 adding riak unit test case

30.2.88 Salt 2015.5.10 Release Notes

release 2015-03-22

Version 2015.5.10 is a bugfix release for 2015.5.0.
Security Fix

CVE-2016-3176 Insecure configuration of PAM external authentication service

This issue affects all Salt versions prior to 2015.8.8/2015.5.10 when PAM external authentication is enabled. This issue involves passing an alternative PAM authentication service with a command that is sent to LocalClient, enabling the attacker to bypass the configured authentication service. Thank you to Dylan Frese <dmfrese@gmail.com> for bringing this issue to our attention.

This update defines the PAM eAuth service that users authenticate against in the Salt Master configuration. No additional fixes are included in this release.

Read Before Upgrading Debian 8 (Jessie) from Salt Versions Earlier than 2015.5.9

Salt systemd service files are missing the following statement in these versions:

```
[Service]
KillMode=process
```

This statement must be added to successfully upgrade on these earlier versions of Salt.

Changelog for v2015.5.9..v2015.5.10


- 69ba1de71d Remove ability of authenticating user to specify pam service

30.2.89 Salt 2015.5.11 Release Notes

release 2015-07-22

Version 2015.5.11 is a bugfix release for 2015.5.0.

Statistics

- Total Merges: 101
- Total Issue References: 73
- Total PR References: 162
- Contributors: 46 (AndrewPashkin, Ch3LL, DmitryKuzmenko, TheNullByte, UtahDave, abednarik, amontalban, anlutro, attiasr, basepi, borgstrom, brejoc, bstevenson, cachedout, carlwgeorge, efficks, gerhardqux, gtmanfred, heyilfe, jacobhammons, jfindlay, justinta, lomeroe, lorengordon, mtorromeo, nmadhok, notpeter, paclat, pcn, phistrom, rallytime, robgott, sacren, astorsl, serge-p, sjmh, sjorge, techhat, terminalmage, thatch45, thegoodduke, toanju, tomwalsh, twangboy, whiteinge, yannis666)
Changelog for v2015.5.10..v2015.5.11


- PR #33412: (jfindlay) update 2015.5.11 release notes
- PR #33405: (rallytime) Back-port #33386 to 2015.5
- PR #33386: (terminalmage) Fix traceback in logging for config validation (refs: #33405)
- ISSUE #33376: (tmehlinger) pip state broken in 2015.8.9 with pip <6.0 (refs: #33383)
- PR #33383: (thatch45) maintain the fallback because I am totally sick of this crap @ 2016-05-20 00:03:59 UTC
  - d15f5e2cef Merge pull request #33383 from thatch45/2015.5
  - f5ebca21c restore whitespace
  - 1d8b289db1 blast, put the try/except int he right place
  - 0816e5b83 maintain the fallback because I am totally sick of this crap
  - PR #33379: (cachedout) Improve doc clarity for disable_modules documentation
- ISSUE #26574: (jfindlay) minion stacktrace on top file yaml syntax error (refs: #33375)
  - PR #33375: (cachedout) Better YAML syntax error handling
- PR #33372: (jacobhammons) revved 2015.8 branch to .9 in version selector @ 2016-05-19 20:05:35 UTC
  - bb3e98cad2 Merge pull request #33372 from jacobhammons/release-update
  - 5ce502160b revved 2015.8 branch to .9 in version selector
  - PR #33341: (phistrom) Expanded documentation for boto_elb state and module
- ISSUE #32400: (rallytime) Document Default Config Values (refs: #33286, #33292, #32538, #33287, #32454, #33282)
  - PR #33292: (rallytime) Added some more docs for master and minion config settings
- ISSUE #23643: (falzm) Error in iptables module: argument --match-set: expected 2 argument(s) (refs: #33301)
  - PR #33301: (gerhardqux) Fix iptables --match-set (#23643)
  - PR #33290: (UtahDave) fix "loose" typo
- ISSUE #32400: (rallytime) Document Default Config Values (refs: #33286, #33292, #32538, #33287, #32454, #33282)
  - PR #33287: (rallytime) Add auth_tries config option to minion.rst docs
  - PR #33286: (rallytime) Document new master and minion config opts for 2016.3.0 (refs: #33287)
- ISSUE #33276: (sjmh) minion_id_caching has no documentation (refs: #33282)
- ISSUE #32400: (rallytime) Document Default Config Values (refs: #33286, #33292, #32538, #33287, #32454, #33282)
  - PR #33282: (rallytime) Document minion_id_caching config value
- ISSUE #33118: (saltuser) file.replace not working correctly on newer minions (refs: #33137)
  - PR #33137: (lorenagordon) Clarify file.replace MULTILINE flag interaction with regex anchors
  - PR #33236: (jfindlay) update 2015.5.11 release notes
- ISSUE #32250: (ikryten) Cannot run salt-minion as unprivileged user using 'user' directive (refs: #33211)
- PR #33211: (cachedout) Don’t try to kill a parent proc if we can’t @ 2016-05-12 21:29:50 UTC
- 698f1eb657 Merge pull request #33211 from cachedout/user_kill
- d4f2e5baa7 Don’t try to kill a parent proc if we can’t

- **ISSUE #32198**: (goatjam) State 'pkg installed' was not found in SLS (refs: #33205)
  - PR #33205: (cachedout) Resolve issue with pkg module on Mint Linux
  - PR #33178: (justinta) Add pip installed and removed test
  - PR #33197: (jfindlay) update 2015.5.11 release notes
  - PR #33181: (twangboy) Fix file.managed for Windows
  - PR #33185: (rallytime) [2015.5] Update to latest bootstrap script v2016.05.11

- **ISSUE #33163**: (jayboc2) Salt 2015.8.5 incompatible with Pip v8.1.2 (refs: #33180)
  - PR #33180: (thatch45) Pip fix
  - PR #33160: (jfindlay) add 2015.5.11 release notes
  - PR #33155: (rallytime) [2015.5] Update to latest bootstrap script v2016.05.10

- **PR #33141**: (justinta) Skipping salt-call --local test @ 2016-05-10 17:05:17 UTC
  - 6cd1641840 Merge pull request #33141 from jtand/disable_local_pkg_install_test
  - 8b1e34fb17 Skipping salt-call --local test

- **ISSUE #33085**: (fmnisme) salt doc err (refs: #33132)
  - PR #33132: (whiteinge) Doc mock decorators

- **ISSUE #33074**: (robnagler) Critical error in msgpack exposes pillar data (refs: #33078)
  - PR #33078: (cachedout) Lower display of msgpack failure msg to debug
  - PR #33080: (justinta) Use saltstack repo in buildpackage.py on CentOS 5
  - PR #33025: (Ch3LL) add test for installing package while using salt-call --local
  - PR #33055: (justinta) File and User test fixes for 2015.5 on Fedora23
  - PR #33060: (Ch3LL) Test pillar.items output
  - PR #33067: (sacren) Fix minor document error of test.assertion
  - PR #33045: (Ch3LL) Saltfile with pillar tests
  - PR #33044: (thatch45) Backport #33021 manually to 2015.5
  - PR #33021: (UtahDave) Fix syndic regression (refs: #33044)

- **ISSUE #22580**: (ryanwalder) minion runs highstate on start if schedule set in pillar (refs: #32958)
  - PR #32958: (rallytime) Add run_on_start docs to schedule.rst

- **ISSUE #23714**: (naemono) file.copy force ignored during highstate, but not with 'salt-call state.sls_id' (refs: #32732, #32848)
  - PR #32848: (lomeroe) backport PR #32732 to 2015.5 fixes #23714
  - PR #32732: (lomeroe) correct use of force flag in file.copy #23714 (refs: #32848)
  - PR #32837: (jfindlay) salt-cloud -u downloads stable version from bootstrap.saltstack.com by default
  - PR #32667: (jfindlay) [2015.5] update bootstrap to 2016.04.18 release

- **PR #32776**: (rallytime) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2016-04-25 15:18:12 UTC
- c842e1e437 Merge pull request #32776 from rallytime/merge-2015.5
- 7ecbf9f885 Merge pull request #14 from whiteinge/runner-async-low
  * 21f7b4af1 Format low data correct for runner_async
- ce72851861 Merge branch '2014.7' into '2015.5'
- 2775edc176 Saltnado /run fix (#32590)
- b19c5a5ce7 Verify auth in saltnado run (#32552)
- PR #32691: (terminalmage) Support remote sources in a source list

• ISSUE #32661: (dergrunepunkt) Batch exception w/duplication of minion IDs (refs: #32686)
• PR #32686: (cachedout) Fix stacktrace in batch with dup minion ids @ 2016-04-19 19:18:50 UTC
  - bd5442d768 Merge pull request #32686 from cachedout/issue_32661
  - f704df90bc Fix stacktrace in batch with dup minion ids
  - PR #32675: (basepi) [2015.5] Update "Low Hanging Fruit" to "Help Wanted"

• ISSUE #32612: (oliver-dungey) Calling Salt Modules from Templates - more complex examples would be great (refs: #32657)
  - PR #32657: (cachedout) Additional documentation on calling exec modules from templates
  - PR #32639: (nmadhok) [2015.5] Fixing critical bug to remove only the specified Host instead of the entire Host cluster
  - PR #32638: (nmadhok) [2015.5] Adding _syspaths.py to .gitignore
• ISSUE #32381: (tbaker57) user.present state includes shadow hash in return when user updated (refs: #32561)
• PR #32561: (gtmanfred) redact passwords and hashes from user.present updates @ 2016-04-19 15:48:59 UTC
  - 027b502335 Merge pull request #32561 from gtmanfred/user_passwords
  - 3db5e78d5d redact passwords and hashes from user.present updates
• ISSUE #32400: (rallytime) Document Default Config Values (refs: #33286, #33292, #32538, #33287, #32454, #33282)
  - PR #32538: (rallytime) Back-port #32528 to 2015.5 @ 2016-04-13 15:06:14 UTC
  - PR #32528: (AndrewPashkin) Document "grains" setting in the minion configuration reference (refs: #32538)
  - 7307bcb88e Merge pull request #32538 from rallytime/bp-32528
  - 46a4e8a310 Remove merge conflict line
  - e0d947c707 Document "grains" setting in the minion configuration reference
• ISSUE #32400: (rallytime) Document Default Config Values (refs: #33286, #33292, #32538, #32827, #32454, #33282)
  - PR #32454: (rallytime) Add documentation for some master/minion configs
• ISSUE #32413: (commutecat) Raspbian detected by both systemd.py and service.py __virtual__ functions (refs: #32421, #32458)
• PR #32458: (terminalmage) Improve and clarify docs on provider overrides. @ 2016-04-09 14:25:42 UTC
  - 100c6eb25 Merge pull request #32458 from terminalmage/clarify-providers-docs
  - 500d3ebbaa Add link to provider override docs to all group providers
- 83ca01f620 dd link to provider override docs to all shadow providers
- c5fe38789d Add link to provider override docs to all user providers
- 5c1c1da59 Add link to provider override docs to all service providers
- 736f2befc9 Add link to provider override docs to all package providers
- f930634778 Clarify the scope of the provider param in states.
- af24c82ab0 Add documentation on virtual module provider overrides to the module docs
- 0bc6c97a63 Improve docstrings
- 1948920674 Add external ref to windows package manager docs
- e7fa21438c Add new doc pages to toctree
- f0de1236ec Move the tables of virtual modules to individual documentation pages

• ISSUE #11497: (eeaston) cmd.run cwd should not be checked before preconditions (refs: #32293)
  - PR #32418: (rallytime) Merge #32293 with test fixes
  - PR #32293: (efficks) Fix issue #11497 (refs: #32418)

• ISSUE #32413: (commutecat) Raspbian detected by both systemd.py and service.py __virtual__ functions (refs: #32421, #32458)
  - PR #32421: (terminalmage) Ignore Raspbian in service.py __virtual__

• ISSUE #1409: (twinshadow) module/network.py: Interfaces do not list multiple addresses

• ISSUE saltstack/salt#28262: (palica) FreeBSD pkgng provider raising error for minion (refs: #32376)

• ISSUE #28262: (palica) FreeBSD pkgng provider raising error for minion (refs: #32399, #32376)

• PR #32399: (amontalban) Backport to fix #28262 for 2015.5 as requested in PR #32376 @ 2016-04-06 22:48:23 UTC
  - PR #32376: (amontalban) Fixes saltstack/salt#28262 (refs: #32399)
  - a36866d7db Merge pull request #32399 from amontalban/2015.5
  - e1ffbd615a Fixes saltstack/salt#28262 for 2015.5 branch

• ISSUE #32066: (guettli) Proxmox docs outdated (refs: #32374)

• PR #32374: (cachedout) Update proxmox documentation @ 2016-04-05 22:25:16 UTC
  - 3f03c5fcf9 Merge pull request #32374 from cachedout/issue_32066
  - 62389d1d1a Update proxmox documentation

• PR #32339: (Ch3LL) remove reference to master_alive_check in 2015.5 @ 2016-04-04 20:39:24 UTC
  - 8578089beb Merge pull request #32339 from Ch3LL/fix_doc_multi-master
  - 2774da288d remove reference to master_alive_check

• ISSUE #32044: (ScoreUnder) Multiple masters throwing warnings? "Key master with value [...] has an invalid type of list, a str is required for this value" (refs: #32129)

• PR #32284: (rallytime) Audit config.py default types and values @ 2016-04-02 02:00:38 UTC
  - PR #32129: (terminalmage) Support multiple valid option types when performing type checks (refs: #32284)
  - fbdc47cc55 Merge pull request #32284 from rallytime/config-audit
0491513204 Don't be so explicit. Just use string_types.
083c477fd3 Use six.string_types in config default tuples
7e642b8381 Audit config.py default types and values - first sweep

• **ISSUE #32301**: (terminalmage) pkg.latest_version returns inaccurate version when blank "Release" param set in package metadata (refs: #32302)

• **PR #32302**: (terminalmage) Properly support packages with blank "Release" param in pkg.latest_version @ 2016-04-01 22:13:27 UTC
  - 0a6d44e57b Merge pull request #32302 from terminalmage/fix-missing-release
  - 413c371cc Properly support packages with blank "Release" param in pkg.latest_version

• **ISSUE #31963**: (UtahDave) pkgrepo.managed state test=True doesn't actually test if changes need to be made. (refs: #32162)

• **PR #32162**: (terminalmage) Properly handle yum/zypper repositories in pkgrepo.managed @ 2016-03-30 17:51:05 UTC
  - 5d08db7c92 Merge pull request #32162 from terminalmage/issue31963
  - 5c1db812c Fix pkgrepo integration test
  - e7fb3095ce Properly handle yum/zypper repositories in pkgrepo.managed
  - add2111fec Use six.iteritems instead of dict.items
  - 6c21881c38 Docstring tweaks
  - ecbb78b649 Remove useless function
  - 06f3309552 Normalize variable naming to match other functions
  - 690537ca8b Look for apt-add-repository in PATH instead of assuming it's there
  - 709d80b11b aptpkg: Accept **kwargs instead of a dict for pkg.expand_repo_def

• **ISSUE #31976**: (moltob) Schedules not persisted on Windows minion (Installer issue) (refs: #32223)

• **PR #32223**: (twangboy) Create minion.d directory on install for Windows @ 2016-03-30 14:43:27 UTC
  - 4fcdab428 Merge pull request #32223 from twangboy/fix_31976
  - b7fcae97ce Create minion.d directory, fixes #31976

• **ISSUE #31501**: (grep4linux) Salt states fail with error 'Failed to return clean data' when using salt-ssh in Amazon EC2 (refs: #32218)

• **PR #32218**: (cachedout) Only display error when tty is True in salt-ssh @ 2016-03-29 19:13:44 UTC
  - 3309f6a29 Merge pull request #32218 from cachedout/issue_31501
  - 6795d6af0 Only display error when tty is True in salt-ssh

• **PR #32196**: (justinta) Fixed pylint error in app_pam_test.py @ 2016-03-28 23:59:42 UTC
  - 6e0cb22c96 Merge pull request #32196 from jtand/cherrypy_pam_test_lint_fix
  - bd942e0fd Fixed pylint error in app_pam_test.py

• **PR #32154**: (Ch3LL) Add integration tests for salt-api using pam eauth @ 2016-03-28 16:06:36 UTC
  - **PR #31826**: (gtmanfred) Remove ability of authenticating user to specify pam service (refs: #32154)
  - 6b888b51c0 Merge pull request #32154 from Ch3LL/ch3ll_pam_2015.5
  - ba605b0128 fix more pylint and add ability to close cherrypy engine
- 2d4dc4da05 add teardown call
- d115878714 fix pylint error
- 4c1ab082b6 add pam salt-api tests

- **PR #32170**: (gtmanfred) add name for lxc for use with cloud cache @ 2016-03-28 14:34:16 UTC
  - 230443be6 Merge pull request #32170 from gtmanfred/lxc_cloud_name
  - eb7d82e7be add name for lxc for use with cloud cache

- **ISSUE #31731**: (sjorge) rh_service references osrelease before it is available, also does not return bool (refs: #32165)
  - **PR #32165**: (terminalmage) Make __virtual__ for rhservice.py more robust (refs: #32164)
  - **PR #32164**: (terminalmage) Make __virtual__ for rhservice.py more robust (2015.5 branch) (refs: #32165) @ 2016-03-27 18:21:52 UTC
    - 32b0421a34 Merge pull request #32164 from terminalmage/issue31731-2015.5
    - 18439c4f89 Make __virtual__ for rhservice.py more robust (2015.5 branch)

- **PR #32141**: (paclat) fixes 32108 @ 2016-03-25 16:50:59 UTC
  - 6212e9aa56 Merge pull request #32141 from paclat/issue_32108
  - 72c5d12d43 fixes 32108

- **ISSUE #32044**: (ScoreUnder) Multiple masters throwing warnings? "Key master with value [...] has an invalid type of list, a str is required for this value" (refs: #32129)
- **PR #32129**: (terminalmage) Support multiple valid option types when performing type checks (refs: #32284) @ 2016-03-24 21:16:29 UTC
  - bdd7ea89d5 Merge pull request #32129 from terminalmage/issue32044
  - 34ca1ea12e Change type check errors to debug loglevel
  - 5462081488 Support multiple valid option types when performing type checks

- **ISSUE #32052**: (bstevenson) list_absent function doesn’t loop through list of values (refs: #32056)
- **PR #32056**: (bstevenson) Fix list absent @ 2016-03-24 17:35:00 UTC
  - c42014eb54 Merge pull request #32056 from bstevenson/fixed-list_absent
  - 1500a0e027 set deleted value to list
  - 1dc85f289 unit test update
  - 39adf86fec Fixed negation logic
  - be9388173b Removed has_key in lieu of in
  - e48593ed81 Comments and Changes output fixes
  - b98f5517de Updated to conform to proper ret values
  - d18b4be8b0 remove whitespace end of line 186:q
  - d2b89c85ad fix formatting
  - 103cee9e29 cleaned up formatting
  - 7a4d7f0bff added whitespace
  - 8ea5b545b0 Loop through list values in list_absent
• PR #32096: (rallytime) Back-port #32065 to 2015.5 @ 2016-03-23 22:01:36 UTC
  – PR #32065: (TheNullByte) Fix an issue with the minion targeting example in docs (refs: #32096)
  – 848ce5647f Merge pull request #32096 from rallytime/bp-32065
  – 36a96da374 Fix an issue with the minion targeting example

• PR #32104: (jacobhammons) One additional known issue for 2015.5.10 release notes @ 2016-03-23 21:20:50 UTC
  – 9b332d48b9 Merge pull request #32104 from jacobhammons/dot10
  – b9fc882a1e One additional known issue for 2015.5.10 release notes

• PR #32100: (jacobhammons) 2015.5.10 release docs @ 2016-03-23 20:05:21 UTC
  – ff51d548e1 Merge pull request #32100 from jacobhammons/dot10
  – 544a1661ce 2015.5.10 release docs

• ISSUE #32037: (terminalmage) Increase the visibility of state.apply in Salt’s documentation (refs: #32038)

• PR #32038: (terminalmage) Improve state module docs, replace references to state.highstate/state.sls with state.apply @ 2016-03-23 17:08:02 UTC
  – 72a20f7999 Merge pull request #32038 from terminalmage/issue32037
  – 8bd983324 Add reference to state tutorial to state.apply docstring
  – 9b4fe8443e Move highstate usage details to top of state.apply docstring
  – 74ee8c54bc Clarify prior role of state.highstate in states tutorial
  – 1b97e4a3df Improve state module docs, replace references to state.highstate/state.sls with state.apply

• PR #32051: (terminalmage) Fix outputter for state.apply @ 2016-03-23 16:42:43 UTC
  – 908a7bf5cd Merge pull request #32051 from terminalmage/fix-state-apply-output
  – 7d7cb45565 Fix outputter for state.apply

• ISSUE #31788: (crocket) pkg.installed doesn't work on Manjaro. (refs: #32002)

• PR #32002: (abednarik) Added Manajro Linux to virtual. @ 2016-03-21 17:55:16 UTC
  – 0e66f678d4 Merge pull request #32002 from abednarik/pkg_manjaron_issue31788
  – 1b052d0a66 Added Manajro Linux to virtual. List extended with ManajaroLinux in order su load pacman module.

• PR #31957: (rallytime) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2016-03-18 15:12:22 UTC
  – ba5bf62c1a Merge pull request #31957 from rallytime/merge-2015.5
  – 1b6ec5d445 Merge branch '2014.7' into '2015.5'
    * ba73deee46 Merge pull request #31929 from twangboy/fix_build_script
      * 2c5599d2bc Backport build script from 2015.8
      * ce74991dd0 Fix nsi script to work with new build process

• PR #31972: (terminalmage) Make lack of python-ldap module more explicit when LDAP eauth is enabled @ 2016-03-18 15:11:59 UTC
  – a52e3ad7a1 Merge pull request #31972 from terminalmage/zh-584
  – 1e5639e495 Make lack of python-ldap module more explicit when LDAP eauth is enabled

• PR #31935: (twangboy) Back port nullsoft build script from 2015.8 @ 2016-03-17 14:54:50 UTC
- 2d1f2a0c2e Merge pull request #31935 from twangboy/fix_build_script2
- 4af8c9dbfc Back port nullsoft build script from 2015.8

- **PR #31912**: (jfindlay) log.mixins: remove extemporaneous .record @ 2016-03-16 01:56:46 UTC
  - 43240dc566 Merge pull request #31912 from jfindlay/log_mixins
  - 9f9c694654 log.mixins: remove extemporaneous .record

- **PR #31825**: (justinta) Updated .testing.pylintrc to match newer versions of pylint @ 2016-03-15 18:12:44 UTC
  - 440e6d6c6b Merge pull request #31825 from jfindlay/udpate_pylintrc
  - 9a14e02766 Updated beacons/sh.py to work with enumerate()
  - 0ecec691a0 Adjusted beacons to work with enumerate better
  - f509b4113e Fixed final lint error
  - 5945b3f11f Fix and disable pylint errors
  - 06a6e6a55 Fixed pylint errors on jboss state and module
  - de96db97c8 Fixed more pylint errors, and disabled some more
  - c07b0a20b5 Merge branch 'lint_fixes' into udpate_pylintrc
    * 2e6a152308 Fixed lint error in lxc.py
    * 908ca1a439 Fixed lint error in ssh_py_shim
    * 404c1b50f7 Changed range(len()) to enumerate()
    * 1e13586546 Changed range(len()) to enumerate()
  - 9c0cc7a9a5 Added more disables
  - 9c1aab3b4e Updated .testing.pylintrc to match newer versions of pylint

- **ISSUE #31867**: (damon-atkins) "__virtual__ returned False" is not a clear error message (refs: #31878, #31900)

- **PR #31900**: (rallytime) Add "python module" clarification to ps __virtual__ warning. @ 2016-03-15 17:59:35 UTC
  - 471c9444a3 Merge pull request #31900 from rallytime/fix-psutil-warning
  - 22403d69ae Add "python module" clarification to ps __virtual__ warning.

- **ISSUE #31867**: (damon-atkins) "__virtual__ returned False" is not a clear error message (refs: #31878, #31900)

- **ISSUE #19659**: (wonderslug) state process.absent is failing on Ubuntu 14.04 because psutil is not installed (refs: #31878)

- **PR #31878**: (rallytime) Make sure __virtual__ error message is helpful when psutil is missing @ 2016-03-14 21:31:42 UTC
  - c44c1b5e59 Merge pull request #31878 from rallytime/fix-psutil-warning
  - 44b29f72a1 Make sure __virtual__ error message is helpful when psutil is missing

- **PR #31852**: (rallytime) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2016-03-13 02:47:02 UTC
  - 5c592b6768 Merge pull request #31852 from rallytime/merge-2015.5
  - 1470de17fa Merge branch '2014.7' into '2015.5'
  - 218c902091 Merge pull request #31834 from jfindlay/2014.7
    * 358fda0c8 add 2014.7.8 release notes

30.2. Previous Releases
- a423c6cd04 Merge pull request #31833 from jfindlay/2014.7
  - 6910fcc584 add 2014.7.9 release notes
- c5e7c03953 Merge pull request #31826 from gtmanfred/2014.7
- d73f70ebb2 Remove ability of authenticating user to specify pam service

- **PR #31827**: (gtmanfred) Remove ability of authenticating user to specify pam service @ 2016-03-11 20:40:19 UTC
  - 0cc1d5db03 Merge pull request #31827 from gtmanfred/2015.5
  - 979173b78a Remove ability of authenticating user to specify pam service

- **PR #31810**: (whiteinge) Fix outdated Jinja 'env' variable reference @ 2016-03-11 03:52:21 UTC
  - 8cf0b9eb3d Merge pull request #31810 from whiteinge/saltenv-jinja-var
  - cb72b91240 Fix outdated Jinja 'env' variable reference

- **ISSUE #31729**: (brejoc) Creating VM with salt-cloud fails for provider Exoscale (Cloudstack) (refs: #31744)

- **PR #31744**: (brejoc) Fix for AttributeError with libcloud <0.15 @ 2016-03-10 00:15:26 UTC
  - 970ef0e445 Merge pull request #31744 from brejoc/fix-attribute-error-with-older-libcloud/2015.5
  - bb29dc2283 Added version to libcloud depends statement
  - 87f9534f5e Added log message with update suggestion for libcloud
  - 72eab406cd Fix for AttributeError with libcloud <0.15

- **ISSUE #31666**: (sjorge) salt-call --local pillar.items is overly eager to give data (refs: #31740)

- **PR #31740**: (terminalmage) Assume pillar_opts is False when not specified in masterless mode @ 2016-03-09 22:57:57 UTC
  - df2d23ba5d Merge pull request #31740 from terminalmage/issue31666
  - aea586464a Fall back to False when pillar_opts not set
  - fe19d77eb4 Add default value for pillar_opts on minion

- **ISSUE #31749**: (milan-milo) salt-cloud spitting out error 'AttributeError: 'NoneType' object has no attribute 'pop'' (refs: #31750)

- **ISSUE #26162**: (nmadhok) VMware cloud driver create function failing with traceback on latest develop (refs: #26170)

- **PR #31750**: (rallytime) Back-port #26170 to 2015.5 @ 2016-03-09 17:44:14 UTC
  - **PR #26170**: (nmadhok) [Backport] Make sure variable is a dictionary before popping something from it. (refs: #31750)
    - e22f5c0aa26 Merge pull request #31750 from rallytime/bp-26170
    - 3c1123a05f Make sure variable is a dictionary before popping something from it.

- **ISSUE #30559**: (kaidokert) module.wait does not fail when called state fails (refs: #31689)

- **PR #31689**: (rallytime) Back-port #29467 to 2015.5 @ 2016-03-06 19:26:11 UTC
  - **PR #29467**: (serge-p) Update module.py (refs: #31689)
    - 9162925dd0 Merge pull request #31689 from rallytime/bp-29467
    - 1f8fb4cb99b Update module.py

- **PR #31687**: (cachedout) Removed useless GPG tests @ 2016-03-05 00:08:27 UTC
- d7914c7b14 Merge pull request #31687 from cachedout/rm_gpg_test
- 8b00f13eb3 Removed useless tests

- **ISSUE #31619**: (alexxannar) 2015.8.7 pkg installed problem with version parameter (refs: #31660)
- **PR #31660** (terminalmage) Remove epoch from version string if present when installing with yum @ 2016-03-04 20:49:23 UTC
  - bd4d12a155 Merge pull request #31660 from terminalmage/issue31619
  - da954d7b92 Add integration test for packages with epoch in version
  - 4fa7e4defe Move epoch removal
  - 290192af56 Remove epoch from version string if present when installing with yum

- **PR #31683** (rallytime) Back-port #31578 to 2015.5 @ 2016-03-04 20:47:41 UTC
  - **PR #31578**: (anlutro) Allow queueing of state runs through saltmod (refs: #31683)
  - e33cf456a Merge pull request #31683 from rallytime/bp-31578
  - 8fe4679b7 allow queueing of state runs through saltmod

- **ISSUE #31671**: (guettli) Word "Job Cache" does not match (refs: #31682)
- **PR #31682** (cachedout) Add definition of job cache to glossary @ 2016-03-04 20:07:19 UTC
  - 27f44389d5 Merge pull request #31682 from cachedout/cache_meaning
  - a75e14125 Add definition of job cache to glossary

- **PR #31658** (rallytime) Add mentioned of Salt's Coding Style docs to the Contributing docs @ 2016-03-03 22:14:57 UTC
  - bd04c96d1 Merge pull request #31658 from rallytime/add-style-to-contrib
  - 6b526b5878 Add mentioned of Salt's Coding Style docs to the Contributing docs

- **ISSUE #21932**: (clinta) Salt Coding Style docs should list requirements for salt pylintrc (refs: #31655)
- **PR #31655** (rallytime) Make note of pylint dependencies in docs @ 2016-03-03 18:37:06 UTC
  - 10658dfe6 Merge pull request #31655 from rallytime/pylint-docs
  - 6e0377d376 Make note of pylint dependencies in docs

- **PR #31440** (cachedout) Set correct type for master_tops config value @ 2016-03-02 21:17:14 UTC
  - 6075774a01 Merge pull request #31440 from cachedout/master_tops_type
  - f49cc7049 Set correct type for master_tops config value

- **ISSUE #31614**: (frizzby) salt.utils.http.query() implementation contradicts its documentation. decode arg (refs: #31622)
- **PR #31622** (jfindlay) doc/topics/tutorials/http: update query decoding docs @ 2016-03-02 18:23:44 UTC
  - 6d31b9918f Merge pull request #31622 from jfindlay/query_doc
  - 4e48fe806 doc/topics/tutorials/http: update query decoding docs

- **PR #31558** (cachedout) Don't stacktrace if ssh binary is not installed with salt-ssh @ 2016-02-29 22:15:44 UTC
  - dbf6e07bce Merge pull request #31558 from cachedout/ensure_ssh_installed
  - cee56e0a5f Don't stacktrace if ssh binary is not installed with salt-ssh
• PR #31521: (terminalmage) salt-ssh: Fix race condition when caching files to build the thin tarball @ 2016-02-29 15:32:22 UTC
  - 060a60fd90 Merge pull request #31521 from terminalmage/issue24753
  - 0d352bb1c6 Add fileclient tests
  - d9370a8041 Update cp module salt-ssh wrapper to use new cachedir param
  - 032049b01d Update the SSH state module wrappers to pass an alternate cachedir
  - 65bc5a8a3a Accept and pass through the alternate cachedir when prepping the thin tar
  - c3f7a2f2e5 Add ability to specify an alternate base dir for file caching

• PR #31497: (rallytime) Remove duplicate "timeout" definition in Roster docs @ 2016-02-26 15:01:30 UTC
  - 92f8f89218 Merge pull request #31497 from rallytime/remove-timeout-dup
  - 83e6480d20 Remove duplicate "timeout" definition in Roster docs

• PR #31472: (rallytime) Update contributing docs @ 2016-02-25 16:05:59 UTC
  - da001bcb49 Merge pull request #31472 from rallytime/update-contributing-docs
  - 5871e4d1e0 Update contributing docs

• ISSUE #30183: (jakehilton) Minion startup extremely delayed when first master in failover multi master setup is down (refs: #31382)

• PR #31461: (DmitryKuzmenko) Set auth retry count to 0 if multimaster mode is failover. @ 2016-02-24 17:15:30 UTC
  - PR #31382: (DmitryKuzmenko) Set auth retry count to 0 if multimaster mode is failover (refs: #31461)
  - f3e2dd1d3 Merge pull request #31461 from DSRCompany/issues/30183_fix_multimaster_failover_2015.5
  - 3d09c3b7a3 Set auth retry count to 0 if multimaster mode is failover.

• ISSUE #31356: (sastorsl) file.copy module with recurse=true and non-existing src dir does not fail and resets dst dir permissions (refs: #31442)

• PR #31442: (sastorsl) Add os.path.exists(src) to file.py, def copy @ 2016-02-23 23:40:03 UTC
  - 26733ce988 Merge pull request #31442 from sastorsl/salt-modules-file.py-copy-check-src
  - 0a4132866d removed lint in the exception string
  - f8b5d498c3 Add os.path.exists(src) to file.py, def copy

• ISSUE #30739: (paclat) manage.present does not work when minion is using localhost (refs: #31441)

• PR #31441: (cachedout) Include localhost minions in presence detection for runner @ 2016-02-23 23:36:59 UTC
  - e480727b27 Merge pull request #31441 from cachedout/issue_30739
  - 4fcbfad570 Include localhost minions in presence detection for runner

• PR #31416: (carlwgeorge) selinux module documentation fix @ 2016-02-22 21:49:28 UTC
  - 91ff95f093 Merge pull request #31416 from carlwgeorge/selinux_doc_fix
  - 0e6846d72e selinux module documentation fix

• PR #31336: (terminalmage) Improve config validation logging @ 2016-02-22 19:34:24 UTC
  - 7d01979898 Merge pull request #31336 from terminalmage/config-validation-logging
  - 795008bad1 Improve config validation logging
• **ISSUE #31369**: (sjorge) illumos/solaris/smartos display compacted hwaddrs (refs: #31374)

• **PR #31374**: (sjorge) fix for #31369 @ 2016-02-22 16:22:21 UTC
  - fed096a29d Merge pull request #31374 from sjorge/solarish_hwaddr
  - bdf2576db missed a .format and messed up the join
  - bbb2d9c6d fix for illumos/solaris hwaddr

• **PR #31339**: (jacobhammons) changed latest release to 2015.8.7 @ 2016-02-19 00:30:24 UTC
  - 6eef7f905b Merge pull request #31339 from jacobhammons/dot7prev
  - 07120a8d48 changed latest release to 2015.8.7

• **PR #31288**: (notpeter) Improve salt.states.ssh_known_hosts documentation. @ 2016-02-17 22:09:18 UTC
  - cd3400e67e Merge pull request #31288 from notpeter/ssh_known_hosts_docs
  - 3f573d9a2 Improve salt.states.ssh_known_hosts documentation.

• **PR #31183**: (heyfife) Fixed named external_ip reservation/re-use code in gce driver. @ 2016-02-17 19:02:27 UTC
  - 875d0925f Merge pull request #31183 from heyfife/fixed-gce-named-static-ip-reservation
  - 04b4e2323 Fixed named external_ip reservation/re-use code.

• **ISSUE #31001**: (toanju) Fedora 23 check installed packages fails (refs: #31032)

• **PR #31032**: (terminalmage) (2015.5 branch) yumpkg: ensure that dnf-plugins-core >= 0.1.15 is installed @ 2016-02-17 19:02:03 UTC
  - 465dc020c Merge pull request #31032 from terminalmage/fixed31001
  - 42daee4509 yumpkg.py: Remove repoquery usage everywhere but check_db
  - 50b8b1c19 backport salt.utils.pkg.rpm to 2015.5
  - a1ad1499a Move salt.utils.itersplit() to salt.utils.itertools.split()
  - 5b86646c64 Ignore failure to install new enough dnf-plugins-core
  - defe0859fd Ensure that dnf-plugins-core 0.1.15 is installed

• **ISSUE #31174**: (sjorge) salt.states.archive.extracted displays incorrect message: (refs: #31176)

• **PR #31264**: (sjorge) fix if_missing gets appended to dirs list, take III @ 2016-02-17 17:12:25 UTC
  - PR #31250: (sjorge) if_missing append to array as far back as 2014.1 (refs: #31264)
  - PR #31250: (sjorge) if_missing incorrrected appended to directories_created (refs: #31250, #31264)
  - cec69b74f0 Merge pull request #31264 from sjorge/if_missing-155-fix
  - 545edbf5e1 fix if_missing gets appended to dirs list, take III

• **PR #31110**: (cachedout) Fixup 30730 @ 2016-02-10 21:37:55 UTC
  - fa3f474de9 Merge pull request #31110 from cachedout/fixup_30730
  - 6f5848e04 Fixup unit test
  - 558f68e0a Fixes pylint warnings
  - 56a975ec43 Attempt to fix pylint warnings
  - 55d71be057 Make documentation and code examples consistent with code
  - 1f04fed68 Change parameter name from includes to skips
- ccf5e13e7d Adding support for skipHidden in SetInclude
- 4f2d4af2e7 Variable names standardization
- f5917ac1e8 Fixes typo
- 26e5236073 Invert RebootRequired logic
- 8065a7abf6 Add basic documentation and define how the skips parameter works.
- 389e65708 Change parameter name from includes to skips
- 30e17ef906 Adding support for skipHidden in SetInclude
- 1244eaa5be Variable names standardization, consistent if/else logic with states.win_update

- ISSUE #30900: (mchugh19) modules/qemu_nbd.py assumes versions of utilities that don’t exist on ubuntu (refs: #30949)
- PR #30974: (rallytime) Back-port #30949 to 2015.5 @ 2016-02-08 16:38:46 UTC
  - PR #30949: (techhat) Replace cfdisk with sfdisk (refs: #30974)
  - 1c699a1664 Merge pull request #30974 from rallytime/bp-30949
  - ff6542f593 Replace cfdisk with sfdisk
- ISSUE #28951: (ClaudiuPID) CloudLinux 7 changes (refs: #30897)
- PR #30942: (rallytime) Back-port #30897 to 2015.5 @ 2016-02-05 19:00:55 UTC
  - PR #30897: (mtorromeo) Only remove the word linux from distroname when its not part of the name (refs: #30942)
  - c7b87cc371 Merge pull request #30942 from rallytime/bp-30897
  - 885e00ba54 Only remove the word linux from distroname when its not part of the name
- PR #30922: (jacobhammons) Rev latest version to 2015.8.5 @ 2016-02-05 01:20:27 UTC
  - 35b7f62669 Merge pull request #30922 from jacobhammons/prev-rel-notes
  - 57c1ec637a Rev latest version to 2015.8.5
- ISSUE #30840: (HeathNaylor) Generic Error for SALT.STATES.BOTO_ELB (refs: #30865)
- PR #30865: (abednarik) Better boto elb error message. @ 2016-02-04 21:02:05 UTC
  - 2488bb902e Merge pull request #30865 from abednarik/better_boto_elb_error
  - 3561ce8c19b Better boto elb error message.
- PR #30831: (jacobhammons) Updated readme @ 2016-02-02 21:06:02 UTC
  - 4da04f82c8 Merge pull request #30831 from jacobhammons/readme-update
  - 01a92f5d98 Updated readme
- PR #30829: (jacobhammons) Updated latest version to 2015.8.4 @ 2016-02-02 20:06:13 UTC
  - 90c1ea6f6c Merge pull request #30829 from jacobhammons/release-2015.5
  - c95b60148e Version to 2015.8.4
- ISSUE #24575: (BrandKNY) raid.present inside mdadm.py triggers IndexError: list index out of range (refs: #30784)
- ISSUE #23694: (gmolight) mdadm.py module (refs: #30784)
- PR #30784: (rallytime) Back-port #24952 to 2015.5 @ 2016-02-01 21:43:01 UTC
- PR #24952: (pcn) Don’t split the string on a single line (refs: #30784)
- a07908bdea Don’t split the string on a single line

- ISSUE #30560: (terminalmage) yumpkg.py: pkg.unhold fails in yum (refs: #30764)

- PR #30764: (terminalmage) Work around yum versionlock’s inability to remove holds by package name alone @ 2016-02-01 18:14:27 UTC
  - e978f5392f Merge pull request #30764 from terminalmage/issue30560
  - 39736afcd7 Work around yum versionlock’s inability to remove holds by package name alone

- PR #30760: (toanju) Changed output format of arp_ip_target from list to comma delimited... @ 2016-01-31 19:05:02 UTC
  - PR #27952: (tomwalsh) Corrected format of arp_ip_target in network config files and modprobe files (refs: #30760)
  - 6f565c0d76 Merge pull request #30760 from toanju/2015.5
  - dc4256f7df Changed output format of arp_ip_target from list to comma delimited string

- ISSUE #30722: (yannis666) mine config is not merged from minion config and pillar (refs: #30757)

- PR #30757: (yannis666) Fix to mine update to merge configuration @ 2016-01-31 19:02:44 UTC
  - 1c205b4898 Merge pull request #30757 from yannis666/fix-for-mine-update-merge
  - 61bb23e256 Fix to mine update to merge configuration

- ISSUE #28751: (olfway) network.system state ignores test=True on debian/ubuntu (refs: #30749)

- PR #30749: (abednarik) Fix Netwotk hostname Module in Debian systems. @ 2016-01-29 23:01:09 UTC
  - f9fde86a7 Merge pull request #30749 from abednarik/fixed_network_system_test
  - 1e9e97df59 Fix Netwotk hostname Module in Debian systems.

- ISSUE #28438: (vakulich) Master failed to save job cache file: "Could not write job invocation cache file: [Errno 2] No such file or directory" (refs: #30699)

- PR #30699: (abednarik) Add Retry to save_load. @ 2016-01-29 16:08:30 UTC
  - 076268089a Merge pull request #30699 from abednarik/save_load_retry_time
  - 186872cf49 Add Retry to save_load.

- ISSUE #30565: (heaje) scsi.ls fails to run both on CentOS 6 and CentOS 7 (refs: #30659)

- PR #30659: (sjmh) Fix Isscsi issues for certain platforms @ 2016-01-28 15:53:38 UTC
  - 8d79d1b9c7 Merge pull request #30659 from sjmh/fixed-scsi
  - 3544dd995e Fix Isscsi issues for certain platforms

- ISSUE #18980: (lrhazi) salt-cloud: ExtraData: unpack(b) received extra data. (refs: #30671)

- PR #30671: (techhat) Add file locking to cloud index @ 2016-01-27 17:14:55 UTC
  - 516919525a Merge pull request #30671 from techhat/lockcloud
  - 47198d4ea Whitespace
  - 8e7eca23e4 Add file locking to cloud index

- ISSUE #28320: (Grokzen) file.comment & file.uncomment changes file permissions on edit (refs: #30586)
• PR #30586: (abednarik) Fix comment_line permissions. @ 2016-01-25 23:24:02 UTC
  - 643e9c9616 Merge pull request #30586 from abednarik/fix_comment_line_perms
  - 8b3954a242 Fix comment line permissions.

• PR #30582: (terminalmage) yumpkg.check_db: run separate repoquery commands when multiple names passed @ 2016-01-24 17:15:04 UTC
  - a823c21428 Merge pull request #30582 from terminalmage/dnf-repoquery-multiple-targets
  - 410da789f9 yumpkg.check_db: run separate repoquery commands when multiple names passed

• PR #30548: (jacobhammons) Added placeholder release notes for 2015.5.10 @ 2016-01-22 18:36:01 UTC
  - 8e56be7f4c Merge pull request #30548 from jacobhammons/doc-fixes
  - 03c51bb54d Added placeholder release notes for 2015.5.10 Changed old doc links from docs.saltstack.org to docs.saltstack.com

• PR #30530: (terminalmage) 2015.5 tweaks from #30529 @ 2016-01-22 16:26:21 UTC
  - PR #30529: (terminalmage) Merge 2015.5 into 2015.8 (refs: #30530)
  - 1aaf4c45b5 Merge pull request #30530 from terminalmage/yumpkg-dnf-cleanup
  - 258671bcf 2015.5 tweaks from #30529

• ISSUE #23553: (aboe76) dnf a new package provider for fedora 22 (refs: #30484)

• PR #30484: (terminalmage) Backport DNF support to 2015.5 branch @ 2016-01-21 22:14:46 UTC
  - 7798442272 Merge pull request #30484 from terminalmage/dnf-yumpkg-2015.5
  - 330e26d1da Hide get_locked_packages
  - 5a6374208e Backport DNF support to 2015.5 branch

• PR #30512: (jfindlay) disable pkgrepo test for ubuntu 15.10+ @ 2016-01-21 21:32:58 UTC
  - b348f804b1 Merge pull request #30512 from jfindlay/repo_test
  - 66f06f2bd3 disable pkgrepo test for ubuntu 15.10+

• PR #30478: (justinta) Updated pip_state to work with pip 8.0 @ 2016-01-21 16:02:41 UTC
  - a9348dfef8 Merge pull request #30478 from jtand/pip_8_update
  - 6227368830 Convert version to int, instead of comparing strings to ints
  - 20384a4810 Added InstallException to except block
  - baa274bca9 Updated pip_state to work with pip 8.0

• ISSUE #30465: (alandrees) Nested imports with pyobjects (refs: #30482)

• PR #30482: (borgstrom) Pyobjects recursive import support (for 2015.5) @ 2016-01-21 15:54:32 UTC
  - a30147c64f Merge pull request #30482 from borgstrom/pyobjects_recursive
  - 2c55a7580b Fixup lint errors
  - b46d0e4b5 Allow recursive salt:// imports
  - 51bfa16173 Add test to prove that recursive imports are currently broken

• PR #30459: (jfindlay) modules.pkg: disable repo int test for ubuntu 15.10 @ 2016-01-20 16:41:12 UTC
  - 5c7cc51937 Merge pull request #30459 from jfindlay/pkg_tests
  - fb9972f590 modules.pkg: disable repo int test for ubuntu 15.10
• PR #30443: (justinta) Boto uses False for is_default instead of None @ 2016-01-19 18:28:08 UTC
  – dd2ceb4c07 Merge pull request #30443 from jtand/boto_vpc_5
  – 2f7f152479 Boto uses False for is_default instead of None
• ISSUE #26833: (twangboy) salt-cloud fails to spin up windows minion on 2015.8 Head (refs: #26853)
• ISSUE #21256: (dhs-rec) win.exe package for RH 6 (refs: #26853)
• PR #30420: (attiasr) Backport @ 2016-01-19 17:33:58 UTC
  – PR #26853: (UtahDave) Fix salt-cloud on windows (refs: #30420)
  – 62d9ddced Merge pull request #30420 from attiasr/patch-1
  – 4de343c5a1 Backport #26853
• ISSUE #30341: (dnd) salt-cloud linode connection reset by peer (refs: #30364)
• PR #30364: (rallytime) Add TLS version imports and add linode driver documentation notices @ 2016-01-14 19:04:47 UTC
  – 5a923b3aa9 Merge pull request #30364 from rallytime/fix-30341
  – 79bcf151cb Add TLS version imports and add linode driver documentation notices
• ISSUE #28822: (HerrBerg) saltenv url-parameter not working in file.managed for salt:// sources since 2015.8 (refs: #30166)
• PR #30184: (rallytime) Back-port #30166 to 2015.5 @ 2016-01-13 18:27:36 UTC
  – PR #30166: (robgott) adding split_env call to cp.hash_file to pick up saltenv in file quer... (refs: #30184)
  – f037fd9c27 Merge pull request #30184 from rallytime/bp-30166
  – fa6b1b3022 adding split_env call to cp.hash_file to pick up saltenv in file query parameter
• PR #30291: (thegoodduke) ipset: fix test=true & add comment for every entry @ 2016-01-12 19:40:23 UTC
  – PR #30170: (thegoodduke) ipset: fix comment and test (refs: #30291)
  – 1d8413fd2f Merge pull request #30291 from thegoodduke/fix_ipset
  – 62d6ccf561 ipset: fix test=true & add comment for every entry

### 30.2.90 Salt 2015.5.2 Release Notes

**release** 2015-06-10

Version 2015.5.2 is a bugfix release for 2015.5.0.

**Statistics**

- Total Merges: 112
- Total Issue References: 36
- Total PR References: 145
- Contributors: 49 (Sacro, The-Loeki, YanChii, aboe76, anlutro, awdrius, basepi, cdarwin, cedwards, clan, corywright, cro, djcrabhat, dmyerscough, dr4Ke, fayetted, galet, garethgreenaway, ghost, hazelesque, hvnsweeting, jacksontj, jacobhammons, jayeshka, jbq, jfindlay, joejulian, justinta, kartiksubbarao, kiorky, merll, mstead, neogenix, nicholascapo, nleib, pengyao, pruiz, rallytime, randybias, ryan-lane, steverweber, swdream, techhat, terminalmage, thcipriani, thusoy, trevor-h, twangboy, whiteinge)
Changelog for v2015.5.1..v2015.5.2


- **PR #24372:** (rallytime) Add 2015.5.2 release notes @ 2015-06-03 19:30:46 UTC
  - d71d75e2ec Merge pull request #24372 from rallytime/release_notes
  - f5ec1a693 Add 2015.5.2 release notes

- **PR #24346:** (rallytime) Backport #24271 to 2015.5 @ 2015-06-03 18:44:31 UTC
  - PR #24271: (randybias) Fixed the setup instructions (refs: #24346)
  - 76927c9ea1 Merge pull request #24346 from rallytime/bp-24271
  - 04067b6833 Fixed the setup instructions

- **ISSUE #24012:** (jbq) Enabling a service does not create the appropriate rc.d symlinks on Ubuntu (refs: #24013)

- **PR #24345:** (rallytime) Backport #24013 to 2015.5 @ 2015-06-03 18:39:41 UTC
  - PR #24013: (jbq) Fix enabling a service on Ubuntu #24012 (refs: #24345)
  - 4afa03d8e3 Merge pull request #24345 from rallytime/bp-24013
  - 16e0732b50 Fix enabling a service on Ubuntu #24012

- **PR #24365:** (jacobhammons) Fixes for PDF build errors @ 2015-06-03 17:50:02 UTC
  - c3392c246a Merge pull request #24365 from jacobhammons/DocFixes
  - 0fc190267f Fixes for PDF build errors

- **ISSUE #22991:** (nicholascapo) npm.installed ignores test=True (refs: #24312)

- **PR #24313:** (nicholascapo) Fix #22991: Correctly set result when test=True @ 2015-06-03 14:49:18 UTC
  - ae681a4db1 Merge pull request #24313 from nicholascapo/fix-22991-npm.installed-test-true
  - ac964cb19 Fix #22991 npm.installed correctly set result on test=True

- **ISSUE #18966:** (bechtoldt) file.serialize ignores test=True (refs: #24312)

- **PR #24312:** (nicholascapo) Fix #18966: file.serialize supports test=True @ 2015-06-03 14:49:06 UTC
  - d57a9a267c Merge pull request #24312 from nicholascapo/fix-18966-file.serialize-test-true
  - e7328e7043 Fix #18966 file.serialize correctly set result on test=True

- **PR #24302:** (jfindlay) fix pkg hold/unhold integration test @ 2015-06-03 03:27:43 UTC
  - 6b694e3495 Merge pull request #24302 from jfindlay/pkg_tests
  - c2db0b1758 fix pkg hold/unhold integration test

- **ISSUE #14021:** (emostar) EC2 doc mentions mount_point, but unable to use properly (refs: #24349)

- **PR #24349:** (rallytime) Remove references to mount_points in ec2 docs @ 2015-06-03 01:54:09 UTC
  - aca8447ced Merge pull request #24349 from rallytime/fix-14021
  - a235b114d7 Remove references to mount_points in ec2 docs

- **PR #24328:** (dr4Ke) Fix state grains silently fails 2015.5 @ 2015-06-02 15:18:46 UTC
  - 88a997e66e Merge pull request #24328 from dr4Ke/fix_state_grains_silently_fails_2015.5
  - 8a63d1ebbe fix state grains silently fails #24319
  - ca1af20203 grains state: add some tests
• ISSUE #9772: (s0undt3ch) Delete VM's in a map does not delete them all (refs: #24310)

• ISSUE #24036: (arthurlogilab) [salt-cloud] Protect against passing command line arguments as names for the --destroy command in map files (refs: #24310)

• PR #24310: (techhat) Add warning about destroying maps @ 2015-06-02 03:01:28 UTC
  - 7dcd9bb5de Merge pull request #24310 from techhat/mapwarning
  - ca535a6ff4 Add warning about destroying maps

• PR #24281: (steverweber) Ipmi docfix @ 2015-06-01 17:45:36 UTC
  - 02bf254d6 Merge pull request #24281 from steverweber/ipmi_docfix
  - dd36f2c555 yaml formating
  - f6dee3047 include api_kg kwarg in ipmi state
  - a7d4e97bb9 doc cleanup
  - 0ded2fdbe5 save more cleanup to doc
  - 08872fa2a3 fix name api_key to api_kg
  - 165a387681 doc fix add api_kg kwarg
  - 1ec7887e4 cleanup docs

• PR #24287: (jfindlay) fix pkg test on ubuntu 12.04 for realz @ 2015-06-01 14:16:37 UTC
  - 73d22b1f Merge pull request #24287 from jfindlay/pkg_test
  - 98944dc7f fix pkg test on ubuntu 12.04 for realz

• PR #24279: (rallytime) Backport #24263 to 2015.5 @ 2015-06-01 04:29:34 UTC
  - PR #24263: (cdarwin) Correct usage of import_yaml in formula documentation (refs: #24279)
  - 02017a074c Merge pull request #24279 from rallytime/bp-24263
  - beff7c77b5 Correct usage of import_yaml in formula documentation

• ISSUE #24226: (c4urself) iptables state needs to keep ordering of flags (refs: #24277)

• PR #24277: (rallytime) Put a space between after_jump commands @ 2015-06-01 04:28:26 UTC
  - 2ba696d54a Merge pull request #24277 from rallytime/fixed_iptables_jump
  - e2d1606b19 Move after_jump split out of loop
  - d14f1307b6 Remove extra loop
  - 42ed5320b6 Put a space between after_jump commands

• PR #24262: (basepi) More dictupdate after #24142 @ 2015-05-31 04:09:37 UTC
  - PR #24142: (basepi) Optimize dictupdate.update and add #24097 functionality (refs: #24262)
  - PR #24097: (kiorky) Optimize dictupdate (refs: #24142)
  - 113eba34ec Merge pull request #24262 from basepi/dictupdatefix
  - 0c4832c0d4 Raise a typeerror if non-dict types
  - be21aa122 Pylint
  - bb8a666cc9 More optimization
  - c933249d1a py3 compat
- ff6b2a781f Further optimize dictupdate.update()
- c73f5ba37c Remove unused valtype
- **PR #24269**: (kiorky) zfs: Fix spurious retcode hijacking in virtual @ 2015-05-30 17:47:49 UTC
  - 785d9a1bfc Merge pull request #24269 from makinacorpus/zfs
  - 0bf23ce701 zfs: Fix spurious retcode hijacking in virtual
- **PR #24257**: (jfindlay) fix pkg mod integration test on ubuntu 12.04 @ 2015-05-29 23:09:00 UTC
  - 3d885c04f0 Merge pull request #24257 from jfindlay/pkg_tests
  - 950892c02 fix pkg mod integration test on ubuntu 12.04
- **ISSUE #23883**: (kaithar) max_event_size seems broken (refs: #24001, #24065)
- **ISSUE #23657**: (arthurlogilab) [salt-cloud lxc] NameError: global name '__salt__' is not defined (refs: #23982, #24080)
- **PR #24260**: (basepi) Fix some typos from #24080 @ 2015-05-29 22:54:58 UTC
  - **PR #24080**: (kiorky) Lxc consistency2 (refs: #24066, #24260, #23982)
  - **PR #24066**: (kiorky) Merge forward 2015.5 -> develop (refs: #23982)
  - **PR #24065**: (kiorky) continue to fix #23883 (refs: #24066, #24080)
  - **PR #23982**: (kiorky) lxc: path support (refs: #24080)
  - 08a1075b3 Merge pull request #24260 from basepi/lxctypos24080
  - 0fa1ad3977 Fix another lxc typo
- **ISSUE #23883**: (kaithar) max_event_size seems broken (refs: #24001, #24065)
- **ISSUE #23657**: (arthurlogilab) [salt-cloud lxc] NameError: global name '__salt__' is not defined (refs: #23982, #24080)
- **PR #24080**: (kiorky) Lxc consistency2 (refs: #24066, #24260, #23982) @ 2015-05-29 22:51:54 UTC
  - **PR #24066**: (kiorky) Merge forward 2015.5 -> develop (refs: #23982)
  - **PR #24065**: (kiorky) continue to fix #23883 (refs: #24066, #24080)
  - **PR #23982**: (kiorky) lxc: path support (refs: #24080)
  - 75590cf490 Merge pull request #24080 from makinacorpus/lxc_consistency2
  - 81f80674a2 lxc: fix old lxc test
  - 458f50617b seed: lint
  - 96b8d55f14 Fix seed.mkconfig yamldump
  - 76dd683f4 lxc/applynet: conservative
  - ce7096fd6b7 variable collision
  - 8a8b28d652 lxc: lint
  - 458b18b7e6 more lxc docs
  - ef1f95231a lxc docs: typos
  - d67a43dc1f more lxc docs
  - 608da5ef5d modules/lxc: merge resolution
- 27c4689a24 modules/lxc: more consistent comparsion
- 07c365a23b lxc: merge conflict spotted
- 999391551c modules/lxc: rework settings for consistency
- ce11d8352e lxc: Global doc refresh
- 61ed2f5e76 clouds/lxc: profile key is conflicting

- **ISSUE #24210**: (damonnk) salt-cloud vsphere.py should allow key_filename param (refs: #24220)
- **PR #24247**: (rallytime) Backport #24220 to 2015.5 @ 2015-05-29 21:40:01 UTC
  - **PR #24220**: (djcrabhat) adding key_filename param to vsphere provider (refs: #24247)
  - da14f3b976 Merge pull request #24247 from rallytime/bp-24220
  - 0b1041dd72 adding key_filename param to vsphere provider
- **PR #24254**: (rallytime) Add deprecation warning to Digital Ocean v1 Driver @ 2015-05-29 21:39:25 UTC
  - **PR #22731**: (dmyerscough) Decommission DigitalOcean APIv1 and have users use the new DigitalOcean APIv2 (refs: #24254)
  - 21d6126c34 Merge pull request #24254 from rallytime/add_deprecation_warning_digitalocean
  - cafe37bd8 Add note to docs about deprecation
  - ea0f1e0921 Add deprecation warning to digital ocean driver to move to digital_ocean_v2
- **PR #24252**: (aboe76) Updated suse spec to 2015.5.1 @ 2015-05-29 21:38:45 UTC
  - dac055dd8b Merge pull request #24252 from aboe76/opensuse_package
  - 0ad617df21 Updated suse spec to 2015.5.1
- **PR #24251**: (garethgreenaway) Returners broken in 2015.5 @ 2015-05-29 21:37:52 UTC
  - 49e7fe8a5e Merge pull request #24251 from garethgreenaway/2015_5_returner_brokenness
  - 5df0b52568 The code calling cfg as a function vs treating it as a dictionary and using get is currently backwards causing returners to fail when used from the CLI and in scheduled jobs.
- **ISSUE #21498**: (rallytime) Clarify Digital Ocean Documentation (refs: #24255)
- **PR #24255**: (rallytime) Clarify digital ocean documentation and mention v1 driver deprecation @ 2015-05-29 21:37:07 UTC
  - bf946123e Merge pull request #24255 from rallytime/clarify_digital_ocean_driver_docs
  - 8d51f75aa5 Clarify digital ocean documentation and mention v1 driver deprecation
- **PR #24232**: (rallytime) Backport #23308 to 2015.5 @ 2015-05-29 21:36:46 UTC
  - **PR #23308**: (thusoy) Don't merge: Add missing jump arguments to iptables module (refs: #24232)
  - 41f5756f36 Merge pull request #24232 from rallytime/bp-23308
  - 2733f66449 Import string
  - 9097cca099 Add missing jump arguments to iptables module
- **PR #24245**: (Sacro) Unset PYTHONHOME when starting the service @ 2015-05-29 20:00:31 UTC
  - a95982c722 Merge pull request #24245 from Sacro/patch-2
  - 6632d06e94 Unset PYTHONHOME when starting the service
• PR #24121: (hvnsweeting) deprecate setting user permission in rabbitmq_vhost.present @ 2015-05-29 15:55:40 UTC
  - 1504c76d3a Merge pull request #24121 from hvnsweeting/rabbitmq-host-deprecate-set-permission
  - 2223158c76 deprecate setting user permission in rabbitmq_host.present

• PR #24179: (merll) Changing user and group only possible for existing ids. @ 2015-05-29 15:52:43 UTC
  - PR #24169: (merll) Changing user and group only possible for existing ids. (refs: #24179)
  - ba02f6509e Merge pull request #24179 from Precis/fix-file-uid-gid-2015.0
  - ee4c9d59ab Use ids if user or group is not present.

• ISSUE #24147: (paclat) Syndication issues when using authentication on master of masters. (refs: #24229)

• PR #24229: (msteed) Fix auth failure on syndic with external_auth @ 2015-05-29 15:04:06 UTC
  - 9bfb066c2c Merge pull request #24229 from msteed/issue-24147
  - 482d1fc664 Fix auth failure on syndic with external_auth

• PR #24234: (jayeshka) adding states/quota unit test case. @ 2015-05-29 14:14:27 UTC
  - 19fa43c290 Merge pull request #24234 from jayeshka/quota-states-unit-test
  - c23356500b adding states/quota unit test case.

• PR #24217: (jfindlay) disable intermittently failing tests @ 2015-05-29 03:08:39 UTC
  - PR #23623: (jfindlay) Fix /jobs endpoint's return (refs: #24217)
  - PR #22857: (jacksontj) Fix /jobs endpoint's return (refs: #23623)
  - e15142c629 Merge pull request #24217 from jfindlay/disable_bad_tests
  - 6b6280442c disable intermittently failing tests

• PR #24199: (ryan-lane) Various fixes for boto_route53 and boto_elb @ 2015-05-29 03:02:41 UTC
  - ce8e43b774 Merge pull request #24199 from lyft/route53-fix-elb
  - d8dc9d59ab Better unit tests for boto_elb state
  - 62f2145b55 Remove cnames_present test
  - 7b9ae82951 Lint fix
  - b74bd14143 Various fixes for boto_route53 and boto_elb

• PR #24142: (basepi) Optimize dictupdate.update and add #24097 functionality (refs: #24262) @ 2015-05-29 03:00:56 UTC
  - PR #24097: (kiorky) Optimize dictupdate (refs: #24142)
  - a43465d235 Merge pull request #24142 from basepi/dictupdate24097
  - 5c6e210c8b Deepcopy on merge_recurse
  - a13c84ade8 Fix None check from #21968
  - 9ef2c64098 Add docstring
  - 8579429314 Add in recursive_update from #24097
  - 8599143200 if key not in dest, don't recurse
  - d8a84b5017 Rename klass to valtype

• PR #24208: (jayeshka) adding states/ports unit test case. @ 2015-05-28 23:06:33 UTC
- 526698ba8d Merge pull request #24208 from jayeshka/ports-states-unit-test
- 657b709932 adding states/ports unit test case.

- **ISSUE #20635**: (dennisjac) 2015.2.0rc1: zfs errors in log after update (refs: #24219)
- **PR #24219**: (jfindlay) find zfs without modinfo @ 2015-05-28 21:07:26 UTC
  - d00945fd40 Merge pull request #24219 from jfindlay/zfs_check
  - 15d401907c use the salt loader in the zfs mod
  - 5599b67a46 try to search for zfs if modinfo is unavailable

- **PR #24190**: (msteed) Fix issue 23815 @ 2015-05-28 20:10:34 UTC
  - 3dc4b85295 Merge pull request #24190 from msteed/issue-23815
  - 086a1a94e8 lint
  - 65de62f852 fix #23815
  - d04e9162de spelling
  - db9f6820b8 add inotify beacon unit tests

- **PR #24211**: (rallytime) Backport #24205 to 2015.5 @ 2015-05-28 18:28:15 UTC
  - **PR #24205**: (hazelesque) Docstring fix in salt.modules.yumpkg.hold (refs: #24211)
  - 43663ab508 Merge pull request #24211 from rallytime/bp-24205
  - 23284b5d47 Docstring fix in salt.modules.yumpkg.hold

- **PR #24212**: (terminalmage) Clarify error in rendering template for top file @ 2015-05-28 18:26:20 UTC
  - cc58624c7e Merge pull request #24212 from terminalmage/clarify-error-msg
  - ca807fb032 Clarify error in rendering template for top file

- **ISSUE #23904**: (mbrgm) Network config bonding section cannot be parsed when attribute names use dashes (refs: #23917)

- **ISSUE #23900**: (hashi825) salt ubuntu network building issue 2015.5.0 (refs: #23922)

- **PR #24213**: (The-Loeki) ShouldFix _- troubles in debian_ip @ 2015-05-28 18:24:39 UTC
  - **PR #23922**: (garethgreenaway) Fixes to debian_ip.py (refs: #24213)
  - **PR #23917**: (corywright) Split debian bonding options on dash instead of underscore (refs: #24213)
  - 9825160b1a Merge pull request #24213 from The-Loeki/patch-3
  - a68d515973 ShouldFix _- troubles in debian_ip

- **PR #24214**: (basepi) 2015.5.1release @ 2015-05-28 16:23:57 UTC
  - 071751d13f Merge pull request #24214 from basepi/2015.5.1release
  - e5ba31b5b5 2015.5.1 release date
  - 7f69494c819 Update latest release in docs

- **PR #24202**: (rallytime) Backport #24186 to 2015.5 @ 2015-05-28 05:16:48 UTC
  - **PR #24186**: (thcipriani) Update salt vagrant provisioner info (refs: #24202)
  - c2f16b244 Merge pull request #24202 from rallytime/bp-24186
  - db793dd0de Update salt vagrant provisioner info

30.2. Previous Releases
• PR #24192: (rallytime) Backport #20474 to 2015.5 @ 2015-05-28 05:16:18 UTC
  – PR #20474: (djcrabhat) add sudo, sudo_password params to vsphere deploy to allow for non-root deploys (refs: #24192)
  – 8a085a2592 Merge pull request #24192 from rallytime/bp-20474
  – fd3c783f3e add sudo, sudo_password params to deploy to allow for non-root deploys

• PR #24184: (rallytime) Backport #24129 to 2015.5 @ 2015-05-28 05:15:08 UTC
  – PR #24129: (pengyao) Wheel client doc (refs: #24184)
  – 7cc535bf4a Merge pull request #24184 from rallytime/bp-24129
  – 722a662479 fixed a typo
  – 565eb46ff5 Add cmd doc for WheelClient

• PR #24201: (whiteinge) Add list of client libraries for the rest_cherrypy module to the top-level documentation @ 2015-05-28 02:12:09 UTC
  – 1b5bf23187 Merge pull request #24201 from whiteinge/rest_cherrypy-client-libs
  – 5f718027ca Add list of client libraries for the rest_cherrypy module
  – 28fc77f6f6 Fix rest_cherrypy config example indentation

• PR #24195: (rallytime) Merge #24185 with a couple of fixes @ 2015-05-27 22:18:37 UTC
  – PR #24185: (jacobhammons) Fixes for doc build errors (refs: #24195)
  – 3307ec20d9 Merge pull request #24185 from rallytime/merge-24185
  – d8da9dcd7 Merge #24185 with a couple of fixes
  – 634d56bca0 Fixed pylon error
  – 0689815d0e Fixes for doc build errors

• PR #24166: (jayeshka) adding states/pkgng unit test case. @ 2015-05-27 20:27:49 UTC
  – 7e400bc3d7 Merge pull request #24166 from jayeshka/pkgng-states-unit-test
  – 2234bb0b70 adding states/pkgng unit test case.

• PR #24189: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-05-27 20:26:31 UTC
  – 9fcdad90ed Merge pull request #24189 from basepi/merge-forward-2015.5
  – 8839e9c22e Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  – 9d7331c87d Merge pull request #24178 from rallytime/bp-24118
    * e2217a09e8 removed deprecated pymongo usage as no longer functional with pymongo > 3.x
  – 4e8c5031b0 Merge pull request #24159 from rallytime/keystone_doc_examples
    * dadac8d076 Fill out modules/keystone.py CLI Examples
- fc10ee8ed5 Merge pull request #24158 from rallytime/fix_doc_error
  * 49a517e2ca Fix test_valid_docs test for tls module

- **PR #24181**: (justinta) Fixed error where file was evaluated as a symlink in test_absent @ 2015-05-27 18:26:28 UTC
  - 2303dec0e9 Merge pull request #24181 from jtdand/file_test
  - 5f0e601589 Fixed error where file was evaluated as a symlink in test_absent

- **PR #24180**: (terminalmage) Skip libvirt tests if not running as root @ 2015-05-27 18:18:47 UTC
  - a16276852b Merge pull request #24180 from terminalmage/fix-libvirt-test
  - 72e7416ad2 Skip libvirt tests if not running as root

- **PR #24165**: (jayeshka) adding states/portage_config unit test case. @ 2015-05-27 17:15:08 UTC
  - 1fbc5b25e6 Merge pull request #24165 from jayeshka/portage_config-states-unit-test
  - 8cf1505392 adding states/portage_config unit test case.

- **PR #24164**: (jayeshka) adding states/pecl unit test case. @ 2015-05-27 17:14:26 UTC
  - 4747856411 Merge pull request #24164 from jayeshka/pecl-states-unit-test
  - 563a5b3c30 adding states/pecl unit test case.

- **PR #24160**: (The-Loeki) small enhancement to data module; pop() @ 2015-05-27 17:03:10 UTC
  - cdaaa19324 Merge pull request #24160 from The-Loeki/patch-1
  - 2175ff3c75 doc & merge fix
  - eba382cdda small enhancement to data module; pop()

- **PR #24153**: (techhat) Batch mode sometimes improperly builds lists of minions to process @ 2015-05-27 16:21:53 UTC
  - 4a8dbc7f13 Merge pull request #24153 from techhat/batchlist
  - 467ba64612 Make sure that minion IDs are strings

- **PR #24167**: (jayeshka) adding states/pagerduty unit test case. @ 2015-05-27 16:14:01 UTC
  - ed88cf57a2 Merge pull request #24167 from jayeshka/pagerduty-states-unit-test
  - 1af8c8334d adding states/pagerduty unit test case.

- **PR #24156**: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-05-27 15:05:01 UTC
  - b9507d1567 Merge pull request #24156 from basepi/merge-forward-2015.5
  - e52b5ab2e2 Remove stray >>>>>
  - 7dfbd929ff Merge remote-tracking branch ‘upstream/2014.7’ into merge-forward-2015.5
    * c0d32e0b5e Merge pull request #24125 from hvnsweeting/fix-rabbitmq-test-mode
      - 71862e69b9 enhance log
      - 28e2594162 change according to new output of rabbitmq module functions
      - cd0212e8ed processes and returns better output for rabbitmq module
    * 39a8f30f06 Merge pull request #24093 from msteed/issue-23464
      - fd35903d75 Fix failing test
      - 41b344c7d3 Make LocalClient.cmd_iter_no_block() not block

30.2. Previous Releases
5bffd3045e Merge pull request #24008 from davidjb/2014.7
   8b8d0293d4 Correct reST formatting for documentation
1aa0420040 Merge pull request #23933 from jacobhammons/2014.7
a3613e68e4 removed numbering from doc TOC
78b737c5e6 removed 2015.* release from release notes, updated index page to remove PDF/epub links
e867f7d77 Changed build settings to use saltstack2 theme and update release versions.
81ed9c9f59 sphinx saltstack2 doc theme

• ISSUE #24102: (bormotov) win_update encoding problems (refs: #24145)
• PR #24145: (jfindlay) attempt to decode win update package @ 2015-05-26 23:20:20 UTC
  05745fa931 Merge pull request #24145 from jfindlay/win_update_encoding
  cc5e17e61f attempt to decode win update package
• ISSUE #24122: (kiorky) service.dead is no more stateful: services does not handle correctly enable/disable change state (refs: #24123)
• PR #24123: (kiorky) fix service enable/disable change @ 2015-05-26 21:24:19 UTC
  70247890de Merge pull request #24123 from makinacorpus/ss
  2e2e1d262d fix service enable/disable change
• PR #24146: (rallytime) Fixes the boto_vpc_test failure on CentOS 5 tests @ 2015-05-26 20:15:19 UTC
  51c3ec5d7 Merge pull request #24146 from rallytime/fix_centos_boto_failure
  ac0f97de51 Fixes the boto_vpc_test failure on CentOS 5 tests
• ISSUE #24052: (twangboy) v2015.5.1 Changes the way it interprets the minion_master.pub file (refs: #24144, #24089)
• ISSUE #23566: (rks2286) Salt-cp corrupting the file after transfer to minion (refs: #24144, #23740)
• PR #24144: (twangboy) Compare Keys ignores all newlines and carriage returns @ 2015-05-26 19:25:48 UTC
  PR #23740: (jfindlay) Binary write (refs: #24144)
  1c91a2176f Merge pull request #24144 from twangboy/fix_24052
  c197b41494 Compare Keys removing all newlines and carriage returns
• PR #24139: (rallytime) Backport #24118 to 2015.5 @ 2015-05-26 18:24:27 UTC
  PR #24118: (trevor-h) removed deprecated pymongo usage (refs: #24178, #24139)
  084166747c Merge pull request #24139 from rallytime/bp-24118
  742eca29f7 Merge pull request #24138 from rallytime/bp-24118
  7f08641800 Fixed typo in chown username (ending dot) that fails the command. (refs: #24138)
• PR #24137: (rallytime) Backport #24105 to 2015.5 @ 2015-05-26 18:23:40 UTC
  PR #24105: (cedwards) Updated some beacon-specific documentation formatting (refs: #24137)
- e01536d098 Merge pull request #24137 from rallytime/bp-24105
- f0778a0a60 Updated some beacon-specific documentation formatting

- ISSUE #23364: (pruiz) Unable to destroy host using proxmox cloud: There was an error destroying machines:
  501 Server Error: Method 'DELETE /nodes/pmx1/openvz/openvz/100' not implemented (refs: #24104)

- PR #24136: (rallytime) Backport #24104 to 2015.5 @ 2015-05-26 15:58:47 UTC
  - PR #24104: (pruiz) Only try to stop a VM if it's not already stopped. (fixes #23364) (refs: #24136)
  - 89c9df8c27 Merge pull request #24136 from rallytime/bp-24104
  - c5346284e1 Only try to stop a VM if it's not already stopped. (fixes #23364)

- PR #24135: (rallytime) Backport #24083 to 2015.5 @ 2015-05-26 15:58:27 UTC
  - PR #24083: (swdream) fix code block syntax (refs: #24135)
  - 674133a92c Merge pull request #24135 from rallytime/bp-24083
  - e1d06f9764 fix code block syntax

- PR #24131: (jayeshka) adding states/mysql_user unit test case @ 2015-05-26 15:58:10 UTC
  - a83371e0ed Merge pull request #24131 from jayeshka/mysql_user-states-unit-test
  - ed16f892b3 adding states/mysql_user unit test case

- PR #24130: (jayeshka) adding states/ntp unit test case @ 2015-05-26 15:57:29 UTC
  - 1dc1d2a7e5 Merge pull request #24130 from jayeshka/ntp-states-unit-test
  - e1d06f9764 adding states/ntp unit test case

- PR #24128: (jayeshka) adding states/openstack_config unit test case @ 2015-05-26 15:56:08 UTC
  - 3943417948 Merge pull request #24128 from jayeshka/openstack_config-states-unit-test
  - c09e0f7c1 adding states/openstack_config unit test case

- PR #24127: (jayeshka) adding states/npm unit test case @ 2015-05-26 15:55:18 UTC
  - 23f25d2c98 Merge pull request #24127 from jayeshka/npm-states-unit-test
  - c3ec56a60 adding states/npm unit test case

- ISSUE #24009: (hvnsweeting) state_verbose False summary is wrong (refs: #24077)

- PR #24077: (anlutro) Change how state_verbose output is filtered @ 2015-05-26 15:41:11 UTC
  - 07488a4415 Merge pull request #24077 from alprs/fix-outputter_highstate_nonverbose_count
  - 7790408c3c Change how state_verbose output is filtered

- PR #24119: (jfindlay) Update contrib docs @ 2015-05-26 15:37:01 UTC
  - 224820efbf Merge pull request #24119 from jfindlay/update_contrib_docs
  - fa2d411f5c update example release branch in contrib docs
  - a0b665bf7c clarify git rebase instructions
  - 3517e095c6 fix contribution docs link typos
  - 6516296a4c backport dev contrib doc updates to 2015.5

- PR #23928: (joejulian) Add the ability to replace existing certificates @ 2015-05-25 19:47:26 UTC
  - 5488c4aa2 Merge pull request #23928 from joesjulian/2015.5_tls_module_replace_existing
- 4a4cbdd266 Add the ability to replace existing certificates

- ISSUE #23221: (Reiner030) Debian Jessie: locale.present not working again (refs: #24078)

- PR #24078: (jfindlay) if a charmap is not supplied, set it to the codeset @ 2015-05-25 19:39:19 UTC
  - dd90ef09b9 Merge pull request #24078 from jfindlay/locale_charmap
  - 5ebf970973 if a charmap is not supplied, set it to the codeset

- PR #24088: (jfindlay) pkg module integration tests @ 2015-05-25 19:39:02 UTC
  - 9ce53d3c9 Merge pull request #24088 from jfindlay/pkg_tests
  - f1bd5ec404 adding pkg module integration tests
  - 739b2ef3bd rework yumpkg refresh_db so args are not mandatory

- ISSUE #24052: (twangboy) v2015.5.1 Changes the way it interprets the minion_master.pub file (refs: #24144, #24089)

- PR #24089: (jfindlay) allow override of binary file mode on windows @ 2015-05-25 19:38:44 UTC
  - 517552caea6 Merge pull request #24089 from jfindlay/binary_write
  - b259a6370 allow override of binary file mode on windows

- ISSUE #23973: (mschiff) state.file.managed: setting contents_pillar to a pillar which is a list throws exception instead giving descriptive error message (refs: #24092)

- PR #24092: (jfindlay) collect scattered contents edits, ensure it’s a str @ 2015-05-25 19:38:10 UTC
  - 121ab9f857 Merge pull request #24092 from jfindlay/file_state
  - cfa0f1358e collect scattered contents edits, ensure it’s a str

- PR #24112: (The-Loeki) thin_gen breaks when thinver doesn’t exist @ 2015-05-25 19:37:47 UTC
  - 84e65dece7 Merge pull request #24112 from The-Loeki/patch-1
  - 34646ea16 thin_gen breaks when thinver doesn’t exist

- PR #24108: (jayeshka) adding states/mysql_query unit test case @ 2015-05-25 12:30:48 UTC
  - ec509ed27 Merge pull request #24108 from jayeshka/mysql_query-states-unit-test
  - ec50450460 adding states/mysql_query unit test case

- PR #24110: (jayeshka) adding varnish unit test case @ 2015-05-25 12:30:21 UTC
  - f2c5d6c2fd Merge pull request #24110 from jayeshka/varnish-unit-test
  - e11988969f adding varnish unit test case

- PR #24109: (jayeshka) adding states/mysql_grants unit test case @ 2015-05-25 12:29:53 UTC
  - 4fca2b94e3 Merge pull request #24109 from jayeshka/mysql_grants-states-unit-test
  - 11a93cb80c adding states/mysql_grants unit test case

- PR #24028: (nleib) send a disable message to disable puppet @ 2015-05-25 04:02:11 UTC
  - 6b43c9a8cb Merge pull request #24028 from nleib/2015.5
  - 15f24b42b2 update format of string in disabled msg
  - 7690e5b008 remove trailing whitespaces
  - 56a972034f Update puppet.py
  - 9686391d81 Update puppet.py

3020 Chapter 30. Release Notes
30.2. Previous Releases

- 33f3d68489 send a disable message to disable puppet

- **PR #24100**: (jfindlay) adding states/file unit test case @ 2015-05-24 05:17:54 UTC
  - **PR #23963**: (jayeshka) adding states/file unit test case (refs: #24100)
  - 52c9acafce Merge pull request #24100 from jfindlay/merge_23963
  - 7d59deb3d6 adding states/file unit test case

- **ISSUE #21446**: (dpheasant) check for systemd on Oracle Linux (refs: #24098)

- **PR #24098**: (galet) Systemd not recognized properly on Oracle Linux 7 @ 2015-05-24 04:07:31 UTC
  - 0eb9f15d20 Merge pull request #24098 from galet/2015.5
  - 4d6ab21c74 Systemd not recognized properly on Oracle Linux 7

- **PR #24090**: (jfindlay) adding states/mount unit test case @ 2015-05-22 23:02:57 UTC
  - **PR #24062**: (jayeshka) adding states/mount unit test case (refs: #24090)
  - 8e04db76de Merge pull request #24090 from jfindlay/merge_24062
  - a81a9225b8 adding states/mount unit test case

- **ISSUE #22574**: (unicolet) error when which is not available (refs: #22806)

- **PR #24024**: (jayeshka) adding states/mongodb_user unit test case @ 2015-05-22 20:53:19 UTC
  - 09de253373 Merge pull request #24024 from jayeshka/mongodb_user-states-unit-test
  - f31dc921f5 resolved errors
  - d038b1fdbh adding states/mongodb_user unit test case

- **ISSUE #23883**: (kaithar) max_event_size seems broken (refs: #24001, #24065)

- **PR #24065**: (kiorky) continue to fix #23883 (refs: #24066, #24080) @ 2015-05-22 18:59:21 UTC
  - bfd812c56b Merge pull request #24065 from makinacorpus/real23883
  - 028282e01d continue to fix #23883

- **ISSUE #24017**: (arthurlogilab) [salt-cloud openstack] TypeError: unhashable type: 'dict' on map creation (refs: #24029)

- **PR #24029**: (kiorky) Fix providers handling @ 2015-05-22 16:56:06 UTC
  - 429adfe00a Merge pull request #24029 from makinacorpus/fixproviders
  - 412b39b802 Fix providers handling

- **PR #23936**: (jfindlay) remove unreachable returns in file state @ 2015-05-22 16:26:49 UTC
  - a42cc2dd98 Merge pull request #23936 from jfindlay/file_state
  - ac29c0cdd0 also validate file.recurse source parameter
  - 57f49af57f remove unreachable returns in file state

- **PR #24063**: (jayeshka) removed tuple index error @ 2015-05-22 14:58:20 UTC
- 8b69b41a42 Merge pull request #24063 from jayeshka/mount-states-module
- b9745d5c4f removed tuple index error

- **PR #24057**: (rallytime) Backport #22572 to 2015.5 @ 2015-05-22 05:36:25 UTC
  - PR #22572: (The-Loeki) Small docfix for GitPillar (refs: #24057)
  - 02ac4aa288 Merge pull request #24057 from rallytime/bp-22572
  - 49aad84b17 Small docfix for GitPillar

- **ISSUE #23088**: (ghost) Segfault when adding a Zypper repo on SLES 11.3 (refs: #24027)

- **PR #24040**: (rallytime) Backport #24027 to 2015.5 @ 2015-05-21 23:43:54 UTC
  - PR #24027: (ghost) Add baseurl to salt.modules.zypper.mod_repo (refs: #24040)
  - 82de059891 Merge pull request #24040 from rallytime/bp-24027
  - 37d25d8bc6 Added baseurl as alias for url and mirrorlist in salt.modules.zypper.mod_repo.

- **PR #24039**: (rallytime) Backport #24015 to 2015.5 @ 2015-05-21 23:43:25 UTC
  - PR #24015: (YanChii) minor improvement of solarisips docs & fix typos (refs: #24039)
  - d909781d97 Merge pull request #24039 from rallytime/bp-24015
  - 6bfaa94a8c minor improvement of solarisips docs & fix typos

- **ISSUE #19598**: (fayetted) ssh_auth.present test=true incorrectly reports changes will be made (refs: #19599)

- **PR #24038**: (rallytime) Backport #19599 to 2015.5 @ 2015-05-21 23:43:10 UTC
  - PR #19599: (fayetted) Fix ssh_auth test mode, compare lines not just key (refs: #24038)
  - 4a0f254d22 Merge pull request #24038 from rallytime/bp-19599
  - ea00d3e786 Fix ssh_auth test mode, compare lines not just key

- **PR #24046**: (rallytime) Remove key management test from digital ocean cloud tests @ 2015-05-21 22:32:04 UTC
  - 42b87f1049 Merge pull request #24046 from rallytime/remove_key_test
  - 1d031ca78e Remove key management test from digital ocean cloud tests

- **PR #24044**: (cro) Remove spurious log message, fix typo in doc @ 2015-05-21 22:31:49 UTC
  - ef54b1c5a Merge pull request #24044 from cro/pgjsonb
  - de063314a Remove spurious log message, fix typo in doc

- **ISSUE #23883**: (kaithar) max_event_size seems broken (refs: #24001, #24065)

- **PR #24001**: (msteed) issue #23883 @ 2015-05-21 20:32:30 UTC
  - ac32000b5d Merge pull request #24001 from msteed/issue-23883
  - bea97a8b98 issue #23883

- **PR #23995**: (kiorky) Lxc path pre @ 2015-05-21 17:26:03 UTC
  - f7fae26059 Merge pull request #23995 from makinacorpus/lxc_path_pre
  - 319282af5f lint
  - 1dc67e5678 lxc: versionadded
  - fcadc7cb804 lxc: states improvements
  - 644bd729f7 lxc: more consistence for profiles
- 139372c055 lxc: remove merge cruft
- 725b0462ca lxc: Repair merge

- **ISSUE #16383** (interjection) salt.states.augeas.change example from docs fails with exception (refs: #24032)
- **PR #24032** (kartiksubbarao) Update augeas_cfg.py @ 2015-05-21 17:03:42 UTC
  - 26d6851666 Merge pull request #24032 from kartiksubbarao/augeas_insert_16383
  - 3686dc4e7 Update augeas_cfg.py

- **PR #24025** (jayeshka) adding timezone unit test case @ 2015-05-21 16:50:53 UTC
  - 55c9245075 Merge pull request #24025 from jayeshka/timezone-unit-test
  - 1ec33e22a7 removed assertion error
  - 16ecb28950 adding timezone unit test case

- **PR #24023** (jayeshka) adding states/mongodb_database unit test case @ 2015-05-21 16:49:17 UTC
  - e243617659 Merge pull request #24023 from jayeshka/mongodb_database-states-unit-test
  - 5a9ac7efb adding states/mongodb_database unit test case

- **PR #24022** (jayeshka) adding states/modjk_worker unit test case @ 2015-05-21 16:48:29 UTC
  - b377bd93e6 Merge pull request #24022 from jayeshka/modjk_worker-states-unit-test
  - 05c0a985db adding states/modjk_worker unit test case

- **ISSUE #23776** (enblde) Presence change events constantly reporting all minions as new in 2015.5 (refs: #24005)
- **PR #24005** (msteed) issue #23776 @ 2015-05-21 01:55:34 UTC
  - 701c51ba7a Merge pull request #24005 from msteed/issue-23776
  - 62e67d8ca0 issue #23776

- **ISSUE #23950** (neogenix) iptables state generates a 0 position which is invalid in iptables cli (refs: #23996)
- **PR #23996** (neogenix) iptables state generates a 0 position which is invalid in iptables cli #23950 @ 2015-05-20 22:44:27 UTC
  - 17b7c0b741 Merge pull request #23996 from neogenix/2015.5-23950
  - ad417a57c2 fix for #23950

- **PR #23994** (rallytime) Skip the gpodder pkgrepo test for Ubuntu 15 - they don't have vivid ppa up yet @ 2015-05-20 21:18:21 UTC
  - 4cb877307c Merge pull request #23994 from rallytime/skip_test_ubuntu_15
  - 9e0ec07d85 Skip the gpodder pkgrepo test - they don't have vivid ppa up yet

### 30.2.91 Salt 2015.5.3 Release Notes

**release** 2015-07-07

Version 2015.5.3 is a bugfix release for 2015.5.0.
Statistics

- **Total Merges:** 178
- **Total Issue References:** 69
- **Total PR References:** 207
- **Contributors:** 62 (CameronNemo, Lanzaa, Starblade42, The-Loeki, TheScriptSage, aboe76, ahus1, aneeshusa, anlutro, arthurlogilab, basepi, borutmrak, cachedout, cgtx, codertux, cro, dkiser, driskell, eliasp, garethgreenaway, grischa, gthb, heewa, insteddead, jacksontj, jacobhammons, jayeshka, jeanpralo, jfindlay, jodyv, joejulian, justinta, kartiksubbarao, kev009, kiorky, lorengordon, msciciel, msted, nmadhok, notpeter, obestwalter, pengyao, pille, porterjamesj, pruiz, quixoten, rallytime, rhertzog, ruzarowski, ryan-lane, steverweber, tankywoo, tbaker57, techhat, terminalmage, thatch45, thenewwazoo, trevor-h, twangboy, varia, zefrog, zhujinhe)

Changelog for v2015.5.2..v2015.5.3

* Generated at: 2018-05-27 21:20:01 UTC

- **PR #25109:** (jfindlay) add 2015.5.3 release notes @ 2015-07-01 19:45:56 UTC
  - 0f0512a4da Merge pull request #25109 from jfindlay/2015.5
  - 318745d5aa add 2015.5.3 release notes
- **PR #25096:** (jfindlay) Postgres group test @ 2015-07-01 18:48:26 UTC
  - **PR #24330:** (jayeshka) adding states/postgres_group unit test case. (refs: #25096)
  - 21709aa483 Merge pull request #25096 from jfindlay/postgres_group_test
  - 3c379dc115 declobber postgres state unit test mocking
  - a162f8a3d8 adding states/postgres_group unit test case.
- **ISSUE #25041:** (wt) REGRESSION: pillar.get of integer fails to render in sls (refs: #25085)
- **PR #25085:** (jfindlay) accept all sources in the file state @ 2015-07-01 18:23:45 UTC
  - 0a846400c6 Merge pull request #25085 from jfindlay/fix_file
  - 937a252e16 remove unnecessary file state tests
  - 6f238e924c integration test file.managed sources
  - a5978d30c2 iterate an iterable source otherwise list+str it
- **PR #25095:** (jfindlay) Win groupadd unit tests @ 2015-07-01 18:18:53 UTC
  - **PR #24207:** (jayeshka) adding win_groupadd unit test case. (refs: #25095)
  - a98394210e Merge pull request #25095 from jfindlay/win_groupadd_test
  - 564ddf14a depend on win libs rather than mocking them
  - b9ae86628 resolved all errors.
  - aaf89354c0 adding win_groupadd unit test case.
- **ISSUE #21520:** (jfindlay) sudo.salt_call is broken (refs: #25089)
- **PR #25089:** (jfindlay) fix minion sudo @ 2015-07-01 15:53:16 UTC
  - **PR #20226:** (thatch45) Allow sudo priv escalation (refs: #25089)
  - 7c8d2a8656 Merge pull request #25089 from jfindlay/fix_sudo
- d8f91d4a19 add some apprehension to the sudo exec module
- a9269c072a adding sudo exec module docs
- e4a40b7b08 comment whitespace in minion config
- 44cb16774a adding sudo_user minion config docs
- d461060efe adding sudo_user minion config to default

**ISSUE #24875:** (ahammond) ValueError: list.remove(x): x not in list in File "/usr/lib/python2.6/site-packages/salt/cli/batch.py", line 179, in run active.remove(minion) (refs: #25099)

**PR #25099:** (driskell) Fix broken batch results @ 2015-07-01 15:51:29 UTC
- 4d6078e5dd Merge pull request #25099 from driskell/patch-1
- 59b23e5f6e Fix broken batch results

**PR #25083:** (steverweber) ipmi: get_sensor_data would always fail @ 2015-06-30 20:57:21 UTC
- 4635079b66 Merge pull request #25083 from steverweber/fix_ipmi_stat
- 836f4c378 include _ in IpmiCommand
- 817e43a911 get_sensor_data would always fail

**PR #25067:** (The-Loeki) Fix for maxdepth=0 in find @ 2015-06-30 20:54:06 UTC
- 15f2a40777c Merge pull request #25067 from The-Loeki/patch-1
- 61ed3a8a0 Fix for maxdepth=0 in find

**PR #25078:** (terminalmage) Use smaller number for upper limit of mac_user's _first_avail_uid helper function @ 2015-06-30 20:53:24 UTC
- 58d933cfa8 Merge pull request #25078 from terminalmage/fix-mac-uid
- df2ab7ee2b Use smaller number for upper limit of mac_user's _first_avail_uid helper function

**ISSUE #24521:** (multani) State network.managed fails on Debian (Jessie) (refs: #25045)

**PR #25045:** (garethgreenaway) Fixes to debian_ip.py in 2015.5 @ 2015-06-30 17:36:43 UTC
- ebd6ec412 Merge pull request #25045 from garethgreenaway/24521_debian_networking
- 6f2a6c940b having proto default to static since it's needed to build the template.

**PR #25065:** (lorencegordon) Add download links for 2015.5.1-3 and 2015.5.2 Windows installers @ 2015-06-30 15:29:31 UTC
- ae31b279cc Merge pull request #25065 from lorengordon/update-windows-installer-links
- 40a0c132d4 Add download links for 2015.5.1-3 and 2015.5.2, Fixes #25057

**PR #25052:** (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-06-30 01:05:00 UTC
- dдаe0bf8e Merge pull request #25052 from basepi/merge-forward-2015.5
- 2c5e6e4a58 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
- a71547c7f71 Merge pull request #25011 from notpeter/s3_2014.7_backport
  * 8b8af640f6 Add s3 to protocols for remote source_hash

**PR #25038:** (jfindlay) versionadded @ 2015-06-29 19:49:27 UTC
- PR #24747: (msciciel) add get_route function to network module (refs: #25038)
- c7003d4951 Merge pull request #25038 from jfindlay/versionadded
• PR #24747: (msciciel) add get_route function to network module (refs: #25038) @ 2015-06-29 16:51:43 UTC
  - 28c87cab17 Merge pull request #24747 from msciciel/2015.5
  - 79b4ec2da8 network module lint fix
  - 0b6ef784b2 network module: fix for ipv6
  - f3d184c478 add get_route function to network module

• PR #24975: (ryan-lane) Fix update of undefined env var in npm module @ 2015-06-29 16:45:05 UTC
  - 46a96773aa Merge pull request #24975 from lyft/npm-module-fix
  - 6fde58182f Try byte literals rather than unicode strings in the env
  - c8514de334 Fix update of undefined env var in npm module

• PR #24986: (heewa) Don’t modify empty change @ 2015-06-29 16:44:17 UTC
  - 9cf8550cd8 Merge pull request #24986 from heewa/fix-pkg-hold-when-errored
  - d47a448a80 Don’t modify empty change

• ISSUE #24969: (bradthuber) salt-cloud 2015.5.0: missing azure dependency results in misleading error (refs: #24999)

• PR #24999: (rallytime) Provide a less confusing error when cloud provider is misconfigured @ 2015-06-29 16:43:31 UTC
  - ece897d8d6 Merge pull request #24999 from rallytime/cloud_error_help
  - 1e81a88625 Clean up
  - be19a6730e Provide a less confusing error when cloud provider is misconfigured

• PR #24987: (heewa) Don’t try to cache a template when it’s not a file @ 2015-06-29 14:02:59 UTC
  - 4af15cfb90 Merge pull request #24987 from heewa/fix-trying-to-cache-no-file
  - 9ae0e78ff0 Don’t try to cache a template when it’s not a file

• PR #25022: (jfindlay) revise label and milestone documentation @ 2015-06-29 13:51:24 UTC
  - 8eeadbf4 Merge pull request #25022 from jfindlay/label_docs
  - 8575192cc4 revise label and milestone documentation

• PR #25029: (jayeshka) adding redismod unit test case. @ 2015-06-29 13:50:33 UTC
  - 89c2e01ac1 Merge pull request #25029 from jayeshka/redismod-unit-test
  - e3045be5a9 adding redismod unit test case.

• PR #24995: (rallytime) Fix deprecated pymongo usage causing errors in latest pymongo @ 2015-06-27 22:28:56 UTC
  - PR #24175: (trevor-h) fix deprecated pymongo usage causing errors in latest pymongo (refs: #24995)
  - 642525298c Merge pull request #24995 from rallytime/tops_mongo
  - a3c1063a37 fix deprecated pymongo usage causing errors in latest pymongo

• ISSUE #24862: (dkatsanikakis) gpg.import_key returns error after successfully completed (refs: #24994, #24966)

• PR #24994: (garethgreenaway) Another Fix to gpg.py in 2015.5 @ 2015-06-27 22:28:15 UTC
  - e9aaa11b68 Merge pull request #24994 from garethgreenaway/2015_5_24862_gpg_import_key
- `d2f0d8fa96` variable was referenced before assignment. Just removing the variable and checking the return from `distutils.version.LooseVersion` directly.

- **PR #24988**: (jayeshka) adding states/supervisord unit test case. @ 2015-06-27 22:24:42 UTC
  - ebd666e5ee Merge pull request #24988 from jayeshka/supervisord-states-unit-test
  - bb0a6d5625 adding states/supervisord unit test case.

- **PR #25007**: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-06-26 21:28:57 UTC
  - 0487e3c59b Merge pull request #25007 from basepi/merge-forward-2015.5
  - 4980fd547b Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - a11e4e6ea Merge pull request #24944 from techhat/issue24915
    - 59c3081e49 Double-check main_cloud_config
    - d26a5447ba Merge pull request #24936 from jtand/psutil
      - bdb7a19c36 Fixed ps module to not use depreciated psutil commands

- **PR #25003**: (jacobhammons) Updated man pages @ 2015-06-26 19:13:41 UTC
  - 91a60e198e Merge pull request #25003 from jacobhammons/man-pages
  - cf97a4ab17 Updated man pages

- **PR #25002**: (jacobhammons) sphinx html theme updates @ 2015-06-26 18:39:14 UTC
  - a60a2c4222 Merge pull request #25002 from jacobhammons/doc-announcements
  - f88f344a28 sphinx html theme updates

- **PR #24977**: (rallytime) Only warn about digital ocean deprecation if digital ocean is configured @ 2015-06-25 23:54:46 UTC
  - a791b23ff9 Merge pull request #24977 from rallytime/do_move_warning
  - 6b544227ab Only warn about digital ocean deprecation if digital ocean is configured

- **ISSUE #24862**: (dkatsanikakis) `gpg.import_key` returns error after successfully completed (refs: #24994, #24966)

- **PR #24966**: (garethgreenaway) Fixes to gpg.py in 2015.5 @ 2015-06-25 19:58:49 UTC
  - a71c17c88b Merge pull request #24966 from garethgreenaway/2015.5_24862_gpg_import_key
  - 55eb73b0c9 fixing unit tests.
  - 80c24be4fe Fixing an issue with the import_key method. Different results depending on which gnupg python module is installed.

- **ISSUE #24846**: (mavenAtHouzz) Memory leak issue in rest_tornado EventListener (refs: #24965)

- **PR #24965**: (jacksontj) Fix memory leak in saltnado @ 2015-06-25 18:48:03 UTC
  - 86221846ac Merge pull request #24965 from jacksontj/2015.5
  - 48b5e1653e pylint
  - 87adaa4e60 Fix memory leak in saltnado

- **PR #24948**: (jfindlay) fix some malformed doc links and anchors @ 2015-06-25 15:51:38 UTC
  - 773c4ef8e4 Merge pull request #24948 from jfindlay/doc_links
  - 152a9b2a12 fix some malformed doc links and anchors
• ISSUE #24885: (anlutro) Master config - Directories starting with a dot have the dot stripped when root_dir is.

  (refs: #24886)

• PR #24886: (anlutro) Be more careful about stripping away root_dir from directory options @ 2015-06-25 15:50:11 UTC

  – 4ebc01e662 Merge pull request #24886 from alprs/fix-root_dir_bug
  – 52ccafed3 os.sep is the correct directory separator constant
  – 0ebcf2d1ad Be more careful about stripping away root_dir from directory options

• PR #24930: (jacksontj) Don't refetch file templates 100% of the time-- Performance optimization for templated files @ 2015-06-24 21:22:47 UTC

  – f52f7e1d20 Merge pull request #24930 from jacksontj/2015.5
  – 5fb75346ef Only parse the source if we have one
  – c03a6fa9d1 Add support for sources of managed files to be local
  – 4cf78a0a95 pylint
  – d70914e73f Don't refetch the template 100% of the time-- Performance optimization for templated files

• PR #24935: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-06-24 18:17:54 UTC

  – 925a4d91ba Merge pull request #24935 from basepi/merge-forward-2015.5
  – 8d8bf3476f Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  – eeb05a1b10 Merge pull request #24918 from BretFisher/minion-start-smartos-smf-fix

  + d7bf0c7fd Smartos smf minion fix

• ISSUE #24826: (rakai93) rh_service.py: 'int' object has no attribute 'startswith' (refs: #24873)

• PR #24873: (jfindlay) convert osrelease grain to str before str op @ 2015-06-24 16:43:08 UTC

  – 4e8ed0d8ed Merge pull request #24873 from jfindlay/rh_service
  – febe66f8e7 convert osrelease grain to str before str op

• PR #24923: (jayeshka) adding states/status unit test case. @ 2015-06-24 15:50:07 UTC

  – 908199f9c3 Merge pull request #24923 from jayeshka/status-states-unit-test
  – baec650674 adding states/status unit test case.

• PR #24902: (cro) Fix minion failover, document same @ 2015-06-24 15:20:43 UTC

  – 2dd24ece71 Merge pull request #24902 from cro/fixfo2
  – 90c73ff446 References to documentation.
  – f0c9204d8b Add references to failover parameters in conf
  – 9da96a89b95 Docs
  – e231408e49 Move comment.
  – b9a756ff5f Fix master failover and add documentation for same. Factor in syndics. Syndics will not failover (yet).

• PR #24926: (rallytime) Back-port #22263 to 2015.5 @ 2015-06-24 15:09:40 UTC

  – PR #22263: (cachedout) Prevent a load from being written if one already exists (refs: #24926)
  – 087ee0f46 Merge pull request #24926 from rallytime/bp-22263
- 8c92d9c677 Prevent a load from being written if one already exists

- **PR #24900**: (rallytime) Back-port #24848 to 2015.5 @ 2015-06-24 15:09:18 UTC
  - PR #24848: (nmadhok) Correcting bash code blocks (refs: #24900)
  - b34a74fe89 Merge pull request #24900 from rallytime/bp-24848
  - d2b5456f5d Correcting bash code blocks

- **PR #24899**: (rallytime) Back-port #24847 to 2015.5 @ 2015-06-24 15:09:01 UTC
  - PR #24847: (borutmrak) unset size parameter for lxc.create when backing=zfs (refs: #24899)
  - a546e8e326 Merge pull request #24899 from rallytime/bp-24847
  - 1e4ec7a56b unset size parameter for lxc.create when backing=zfs

- **PR #24898**: (rallytime) Back-port #24845 to 2015.5 @ 2015-06-24 15:06:09 UTC
  - PR #24845: (porterjamesj) fix bug in docker.loaded (refs: #24898)
  - d4dd8d288d Merge pull request #24898 from rallytime/bp-24845
  - 071049ae7a fix bug in docker.loaded

- **ISSUE #24799**: (infestdead) Forced remount because options changed when no options changed (glusterfs) (refs: #24839)

- **PR #24897**: (rallytime) Back-port #24839 to 2015.5 @ 2015-06-24 15:05:35 UTC
  - PR #24839: (infestdead) fix for issue #24799 (refs: #24897)
  - 693085520f Merge pull request #24897 from rallytime/bp-24839
  - f3b20d5445 fix for issue #24799

- **PR #24891**: (jayeshka) adding states/ssh_known_hosts unit test case. @ 2015-06-23 16:46:58 UTC
  - 1650233be9 Merge pull request #24891 from jayeshka/ssh_known_hosts-states-unit-test
  - ef1347f2b3 adding states/ssh_known_hosts unit test case.

- **ISSUE #24870**: (dkiser) salt-cloud fails on sudo password prompt when using ssh key to auth (refs: #24874)

- **PR #24874**: (dkiser) Fix for salt-cloud when ssh key used to auth and using sudo. @ 2015-06-22 23:46:08 UTC
  - c32ae96aa Merge pull request #24874 from dkiser/salt-cloud-24870
  - 6c31143b22 Fix key error for the PR to fix #24870.
  - bdcf7d88c1 Fix pylint for #24874.
  - 8f66d193e0 Fix for salt-cloud when ssh key used to auth and using sudo.

- **ISSUE #24871**: (dkiser) salt-cloud fails to honor 'password' in cloud options before raising an exception (refs: #24880)

- **PR #24880**: (dkiser) Fix to allow password for salt-cloud to be set outside of a vm specific context. @ 2015-06-22 23:44:59 UTC
  - dd9a21c09ee Merge pull request #24880 from dkiser/salt-cloud-24871
  - 4f6c035673 Fix to allow password for salt-cloud to be set outside of a vm specific context.

- **PR #24852**: (pruiz) Fix issue 24851: regular expression so it now matches packages with '.' or '-' at pkg name @ 2015-06-22 20:37:13 UTC
  - 3902b162a9 Merge pull request #24852 from pruiz/issue-24851
- 73adb1d50 Fix regular expression so it now matches packages with '.', '-' or '-' at pkg name.

- **PR #24861** (jayeshka) adding states/ssh_auth unit test case. @ 2015-06-22 16:20:01 UTC
  - 6c5b788af9 Merge pull request #24861 from jayeshka/ssh-auth-states-unit-test
  - e5d70de8a0 adding states/ssh_auth unit test case.

- **ISSUE #23478** (calvinhp) grains.get virtual reports "physical" on bhyve FreeBSD VM (refs: #24824)

- **PR #24824** (kev009) Detect bhyve virtual type for FreeBSD guests @ 2015-06-22 15:24:35 UTC
  - 9e3321c18e Merge pull request #24824 from kev009/grains-bhyve-bsd
  - a2262097a1 Detect bhyve virtual type for freebsd guests

- **ISSUE #24746** (anlutro) state.apply doesn't seem to work (refs: #24795)

- **PR #24795** (anlutro) Fix state.apply for salt-ssh @ 2015-06-22 15:23:57 UTC
  - 905840b1fa Merge pull request #24795 from alprs/fix-salt_ssh_state_apply

- **ISSUE #24832** (jacksontj) Don't incur a "._load_all" of the lazy_loader while looking for mod_init. @ 2015-06-22 15:17:10 UTC
  - PR #20540: (jacksontj) Loader nomerge: Don't allow modules to "merge" (refs: #24832)
  - PR #20481: (jacksontj) Add submodule support to LazyLoader (refs: #20540)
  - PR #20473: (jacksontj) Add "disabled" support (refs: #20481)
  - PR #20274: (jacksontj) Loader overhaul to LazyLoader (refs: #20473)
  - PR #12327: (jacksontj) Add a LazyLoader class which will lazily load modules (with the given lo... (refs: #20274)
  - 31d4c131e9 Merge pull request #24832 from jacksontj/2015.5
  - cfa7c0a699 pylint
  - be18439736 Don't incur a "._load_all" of the lazy_loader while looking for mod_init.

- **ISSUE #14666** (luciddr34m3r) salt-cloud GoGrid exception when using map file (refs: #24811)

- **PR #24834** (rallytime) Back-port #24811 to 2015.5 @ 2015-06-19 18:43:49 UTC
  - PR #24811: (rallytime) Add notes to map and gogrid docs -- don't use -P with map files (refs: #24834)
  - 2d8148fb4d Merge pull request #24834 from rallytime/bp-24811
  - e2684ecf0b Add notes to map and gogrid docs -- don't use -P with map files

- **PR #24790** (rallytime) Back-port #24741 to 2015.5 @ 2015-06-19 17:25:58 UTC
  - PR #24741: (CameronNemo) Improve Upstart enable/disable handling (refs: #24790)
  - d26db63c0f Merge pull request #24790 from rallytime/bp-24741
  - a54245f080 Add missing import
  - 4ce6370d6e salt.modules.upstart: fix lint errors
  - aec53ec32a Improve Upstart enable/disable handling

- **PR #24789** (rallytime) Back-port #24717 to 2015.5 @ 2015-06-19 17:17:00 UTC
  - PR #24717: (gthb) virtualenv.managed: document user and no_chown (refs: #24789)
  - 645e62a43c Merge pull request #24789 from rallytime/bp-24717
• PR #24823: (jayeshka) adding states/splunk_search unit test case. @ 2015-06-19 17:14:12 UTC
  0a6c70f062 Merge pull request #24823 from jayeshka/splunk_search-states-unit-test
  98318acb0 adding states/splunk_search unit test case.

• PR #24809: (jodv) Correctly create single item list for failover master type with string value for master opt @ 2015-06-19 15:22:20 UTC
  4c5a708599 Merge pull request #24809 from jodv/single_item_master_list
  18cee8c7df single item list vs. list of characters

• PR #24802: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-06-18 20:11:58 UTC
  ae05e70e94 Merge pull request #24802 from basepi/merge-forward-2015.5
  5b7a65d6d9 Merge pull request #19 from twangboy/merge-forward-fixes
    9837e90299 Fixed test failures for Colton
  b949856ae6 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
    4281dfbb0a Merge pull request #24780 from nmadhok/backport-2014.7-24777
      c53b0da22 Backporting PR #24777 to 2014.7 branch
    f3c5cb2d41 Merge pull request #24769 from msteed/issue-21318
      f409d5cc0 Fix stacktrace in get_cli_returns()
    59db24602f Merge pull request #24690 from twangboy/fix_17041
      7a01538af Added additional reporting
      d84ad5d519 Fixed capitalization... Failed and Already
      e9552455c4 Merge branch '2014.7' of https://github.com/saltstack/salt into fix_17041
      144b2f2f67 Report powershell output instead of error
  PR saltstack/salt#24329: (jayeshka) adding states/postgres_database unit test case. (refs: #24798)

• PR #24798: (justinta) Revert "adding states/postgres_database unit test case." @ 2015-06-18 17:56:17 UTC
  daa76c34e4 Merge pull request #24798 from saltstack/revert-24329-postgres_database-states-unit-test
  179ce03d93 Revert "adding states/postgres_database unit test case."

• PR #24791: (rallytime) Back-port #24749 to 2015.5 @ 2015-06-18 17:43:15 UTC
  PR #24749: (obestwalter) add windows specfic default for multiprocessing (refs: #24791)
  7073a9f850 Merge pull request #24791 from rallytime.bp-24749
  be43b2f3b34 add windows specific default for multiprocessing

• PR #24792: (rallytime) Back-port #24757 to 2015.5 @ 2015-06-18 15:58:35 UTC
  PR #24757: (cachedout) Fix loader call in pyobjects (refs: #24792)
  PR #24668: (grischa) enable virtual package names in pyobjects renderer (refs: #24721, #24757)
  1a158e8a3b Merge pull request #24792 from rallytime.bp-24757
  6c804f0789 Fix loader call in pyobjects

• PR #24768: (jfindlay) fix yum versionlock on RHEL/CentOS 5, disable corresponding test @ 2015-06-18 15:13:12 UTC

30.2. Previous Releases
- `0f9298263b` Merge pull request #24768 from jfindlay/pkg_mod
- `7a26c2b5b9` disable pkg.hold test for RHEL/CentOS 5
- `4cad93c222` use correct yum versionlock pkg name on centos 5

**ISSUE #24776**: (nmadhok) --static option in salt raises ValueError and has been broken for a very long time (refs: #24777)

- PR #24779: (nmadhok) Backporting Changes to 2014.7 branch (refs: #24777)

**PR #24778**: (nmadhok) Backporting PR #24777 to 2015.2 branch (refs: #24777) @ 2015-06-18 14:53:04 UTC

- PR #24777: (nmadhok) Fixing issue where --static option fails with ValueError Fixes #24776 (refs: #24778, #24780)

- `39f088a74c` Merge pull request #24778 from nmadhok/backport-2015.2-24777
- `ae370f639` Backporting PR #24777 to 2015.2 branch

**PR #24774**: (zefrog) Fix lxc lvname parameter command @ 2015-06-18 14:49:06 UTC

- `2a4f553f7` Merge pull request #24774 from zefrog/fix-lxc-lvname-param
- `21e0cd4a5e` Fixed typo in lxc module: lvname parameter typo
- `283d86ec12` Fixed bug in lxc module: lvname using wrong parameter in cmd

**PR #24782**: (jayeshka) adding states/slack unit test case. @ 2015-06-18 14:33:55 UTC

- `fd7330914b` Merge pull request #24782 from jayeshka/slack-states-unit-test
- `2c8217464` adding states/slack unit test case.

**ISSUE #24770**: (jacksontj) Requisite and Requisite_in don’t play nice together (refs: #24771)

- PR #24771: (jacksontj) Always extend requisites, instead of replacing them @ 2015-06-18 14:29:09 UTC

- `c090af512` Merge pull request #24771 from jacksontj/2015.5
- `b1211c5422` Re-enable tests for complex prereq and prereq_in
- `3785b6f36` Only merge when the merge is of requisites

**PR #24766**: (msteed) Remove doc references to obsolete minion opt @ 2015-06-17 21:36:55 UTC

- `5f5ed48f62` Merge pull request #24766 from msteed/undoc-dns_check
- `c92a769d35` Remove doc references to obsolete minion opt

**PR #24329**: (jayeshka) adding states/postgres_database unit test case. @ 2015-06-17 19:11:02 UTC

- `a407ab7c51` Merge pull request #24329 from jayeshka/postgres_database-states-unit-test
- `ee06f1ad57` adding states/postgres_database unit test case.

**ISSUE #24560**: (hydrosine) Documentation missing on parameter (refs: #24632)

**ISSUE #24547**: (dragonpaw) Artifactory docs say module is 'jboss7'. (refs: #24632)

**ISSUE #24375**: (companykitchen-dev) Custom grain won’t sync under any circumstances (refs: #24632)

**ISSUE #24275**: (kartiksubbarao) augeas issue with apache and recognizing changes that have been already made (refs: #24632)

**ISSUE #24163**: (tbaker57) enable_gpu_grains default value confusion (refs: #24632)

**PR #24632**: (jacobhammons) Doc bug fixes @ 2015-06-17 18:40:02 UTC

- `3ff6effs46` Merge pull request #24632 from jacobhammons/bug-fixes
- 7c52012e31 Fixed typos
- c7cdd416a2 Doc bug fixes Refs #24547 Refs #24275 Refs #24375 Refs #24560 Refs #24163

• ISSUE #24198: (ahammond) salt-call event.send doesn’t send events from minion (refs: #24607)
• PR #24607: (garethgreenaway) fixes to minion.py @ 2015-06-17 18:16:42 UTC
  - 9995f64428 Merge pull request #24607 from garethgreenaway/2015_5_sending_events_multi_master
  - 8abd300ee1 A fix if you have multiple masters configured and try to fire events to the minion. Currently they fail silently. Might be the cause of #24198.
• PR #24755: (rallytime) Remove SALT_CLOUD_REQS from setup.py @ 2015-06-17 17:42:25 UTC
  - bf2dd94389 Merge pull request #24755 from rallytime/fix_setup_15
  - 48769a544d Remove SALT_CLOUD_REQS from setup.py
• PR #24740: (rallytime) Backport #24720 to 2015.5 @ 2015-06-17 16:43:20 UTC
  - PR #24720: (TheScriptSage) Issue 24621 - AD/LDAP Group Auth Issue (refs: #24740)
  - 3d53d79476 Merge pull request #24740 from rallytime/bp-24720
  - a9c6b5b77 Updating master.py to properly check against groups when user is only authed against group. Tested against unit.auth_test.
• PR #24723: (rallytime) Back-port #20124 to 2015.5 @ 2015-06-17 16:43:20 UTC
  - PR #20124: (cgtx) add init system to default grains (refs: #24723)
  - ac2851be55 Merge pull request #24723 from rallytime/bp-20124
  - 4d0061b832 fix infinite loop introduced by #20124 when the init system is not in the supported_inits list
  - 0c7fa0fca2 Optimizations for #20124
  - f353454327 add init system to default grains (resolve #20124)
• PR #24754: (anlutro) salt-cloud documentation - Add information about linode location @ 2015-06-17 16:04:48 UTC
  - 78cd09b6e9 Merge pull request #24754 from alprs/docs-add_linode_location_option
  - d88e071e98 add information about linode location
• PR #24748: (jayeshka) adding states/serverdensity_device unit test case. @ 2015-06-17 15:39:07 UTC
  - d55547f66c Merge pull request #24748 from jayeshka/serverdensity_device-states-unit-test
  - 1a4c241050 adding states/serverdensity_device unit test case.
• PR #24739: (rallytime) Back-port #24735 to 2015.5 @ 2015-06-17 15:16:47 UTC
  - PR #24735: (notpeter) Add 2015.5 codename to version numbers docs (refs: #24739)
  - 0b7e7ef879 Merge pull request #24739 from rallytime/bp-24735
  - 64ec56d9be Add .0 to version number
  - 5ed801b98f Add codenames for 2015.5 and future versions. Trailing newline.
• ISSUE #24111: (yermulnik) cli option ‘--summary’ got broken after upgrade to 2015.5.1 (refs: #24732)
• PR #24732: (msteed) Fix stacktrace when --summary is used @ 2015-06-17 03:27:57 UTC
  - c8713f2d00 Merge pull request #24732 from msteed/issue-24111
  - 54b33dd359 Fix stacktrace when --summary is used

30.2. Previous Releases
• PR #24721: (rallytime) Back-port #24668 to 2015.5 @ 2015-06-17 03:23:47 UTC
  - PR #24668: (grischa) enable virtual package names in pyobjects renderer (refs: #24721, #24757)
  - 70d37816bf Merge pull request #24721 from rallytime/bp-24668
  - 68f5af970 fixing other test
  - ba4f262b9c fixing text for virtual support in pyobjects
  - b349d91a5f enable virtual package names in pyobjects renderer

• ISSUE #21923: (Fluro) Salt cloud not running provisioning script as root (refs: #24718)

• ISSUE #17241: (hasues) Salt-Cloud for vSphere needs additional documentation (refs: #24718)

• PR #24718: (rallytime) Added some missing config documentation to the vsphere driver @ 2015-06-17 03:19:35 UTC
  - 1b9d6895c7 Merge pull request #24718 from rallytime/update_vsphere_docs
  - bfdebb6e18 Added some missing config documentation to the vsphere driver

• PR #24714: (rallytime) Remove cloud-requirements.txt @ 2015-06-17 03:17:04 UTC
  - 64857c70d6 Merge pull request #24714 from rallytime/remove_cloud_reqs_15
  - 67b796d01e Remove cloud-requirements.txt

• ISSUE #24439: (bechtoldt) Add tornado version to versions report (refs: #24733)

• PR #24733: (msteed) Include Tornado in versions report @ 2015-06-17 03:13:53 UTC
  - 961b16d8cd Merge pull request #24733 from msteed/issue-24439
  - 76c3f05ec Include Tornado in versions report

• PR #24737: (jacksontj) Move AES command logging to trace @ 2015-06-17 01:48:11 UTC
  - a861fe0f4f Merge pull request #24737 from jacksontj/2015.5
  - a4ed41f8e2 Move AES command logging to trace

• PR #24724: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-06-16 22:46:27 UTC
  - 0d2dc646e8 Merge pull request #24724 from basepi/merge-forward-2015.5
  - 4641028464 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - a18dad71 Merge pull request #24646 from twangboy/fix_24196
    * a208e1d60f Fixed user.present on existing user

• PR #24701: (jayeshka) adding states/selinux unit test case. @ 2015-06-16 15:27:29 UTC
  - 3d33fe7676 Merge pull request #24701 from jayeshka/selinux-states-unit-test
  - 0c136fd9c2 adding states/selinux unit test case.

• PR #24687: (cachedout) Note about minimum worker_threads @ 2015-06-15 20:46:23 UTC
  - 2e287a9e33 Merge pull request #24687 from cachedout/min_worker_threads
  - b7bb7eab2 Note about minimum worker_threads

• PR #24688: (cachedout) Update AUTHORS @ 2015-06-15 20:46:03 UTC
  - 432478cc87 Merge pull request #24688 from cachedout/update_authors
  - 3f6880e291 Better email
- 6c7b773eae Update AUTHORS

- **ISSUE #22385**: (cachedout) States which require unavailable modules should display the reason (refs: #24649)

- **PR #24649**: (cachedout) Improved error reporting for failed states @ 2015-06-15 16:04:20 UTC
  - 9a2b50d59f Merge pull request #24649 from cachedout/issue_22385
  - b9fe792534 States will now return the reason behind failure if a module could not be loaded

- **PR #24673**: (jayeshka) adding states/schedule unit test case. @ 2015-06-15 15:24:52 UTC
  - 66e9e16753 Merge pull request #24673 from jayeshka/schedule-states-unit-test
  - 54aaaa5f12 adding states/schedule unit test case.

- **ISSUE #24661**: (kartiksubbarao) augeas.change doesn’t support setting empty values (refs: #24663)

- **PR #24663**: (kartiksubbarao) Update augeas_cfg.py @ 2015-06-15 15:18:48 UTC
  - 5eb19c4e4d Merge pull request #24663 from kartiksubbarao/patch-2
  - e18db50e0c Update augeas_cfg.py

- **ISSUE #24583**: (dkiser) salt-cloud keyring password referenced before assignment (refs: #24667)

- **PR #24667**: (dkiser) fix for #24583 clouds/openstack.py kerying first time succeeds @ 2015-06-14 21:58:58 UTC
  - 4450432161 Merge pull request #24667 from dkiser/fix-cloud-keyring
  - c92c05f901 fix for #24583 clouds/openstack.py kerying first time succeeds

- **ISSUE #24537**: (kartiksubbarao) alias.present doesn’t update alias values that are substrings of the existing value (refs: #24659)

- **PR #24659**: (kartiksubbarao) Update aliases.py @ 2015-06-13 17:31:42 UTC
  - 4c64ee9d94 Merge pull request #24659 from kartiksubbarao/patch-1
  - d6834749e2 Update aliases.py

- **PR #24644**: (cro) Merge forward 2014.7->2015.5 @ 2015-06-12 21:31:41 UTC
  - 89eb616c29 Merge pull request #24644 from cro/2014.7-20150612
  - 4136dc3160 Merge forward from 2014.7 to 2015.5
  - b99484fde2 Merge pull request #24643 from cro/saltannounce
    - 635121e85d Merge pull request #24620 from twangboy/fix-24215
    - d7a9999be1 Fixed comment and uncomment functions in file.py

- **PR saltstack/salt#24595**: (tankywoo) fix target rule, remove unneeded quotation mark (refs: #24642)

- **PR #24642**: (basepi) Revert "fix target rule, remove unneeded quotation mark" @ 2015-06-12 20:14:26 UTC
  - b896a0d0e9 Merge pull request #24642 from saltstack/revert-24595-fix-iptables-target
  - 5ff3224ae1 Revert "fix target rule, remove unneeded quotation mark"

- **PR #24628**: (jayeshka) adding states/reg unit test case. @ 2015-06-12 17:29:11 UTC
  - 01092c2337 Merge pull request #24628 from jayeshka/reg_states-unit-test
  - af1bd8f9ff adding states/reg unit test case.

- **ISSUE #24494**: (arount) Computed comments in jinja states (refs: #24591)
• **ISSUE #23359**: (BalintSzigeti) init.sls parsing issue (refs: #24591)

• **ISSUE #21217**: (Colstuwjx) Maybe a bug for jinja render? (refs: #24591)

• **PR #24631**: (rallytime) Back-port #24591 to 2015.5 @ 2015-06-12 16:54:32 UTC
  - PR #24591: (tbaker57) Add some documentation surrounding Jinja vs yaml comments - (refs: #24631)
  - 5f49f9191d Merge pull request #24631 from rallytime/bp-24591
  - f13cd418bc Add extra clarification why jinja comments are needed.
  - 2379f718bb Fix typo
  - 6a9f17471d4 Add some documentation surrounding Jinja comments - refs #24492, #21217, #23359

• **PR #24616**: (garethgreenaway) additional logging in state.py module @ 2015-06-12 16:25:39 UTC
  - f23f99ec35 Merge pull request #24616 from garethgreenaway/2015_5_logging_disabled_states
  - 4db09ef160 Adding some logging statement to give feedback when states, including highstate, are disabled. Useful when running from scheduler.

• **PR #24595**: (tankywoo) fix target rule, remove unneeded quotation mark @ 2015-06-12 16:23:22 UTC
  - 6dcbb04a1 Merge pull request #24595 from tankywoo/fix-iptables-target
  - 10a5160d7c fix target rule, remove unneeded quotation mark

• **PR #24604**: (jfindlay) fix pkg module integration tests @ 2015-06-12 16:04:26 UTC
  - 8ac3d94785 Merge pull request #24604 from jfindlay/pkg_tests
  - d88fb22fde fix pkg module integration tests on CentOS 5
  - fb91ab0a0 fix pkg module integration tests on ubuntu 12

• **PR #24600**: (basepi) [2015.5] Remove __kwarg__ from salt-ssh keyword args @ 2015-06-11 04:21:29 UTC
  - 0ff545c549 Merge pull request #24600 from basepi/salt-ssh_orchestrate.20615
  - 9b556836fa Remove __kwarg__ from salt-ssh keyword args

• **ISSUE #22843**: (Xiol) salt-ssh roster doesn’t support integers as host keys (refs: #24608)

• **PR #24608**: (basepi) [2015.5] Normalize salt-ssh flat roster minion IDs to strings @ 2015-06-11 21:35:07 UTC
  - 832916f49f Merge pull request #24608 from basepi/salt-ssh.flat.roster.integers.22843
  - 38120f051 Normalize salt-ssh flat roster minion IDs to strings

• **PR #24605**: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-06-11 19:15:21 UTC
  - 4eb5bb253b Merge pull request #24605 from basepi/merge-forward-2015.5
  - f96c5029bb Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - d8392a7f9 Merge pull request #24589 from BretFisher/patch-1
    - 65a11336dc Fixed Mine example for jinja code block

• **ISSUE #24457**: (ryan-lane) When selecting the version of docs on the docs site, it brings you to the homepage (refs: #24598)

• **ISSUE #24250**: (jfindlay) have version links on docs page link to that version of the current page (refs: #24598)

• **PR #24598**: (jacobhammons) 2015.5.2 release changes @ 2015-06-11 17:24:11 UTC
  - e0bb177823 Merge pull request #24598 from jacobhammons/doc-fixes
  - f3f34dd6f6 2015.5.2 release changes Refs #24250 Refs #24457
• ISSUE #20615: (aurynn) 2014.7.1: salt/states/saltmod using incorrect return dict for orchestrate (refs: #24588)
• PR #24588: (basepi) Fixes for saltmod.function for salt-ssh @ 2015-06-11 16:15:21 UTC
  - 26930b45bd Merge pull request #24588 from basepi/salt-ssh.orchestrate.20615
  - 826936ce57 Move documentation into docstring instead of comments
  - de052e7135 Assign 'return' to 'ret' if necessary in saltmod.function
  - 34f989d66 Convert keyword args to key=value strings in salt-ssh
• PR #24593: (jayeshka) adding states/redismod unit test case. @ 2015-06-11 15:55:27 UTC
  - 5a21ad152e Merge pull request #24593 from jayeshka/redismod_states-unit-test
  - 3b95744840 adding states/redismod unit test case.
• ISSUE #40: (thatch45) Clean up timeouts (refs: #22857)
• PR #24581: (rallytime) Disabled some flaky tests until we can figure out how to make them more reliable @ 2015-06-11 15:51:41 UTC
  - PR #24217: (jfindlay) disable intermittently failing tests (refs: #24581)
  - PR #23623: (jfindlay) Fix /jobs endpoint's return (refs: #24217)
  - PR #22857: (jacksontj) Fix /jobs endpoint's return (refs: #23623)
  - 8ff86edd0 Merge pull request #24581 from rallytime/disable_some_flaky_tests
  - c82f135d2e Disabled some flaky tests until we can figure out how to make them more reliable
• PR #24566: (jayeshka) adding states/rdp unit test case. @ 2015-06-11 02:14:39 UTC
  - a570d7f967 Merge pull request #24566 from jayeshka/rdp_states-unit-test
  - 273b994e91 adding states/rdp unit test case.
• ISSUE #24480: (kiorky) [CRITICAL] [2015.5] tls breaks tzinfo (refs: #24551)
• PR #24551: (joejulian) 2015.5 dont pollute environment @ 2015-06-11 02:13:06 UTC
  - 20ada1f8a1 Merge pull request #24551 from joejulian/2015.5_dont_pollute_environment
  - cfc3b43ba2 Don't pollute the TZ environment variable
  - cba8d3f923 pep8
  - 9cb7015568 Mark keyword version adds
  - 76e2583265 Merge tls changes from develop
• ISSUE #19901: (clinta) State cache is not documented (refs: #24574, #24468)
• PR #24574: (jacobhammons) Refs #19901 @ 2015-06-10 20:09:23 UTC
  - bb2fd6a970 Merge pull request #24574 from jacobhammons/19901
  - e2a2946dc7 Refs #19901
• PR #24577: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-06-10 19:46:22 UTC
  - b03166cde3 Merge pull request #24577 from basepi/merge-forward-2015.5
  - e1d45ccf3b Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - d376390f76 Merge pull request #24530 from twangboy/fix_24427
  - 673e1d809e Added missing panel.bmp for installer

30.2. Previous Releases 3037
- cc50218b01 Start Minion Service on Silent Install

- **ISSUE #24235**: (tomasfejfar) Difference between running from minion and from master (refs: #24571, #24468)

- **PR #24571**: (jacobhammons) Refs #24235 @ 2015-06-10 17:02:18 UTC
  - 3ec457beef Merge pull request #24571 from jacobhammons/24235
  - 8df5d53bb8 Refs #24235

- **PR #24565**: (pille) Fix backtrace, when listing plugins @ 2015-06-10 16:33:11 UTC
  - fe07eb5653 Merge pull request #24565 from pille/munin-ignore-broken-symlinks
  - 8511a6c0a6 fix backtrace, when listing plugins

- **PR #24554**: (ryan-lane) Fix yes usage for pecl defaults @ 2015-06-09 23:59:49 UTC
  - 251c8f9f5f Merge pull request #24554 from lyft/pecl-module-fix
  - 56a9cfcf24 Fix yes usage for pecl defaults

- **PR #24535**: (rallytime) Back-port #24518 to 2015.5 @ 2015-06-09 20:06:18 UTC
  - PR #24518: (rallytime) Merge #24448 with Pylint Fixes (refs: #24535)
  - PR #24448: (codertux) Update modules path for operating systems using systemd (refs: #24518)
    - dbd49b4acb Merge pull request #24453 from rallytime/bp-24518
    - fc75197616 Pylint fix
    - 3e08840988 Update modules path for operating systems using systemd

- **PR #24538**: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-06-09 17:27:20 UTC
  - 485ed3c0f9 Merge pull request #24538 from basepi/merge-forward-2015.5
  - 6a8039d468 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - 6ebc476bb3 Merge pull request #24513 from jquast/2014.7-bugfix-iteritem
    - 2be0180e5e use of 'iteritem' in 2014.7 branch

- **PR #24495**: (jayeshka) adding states/rabbitmq_vhost unit test case. @ 2015-06-09 15:33:23 UTC
  - 73e6388acd Merge pull request #24495 from jayeshka/rabbitmq_vhost_states-unit-test
  - 31889e38eb cosmetic change.
  - cf501cf60d resolved error.
  - 4bb6087722 Merge branch '2015.5' of https://github.com/saltstack/salt into rabbitmq_vhost_states-unit-test
  - 3ad77143a8 adding states/rabbitmq_vhost unit test case.

- **PR #24445**: (jayeshka) adding states/pyrax_queues unit test case. @ 2015-06-09 15:28:45 UTC
  - bf1abccebe Merge pull request #24445 from jayeshka/pyrax_queues_states-unit-test
  - ea27cefb10 adding states/pyrax_queues unit test case.

- **PR #24490**: (aneeshusa) Fix pacman.list_upgrades for new python_shell default. @ 2015-06-09 15:13:16 UTC
  - 0247ed8d10d Merge pull request #24490 from aneeshusa/fixed-pacman-list-upgrades
  - 980e1cb4de Lint fix.
  - dca33f1112 Fix pacman.list_upgrades for new python_shell default.
• PR #24517: (steverweber) small fixes to the ipmi docs @ 2015-06-09 15:10:14 UTC
  - 6268ddb43a Merge pull request #24517 from steverweber/ipmi_doc
  - 6413712844 lint
  - e78ae9b01 more small fixes to the ipmi docs
• PR #24524: (jayeshka) any() takes list oy tuple. @ 2015-06-09 13:49:42 UTC
  - 3728b3f327 Merge pull request #24524 from jayeshka/rabbitmq_vhost_states-module
  - 01c99ad767 any() takes list oy tuple.
• PR #24482: (eliasp) `docker.running` needs now the 'image' param. @ 2015-06-09 04:43:04 UTC
  - dd23de885b Merge pull request #24482 from eliasp/2015.5-states.dockerio-docker.running-doc
  - 5de471d626 'docker.running' needs now the 'image' param.
• ISSUE #23503: (jfindlay) salt-ssh fails on CentOS 7 when python-zmq is not installed (refs: #24515)
• PR #24515: (basepi) [2015.5] Add xml library to the salt-thin @ 2015-06-09 04:10:06 UTC
  - 2a727c3f55 Merge pull request #24515 from basepi/susexml23503
  - 07bb83eaaaf Add xml library to the thin
• PR #24497: (jayeshka) adding states/rbenv unit test case. @ 2015-06-09 03:56:10 UTC
  - fce998a58b Merge pull request #24497 from jayeshka/rbenv_states-unit-test
  - 79d43a622b adding states/rbenv unit test case.
• PR #24496: (jayeshka) adding states/rabbitmq_user unit test case. @ 2015-06-09 03:55:23 UTC
  - 2bc41be6ed Merge pull request #24496 from jayeshka/rabbitmq_user_states-unit-test
  - 7d96f27f91 adding states/rabbitmq_user unit test case.
• PR #24481: (eliasp) Fix typo (licnese → license). @ 2015-06-09 03:30:25 UTC
  - 02a597b746 Merge pull request #24481 from eliasp/2015.5-salt.states.powerpath-license_typo
  - 128005b4d5 Fix typo (licnese → license).
• PR #24467: (thenewwazoo) Fix dockerio bound volumes @ 2015-06-09 01:40:23 UTC
  - 5ad3db5f8b Merge pull request #24467 from thenewwazoo/fixedockerio-bound-volumes
  - db4e3dc69b Let's raise an exception if create fails
  - d1d85dd685 Add logging
  - ddc63f0f30 Fix volume handling when creating containers
• PR #24504: (rallytime) Move vsphere deprecation to 2015.5 @ 2015-06-08 22:43:05 UTC
  - PR #24487: (nmadhok) Deprecating vsphere cloud driver in favor of vmware cloud driver (refs: #24504)
  - d36bd3f8b8 Merge pull request #24487 from rallytime/move_vsphere_deprecation_2015.5
  - d876555d71 Add Getting Started with VSphere doc to 2015.5
  - b685ebc104 Add vSphere deprecation warnings to 2015.5
• PR #24506: (rallytime) Backport #24450 to 2015.5 @ 2015-06-08 22:42:14 UTC
  - PR #24450: (ruzarowski) Fix salt cli runs with batch-size set (refs: #24506)
  - cb5546085c Merge pull request #24506 from rallytime/bp-24450
- 1c0fca2b9d Backport #24450 to 2015.5

- **PR #24498**: (rallytime) Added "CLI Example" to make failing test happy on 2015.5 @ 2015-06-08 15:48:40 UTC
  - 3173fd17ad Merge pull request #24498 from rallytime/fix_doc_failure_fifteen
  - d992e4f777 Added "CLI Example" to make failing test happy on 2015.5

- **PR #24471**: (anlutro) Set up salt-ssh file logging @ 2015-06-08 15:26:49 UTC
  - 3639e411bd Merge pull request #24471 from alprs/fix_salt_ssh_logging
  - 6a11e878b8 set up salt-ssh file logging

- **ISSUE #24231**: (tarwich) npm.bootstrap (refs: #24469)

- **PR #24469**: (jfindlay) correctly handle user environment info for npm @ 2015-06-08 15:26:02 UTC
  - 551e70f3b8 Merge pull request #24469 from jfindlay/npm_env
  - 8140c96949 update npm's user info envs
  - cb572f8c41 add env parameter to npm.uninstall

- **ISSUE #24235**: (tomjasfejfar) Difference between running from minion and from master (refs: #24571, #24468)

- **ISSUE #24193**: (abng88) Update ext_pillar docs to mention that this feature is supported masterless as well (refs: #24468)

- **ISSUE #24172**: (zhuijinhc) Can lists be passed in the pillar on the command line on version 2015.5.0? (refs: #24468)

- **ISSUE #23211**: (lloesche) Document that salt://| escapes special characters in filenames (refs: #24468)

- **ISSUE #19901**: (clinta) State cache is not documented (refs: #24574, #24468)

- **ISSUE #19801**: (ksalman) How are grains static? (refs: #24468)

- **PR #24468**: (jacobhammons) Bug fixes and build errors @ 2015-06-08 15:25:40 UTC
  - 0d90ec2b8c Merge pull request #24468 from jacobhammons/doc-fixes
  - 1035995959 Appended .0 to version added
  - d45c4ed11f Bug fixes and build errors Refs #23211 Refs #24268 Refs #24235 Refs #24193 Refs #24172 Refs #19901

- **ISSUE #24318**: (favadi) uncaught exception for pkgrepo.absent for invalid PPA (refs: #24465)

- **PR #24465**: (jfindlay) catch exception from softwarerepositories @ 2015-06-08 15:25:19 UTC
  - be6905a545 Merge pull request #24465 from jfindlay/unknown_ppa
  - 19c912866d catch exception from softwarerepositories

- **ISSUE #24296**: (objectcx) mount.mount calls file.mkdir with incorrect named argument (refs: #24464)

- **PR #24464**: (jfindlay) fix typo in modules/mount.py @ 2015-06-08 15:25:07 UTC
  - 58d1ea8fe8 Merge pull request #24464 from jfindlay/file mkdir
  - 6e8c44500 fix typo in modules/mount.py

- **ISSUE #24434**: (dkiser) multimaster failover fails due to logic from issue #23611 (refs: #24461)

- **PR #24461**: (dkiser) fix for #24434 @ 2015-06-08 15:24:53 UTC
  - 4f332a71c6 Merge pull request #24461 from dkiser/multimaster_minion_fix

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3040 Chapter 30. Release Notes
- 1944a743d7 fix for #24434

- **PR #24479**: (ahu1) change "path" to "name" for "file" operations @ 2015-06-07 17:56:11 UTC
  - 8917416d39 Merge pull request #24479 from ahu1/patch-1
  - 7d6b60c79d change "path" to "name" for "file" operations

- **PR #24475**: (rallytime) Back-port #24454 to 2015.5 @ 2015-06-07 01:29:32 UTC
  - **PR #24454**: (rhetzog) Strip extraneous newline character added in last environment variable (refs: #24475)
  - 86185b6ea Merge pull request #24475 from rallytime/bp-24454
  - a793c192a6 Avoid extraneous newline character added in last environment variable

- **ISSUE #24407**: (aboe76) Please expand salt module random (refs: #24420)

- **PR #24474**: (rallytime) Back-port #24420 to 2015.5 @ 2015-06-07 01:29:11 UTC
  - **PR #24420**: (aboe76) added random integer module to mod_random.py (refs: #24474)
  - 61658b78c8 Merge pull request #24420 from rallytime/bp-24420
  - 42194b04ad Fix lint error and update versionadded to 2015.5.3
  - 3613c9659 added random integer module to mod_random.py

- **ISSUE #24397**: (kiorky) on debian: states.apt should use virtualname as it shadows system apt module (refs: #24398, #24400, #24399)
  - **PR #24399**: (kiorky) Versionvirtual (refs: #24398)
  - **PR #24398**: (kiorky) VirtualName for states.apt (refs: #24399) @ 2015-06-05 17:40:04 UTC
    - c0ff4110ab Merge pull request #24398 from makinacorpus/aptv
    - 785d27707f VirtualName for states.apt
• PR #24447: (jayeshka) adding states/rabbitmq_policy unit test case. @ 2015-06-05 15:26:11 UTC
  - 36263405be Merge pull request #24447 from jayeshka/rabbitmq_policy_states-unit-test
  - 9b038abd63 adding states/rabbitmq_policy unit test case.
• PR #24446: (jayeshka) adding states/rabbitmq_plugin unit test case. @ 2015-06-05 15:25:33 UTC
  - 8445a3f28d Merge pull request #24446 from jayeshka/rabbitmq_plugin_states-unit-test
  - cb0c99a012 adding states/rabbitmq_plugin unit test case.
• PR #24426: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-06-05 03:59:11 UTC
  - 9cc3808758 Merge pull request #24426 from basepi/merge-forward-2015.5
  - eafa20cdbe Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
    * 83f853b6ea Merge pull request #24405 from jacksontj/2014.7
      - 2c7afaeebf Fix for #24276
    * cef919c602 Merge pull request #24395 from hvnsweeting/handle-exception-get-file
      - bb798a0224 handle exceptions when received data is not in good shape
    * efa1a94b4 Merge pull request #24305 from twangboy/win_path_docs
      - 368042536 Fixed pylint error caused by P... added r
    * be42a4bb11 triple double quotes to triple single quotes
    * 77cd930bba Added documentation, fixed formatting
• ISSUE #24309: (steverweber) missing docs (refs: #24429)
• PR #24429: (jacobhammons) Salt cloud doc updates, build errors and bug fixes @ 2015-06-05 00:27:38 UTC
  - 5d738b88f8 Merge pull request #24429 from jacobhammons/cloud-doc-updates
  - 1f7a13d6f9 Salt cloud doc updates, build errors and bug fixes Refs #24309
• PR #24408: (rallytime) Backport #24392 to 2015.5 @ 2015-06-04 20:22:09 UTC
  - PR #24392: (quixoten) Fix "No such file or directory" in grains/core.py (refs: #24408)
  - cdffcc02cfe Merge pull request #24408 from rallytime/bp-24392
  - f7461b3cd3 Use path found by salt.utils.which
• PR #24380: (rallytime) Backport #24357 to 2015.5 @ 2015-06-04 20:13:51 UTC
  - PR #24357: (zhujinhe) fix invoke issues of Jinja Macros example (refs: #24380)
  - a6a1f87cd9 Merge pull request #24380 from rallytime/bp-24357
  - f08c75015 fix invoke issues of Jinja Macros example
• ISSUE #24358: (pengyao) Netapi SSH client don’t support ssh_user and ssh_passwd arguments (refs: #24388)
• PR #24388: (pengyao) fixes #24358 @ 2015-06-04 20:07:40 UTC
  - 86ec99dbd9 Merge pull request #24388 from pengyao/sshclient-kwarg
  - 5c08ca4bb4 fixes #24358
• ISSUE #22958: (highlyunavailable) Weird error when typoing a command (refs: #24367)
• PR #24367: (terminalmage) Improve error message when module does not exist @ 2015-06-04 20:07:12 UTC
  - 72d2eaeda9 Merge pull request #24367 from terminalmage/issue22958
- d0d7a5481c Improve error message when module does not exist

**ISSUE #23101: (gravyboat)** Create a docs page for labels (refs: #23387)

**PR #24412: (jfindlay)** backport #23387 @ 2015-06-04 20:06:03 UTC

- **PR #23387: (rallytime)** Add some "What are all these labels for?" documentation (refs: #24412)
- a628778e3c Merge pull request #24412 from jfindlay/bp-23387
- bf85772042 Make sure the parameters are in the correct order
- 9f53809cde Add "* Change" label parameters
- b27a15e774 Remove "workaround" wording
- 9ff35a959 Some small fixes
- 54a7089fd6 Link the new labels doc in contributing and hacking docs
- 375695e696 Add pull request label definitions
- de945638d3 Add Feature Request label definition
- 684f291bd4 Add issue definition and augment functional areas section
- 2da13dd525 Start a "what are all of these labels for?" doc

**ISSUE #24154: (ssgward)** Exception when running cp.get_url (refs: #24336)

**PR #24336: (twangboy)** Added line to give more descriptive error @ 2015-06-04 19:56:00 UTC

- 485116c2cc Merge pull request #24336 from twangboy/fix_cp_get_url
- 37b11f931c Added line to give more descriptive error

**PR #24413: (techhat)** Add more namespaced functions to GoGrid driver @ 2015-06-04 19:51:22 UTC

- b3d39cc0e8 Merge pull request #24413 from techhat/gogridnamespace
- 1b397cb6fe Adding blank line
- da08cc9aac Add more namespaced functions to GoGrid driver

**ISSUE #24397: (kiorky)** on debian: states.apt should use virtualname as it shadows system apt module (refs: #24398, #24400, #24399)

**PR #24399: (kiorky)** Versionvirtual (refs: #24398) @ 2015-06-04 18:02:22 UTC

- **PR #24398: (kiorky)** VirtualName for states.apt (refs: #24399)
- 27f109bd76 Merge pull request #24399 from makinacorpus/versionvirtual
- 235c78ddf8 Use apt_pkg.version_compare if available
- 1c0cd459f8 Reindent block to isolate conflict on merge forward
- 699e9ab64 Use var to isolate conflict on merge forward

**PR #24371: (joejulian)** 2015.5 tls module tests @ 2015-06-04 15:20:16 UTC

- deae68889 Merge pull request #24371 from joejulian/2015.5_tls_module_tests
- 4e5dee1e25 Add @destructiveTest decorator to destructive tests
- 274bbd4d43 Accept results from older pyOpenSSL
- 161f913522 All cert info should be in UTC always
- 9affcca766 See the whole diff if dict compare fails
- Ignore extensions for now. Resolve this as part of fixing issue 24338.
- Mask lint warning for unused imported module
- Do not test if PyOpenSSL is not installed
- Add tls tests

- **PR #24403**: (jayeshka) adding states/process unit test case. @ 2015-06-04 15:19:01 UTC
  - Merge pull request #24403 from jayeshka/process_states-unit-test
  - fcb71fb35e adding states/process unit test case.

- **PR #24402**: (jayeshka) adding states/pyenv unit test case. @ 2015-06-04 15:18:11 UTC
  - Merge pull request #24402 from jayeshka/pyenv_states-unit-test
  - 5f263ab48b adding states/pyenc unit test case.

- **PR #24401**: (jayeshka) adding states/powerpath unit test case. @ 2015-06-04 15:17:46 UTC
  - Merge pull request #24401 from jayeshka/powerpath-states-unit-test
  - 632f838838 Merge pull request #24401 from jayeshka/powerpath-states-unit-test
  - 49ff9272ce adding states/powerpath unit test case.

- **ISSUE #24397**: (kiorky) on debian: states.apt should use virtualname as it shadows system apt module (refs: #24398, #24400, #24399)

- **PR #24400**: (kiorky) Aptversion @ 2015-06-04 15:17:19 UTC
  - 0a6e5e0d96 Merge pull request #24400 from makinacorpus/aptversion
  - e15cb936b5 Use apt_pkg.version_compare if available
  - 953725a563 Fix too much quoting in apt.version_cmp

- **PR #24385**: (jeanpralo) Fix salt.modules.dockerio.start method @ 2015-06-04 15:00:22 UTC
  - a904055d28 Merge pull request #24385 from jeanpralo/Fix-binds-dockerio.start
  - a0fed313fa binds dict if not specified should remain to none otherwise docker-py will try to create a new host config and all volume and ports binds are lost. config should be done at the creation of the container not when we start it

- **PR #24381**: (justinta) Disabled flaky test to review later @ 2015-06-04 14:57:43 UTC
  - 9890bc4e43 Merge pull request #24381 from jtiand/seed_test
  - 7570ae9132 Disabled flaky test to review later

- **ISSUE #23342**: (philipsd6) salt-ssh 2015.2.0rc2 fails when target doesn’t have lspci available (refs: #24382)

- **PR #24382**: (basepi) [2015.5] Handle CommandExecutionError in grains commands, Fixes #23342 @ 2015-06-04 12:44:04 UTC
  - b3fa8f6fcb Merge pull request #24382 from basepi/grainscommandnotfound23342
  - 85b91d64cc Handle CommandExecutionError in grains commands

- **PR #24379**: (Starblade42) Fixes an issue where Pagerduty states/modules couldn’t find their profile in the Pillar @ 2015-06-04 12:41:13 UTC
  - 52587a4fc1 Merge pull request #24379 from Starblade42/2015.5
  - b93dc8f6c8 linting!
  - 2dd5904119 Fixes an issue where Pagerduty states/modules couldn’t find its profile in the Pillar

- **PR #24366**: (terminalmage) Use yes "$\n" instead of printf "\n" for pecl commands @ 2015-06-03 21:28:58 UTC
Salt Documentation, Release 3002.5

- 3ca35d1ec3 Merge pull request #24366 from terminalmage/pecl-yes
- dcd9ad8b6e Use yes $'n' instead of printf 'n' for pecl commands

**ISSUE #24284**: (kiorky) systemd lxc containers need use_vt=True at lxc-start stage (refs: #24348)
- PR #548: (Lanzaa) Salt is now platform dependent. Use get_python_lib(1) (refs: #24348)

**PR #24348**: (kiorky) Try to close input pipes before calling lxc-start @ 2015-06-03 19:38:07 UTC
- 86a3b317c6 Merge pull request #24348 from makinacorpus/lxcpre
- 0cb11a2767 lxc: typo
- d71efa6d66 Try to close input pipes before calling lxc-start

### 30.2.92 Salt 2015.5.4 Release Notes

**release** 2015-08-13

Version 2015.5.4 is a bugfix release for 2015.5.0.

**Statistics**

- Total Merges: 247
- Total Issue References: 138
- Total PR References: 312

**Contributors**: 92 (0xf10e, AkhterAli, BretFisher, DmitryKuzmenko, EvaSDK, GideonRed-zz, JohannesEbke, Oro, TheBigBear, TronPaul, UtahDave, ahus1, alekti, alexandrsushko, amontalban, andre-luiz-dos-santos, aneeshsusa, anlutro, asyncscrc, attiasr, babilen, basepi, binet, bclermont, bechtoldt, blackmailx, bobrik, cachelout, colekovalski, cro, d--j, davidjh, denmat, derBroBro, dkiser, diskell, egarbi, fleaflicker, garethgreenaway, gmcwhistler, gtmanfred, hasues, isbm, jacksonjt, jacobhammons, jahamn, jarpy, jasonkeene, jakeshka, jfindlay, jleroy, jmdecal, jodv, joejulian, jquist, justinta, kev009, klyr, l2ol33rt, loa, lomeroe, martinhoefling, mgwilliams, nicholascapo, niq000, nnadphok, nyushi, oeuftete, opdude, pcdummy, pcn, peterdemin, puneflk, rallytime, matulat, s0undt3ch, silenius, sjorge, stanislavb, steverweber, supertom, t0rrant, tankywoo, techhat, terminalmage, thatch45, tony-cocco, twangboy, uvsmtid, vr-jack, yanatan16, zyio)

**Bug Fixes**

- The cron.present state now correctly defaults to state ID as identifier.

**Salt-Cloud Changes**

- When querying for VMs in the digital_ocean_v2 cloud driver, the number of VMs to include in a page was changed from 20 (default) to 200 to reduce the number of API calls to Digital Ocean.
- The vmware salt-cloud driver was back-ported from the develop branch in order for installations of Salt that are older than 2015.8.0 to be able to use the vmware driver without stack-tracing on various deprecation paths that were implemented in the 2015.8.0 release.
Changelog for v2015.5.3..v2015.5.4


- **PR #26292**: (jquast) Rabbitmq 3.2.4 on Ubuntu has "...done.", not "...done" @ 2015-08-13 19:53:29 UTC
  - 0a5d1307c4 Merge pull request #26292 from jquast/backport-ubuntu-rabbitmq-fix
  - 39e6f53bc2 Rabbitmq 3.2.4 on Ubuntu has ...done. not ...done, change the if to be more portable
- **PR #26296**: (jquast) bugfix missing 'runas=None' for rabbitmqctl cmds (backport to 2015.5) @ 2015-08-13 19:52:40 UTC
  - 21cc3c8bf6 Merge pull request #26296 from jquast/bugfix-runas-rabbitmqctl-2015.5
  - eb77320786 bugfix missing 'runas=None' for rabbitmqctl cmds
- **ISSUE #25618**: (twangboy) Fix reg.py to work with the registry properly (refs: #26268)
- **PR #26293**: (jfindlay) Fix #26268 @ 2015-08-13 19:48:06 UTC
  - **PR #26268**: (twangboy) Multiple improvements to reg executionmod and state mod (refs: #26293)
  - ee59d14d7 Merge pull request #26293 from jfindlay/reggie
  - 91ea9e6556 add versionadded to reg exec and state mods
  - 3348bd726c9 fix state/reg unit tests
  - 3f74a389ce return test results when test=True
  - a1274c438d I might have fixed some tests... I might have made them worse
  - 7393ad5a8 Fixed some lint
  - 787c88a283 Multiple improvements to reg executionmod and state mod
- **ISSUE #25192**: (deuscapturus) 2015.5.2 boto_cloudwatch_alarm.present not working. (refs: #26290)
- **PR #26290**: (rallytime) Only call convert_to_arn when action name is provided @ 2015-08-13 18:48:58 UTC
  - 5dd5ac1198 Merge pull request #26290 from rallytime/fix-25192
  - a1f90fa070 Only call convert_to_arn when action name is provided
- **PR #26288**: (bbinet) allow to delete grains which value is False @ 2015-08-13 18:24:36 UTC
  - c81dc0b62f Merge pull request #26288 from bbinet/grains-absent-fix
  - f46722aeb allow to delete grains which value is False
- **ISSUE #24882**: (nmadhok) salt.states.openstack_config.present and salt.states.openstack_config.absent make changes when test=True (refs: #26263)
- **PR #26263**: (rallytime) Don't make changes when test=True for openstack present/absent funcs @ 2015-08-13 16:30:31 UTC
  - 65ab5aa495 Merge pull request #26263 from rallytime/fix-24882
  - 86b8161d22 Mock test key in __opts__ dict
  - 298685bb2 Don't make changes when test=True for openstack present/absent funcs
- **ISSUE #24484**: (bailsman) clouds/ec2.py: create_snapshot throws exception (refs: #26265)
- **PR #26265**: (rallytime) Don't stacktrace on query return in ec2.create_snapshot @ 2015-08-13 16:28:48 UTC
  - 3d1a9cfedd Merge pull request #26265 from rallytime/fix-24484
  - 4975300591 Don't stacktrace on query return in ec2.create_snapshot
• **PR #26285**: (stanislavb) Remove explicit version from instance identity URL @ 2015-08-13 16:25:32 UTC
  
  - 5778cb3f01 Merge pull request #26285 from stanislavb/2015.5
  - 1f18f4f91e Remove explicit version from instance identity URL

• **PR #26275**: (cachedout) Re-init modules on multi-master reconnect @ 2015-08-13 15:52:50 UTC
  
  - 679dc089c0 Merge pull request #26275 from cachedout/mm_reinit
  - 1e0473c04a Re-init modules on multi-master reconnect

• **PR #26273**: (garethgreenaway) Fixes to schedule module in 2015.5 @ 2015-08-13 15:34:43 UTC
  
  - 75ff28779 Merge pull request #26273 from garethgreenaway/2015_5_schedule_list_show_jobs_enabled
  - 1aad4b1b4f Jobs are enabled by default but schedule.list does not show an enabled jobs as being enabled by default. This change fixes that.

• **ISSUE #24483**: (bailsman) clouds/ec2.py: del_root_vol_on_destroy and del_all_vols_on_destroy not working (refs: #26271)

• **PR #26271**: (rallytime) Fix del_root_vol_on_destroy and del_all_vols_on_destroy functionality on ec2 @ 2015-08-12 23:22:47 UTC
  
  - 10af22775a Merge pull request #26271 from rallytime/fix-24483
  - 139fbb93bc Fix del_root_vol_on_destroy and del_all_vols_on_destroy functionality on ec2

• **ISSUE #25958**: (anlutro) Cron identifier does not default to state ID as documented (refs: #26219)

• **PR #26219**: (anlutro) cron: make identifier default to state ID @ 2015-08-12 18:42:33 UTC
  
  - 8e1b5da2e0 Merge pull request #26219 from alprs/fixed-cron_identifier_default
  - 1f02e171b cron: fix a typo in the tests
  - a86b1b7f94 add release note about cron state changes
  - 9511e3927e cron: read full length of multi-line comments
  - 9b18c9050 cron: more descriptive tests, updated to reflect new behavior
  - f22ad837c3 cron: change identifier default value to False
  - ad444b6e7b cron identifier: default to state id

• **ISSUE #26207**: (fullermd) group members setting fails with obscure error message on FreeBSD (refs: #26237)

• **PR #26257**: (rallytime) Back-port #26237 to 2015.5 @ 2015-08-12 18:40:35 UTC
  
  - PR #26237: (silienius) fix issue #26207 (refs: #26257)
  - eebcdae533 Merge pull request #26257 from rallytime/bp-26237
  - d57fbc6a40 Add versionadded to new members function
  - dad1920626 fix issue #26207

• **PR #26258**: (nmadhok) Fix permission on tests/runtests.py on 2015.5 branch @ 2015-08-12 18:40:04 UTC
  
  - d7e8169df0 Merge pull request #26258 from nmadhok/fix-permission
  - d9445d333 Fix permission on tests/runtests.py on 2015.5 branch

• **PR #26261**: (nmadhok) Correct spelling of integration in docs @ 2015-08-12 18:14:48 UTC
  
  - 74b7003c7b7 Merge pull request #26261 from nmadhok/doc-fix-2015.5
  - 714f9766e7 Correct spelling of integration in docs
• PR #26247: (nmadhok) Initial commit of unit tests for vmware cloud driver @ 2015-08-12 16:58:24 UTC
  – de00c181f8 Merge pull request #26247 from nmadhok/vmware-cloud-test-2015.5
  – 6cc5f97e92 Lint Fix
  – a8bf65ec1f Initial commit of unit tests for vmware cloud driver
• PR #26246: (nmadhok) Backport additions to VMware cloud driver from develop to 2015.5 branch @ 2015-08-12 15:11:26 UTC
  – d14d7b2c0e Merge pull request #26246 from nmadhok/vmware-cloud-driver-additions-2015.5
  – 5227aa94bc Backport additions to VMware cloud driver from develop to 2015.5 branch
• PR #26239: (opdude) Fixed documentation to match function name @ 2015-08-12 14:48:52 UTC
  – 87b3d00d7b3 Merge pull request #26239 from Unity-Technologies/2015.5
  – fc18751710 Fixed documentation to match function name
• PR #26232: (garethgreenaway) Fix to trust_key in gpg module for 2015.5. @ 2015-08-12 04:48:27 UTC
  – a93b96c9ba Merge pull request #26232 from garethgreenaway/2015_5_gpg_trust_key_fix
  – e174e41887 Fix to trust_key in gpg module for 2015.5.
• ISSUE #25802: (jefftucker) Running module "npm.list" fails on Windows for masterless minion (refs: #26084)
• PR #26084: (twangboy) Added python_shell=True, quoted user input @ 2015-08-10 21:29:35 UTC
  – b57da552ff Merge pull request #26084 from twangboy/fix_25802
  – 4503ed5b34 Fixed but with multiple packages, was causing tests to fail
  – f05e3e72a3 Merge branch '2015.5' of https://github.com/saltstack/salt into fix_25802
• PR #26183: (cro) Fix LDAP configuration issue. @ 2015-08-10 19:09:41 UTC
  – c3814137a3 Merge pull request #26183 from cro/anonldap2
  – aa5e9c80b5 Lint roller
  – 79833e3f8a Cherry pick index.rst change.
  – 99f2c27399 Documentation update for anonymous bind issue.
  – 793ed7b96 Cherry pick master.py groups check
• PR #26186: (jacobhammons) regenerated man pages @ 2015-08-10 19:07:44 UTC
  – 3233ed4675 Merge pull request #26186 from jacobhammons/man-page-updates
  – bf2dad913f regenerated man pages
• PR #26182: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-08-10 19:00:10 UTC
  – d48bce7598 Merge pull request #26182 from basepi/merge-forward-2015.5
  – 32f5345d7d Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
    • abdf2935c4 Merge pull request #26116 from corux/fix-escape-content
      · fd913dcd36 Append/prepend: search for full line with escaped content
    • 106356d97d Merge pull request #26088 from jacobhammons/master-finger
      · 133d5f7885 some small changes
      · d220c83f77 master_finger configuration docs switch a script to use https:// instead of http://
        Refs #25751

Chapter 30. Release Notes
• 4bd4bc41f2 Merge pull request #26047 from jacobhammons/win-downloads
  - 7c162d181c Updated windows download links in the docs to https://repo.saltstack.com Refs #25961

• ISSUE #25998: (driskell) Event subsystem discarding required events during --batch breaking it for slow running commands (refs: #26000)

• PR #26000: (driskell) Implement full event caching for subscribed tags @ 2015-08-10 18:57:17 UTC
  - f39780f8ce Merge pull request #26000 from driskell/fix_discarded_events
  - 65ac975dd Implement full event caching for subscribed tags Require all multitasking contexts to subscribe to their events so one call to get_event for one tag does not discard events that should be saved for a subsequent call to get_event with another tag. Use blocking get_event in batching with very small timeout. Fixes #25998

• PR #26175: (rallytime) Back-port #26153 to 2015.5 @ 2015-08-10 18:22:32 UTC
  - PR #26153: (loa) Fix dockerio state documentation typo (refs: #26175)
  - c01b4cf150 Merge pull request #26175 from rallytime/bp-26153
  - 9a263067e9 Fix dockerio state documentation typo

• ISSUE #26024: (jpic) lxc_conf_unset in cloud.profile is ignored (refs: #26147)

• PR #26177: (rallytime) Back-port #26147 to 2015.5 @ 2015-08-10 18:22:01 UTC
  - PR #26147: (martinhoefling) Fixes #26024 (refs: #26177)
  - ca80f33bdf Merge pull request #26177 from rallytime/bp-26147
  - 323c3ab53c Fixes #26024

• ISSUE #21082: (clinta) master_type failover does not failover on DNS errors (refs: #25404)

• PR #26179: (rallytime) Back-port #25404 to 2015.5 @ 2015-08-10 18:21:50 UTC
  - PR #25404: (DmitryKuzmenko) Fixed minion failover to next master on DNS errors. (refs: #26179)
  - 1213b8d706 Merge pull request #26179 from rallytime/bp-25404
  - 52ab9fc1fb Fixed minion failover to next master on DNS errors.

• ISSUE #26112: (wt) state.template fails with unclear error with template with only an include (refs: #26180)

• PR #26180: (jfindlay) fix processing of state.template @ 2015-08-10 18:21:38 UTC
  - b319c5ec04 Merge pull request #26180 from jfindlay/templ_env
  - 5e46ea4441 check type of matches in render_state before iterating
  - c80299b918 insert saltenv to render_state args in state.template

• ISSUE #26162: (nnadhok) VMware cloud driver create function failing with traceback on latest develop (refs: #26172)

• PR #26172: (nnadhok) [Backport] Make sure variable is a dictionary before popping something from it. @ 2015-08-10 16:42:50 UTC
  - ef5a4a7f6 Merge pull request #26172 from nnadhok/backport-cloud-fix-26163-2015.5
  - 0fb5f8ac8 Make sure variable is a dictionary before popping something from it.

• ISSUE #26098: (rdinoff) SALT.STATES.SLACK Doc update (refs: #26168)

• PR #26168: (cachedout) Fix slack docs @ 2015-08-10 14:57:18 UTC
- 2545df052a Merge pull request #26168 from cachedout/fix_slack_docs
- f421a936dc Fix slack docs

**ISSUE #24106:** (nvx) fileclient.py#get_url ignores HTTP Auth again (2015.5 regression) (refs: #26127)

**PR #26127:** (garethgreenaway) Fixes to salt.utils.http related to cp.get_file_str bug. @ 2015-08-10 14:38:25 UTC
- 9e6b0d6165 Merge pull request #26127 from garethgreenaway/2015_5_24106
- 66f640086a one more lint error
- 317a8ec75c Disabling pylint for W0633, auth should only ever be a sequence at this location.
- 08eca4fe4 lint fixes.
- 7046b84ac8 Fixing a bug where cp.get_file_str would not work if using http(s) URLs with authentication. The salt.utils.http library in 2015.5 defaults to using urllib instead of requests and there was no authentication support added. This PR adds authentication support. #24106

**ISSUE #26141:** (nmadhok) salt-cloud VMware driver fails with error in parsing configuration file (refs: #26140)

**ISSUE #25809:** (o-sleep) vmware cloud module error message (refs: #26140)

**ISSUE #25625:** (steverweber) cloud vmware driver does not provide mac_address unless vmware tools is running (refs: #26137, #26140)

**PR #26140:** (nmadhok) VMware cloud driver fixes @ 2015-08-10 13:15:58 UTC
- 3b65e1dd91 Merge pull request #26140 from nmadhok/vmware-cloud-fixes
- a1899b436c Correct provider name in profile example
- 1f21876d21 Lint fixes
- 0bd4fc9e6c Additional fixes to format_instance functions to display more information available
- 4ee1b777e9 Change double quotes to single quotes in add_host config example
- e132f06a5c Change double quotes to single quotes in provider configuration example
- ad9899b07e Display error in else condition if connection is unsuccessful and does not have msg attribute. Fixes #25809

**ISSUE #25625:** (steverweber) cloud vmware driver does not provide mac_address unless vmware tools is running (refs: #26137, #26140)

**PR #26137:** (steverweber) use device mac address if vmtools not active @ 2015-08-09 03:05:36 UTC
- 474a250414 Merge pull request #26137 from steverweber/vmware_macaddress_fix
- 2589e389f0 use device mac address if vmtools not active

**PR #26119:** (jodv) Backport eauth bugfix to 2015.5 @ 2015-08-09 02:19:52 UTC
- 8a33797737 Merge pull request #26119 from jodv/backport_eauth_bugfix
- e1a7bb5e7b fix pylint error (unnecessary 'finally' clause may swallow exceptions unintentionally)
- 5b5b4d8fe9 Fix issue with mixed user and group eauth perms
- 0d2ca6a7a5 Return all relevant perms on login

**PR #26135:** (cro) Fix proxy minions in 2015.5 and significantly update documentation. @ 2015-08-09 02:19:21 UTC
- 2b8d8e0ca Merge pull request #26135 from cro/pm20155_2
- 28329ff55 These tests make no sense now that the proxy interface is module based and not object based.
- b17b65d4de Fix lint.
- f4263c8f17 Fix lint.
- 6927251c09 Fix lint.
- 08f1a43ff0 Fix lint.
- 8261158b5a Fix lint.
- b5e643b9cd Whoops…Don’t log the entire proxy dictionary—might have sensitive stuff in it.
- 2acf3c5a3 Remove some debugging statements, change some others to ‘info’ level.
- 37de6af686 More proxy minion updates
- e79a182108 More proxy minion updates
- 3b746ac2f6 Update to reflect refactor to LazyLoader
- 5d390d3a5f Updates post meeting with Rick
- d1213ce4a0 Updates post meeting with Rick
- ddb07c6937 Fix proxyobject confusion, now called proxymodule
- 9b1599d436 Update to reflect refactor to LazyLoader

- **PR #26132**: (TheBigBear) minor edit @ 2015-08-08 21:05:34 UTC
  - 2705b4a36a Merge pull request #26132 from TheBigBear/patch-5
  - 1d624d77bc minor edit

- **ISSUE #25915**: (ari) FreeBSD pkg install fails (refs: #26133)

- **PR #26133**: (amontalban) Fixed #25915 in salt/modules/pkgng.py and salt/states/pkg.py @ 2015-08-08 21:05:05 UTC
  - 3eac28f0f9 Merge pull request #26133 from amontalban/fix-bug-25915
  - 6b0f4fca05 Fixed #25915 in salt/modules/pkgng.py and salt/states/pkg.py

- **PR #26111**: (anlutro) Better error messages when virtualenv creation fails @ 2015-08-07 21:42:09 UTC
  - 19c42b8a3e Merge pull request #26111 from alprs/fixed-virtualenv_fails_message
  - b2913acc48 virtualenv: better error messages when creation fails

- **ISSUE #26093**: (freedba) archive.tar bug (refs: #26110)

- **PR #26110**: (jfjindlay) check for sources before adding them to cmd str @ 2015-08-07 21:33:23 UTC
  - 1d624d77bc check for sources before adding them to cmd str

- **PR #26106**: (vr-jack) Update __init__.py @ 2015-08-07 21:15:55 UTC
  - 2d71b3612 Merge pull request #26106 from vr-jack/2015.5
  - 5664de6610 Update __init__.py

- **ISSUE #25983**: (jmdcal) Trying to get md5 of local zip (refs: #25984)

- **PR #26101**: (rallytime) Back-port #25984 to 2015.5 @ 2015-08-07 18:56:26 UTC
  - **PR #25984**: (jmdcal) Support local files without md5sum (refs: #26101)
  - 40d41741c1 Merge pull request #26101 from rallytime/bp-25984
- 3d279c0713 Pylint Fix
- cced16af9f4 Support local files without md5sum

- PR #26080: (techhat) Fix string checking in s3fs @ 2015-08-06 23:36:09 UTC
  - d03c2d549e Merge pull request #26080 from techhat/fixlower
  - 8717a36963 Fix string checking in s3fs

- ISSUE #26039: (basepi) Update scheduler docs to use orchestrate instead of overstate (refs: #26079)
  - PR #26079: (cachedout) Update docs to remove state.over from cachedout/issue_26039
    - 8717a36963 Fix string checking in s3fs

- ISSUE saltstack/salt-bootstrap#650: (Deshke) salt-minion install bug on ubuntu 14.04 tornado>=4.0 (refs: #26065)
  - ISSUE saltstack/salt-bootstrap#633: (neilmb) Bootstrap install fails on python-requests dependency (refs: #26065)
  - ISSUE saltstack/salt-bootstrap#632: (JulianGindi) python-requests : Depends: python-urllib3 (>= 1.7.1) but it is not installable (refs: #26065)
  - ISSUE saltstack/salt-bootstrap#631: (DavidJFelix) Stable broken in 15.04 even with -P (refs: #26065)
  - ISSUE #636: (pille) restrict access to salt:// filesystem (refs: #`saltstack/salt-bootstrap#638`_)
  - ISSUE #613: (thatch45) Add timeout option to publish.publish (refs: #`saltstack/salt-bootstrap#634`_)
    - PR saltstack/salt-bootstrap#638: (stanislavb) Use prefix /usr for centos git install (refs: #26065)
    - PR saltstack/salt-bootstrap#634: (BretFisher) bugfix: exit git root before removing it (refs: #26065)

- PR #26065: (s0undt3ch) [2015.5] Update to latest bootstrap stable release v2015.06.08 @ 2015-08-06 17:09:35 UTC
  - 5570408597 Merge pull request #26065 from s0undt3ch/hotfix/bootstrap-script-2015.5
  - a430a62b01 Update to latest bootstrap stable release v2015.06.08

- ISSUE #25994: (gmcwhistler) module.ilo tempfile creation in __execute_cmd results in TypeError: cannot concatenate 'str' and 'int' objects (refs: #26061)

- PR #26061: (gmcwhistler) Patch for issue #25994 @ 2015-08-06 17:07:34 UTC
  - 83a1922196 Merge pull request #26061 from gmcwhistler/2015.5

- ISSUE #26063: (saltstack-bot) not working with salt-cloud shows unknown locale error (refs: #26064)

- PR #26064: (s0undt3ch) Don't stacktrace when trying to get the default locale. @ 2015-08-06 16:11:05 UTC
- 073fb2bdea Merge pull request #26064 from s0undt3ch/issues/26063-unknown-locale
- 8c6ab78b1d Don't stacktrace when trying to get the default locale.

- **PR #26048**: (jacobhammons) Updated windows download links in the docs to https://repo.saltstack.com @ 2015-08-05 22:59:50 UTC
  - 0f44761d6e Merge pull request #26048 from jacobhammons/win-downloads2
  - 75243b61cf Updated windows download links in the docs to https://repo.saltstack.com

- **PR #26044**: (rallytime) Make sure the key we're comparing is also lowercase @ 2015-08-05 19:23:54 UTC
  - dedcadc37e Merge pull request #26044 from rallytime/fix-25616
  - c2e3803810 Make sure the key we're comparing is also lowercase

- **PR #26042**: (jfindlay) fix test mode logic in state docs @ 2015-08-05 19:23:07 UTC
  - f005bdfce6 Merge pull request #26042 from jfindlay/result
  - a83059ca01 fix test mode logic in state docs

- **PR #26036**: (nicholascapo) survey.hash: Remove manually printed text @ 2015-08-05 19:21:59 UTC
  - 51ab6864b7 Merge pull request #26036 from nicholascapo/survey.hash_follow_out_flag
  - 439ee9831c survey.hash: Remove manually printed text

- **PR #26030**: (opdude) Fix a bug in choco version that returned odd data @ 2015-08-05 16:30:25 UTC
  - 6a4d18eba6 Merge pull request #26030 from Unity-Technologies/hotfix/fix-choco-pkg-version-2015-5
  - 3dd96c0638 Fix a bug in choco version that returned odd data

- **PR #26032**: (jfindlay) add test logic to state reult doc @ 2015-08-05 16:28:32 UTC
  - c96d3bb55e Merge pull request #26032 from jfindlay/result
  - 0fd180e106 add test logic to state reult doc

- **PR #26020**: (alekti) Correctly resolve conflict merging pull 25750 to 2015.5 @ 2015-08-05 14:16:58 UTC
  - PR #25750: (alekti) Issue #23764 regression (refs: #25750)

- **ISSUE #23764**: (es1o) source_hash from local file is not supported. (refs: #26031, #25750)
- 4b9d7426cc Add file as supported protocol for file source_hash. Fixes #23764.

- **ISSUE #22241**: (masterkorp) Salt master not properly generating the map (refs: #25358)

- **PR #26016**: (basepi) Revert "Deep merge of pillar lists" @ 2015-08-05 04:59:52 UTC
  - **PR #25358**: (dkiser) Deep merge of pillar lists (refs: #26016)
  - 53f7aadcd7 Merge pull request #26016 from basepi/revert.25358
  - 8a0e8e0460 Revert "Deep merge of pillar lists"

- **ISSUE #12255**: (eliasp) 'system.set_computer_desc' fails with non-ASCII chars (refs: #25992)

- **PR #25992**: (twangboy) Refactor win_system.py @ 2015-08-05 04:54:18 UTC
  - 200bff7538 Merge pull request #25992 from twangboy/fix_12255
  - 0502897635 Fixed the lint... again
  - 6f85d6b9af Fixed some lint
  - 4195803e56 Merge pull request #3 from jfindlay/win_sys
    - 9156bbd33e update win_system exec mod unit tests
  - e92add95b5 Gated ctypes import, fixed some lint
  - d7670fd80a Refactor win_service.py

- **ISSUE #25948**: (twangboy) Fix uncomment function to handle spaces (refs: #26002)

- **PR #26002**: (twangboy) Fixed regex to account for comment character followed by whitespace @ 2015-08-04 22:28:11 UTC
  - c168159750 Merge pull request #26002 from twangboy/fix_25948
  - ba1a57e582 Fixed regex to account for comment character followed by whitespace

- **ISSUE #25949**: (godlike64) layman.add does not work with unofficial overlays (refs: #25970)

- **PR #25970**: (jfindlay) accept addition of layman overlay @ 2015-08-04 15:42:28 UTC
  - 4ad2422da1 Merge pull request #25970 from jfindlay/layman
  - 237a9e18b3 accept addition of layman overlay

- **PR #25971**: (basepi) [2015.5] salt.modules.reg Add spaces for strings split across multiple lines @ 2015-08-04 15:39:48 UTC
  - f136c6c1c0 Merge pull request #25971 from basepi/reg,typos
  - bb001a0c0e Add spaces for strings split across multiple lines

- **PR #25990**: (rallytime) Back-port #25976 to 2015.5 @ 2015-08-04 14:36:53 UTC
  - **PR #25976**: (fleaflicker) Typo in help output (refs: #25990)
  - 6383d8a78d Merge pull request #25990 from rallytime/bp-25976
  - 5f6dc0ce85 Typo in help output

- **PR #25996**: (attiasr) fix msiexec package remove @ 2015-08-04 14:36:31 UTC
  - 9f88b75dc0 Merge pull request #25996 from attiasr/patch-1
  - 5fbd5fcd94 fix msiexec package remove

- **ISSUE #25863**: (peterdemin) pkg.installed fails on already installed package if it is in versionlock.list (refs: #25864)
• PR #25966: (rallytime) Back-port #25864 to 2015.5 @ 2015-08-03 18:48:26 UTC
  – PR #25864: (peterdemin) #25863 state.pkg.installed fix (refs: #25966)
  – 2dca8d959b Merge pull request #25966 from rallytime/bp-25864
  – 0f7f9637b4 #25863 fix - state.pkg: do preflight check only for non-installed packages
• PR #25967: (rallytime) Back-port #25917 to 2015.5 @ 2015-08-03 18:48:02 UTC
  – PR #25917: (jmdcal) adding missing format string (refs: #25967)
  – a6d8e541ed Merge pull request #25967 from rallytime/bp-25917
  – 82b7e14a1f adding missing format string
• PR #25895: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-08-03 17:12:37 UTC
  – 87d028b302 Merge pull request #25895 from basepi/merge-forward-2015.5
  – 56e43c8f88 Fix lint
  – 93a182d9ea Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
    * d93eb87c16 Merge pull request #25750 from alekti/2014.7
      * 9ec3ae96d4 Add file as supported protocol for file source_hash. Fixes #23764.
    * 3a15df22ac Merge pull request #25704 from cachedout/master_type_2014.7
      * c95886c9a7 Ensure prior alignment with master_type in 2014.7
    * d1b9362a73 Merge pull request #25657 from MrCitron/pattern-carbon-returner-2014.7
      * 9634351fcf Add the ability to specify a base pattern for metrics path used by the carbon
        returner
      * 93a182d9ea Merge pull request #25633 from AkhterAli/2014.7
        * 29be4bee11 Update loader.py
• ISSUE #25850: (ssgward) Need to add packages to --versions-report (refs: #25941)
• PR #25941: (jfindlay) add timelib to dependency versions @ 2015-08-03 12:23:42 UTC
  – 98955057e0 Merge pull request #25941 from jfindlay/time_lib
  – 464f7a404c add timelib to dependency versions
• PR #25951: (garethgreenaway) Log when event.fire and event.fire_master fail. @ 2015-08-03 00:19:45 UTC
  – dcc6883b24 Merge pull request #25951 from garethgreenaway/event_fire_failed_log_why
  – 7f20454427 If we're unable to fire an event, log the cause so we know what happened
• ISSUE #25838: (grep4linux) docs disable_modules documentation typo (refs: #25942)
• PR #25942: (jfindlay) typo in minion doc @ 2015-07-31 23:34:55 UTC
  – 4143cece3bf Merge pull request #25942 from saltstack/lover
  – 7e121de907 Update minion.rst
• PR #25938: (jacobhammons) Doc on using syndic with multimaster @ 2015-07-31 23:05:05 UTC
  – PR #14690: (jacksontj) Multi syndic (refs: #25938)
  – 1f20c65b88 Merge pull request #25938 from jacobhammons/syndic-multimaster
  – ac0a8ff711 Doc on using syndic with multimaster
ISSUE #25839: (twangboy) ALLUSERS="1" should be a default when installing MSI's (refs: #25848)

PR #25848: (twangboy) Added allusers="1" when installing msi @ 2015-07-31 20:33:17 UTC
- 18a9a65e1f Merge pull request #25848 from twangboy/fix_25839
- e797739a1b Removed normalize_name function
- ad7fdda68b Adder allusers="1" when installing msi

PR #25898: (jfindlay) clarify and expand syndic docs @ 2015-07-31 20:01:23 UTC
- de0a0593c2 Merge pull request #25898 from jfindlay/syndic_doc
- 4795952847 rework syndic doc
- a25d0eabef update syndic doc to conform to style

ISSUE #25852: (UtahDave) Salt loader is not loading Salt vars in reactor python renderer (refs: #25927)

PR #25927: (jacksontj) Pass actual renderers to the Reactor's Compiler @ 2015-07-31 20:00:17 UTC
- d1f3da548a Merge pull request #25927 from jacksontj/2015.5
- c7479aa0a Pass actual renderers to the Reactor's Compiler

ISSUE #25810: (nvx) winpkg highstate fails when a new package name contains a unicode character (refs: #25921)

PR #25921: (cachedout) Handle non-ascii in state log @ 2015-07-31 17:41:30 UTC
- 331fc121a8 Merge pull request #25921 from cachedout/issue_25810
- 8074c545ea Handle non-ascii in state log

PR #25919: (TheBigBear) Minor update to msi un-installer info @ 2015-07-31 17:39:48 UTC
- 20fb8da8d4 Merge pull request #25919 from TheBigBear/patch-4
- c994d22696 Minor update to msi un-installer info
- PR #25982: (sjorge) salt.modules.smartos_* limit to global zone only (refs: #25905)

PR #25905: (rallytime) Back-port #25982 to 2015.5 @ 2015-07-30 23:24:19 UTC
- PR #25892: (TheBigBear) Update 7-zip msi un-installer instructions (refs: #25905)
- 9a569da4ee Merge pull request #25905 from rallytime/bp-25892
- 333fbdde30 Update 7-zip msi un-installer instructions

ISSUE #25577: (yellow1912) Wrong indentation in document (refs: #25696)

PR #25890: (rallytime) Back-port #25698 to 2015.5 @ 2015-07-30 23:12:09 UTC
- PR #25892: (TheBigBear) Update 7-zip msi un-installer instructions (refs: #25905)
- 7d68e49d98 Update schedule.py

ISSUE #25650: (jacksontj) state.running documentation is incorrect (refs: #25894)

ISSUE #24042: (whiteinge) The state_events setting is not documented (refs: #25894)

ISSUE #23788: (k5jj) functions in drac.py module do not match documentation (refs: #25894)
• ISSUE #21296: (Lothiraldan) Possible minion enumeration using saltutil.find_job and eauth (refs: #25894)

• PR #25894: (jacobhammons) Minor doc fixes @ 2015-07-30 23:02:34 UTC
  – 8abb21e206 Merge pull request #25894 from jacobhammons/bug-fixes
  – 3f3db4d8e Additions for #24042
  – db2129b199 Minor doc bug fixes Refs #24042 Refs #25650 Refs #21296 Refs #23788

• ISSUE #24036: (arthurlogilab) [salt-cloud] Protect against passing command line arguments as names for the --destroy command in map files (refs: #25877)

• PR #25877: (rallytime) Protect against passing a map file in addition to VM names with --destroy @ 2015-07-30 21:55:45 UTC
  – 9e1680182 Merge pull request #25877 from rallytime/fix-24036
  – 0211972fd7 Whitespace fix
  – c6715e0404 Protect against passing a map file in addition to VM names with --destroy
  – 3aaa604138 Clean up stacktrace when referenced map file doesn’t exist

• PR #25870: (rallytime) Back-port #25824 to 2015.5 @ 2015-07-30 21:54:35 UTC
  – PR #25824: (klyr) Fix get_managed() in file.py module for local files (refs: #25870)
  – c4c9e0b6e6 Merge pull request #25870 from rallytime/bp-25824
  – 1f4837b793 Fix get_managed() in file.py module for local files

• PR #25885: (t0rrant) Update Debian changelog @ 2015-07-30 20:05:59 UTC
  – a2326af68 Merge pull request #25885 from t0rrant/patch-3
  – 3f73900c61 Update Debian changelog

• ISSUE #25478: (zyio) salt-ssh - Unable to locate current thin version (refs: #25862)

• ISSUE #25026: (sylvia-wang) salt-ssh "Failure deploying thin" when using salt module functions (refs: #25862)

• PR #25875: (rallytime) Back-port #25862 to 2015.5 @ 2015-07-30 17:34:02 UTC
  – PR #25862: (zyio) Adding SCP_NOT_FOUND exit code (refs: #25875)
  – 6c5b23e582 Merge pull request #25875 from rallytime/bp-25862
  – d7f44d5e01 Needed popen.wait().
  – 25f8042e41 Checking for scp existance. Using command -v should be POSIX
  – 6b2100a30b New exitcode for SCP not found Re: https://github.com/saltstack/salt/issues/25478 and https://github.com/saltstack/salt/issues/25026

• PR #25873: (rallytime) Back-port #25855 to 2015.5 @ 2015-07-30 17:33:55 UTC
  – PR #25855: (puneetk) Patch 3 (refs: #25873)
  – 6d6c5525e Merge pull request #25873 from rallytime/bp-25855
  – f1f7ce25b7 Update saltmod.py
  – 23a6806008 Update saltmod.py

• PR #25871: (rallytime) Back-port #25829 to 2015.5 @ 2015-07-30 17:33:43 UTC
  – PR #25829: (peterdemin) Fixed typo in salt.states.saltmod.function doc string (refs: #25871)
  – bf8bd38da7 Merge pull request #25871 from rallytime/bp-25829
Salt Documentation, Release 3002.5

- a80c47ee10 Fixed typo in salt.states.saltmod.function doc string

- **ISSUE #24002**: (csakoda) File lock contention on windows minions causing highstate crash (refs: #25788)

- **PR #25869**: (rallytime) Back-port #25788 to 2015.5 @ 2015-07-30 17:33:33 UTC
  - PR #25788: (opdude) Catch a hard crash when running highstate on windows (refs: #25869)
  - f26310ff0b Merge pull request #25869 from rallytime/bp-25788
  - 65b18e3b34 Catch a hard crash when running highstate on windows

- **ISSUE #19532**: (stolendog) salt-ssh running git clone with not root user (refs: #25853)

- **PR #25853**: (davidjb) Make ssh-id-wrapper accessible to non-root users @ 2015-07-30 16:49:47 UTC
  - 810fbb8bfb Merge pull request #25853 from davidjb/ssh-id-wrapper-non-root
  - 6492bde192 Make ssh-id-wrapper accessible to non-root users

- **ISSUE #25447**: (spo0nman) SaltMaster is crippled with Minion Re-Authentication (refs: #25856)

- **PR #25856**: (jfindlay) expand minion reauth scalability documentation @ 2015-07-30 15:33:17 UTC
  - b6805b068a Merge pull request #25856 from jfindlay/intro_scale
  - 5921461bb1 style and usage consistency in intro_scale
  - 51dc7cacfb whitespace adjustments in intro_scale
  - 39a82467f1 expand minion reauth scalability documentation

- **ISSUE #25801**: (themalkolm) Update docs that salt.states.winrepo requires roles:salt-master in grains. (refs: #25840)

- **PR #25840**: (jfindlay) add note to winrepo state docs about required grain @ 2015-07-30 14:38:27 UTC
  - 423d528b73 Merge pull request #25840 from jfindlay/winrepo_master
  - b6cfdf4f3b add note to winrepo state docs about required grain

- **ISSUE #25827**: (0xf10e) "Deprecating Code" doesn't mention Usage of warn_until() w/ Release Names (refs: #25846)

- **PR #25846**: (jfindlay) rework deprecation documentation for release names @ 2015-07-30 13:26:21 UTC
  - 754c8be719 Merge pull request #25846 from jfindlay/depr_code
  - d377f42c48 rework deprecation documentation for release names

- **ISSUE #23288**: (UtahDave) cp.push fails to recreate empty files. (refs: #25833)

- **PR #25833**: (jahamn) Allows cp.push to recreate empty files @ 2015-07-29 16:14:48 UTC
  - d9ab4bb989 Merge pull request #25833 from jahamn/fix-cp.push-not-recreating-empty-files
  - eac19fbf33 Allows cp.push to recreate empty files

- **ISSUE #11474**: (JensRantil) pkgrepo.managed key_url: salt:// always use base env (refs: #25831)

- **PR #25831**: (rallytime) Add salt:// to key_url options to docs for pkgrepo.managed @ 2015-07-29 15:38:43 UTC
  - 6f93d4784 Merge pull request #25831 from rallytime/fixed-11474
  - 067ea78e9 Add salt:// to key_url options to docs for pkgrepo.managed

- **ISSUE #22699**: (arthurlogilab) salt-cloud fails on KeyError when given a nonexistent action (refs: #25807)

- **PR #25807**: (rallytime) Provide helpful error when using actions with a mapfile @ 2015-07-29 15:30:15 UTC
  - 72b3633383 Merge pull request #25807 from rallytime/fixed-22699
- 3f3005c746 Use handle_exception function in cloud cli.py
- f91edf3a33 Provide helpful error when using actions with a mapfile

- **PR #25818:** (jfindlay) fix autoruns list @ 2015-07-29 15:29:20 UTC
  - 71497ad0d Merge pull request #25818 from jfindlay/autoruns_users
  - c2dbb65982 fix autoruns list for modern windowsen

- **PR #25826:** (anlutro) Check that "onchanges" is a list @ 2015-07-29 15:00:28 UTC
  - 98b324c5f8 Merge pull request #25826 from alprs/fix-onchanges_type_check
  - 7992a3f0f4 state.py: check that "onchanges" is a list

- **ISSUE #25258:** (nickw8) windows minion repo not updating (refs: #25798, #25763)

- **PR #25798:** (twangboy) Fixed stacktrace on package name not found @ 2015-07-28 22:40:14 UTC
  - ad07dc1e27 Merge pull request #25798 from twangboy/fix_25258
  - aa19c2b8f8 Fixed stacktrace on package name not found

- **ISSUE #25437:** (lorenzgordon) Stacktrace on Windows when running pkg.list_pkgs (refs: #25598, #25793)

- **PR #25797:** (twangboy) Changed repocache back to cached_repo @ 2015-07-28 22:39:32 UTC
  - **PR #25763:** (twangboy) Fix 25437 (refs: #25797)
  - 4a3844a606 Merge pull request #25797 from twangboy/fix_revert_in_25763
  - 81d5b5ee55 Changed repocache back to cached_repo

- **PR #25793:** (rallytime) Back-port #25730 to 2015.5 @ 2015-07-28 19:37:34 UTC
  - **PR #25730:** (sjorg) patchelf lives in pkgsrc (refs: #25793)
  - 823f0ce350 Merge pull request #25793 from rallytime/bp-25730
  - 937779eb51 patchelf lives in pkgsrc

- **PR #25792:** (rallytime) Back-port #25688 to 2015.5 @ 2015-07-28 19:37:17 UTC
  - **PR #25688:** (bclermont) Don't acquire lock if there is no formatter (refs: #25792)
  - 4109ae55f9 Merge pull request #25792 from rallytime/bp-25688
  - 0aa1416b6b Don't acquire lock if there is no formatter

- **PR #25796:** (cachedout) Remove debug from docs @ 2015-07-28 17:35:59 UTC
  - 737fb1410c Merge pull request #25796 from cachedout/debug_doc
  - 33bfdf3b0b Remove debug from docs

- **ISSUE #24920:** (voileux) module.zpool.create on character device is not possible by salt (refs: #25749)

- **PR #25749:** (jahamn) Allow zpool.create on character devices @ 2015-07-28 16:01:40 UTC
  - a658753eff Merge pull request #25749 from jahamn/fix-zpool-special-char-device-support
  - 361f6cc23f Allow zpool.create on character devices

- **PR #25685:** (twangboy) Fixed regex issues with comment and uncomment @ 2015-07-28 15:29:49 UTC
  - 1fae76d53c Merge pull request #25685 from twangboy/fix_25594
  - a904e8329b Fixed another test failure...
  - aa077d3a86 Fixed more tests... justin findlay helped me...
- 87c8f8dfb5 Fixed some tests... maybe...
- 3c1a73f16c Fixed some lint
- b3e44e342c Fixed states to work with comment_line
- b1cedd1153 Fixed regex issues with comment and uncomment

- **ISSUE #25437**: (lorendgordon) Stacktrace on Windows when running pkg.list_pkgs (refs: #25598, #25763)

- **PR #25763**: (twangboy) Fix 25437 (refs: #25797) @ 2015-07-28 15:29:27 UTC
  - 0db29402a Merge pull request #25763 from twangboy/fix_25437
  - 9e70c800b9 The real fix for 25437 that doesn't break other crap
  - d7347e01e5 Revert "Fixed problem trying to load file with name of boolean type"
  - cf57712e Merge branch '2015.5' of https://github.com/saltstack/salt into fix_25437

- **PR #25752**: (thatch45) State top saltenv @ 2015-07-28 01:02:10 UTC
  - c1236595f9 Merge pull request #25752 from thatch45/state_top_saltenv
  - 65d6ec0659 don't override the minion config unless requested
  - 26c858361c Add state_top_saltenv to the config chain
  - 36a3b674a7 Add raet support for state_top_saltenv
  - 66fa025b13 Add saltenv top file support to salt master_opts
  - 4a1c53309b Add state_top_saltenv support

- **ISSUE #25717**: (twangboy) Problem with chocolatey module not loading (refs: #25755)

- **PR #25755**: (twangboy) Fixed problem with dunder functions not being passed @ 2015-07-27 19:31:22 UTC
  - f367acb253 Merge pull request #25755 from twangboy/fix_25717
  - 10e410504d Fixed problem with dunder functions not being passed

- **ISSUE #25352**: (m03) reg.absent reporting incorrect results (refs: #25648)

- **PR #25648**: (twangboy) Clarified functionality of reg module, fixed state to work with new module @ 2015-07-27 19:30:33 UTC
  - f05ae95f9c Merge pull request #25648 from twangboy/fix_25352
  - d6496ce814 Merge pull request #1 from jfindlay/reg
    - 3b0cc6592a fix reg unit tests
    - b473fb7827 Fixed some tests... maybe...
    - ff7296d983 Fixed some more lint
    - 7a71f5ea6a Merge branch '2015.5' of https://github.com/saltstack/salt into fix_25352
    - f57b2b8e7a Fixed some line, added documentation
    - d78fa97a71 Merge branch '2015.5' of https://github.com/saltstack/salt into fix_25352
    - 99d9518af8 Clarified functionality of reg module, fixed state to work with new module

- **ISSUE #25154**: (uvsmtid) All data mixed on STDOUT together should generate valid JSON output (refs: #25722)

- **ISSUE #25153**: (uvsmtid) Multiple results should generate valid JSON output (refs: #25722)

- **PR #25740**: (rallytime) Back-port #25722 to 2015.5 @ 2015-07-27 16:08:40 UTC
- PR #25722: (uvsmtid) Minor docs changes to emphasize JSON output problems without --static option (refs: #25740)
  - 29c66d85a4 Merge pull request #25740 from runtime/bp-25722
  - c33eb813ea Change docs for --static option with JSON - text B
  - 89dd2ec8fb Change docs for --static option with JSON - text A

- PR #25739: (rallytime) Back-port #25709 to 2015.5 @ 2015-07-27 16:08:27 UTC
  - PR #25709: (colekowski) add direct-io-mode to mount_invisible_options (refs: #25739)
  - PR #25699: (rallytime) Back-port #25660 to 2015.5 (refs: #25709)
  - PR #25660: (colekowski) add glusterfs’ direct-io-mode to mount_invisible_keys (refs: #25699, #25709)
  - 135b03e53b Merge pull request #25739 from runtime/bp-25709
    - 6d0bce2418 add direct-io-mode to mount_invisible_options

- PR #25738: (rallytime) Back-port #25671 to 2015.5 @ 2015-07-27 16:08:23 UTC
  - PR #25671: (miq000) added a parameter so verifying SSL is now optional instead of hard-coded (refs: #25738)
  - 095a923b6e Merge pull request #25738 from rallytime/bp-25671
    - 525cd0589 added a parameter so verifying SSL is now optional instead of hard-coded

- ISSUE #25229: (rmatulat) Module git.latest kills target directory when test=True (refs: #25608)

- PR #25737: (rallytime) Back-port #25608 to 2015.5 @ 2015-07-27 16:08:18 UTC
  - PR #25608: (rmatulat) Fix: prevent git.latest from removing target (refs: #25737)
  - 05fbfe64e9 Merge pull request #25737 from rallytime/bp-25608
    - df85d734bc Fix: prevent git.latest from removing target Fixes #25229 While force=True and test=True
git.latest should not remove the target directory.

- PR #25733: (davidjb) Avoid IndexError when listing mounts if mount output ends in newline @ 2015-07-27 16:08:05 UTC
  - 9817fc55d6 Merge pull request #25733 from davidjb/mount-fix
    - 6d0bce2418 Test length of comps when listing mounts

- ISSUE #22460: (onmeac) Command setm is not supported (yet) (refs: #25705)

- PR #25705: (blackduckx) Support for setm augeas command. @ 2015-07-27 16:07:10 UTC
  - 82ba390b7b Merge pull request #25705 from blackduckx/augeas-setm
    - cad02b46e Augeas: fix pylint and documentation
    - ee9786c4 Support for setm augeas command.

- PR #25703: (cachedout) Return to str for master_type for 2015.5 @ 2015-07-27 16:06:22 UTC
  - f732be365d Merge pull request #25703 from cachedout/master_type_2015_5
    - 0dc28ad364 Return to str for master_type for 2015.5

- ISSUE #25144: (johnccfm) user.present on Windows fails to add user to groups if group name contains a space (refs: #25702)

- PR #25702: (twangboy) Fixed win_user module for groups with spaces in the name @ 2015-07-27 15:06:33 UTC
  - dea3d31578 Merge pull request #25702 from twangboy/fixed_25144
• ISSUE #25351: (m03) win_servermanager.list_installed failing with "IndexError: list index out of range" (refs: #25711)

• PR #25711: (twangboy) Fixed problem with win_servermanager.list_installed @ 2015-07-27 15:05:48 UTC
  - 186af9b54d Merge pull request #25711 from twangboy/fix_25351
  - 82fa911931 Fixed problem with win_servermanager.list_installed

• ISSUE #25435: (yee379) progressbar dependency missing (refs: #25714)

• PR #25714: (cachedout) Display warning when progressbar can't be loaded @ 2015-07-25 00:10:13 UTC
  - ad8456eeed Merge pull request #25714 from cachedout/issue_25435
  - 44f34684ef Included note in help docs
  - 4e2fee17cc Display warning when progressbar can't be loaded

• PR #25699: (rallytime) Back-port #25660 to 2015.5 (refs: #25709) @ 2015-07-24 22:11:40 UTC
  - PR #25660: (colekwalski) add glusterfs' direct-io-mode to mount_invisible_keys (refs: #25699, #25709)
  - a0969ff74a Merge pull request #25699 from rallytime/bp-25660
  - 85c636d7a1 add glusterfs' direct-io-mode to mount_invisible_keys

• ISSUE #25689: (anlutro) Minion log in salt-ssh (refs: #25694)

• PR #25694: (s0undt3ch) Salt-SSH fix for #25689 @ 2015-07-24 21:41:57 UTC
  - fe82956f4f Merge pull request #25694 from s0undt3ch/2015.5
  - afba3bde90 Use a relative un-nested path to the salt-call logfile.
  - 6309f22a65 Fix wrong variable assignment
  - c312592e81 Have cookie JAR's respect the configured cachedir

• ISSUE #25250: (wipfs) 'force' option in copy state deletes target file (refs: #25461, #25710)

• PR #25710: (jahamm) Integration Testcase for Issue 25250 @ 2015-07-24 20:57:33 UTC
  - fb4744b2f8 Merge pull request #25710 from jahamm/integration-test-for-issue-25250
  - 24f653e963 Integration Test for Issue 25250

• PR #25680: (basepi) [2015.5] Move cmd.run jinja aliasing to a wrapper class to prevent side effects @ 2015-07-24 19:52:10 UTC
  - PR #25049: (terminalmage) Fix cmd.run when cross-called in a state/execution module (refs: #25680)
  - 18c9d545d Merge pull request #25049 from terminalmage/cmd.run
  - 61363f798b Use new-style classes
  - 4a50bac1c2 Fix typo
  - 36410389dc Name the Nitrogen release
  - 77679596f9 Make ALIASES global
  - 01c209ef9c Fix some aliases references
  - 1644641c06 Move cmd.run aliasing to a wrapper class to prevent side effects

• PR #25682: (basepi) [2015.5] Fix parsing args with just a hash (#) @ 2015-07-24 19:52:01 UTC
  - 6a5c6dc0d0 Merge pull request #25682 from basepi/cmd.runalias
- 8d75c1b882 Fix parsing args with just a hash (#)

- **PR #25695**: (stanislavb) Configurable AWS region & region from IAM metadata @ 2015-07-24 19:36:40 UTC
  - d300ef0d81 Merge pull request #25695 from stanislavb/expose-aws-region-config-and-fetch-region-from-metadata
  - 595da6252e Configurable AWS region & region from IAM metadata

- **PR #25645**: (kev009) Fix pkgng provider to work with a sources list and the underlying pkg... @ 2015-07-24 16:33:18 UTC
  - ea0d295d49 Merge pull request #25645 from kev009/freebsd-pkgng-add
  - ee2cb57fa Fix pkgng provider to work with a sources list and the underlying pkg-add(8)

- **PR #25677**: (aneeshusa) Fix pacman.list_upgrades when refresh=True. @ 2015-07-24 16:30:06 UTC
  - 2cad79c2f0 Merge pull request #25677 from aneeshusa/fi-pacman-list-upgrades-when-refreshing
  - 7062a4eae Fix pacman.list_upgrades when refresh=True.

- **ISSUE #25674**: (UtahDave) file.managed with contents parameter uses wrong line endings on Windows (refs: #25675)

- **PR #25675**: (UtahDave) Use OS line endings with contents on file.managed @ 2015-07-24 16:29:50 UTC
  - 18e739b812 Merge pull request #25675 from UtahDave/2015.5local
  - d0f9d01db Use OS line endings with contents on file.managed

- **PR #25676**: (basepi) Update release candidate docs to 2015.8.0rc2 @ 2015-07-23 20:29:37 UTC
  - 7a14f51636 Merge pull request #25676 from basepi/2015.8.0rc2releasedocs
  - 882d11836b Update release candidate docs to 2015.8.0rc2

- **ISSUE #25665**: (nmadhok) salt-cloud VMware driver fails with KeyErrors if there's any existing machine in the VMware infrastructure in (invalid state) (refs: #25666)

- **PR #25666**: (nmadhok) Check if the properties exist before looping over them causing KeyError @ 2015-07-23 17:55:40 UTC
  - c36b714401 Merge pull request #25666 from nmadhok/vmware-cloud-fix_2015.5
  - 8c812299e6 Check if the properties exist before looping over them causing KeyErrors Fixes #25665

- **PR #25656**: (anlutro) Fix locale detection in debian/gentoo @ 2015-07-23 16:46:40 UTC
  - 36d04b2954 Merge pull request #25656 from alprs/fi-locale_detection
  - a260236942 change variable name
  - dd2a188e05 fix tests
  - aefd0fb374 code formatting
  - e58d222fb0 fix locale detection in debian/gentoo

- **PR #25661**: (rallytime) Back-port #25624 to 2015.5 @ 2015-07-23 16:26:48 UTC
  - **PR #25624**: (bobrik) Fix typo in get_routes example for debian_ip (refs: #25661)
    - b1c1735aae Merge pull request #25661 from rallytime/bp-25624
    - 4e1fca15e Fix typo in get_routes example for debian_ip

- **ISSUE #15209**: (hubez) file.manage: source_hash not working with s3:// (2014.7.0rc1) (refs: #25638)

- **PR #25662**: (rallytime) Back-port #25638 to 2015.5 @ 2015-07-23 16:26:40 UTC
- PR #25638: (TronPaul) fix bad merge in 99fc7ec (refs: #25662)
- 6a2843dee2 Merge pull request #25662 from rallytime/bp-25638
- 90d833d5d2 fix bad merge 99fc7ec

- ISSUE #25143: (zizkebab) pillar_opts default behavior is not reflected in the docs (refs: #25644)
- PR #25644: (cachedout) pillar doc fix @ 2015-07-22 22:57:23 UTC
  - 00f4689fe3 Merge pull request #25644 from cachedout/issue_25413
  - 8ce6166c pillar doc fix

- ISSUE #25540: (dennisjac) salt highstate schedule cannot be removed (refs: #25642)
- PR #25642: (cachedout) Warn on pillar schedule delete @ 2015-07-22 22:04:12 UTC
  - aeeb53ed6 Merge pull request #25642 from cachedout/issue_25540
  - 74f6693c Warn on pillar schedule delete

- ISSUE #25437: (lorendorgon) Stacktrace on Windows when running pkg.list_pkgs (refs: #25598, #25763)
- PR #25598: (twangboy) Fixed problem trying to load file with name of boolean type @ 2015-07-22 17:07:49 UTC
  - 7b79e433f1 Merge pull request #25598 from twangboy/fix_25437
  - c53e11d42c Fixed problem trying to load file with name of boolean type

- ISSUE #25323: (terminalmage) unit.modules.tls_test fails with older mock (refs: #25604)
- PR #25604: (terminalmage) Move patching of mock_open to within test @ 2015-07-22 16:53:55 UTC
  - f4a38a8aee Merge pull request #25604 from terminalmage_FIX-mock_open
  - 123b8ee1cb Fix mock_open patch
  - af8283af42 Move patching of mock_open to within test

- ISSUE saltstack/salt-bootstrap#630: (jf) Ubuntu 12.04 (and maybe 12.x?): apt-get installing python-requests causes digital_ocean_v2 to fail with "[ERROR ] Failed to get the output of 'digital_ocean.avail_sizes()': 'Response' object has no attribute 'text'" (refs: #25609)
  - PR saltstack/salt-bootstrap#627: (nyushi) Fix tornado installation on ubuntu (refs: #25609)

- ISSUE #25609: (s0undt3ch) [2015.5] Update the bootstrap script to latest release v2015.07.22 @ 2015-07-22 16:28:52 UTC
  - 224484df7c Merge pull request #25609 from s0undt3ch/fix-bootstrap-script-2015.5
  - 96a8568336 Update the bootstrap script to latest release v2015.07.22

- ISSUE #21912: (rvora) pkg.latest not updating the package on CentOS though yum reports an update available (refs: #25603)
- PR #25603: (terminalmage) Add version_cmp function to yumpkg.py @ 2015-07-22 15:42:29 UTC
  - 07eb78c79f Merge pull request #25603 from terminalmage/issue21912
  - 99e532ba74 Add versionadded directive
  - 8a1765c6f6 Add version_cmp function to yumpkg.py
  - 457e273 Fix references to __salt__['version_cmp']
  - a19fa2296a Avoid using single-letter variable

- ISSUE #25560: (dennisjac) scheduled highstate runs don't return results to the job cache (refs: #25590)
• PR #25590: (garethgreenaway) 2015.5 scheduled jobs return data @ 2015-07-21 21:57:42 UTC
  - 69ef81caba Merge pull request #25590 from garethgreenaway/25560_2015_5_schedule_return_data
  - 19ca0c0b40 Switching default in 2015.5 for whether job data in returned to the mater job_cache.

• PR #25584: (rallytime) Back-port #24054 and #25576 to 2015.5 @ 2015-07-21 21:16:38 UTC
  - PR #25576: (pcn) s3fs breaks when fetching files from s3 (refs: #25584)
  - PR #24054: (mgwilliams) s3.head: return useful data (refs: #25584)
  - 9ffe686e7 Merge pull request #25584 from rallytime/bp-24054-and-25576
    - aa95983a5 s3fs breaks when fetching files from s3
    - 1667673c8e head: return useful data

• ISSUE #23626: (mirko) salt state 'ssh_known_hosts' doesn't take 'port' into account (refs: #25589)

• PR #25589: (jahamn) Fixes ssh_known_host not taking port into account @ 2015-07-21 21:15:06 UTC
  - a966e439d1 Merge pull request #25589 from jahamn/fix-ssh_known_host-not-taking-port-into-account
  - 8db7a82d Fixed pylint e8303 errors
  - 6abad92f66 Fixed pylint errors
  - 8ae6b12909 Merge branch '2015.5' of https://github.com/saltstack/salt into Fix-ssh_known_host-not-taking-port-into-account

• PR #25573: (EvaSDK) Do not execute bootstrap script twice @ 2015-07-21 18:20:04 UTC
  - PR #25465: (EvaSDK) 2015.5.3 LXC module fixes (refs: #25573)
  - df74f2c3ad Merge pull request #25573 from EvaSDK/2015.5.3-lxc-fixes
  - 49c996f9a1 Use a more persistent tmp directory
  - 96a67f8e0 Do not execute bootstrap script twice

• ISSUE #25532: (attiasr) salt/metadata/win_pkg.py list_pkgs is broken (encoding issues) (refs: #25580, #25556)

• PR #25580: (attiasr) use explicit utf-8 decoding (#25532) @ 2015-07-21 15:40:49 UTC
  - 79a9009a79 Merge pull request #25580 from attiasr/patch-1
  - 4b7dc96919 use explicit utf-8 decoding (#25532)

• ISSUE #25206: (jfindlay) fullname issues with user.add state on windows (refs: #25568)

• PR #25568: (twangboy) Fixed win_useradd module to add fullname @ 2015-07-21 14:30:25 UTC
  - 6edf196533 Merge pull request #25568 from twangboy/fix_25206
  - fbee445c6d Commented out a pylint error
  - 4b56dc3893 Fixed win_useradd module to add fullname

• ISSUE #21041: (deuscapturus) state module gem.installed not working on Windows. (refs: #25430, #25561, #25428)

• PR #25561: (twangboy) Fixed the gem module to work on windows... without injection @ 2015-07-20 21:12:15 UTC
  - PR #25428: (twangboy) Fixed the gem module to work on windows (refs: #25561)
  - 3c320b669 Merge pull request #25561 from twangboy/fix_21041_again
  - aaf335d38d Fixed some line and style issues
- e6d0e5cda7 Merge branch '2015.5' of https://github.com/saltstack/salt into fix_21041_again

- PR #25521: (cachedout) Fix outputter for state.orch @ 2015-07-20 19:30:14 UTC
  - 9e19142c35 Merge pull request #25521 from cachedout/orch_outputter
  - ea40816621 Try/except
  - dd609eb440 Fix outputter for state.orch

- PR #25563: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-07-20 19:27:36 UTC
  - 2117ac8022 Merge pull request #25563 from basepi/merge-forward-2015.5
  - 3bf2f1a722 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - 09ebaceca8 Merge pull request #25416 from cachedout/str_2014_7
      * cc514938a8 Fix broken keyword
          - d67491bb80 Removed the logger as it's not used anymore
          - 5008bfee96 Merge branch '2015.5' of https://github.com/saltstack/salt into fix_21041_again

- PR #25559: (cachedout) Lint win_pkg @ 2015-07-20 17:46:29 UTC
  - 50c257b1d5 Merge pull request #25559 from cachedout/lint_win_pkg
  - 53a00add99 Lint win_pkg

- ISSUE #25532: (attiasr) salt/modules/win_pkg.py list_pkgs is broken (encoding issues) (refs: #25580, #25556)

- PR #25556: (attiasr) fix for #25532 @ 2015-07-20 17:45:11 UTC
  - 7c7015ccda Merge pull request #25556 from attiasr/patch-1
  - 9b224e8d4e fix for #25532

- ISSUE #25538: (stanislavb) S3 ext_pillar configuration requires verify_ssl (refs: #25554)

- PR #25554: (jfindlay) verify_ssl=True for s3 ext pillar @ 2015-07-20 17:43:38 UTC
  - 3c73dab2ce Merge pull request #25554 from jfindlay/verify_ssl
  - ca3ab4e737 verify_ssl=True for s3 ext pillar

- PR #25551: (rallytime) Backport #25530 to 2015.5 @ 2015-07-20 17:43:00 UTC
  - PR #25530: (andre-luiz-dos-santos) The variable name must be last (refs: #25551)
  - e3e2e6718e Merge pull request #25551 from rallytime/bp-25530
  - df5003d7f9 The variable name must be last

- PR #25533: (attiasr) port 445 for windows bootstraping @ 2015-07-20 15:13:06 UTC
  - 3e3441937f Merge pull request #25533 from attiasr/patch-2
  - c7f685977 fix windows bootstrapping

- ISSUE #25432: (gtmanfred) [2015.5.3][raet] raet error with SaltRaetRoadStackJoiner (refs: #25525)

- PR #25525: (gtmanfred) add make _prepare an alias for postinitio @ 2015-07-20 15:12:38 UTC
  - 7fc051f56d Merge pull request #25525 from gtmanfred/2015.5
  - 43950a5bc5 add make _prepare an alias for postinitio

- ISSUE #25511: (rallytime) Make provider --> driver change backward compatible (refs: #25519)
ISSUE #23574: (CedNantes) Failed to Deploy Salt-Minion on a Win 2012 R2 using vmware Cloud Driver from Develop branch (refs: #25519)

PR #25519: (rallytime) Backport vmware driver to 2015.5 branch @ 2015-07-20 15:11:26 UTC
- 725d1a40d0 Merge pull request #25519 from rallytime/backport_vmware
- 35e13eef1d Don't reference driver in older salt versions
- f011890217 Add vmware back-port change to release notes
- 0f4f60b38 Backport vmware driver to 2015.5 branch

PR #25542: (Oro) Fix hipchat.send_message when using API v2 @ 2015-07-20 15:09:13 UTC
- 2f0d695bc0 Merge pull request #25542 from Oro/fix-hipchat-v2-sendmessage
- 3a9f5b037f Fix hipchat.send_message when using API v2

PR #25531: (rallytime) Back-port #25529 to 2015.5 @ 2015-07-18 19:16:10 UTC
- PR #25529: (davidjb) Fix minor typo in best practice example (refs: #25531)
- 390aa7d28f Merge pull request #25531 from rallytime/bp-25529
- 3e24381439 Fix minor typo in best practice example

PR #25528: (davidjb) Fix typo in extend declaration doco @ 2015-07-18 14:22:06 UTC
- 6e811bfdd2 Merge pull request #25528 from davidjb/patch-7
- bfc4f6d85 Fix typo in extend declaration doco

ISSUE #25486: (whiteinge) Highstate outputter not used for state.apply (refs: #25517)

PR #25517: (rallytime) Back-port #25486 to 2015.5 @ 2015-07-17 21:49:26 UTC
- PR #25485: (attiasr) fix file downloads on windows
- b9abd723a7 Merge pull request #25517 from rallytime/bp-25485
- 6c2f3180c2 fix file downloads on windows

ISSUE #25479: (alexandrsushko) multiple mount.mounted of one device (refs: #25483)

PR #25516: (rallytime) Back-port #25483 to 2015.5 @ 2015-07-17 21:49:05 UTC
- PR #25483: (alexandrsushko) Added 'none' to the set of specialFSes (refs: #25516)
- 9cb436fbae Merge pull request #25516 from rallytime/bp-25483
- e0af6e3478 Added 'none' to the set of specialFSes

ISSUE #25493: (blackduckx) Issue with job_args on schedule.add command (refs: #25513)

PR #25513: (garethgreenaway) fixes to schedule.add documentation in 2015.5 @ 2015-07-17 17:03:24 UTC
- daf03eb7c Merge pull request #25513 from garethgreenaway/25493_2015_5_schedule_add_documentation
- bc2414bc4d Fixing documentation for schedule.add when using the job_args parameter, value needs to be be in quotes for the value to be passed in as an array.

PR #25465: (EvaSDK) 2015.5.3 LXC module fixes (refs: #25573) @ 2015-07-17 15:57:54 UTC
- 48050cd287 Merge pull request #25465 from EvaSDK/2015.5.3-lxc-fixes
- 170eb52cc4 Fix use of undefined cmd when install of bootstrap script fails
- 86118f4a7b Install bootstrap script like dns and systemd check scripts in container
- 978e6d56e2 Error out if configdir could not be created when preparing LXC container
- 41b6c3c2bf Fix typo in redirecting shell output to /dev/null
- 456393d4db Fix DNS script cleanup

- ISSUE saltstack/salt-bootstrap#611: (BretFisher) SmartOS doesn’t detect missing git, fails install (refs: #25506)
- ISSUE saltstack/salt-bootstrap#607: (bechtoldt) (git install) change source of init scripts for debian based systems (refs: #25506)
- ISSUE saltstack/salt-bootstrap#602: (rallytime) Ubuntu 14.10 Won’t Bootstrap with Latest Stable (refs: #25506)
- ISSUE saltstack/salt-bootstrap#598: (babilen) Installation fails on Debian 7 due to missing easy_install (refs: #25506)
- ISSUE saltstack/salt#25456: (julienlavergne) [2015.8.0rc1] salt-bootstrap fails to install salt master (refs: #25506)
- ISSUE saltstack/salt#25270: (iggy) [2015.8.0rc1] salt-bootstrap fails to properly install a minion (refs: #25506)
- ISSUE #619: (syphernl) Only send over changed files during state.highstate (refs: #25506)
- ISSUE #2556: (s0undt3ch) [2015.5] Update bootstrap script to latest stable release, v2015.07.17 @ 2015-07-17 15:40:38 UTC
- ISSUE #25454: (mschiff) Regression: salt 2015.5 not working in secure chroot anymore. (refs: #25498)
- PR #25458: (jfindlay) only read /proc/1/cmdline if it exists @ 2015-07-17 15:35:33 UTC
- PR #25487: (rallytime) Back-port #25464 to 2015.5 @ 2015-07-16 16:58:36 UTC
- PR #25482: (oeuftete) Fix docker.running detection of running container @ 2015-07-16 16:58:29 UTC
- 3f695a17cf Merge pull request #25506 from s0undt3ch/hotfix/bootstrap-script
- f85f2b49fd Merge pull request #25506 from s0undt3ch/bootstrap-script
- 331808eb7d Merge pull request #25482 from oeuftete/docker-running-is-running-fix-2015-5
- 3068 Chapter 30. Release Notes
- 7a20eb6f46 Merge pull request #25468 from joejulian/use_pyopenssl_0_10
- 1b7a56a38 Add support for pyOpenSSL > 0.10

**PR #25467:** (rallytime) Add lxml dependency to opennebula docs @ 2015-07-16 15:09:57 UTC
- d169905170 Merge pull request #25467 from rallytime/lxml_dep
- d326f4h586 Add lxml dependency to opennebula docs

**ISSUE #25250:** (wipfs) 'force' option in copy state deletes target file (refs: #25461, #25710)

**ISSUE #24647:** (nmadhok) salt.states.file.copy does not copy the file if it already exists with force=True (refs: #25461)

**PR #25461:** (jahamn) Update file, if force option and content not same @ 2015-07-15 20:15:07 UTC
- 89649456e0 Merge pull request #25461 from jahamn/fixed-file.copy-force-option-deleting-files-without-updating-them
- 3cfe1b6b55 Update file, if force option and content not same

**ISSUE #25431:** (namcois) Digital Ocean v2 reducing API calls by adding per_page (refs: #25438)

**PR #25438:** (rallytime) Reduce digital_ocean_v2 API call frequency @ 2015-07-15 19:40:18 UTC
- 146a81b7c3 Merge pull request #25438 from rallytime/do_v2
- faf4e2a2a3 Add page number change release notes
- da6ab82837 Reduce digital_ocean_v2 API call frequency

**PR #25457:** (jacksontj) Saltnado @ 2015-07-15 17:50:12 UTC
- **PR #25427:** (tony-cocco) Saltnado runner client results in blocking call despite being set-up as Runner.async (refs: #25457)
- cb98d79cdd Merge pull request #25457 from jacksontj/saltndao
- bc32f66b98 Add runner_async endpoint to saltnado
- b043fa9b05 Better name of method process manager is starting

**PR #25459:** (jahamn) Fixed 'defulats' typo in verify.py @ 2015-07-15 16:53:06 UTC
- 3f72eb5486 Merge pull request #25459 from jahamn/fix-defulats-typo-in-verify.py
- 9badf9df67 Fixed 'defulats' typo in verify.py

**PR #25426:** (jquast) bugfix: trailing "...done" in rabbitmq output (backport from 'develop' to 2015.5) @ 2015-07-15 14:48:05 UTC
- 73566188cf Merge pull request #25426 from jquast/2015.5
- 005a7ca2a3 bugfix: trailing "...done" in rabbitmq output

**PR #25433:** (jleroy) Support for IPv6 addresses scopes in network.interfaces (ifconfig) @ 2015-07-15 14:44:09 UTC
- **PR #25151:** (jleroy) Support for IPv6 addresses scopes in network.interfaces (refs: #25274, #25433)
- cfc999062 Merge pull request #25433 from jleroy/ipv6-scope-support-ifconfig
- bc36d05c0c Support for IPv6 addresses scopes in network.interfaces (ifconfig)

**ISSUE #21041:** (deuscapturus) state module gem.installed not working on Windows. (refs: #25430, #25561, #25428)

**PR #25430:** (twangboy) Disabled rbenv execution module for Windows @ 2015-07-15 14:41:18 UTC
• ISSUE #1846: (seanchannel) development dependencies
• PR #25420: (techhat) Move S3 to use AWS Signature Version 4 @ 2015-07-14 22:03:09 UTC
  - 9313804e27 Merge pull request #25420 from techhat/s3sig4
  - 3edf3a14e2 Linting
  - c63c2356be Move S3 to use AWS Signature Version 4
• ISSUE #20441: (deuscapturus) State module file.managed returns an error on Windows and test=Test (refs: #25418)
• PR #25418: (twangboy) Fixed problem with file.managed test=True @ 2015-07-14 21:26:59 UTC
  - 30a41d5f51 Merge pull request #25418 from twangboy/fix_20441
  - d8957s6ec6 Fixed problem with file.managed test=True
• PR #25417: (ahu1) extended documentation about dependencies for dig module @ 2015-07-14 20:49:51 UTC
  - 3805677e93 Merge pull request #25417 from ahus1/patch-1
  - 3cd194ebaf Update dig.py
  - 287f76e3 extended documentation about dependencies
• PR #25411: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-07-14 17:55:26 UTC
  - 4d929071e1 Merge pull request #25411 from basepi/merge-forward-2015.5
  - 33d24514ef Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - 2a1dd1113f Merge pull request #25375 from cachedout/config_fix_2014_7
    • c041f2905f Fix error in config.py for master_type
  - 2590e23d48 Merge pull request #25324 from jacobhammons/doc-theme-updates
    • 8bdf5fc58d Latest help theme updates
• PR #25406: (anlutro) Force arguments to aptpkg.version_cmp into strings @ 2015-07-14 16:15:41 UTC
  - 81bed62d16 Merge pull request #25406 from alprs/fix-apt_version_cmp_types
  - d56f1d1341 force arguments to apt_pkg.version_compare into strings
• PR #25408: (rallytime) Back-port #25399 to 2015.5 @ 2015-07-14 16:09:06 UTC
  • PR #25399: (jarpy) Demonstrate per-minion client_acl. (refs: #25408)
    • cd9ea63ff2 Merge pull request #25408 from rallytime/bp-25399
    • da96ce673 Typos in client_acl ref doc.
  - 50e0ba270 Demonstrate per-minion client_acl.
• PR #25240: (tankywoo) file make os.walk only be called one @ 2015-07-14 16:04:49 UTC
  • ef96b0ce0 Merge pull request #25240 from tankywoo/fix-files-os-walk-multiple-times
  - 8044def1c0 file make os.walk only be called one
• **PR #25395**: (rallytime) Back-port #25389 to 2015.5 @ 2015-07-14 03:26:34 UTC
  - **PR #25389**: (l2ol33rt) Adding entropy note for gpg renderer (refs: #25395)
  - d02f388b08 Merge pull request #25395 from rallytime/bp-25389
  - a086e5ad35 Adding entropy note

• **PR #25392**: (rallytime) Back-port #25256 to 2015.5 @ 2015-07-14 03:25:13 UTC
  - **PR #25256**: (yanatan16) Dont assume source_hash exists (refs: #25392)
  - 008e3295c6 Merge pull request #25392 from rallytime/bp-25256
  - 6b2da4d582 Dont assume source_hash exists

• **PR #25398**: (twangboy) Fix date @ 2015-07-14 03:21:17 UTC
  - 3f278963ae Merge pull request #25398 from twangboy/fix_date
  - 52824f9602 Added /V1 /Z to remove scheduled task after run
  - a055ca79f Changed date of scheduled task to work in other locales

• **PR #25397**: (GideonRed-zz) Introduce standard error output when cli exits with non-zero status @ 2015-07-14 03:20:24 UTC
  - 978d9f7117 Merge pull request #25397 from GideonRed/2015.5
  - ea7ab27f31 Introduce standard error output when cli exits with non-zero status

• **ISSUE #24444**: (michaelkrupp) file.managed does not handle dead symlinks (refs: #25383)

• **PR #25386**: (cachedout) Lint #25383 @ 2015-07-13 21:01:10 UTC
  - **PR #25383**: (jahamn) Fix manage_file function in salt/modules/file.py to handle broken sym... (refs: #25386)
  - 09442abbde Merge pull request #25386 from cachedout/lint_25383
  - 7694299170 Lint #25383

• **ISSUE #24444**: (michaelkrupp) file.managed does not handle dead symlinks (refs: #25383)

• **PR #25383**: (jahamn) Fix manage_file function in salt/modules/file.py to handle broken sym... (refs: #25386) @ 2015-07-13 20:58:23 UTC
  - 47bc61f55 Merge pull request #25383 from jahamn/fix-file.managed_not_handling_dead_symlinks
  - ab17aa160e Fix manage_file function in salt/modules/file.py to handle broken symlinks

• **PR #25369**: (anlutro) Fix aptpkg.version_cmp @ 2015-07-13 20:18:45 UTC
  - c9fe10e7aa Merge pull request #25369 from alprs/fix-apt_version_cmp
  - 6391b15b3e fix aptpkg.version_cmp

• **ISSUE #25337**: (eliasp) salt-call from non-existend cwd backtraces (refs: #25379)

• **PR #25379**: (jfindlay) check for cwd before getting it @ 2015-07-13 19:50:27 UTC
  - beb023892 Merge pull request #25379 from jfindlay/check_wd
  - 6e4547ff38 check for cwd before getting it

• **ISSUE #25320**: (podloucky-init) zypper module list_upgrades broken (2015.5.2) (refs: #25334)

• **PR #25334**: (jfindlay) return all cmd info back to zypper fcn @ 2015-07-13 17:03:29 UTC
  - 274622ad9b Merge pull request #25334 from jfindlay/fix_zyp
- c1e63903e return all cmd info back to zypper fcn

- **PR #25339**: (jfindlay) update orchestration docs @ 2015-07-13 16:04:26 UTC
  - 71859c6593 Merge pull request #25339 from jfindlay/orch_doc
  - 0447808d95 clarify, motivate orchestration docs

- **ISSUE #22241**: (masterkorp) Salt master not properly generating the map (refs: #25358)

- **PR #25358**: (dkiser) Deep merge of pillar lists (refs: #26016) @ 2015-07-13 15:51:01 UTC
  - 90a1ca02a3 Merge pull request #25358 from dkiser/22241_pillar_merge_lists
  - d030e289b3 Deep merge of pillar lists

- **ISSUE #25281**: (shinshenjs) Unless usage in Official Doc syntax error? (refs: #25346)

- **PR #25346**: (bechtoldt) set correct indentation in states/requisites.rst (docs), fixes #25281 @ 2015-07-13 15:34:45 UTC
  - 66c619fd71 Merge pull request #25346 from bechtoldt/issue25281
  - 8eb2ac1dbe set correct indentation in states/requisites.rst (docs), fixes #25281

- **PR #25336**: (terminalmage) Don't try to read init binary if it wasn't found @ 2015-07-13 09:45:30 UTC
  - b122ed931d Merge pull request #25336 from terminalmage/fix-init-grain
  - f473918a53 Don't try to read init binary if it wasn't found

- **PR #25350**: (davidjb) Fix documentation for file.blockreplace @ 2015-07-13 03:41:20 UTC
  - 1805bafc89 Merge pull request #25350 from davidjb/patch-4
  - e13a9fd74e Fix documentation for file.blockreplace

- **ISSUE #19288**: (oba11) AssociatePublicIpAddress doesn't work with salt-cloud 2014.7.0 (refs: #25326, #20972)

- **PR #25326**: (rallytime) Back-port #20972 to 2015.5 @ 2015-07-10 18:49:44 UTC
  - **PR #20972**: (JohannesEbke) Fix interface cleanup when using AssociatePublicIpAddress in #19288 (refs: #25326)
    - b0196fccb7 Merge pull request #25326 from rallytime/bp-20972
    - 51c941f59d Also fix cleanup of interfaces when using AssociatePublicIpAddress in #19288

- **ISSUE #24433**: (chrimi) Salt locale state fails, if locale has not been generated (refs: #25290)

- **PR #25327**: (rallytime) Back-port #25290 to 2015.5 @ 2015-07-10 18:49:37 UTC
  - **PR #25290**: (pcdummy) Simple fix for locale.present on Ubuntu. (refs: #25327)
    - 28450d124e Merge pull request #25290 from rallytime/bp-20972
    - 20032c55f3 Simple fix for locale.present on Ubuntu.

- **ISSUE #24827**: (yermulnik) locale.present doesn't generate locales (refs: #25309)

- **PR #25328**: (rallytime) Back-port #25309 to 2015.5 @ 2015-07-10 17:22:59 UTC
  - **PR #25309**: (davidjb) Format /etc/locale.gen correctly in salt.modules.localemod.gen_locale (refs: #25328)
    - 8f666a24f3 Merge pull request #25328 from rallytime/bp-25309
    - 44d44ec574 Format /etc/locale.gen correctly on gen_locale

- **PR #25322**: (jacobhammons) version change to 2015.5.3 @ 2015-07-10 16:11:24 UTC
• PR #25308: (jacksontj) Make clear commands trace level logging @ 2015-07-10 14:20:06 UTC
  – PR #24737: (jacksontj) Move AES command logging to trace (refs: #25308)
  – dbf59b6cb Merge pull request #25308 from jacksontj/2015.5
  – 60fc770ba2 Make clear commands trace level logging

• ISSUE #24520: (nvx) Tomcat module fails to extract version number from snapshot builds (2015.5 regression) (refs: #24927)

• PR #25269: (jfindlay) Extract tomcat war version @ 2015-07-10 01:28:21 UTC
  – PR #24927: (egarbi) Tomcat module fails to extract version number from snapshot builds #2... (refs: #25269)
  – 9b6646d578 Merge pull request #25269 from jfindlay/tomcat
  – fd4ca172d consolidate tomcat exec and state version extract
  – 59dc833567 update tomcat war_deployed state tests
  – edca458b6c Fixed 2 blank lines around import re
  – 7e528d1050 Tomcat module fails to extract version number from snapshot builds #24520

• ISSUE #18808: (amendlik) Add command line argument to select pillar environment (refs: #25238)

• PR #25238: (DmitryKuzmenko) Pillarenv backport 2015.5 @ 2015-07-10 01:25:07 UTC
  – 0f82ac3e30 Merge pull request #25238 from DSRCompany/pillarenv_backport_2015.5
  – 98792eb179 Pillarenv support in minion config, cp and cmdmod modules.
  – 88ff57639 Support pillarenv cmdline in state.sls. Backport of PR #23719

• ISSUE #13943: (Supermathie) Powershell commands that expect input hang forever (refs: #25299)

• PR #25299: (twangboy) Added -NonInteractive so powershell doesn't hang waiting for input @ 2015-07-09 21:00:16 UTC
  – 219d4cad9c Merge pull request #25299 from twangboy/fix_13943
  – c05889031f Added -NonInteractive so powershell doesn't hang waiting for input

• PR #25301: (jacobhammons) bug fix for module function display in help @ 2015-07-09 20:46:34 UTC
  – 1c43892a80 Merge pull request #25301 from jacobhammons/doc-bugs
  – f6561289af bug fix for module function display in help

• ISSUE #25277: (jacobhammons) CherryPy recommended versions (refs: #25279)

• PR #25279: (jacobhammons) Additional docs on external and master job cache, assorted doc fixes @ 2015-07-09 16:46:26 UTC
  – 68149bc686 Merge pull request #25279 from jacobhammons/job-cache-docs
  – 94770a15da Fixed typos
  – 2f9e5b9125 Additional docs on external and master job cache, assorted doc fixes Refs #25277

• ISSUE #25268: (lichtamberg) Salt not working anymore in 2015.8/develop: ValueError: 'scope' is not in list (refs: #25274)

• PR #25274: (jleroy) Fix for issue #25268 @ 2015-07-09 13:36:26 UTC
- **PR #25151**: (jleroy) Support for IPv6 addresses scopes in network.interfaces (refs: #25274, #25433)
- 972fa2fb54 Merge pull request #25274 from jleroy/25268-fix
- 2c69d204b Fix for issue #25268

- **PR #25272**: (twangboy) Fixed problem with service not starting @ 2015-07-08 23:29:48 UTC
  - 8ebb73df2d Merge pull request #25272 from twangboy/service
  - e61eeba48b Fixed problem with service not starting

- **ISSUE #25223**: (nmadhok) Runner occasionally fails with a RuntimeError when fired by a reactor (refs: #25225)

- **PR #25225**: (nmadhok) Backporting fix for issue #25223 on 2015.5 branch @ 2015-07-08 15:16:18 UTC
  - c6fd2356c Merge pull request #25225 from nmadhok/client-runtime-fix-backport-2015-2
  - 391b7d6730 Backporting fix for issue #25223 on 2015.2 branch

- **PR #25214**: (rallytime) A couple of doc fixes for the http tutorial @ 2015-07-07 22:23:07 UTC
  - 207fbaeac4 Merge pull request #25214 from rallytime/http_doc
  - d0b61f3c1 A couple of doc fixes for the http tutorial

- **ISSUE #24272**: (rallytime) Fix boto_vpc_test moto version check (refs: #25194)

- **PR #25194**: (rallytime) Update moto version check in boto_vpc_test and update min version @ 2015-07-07 18:27:32 UTC
  - 9dd5cd8a8e Merge pull request #25194 from rallytime/fx-24272
  - f959e165a1 Clean up imports
  - fbc9c0d6bf Fix Pylint
  - fe2561f415 Update moto version check in boto_vpc_test and update min version

- **PR #25205**: (basepi) Update releasecandidate docs @ 2015-07-07 15:25:24 UTC
  - a3e9486c28 Merge pull request #25205 from basepi/releasecandidatedocs
  - 4528804aa Update releasecandidate docs

- **PR #25187**: (UtahDave) Doc fixes: Fix misspelling and remove extraneous double spaces @ 2015-07-07 01:07:04 UTC
  - fbafdf39a46 Merge pull request #25187 from UtahDave/fix_misspelling
  - 65abb63003 remove some extraneous double spaces
  - c42f6baa5 fix misspelling

- **PR #25182**: (cachedout) Try to re-pack long floats as strs @ 2015-07-07 01:06:43 UTC
  - ddee90ce23 Merge pull request #25182 from cachedout/pack_long_floats
  - a192e9df74 Try to re-pack long ints as strs

- **ISSUE #23822**: (sidcarter) Zip file extracted permissions are incorrect (refs: #25128)

- **PR #25185**: (rallytime) Back-port #25128 to 2015.5 @ 2015-07-07 00:58:00 UTC
  - PR #25128: (stanislavb) Use cmd_unzip to preserve permissions (refs: #25185)
  - df9982b836 Merge pull request #25185 from rallytime/bp-25128
  - 1726057c8a Use cmd_unzip to preserve permissions

- **PR #25181**: (rallytime) Back-port #25102 to 2015.5 @ 2015-07-07 00:57:13 UTC
**PR #25102**: (derBroBro) Update win_network.py (refs: #25181)
- df0bb8c831 Merge pull request #25181 from rallytime/bp-25102
- 64d8f14417 Update win_network.py
- 6789c5b8e8 Update win_network.py

**Issue #24301**: (iggy) influxdb_user and influxdb_database states need virtual functions (refs: #25059)

**PR #25179**: (rallytime) Back-port #25059 to 2015.5 @ 2015-07-07 00:56:44 UTC
- PR #25059: (babilen) Add virtual functions to influxdb state modules (refs: #25179)
  - 04fdd7b0ee Merge pull request #25179 from rallytime/bp-25059
  - 1eeefbd2ab Add virtual functions to influxdb state modules

**Issue #18919**: (giner) Windows: pkg.refresh_db returns false-positive success (refs: #25196)

**PR #25196**: (twangboy) Fixed #18919 false-positive on pkg.refresh @ 2015-07-07 00:24:13 UTC
- 58b7d0e653 Merge pull request #25196 from twangboy/pkg_refresh
- 12ffcd1062 Fixed #18919 false-positive on pkg.refresh

**PR #25180**: (rallytime) Back-port #25088 to 2015.5 @ 2015-07-06 20:33:45 UTC
- PR #25088: (supertom) Update (refs: #25180)
  - 4a406aca45 Merge pull request #25088 from rallytime/bp-25088
  - 4078c8db25 added message recommending JSON file be used if the libcloud version is >= 0.17.0

**PR #25191**: (basepi) Add extrndest back to fileclient.is_cached in 2015.5 @ 2015-07-06 19:35:24 UTC
- PR #25117: (basepi) Fix fileclient.is_cached (refs: #25191)
  - 01ed062ca7 Merge pull request #25191 from basepi/fix.fileclient.is_cached
  - 5fa74f4408 Add back in the extrndest stuff (which is now in develop)

**Issue #25016**: (martinhoefling) salt-run doc.execution fails with AttributeError (refs: #25020)

**PR #25175**: (rallytime) Back-port #25020 to 2015.5 @ 2015-07-06 18:53:19 UTC
- PR #25020: (martinhoefling) Fix for issue #25016 (refs: #25175)
  - a9404aca5c Merge pull request #25020 from rallytime/bp-25020
  - da2e1704ea Fix for issue #25016

**Issue #21879**: (bechtoldt) Reference pages in documentation are outdated again (refs: #25019, #21880)

**Issue #19262**: (bechtoldt) salt.pillar.file_tree doesn’t appear in the documentation (refs: #25019)

**PR #25173**: (rallytime) Partial back-port of #25019 @ 2015-07-06 18:52:59 UTC
- PR #25019: (bechtoldt) add missing module documentation to references (refs: #25173)
- PR #24421: (bechtoldt) add missing module documentation (refs: #25019)
- PR #21880: (bechtoldt) update references, fixes #21879 (refs: #25019)
- PR #20039: (bechtoldt) completing some doc references (refs: #25019)
  - c70fec65b8 Merge pull request #25173 from rallytime/partial-bp-25019
  - c0c2463b64 Partial backport of #25019

**PR #25171**: (rallytime) Back-port #25001 to 2015.5 @ 2015-07-06 18:51:53 UTC
- **PR #25001**: (jasonkeene) Add docs for key arg in ssh_known_hosts.present (refs: #25171)
  - c5ba9a90ba Merge pull request #25171 from rallytime/bp-25001
  - a891108793 Add docs for key arg in ssh_known_hosts.present

- **PR #25170**: (rallytime) Back-port #24982 to 2015.5 @ 2015-07-06 16:34:43 UTC
  - **PR #24982**: (asyncsrc) ec2 network_interfaces fix (refs: #25170)
  - 3e06602545 Merge pull request #25170 from rallytime/bp-24982
  - 3e6eab3ae9 ec2 network_interfaces fix

- **PR #25161**: (aneeshusa) Allow checking for non-normalized systemctl units. @ 2015-07-06 15:15:31 UTC
  - 09602808a0 Merge pull request #25161 from aneeshusa/allow-checking-non-normalized-systemd-service-availability
  - b4d544afe70 Allow checking for non-normalized systemd units.

- **PR #25151**: (jleroy) Support for IPv6 addresses scopes in network.interfaces (refs: #25274, #25433) @ 2015-07-06 14:43:03 UTC
  - 3599b8abab Merge pull request #25151 from jleroy/ipv6-scope-support
  - edce034e6c Support for IPv6 addresses scopes in network.interfaces

- ISSUE #24979: (mavenAtHouzz) [Discussion] Support for more than 1 netapi.rest_tornado server process (refs: #25149)

- **PR #25166**: (cachedout) Lint #25149 @ 2015-07-06 14:40:29 UTC
  - **PR #25149**: (jacksontj) Saltando multiprocess support (refs: #25166)
  - 66d6365a9f Merge pull request #25166 from cachedout/lint_saltando
  - 2fe167edf8 Lint #25149

- ISSUE #24979: (mavenAtHouzz) [Discussion] Support for more than 1 netapi.rest_tornado server process (refs: #25149)

- **PR #25149**: (jacksontj) Saltando multiprocess support (refs: #25166) @ 2015-07-06 14:38:43 UTC
  - 2f1bad1c01 Merge pull request #25149 from jacksontj/saltando
  - 6aa5548e2d Enable multiprocess support in saltando
  - 9a1351eada Change print to logger, so we can set a level and log exc_info

- **PR #25120**: (d--j) add missing continue for exception case @ 2015-07-02 19:38:45 UTC
  - a723af0f10 Merge pull request #25120 from d--j/patch-2
  - 81d5d15dce add missing continue for error case

- **PR #25117**: (basepi) Fix fileclient.is_cached (refs: #25191) @ 2015-07-02 19:38:26 UTC
  - 6e2222241a Merge pull request #25117 from basepi/fix.fileclient.is_cached
  - 38e243f6db Add fix from merge forward
  - 52f35f761a Add import
  - 23c32a7518 Backport develop version of salt.fileclient.is_cached

- **PR #25087**: (0xf10e) Fix execution module for glance - now based on 2015.5! @ 2015-07-02 19:36:27 UTC
  - c80990ba4f Merge pull request #25087 from 0xf10e/fix_glance_2015.5
- 7749cc081c PEP8 W601...
- bbda079fa5 fix pylint E302, E502, E713, E1305
- 3baacc72b4 use Glance API v1 for image_create
- c3d6134da1 making pylint marginally happier
- 19a20bf228 get valid properties for image_show() from the schema for "image"
- 0c6a61173a add some debugging, fix a few AttributeError
- aceca0e20d fix return of glance.image_show()
- a47509e7dd fix return of image_list
- 9f923edfab Change confusing "nt ks" to "g_client"
- fa2bd1a79c bit of docs/comments in image_create()
- 5c34d0c494 merge 439b1e42053239b into 2015.5
- 7a3cf27948 update attributes for image_show output
- b1bec0f1a1 fix retry w/ user/pass if token fails
- 2f4ef6683c update attributes for image_list output
- eef3bc7048 use _auth() from neutron plus keystoneclient,
• PR #24361: (jayeshka) adding states/postgres_schema unit test case. @ 2015-07-01 21:44:56 UTC
  – 4195cea512 Merge pull request #24361 from jayeshka/postgres_schema-states-unit-test
  – 0558b0d744 adding states/postgres_schema unit test case.
• PR #24331: (jayeshka) adding states/postgres_extension unit test case. @ 2015-07-01 21:43:58 UTC
  – ada8fe57d4 Merge pull request #24331 from jayeshka/postgres_extension-states-unit-test
  – 3d465a574a adding states/postgres_extension unit test case.

### 30.2.93 Salt 2015.5.5 Release Notes

release 2015-08-20

Version 2015.5.5 is a bugfix release for 2015.5.0.

Statistics

- Total Merges: 33
- Total Issue References: 28
- Total PR References: 39
- Contributors: 20 (TheBigBear, arthurlogilab, basepi, bastiaanb, cachedout, driskell, garethgreenaway, jacobhammons, jahann, jfindlay, rallytime, s0undt3ch, scottjpack, silenius, sixninetynine, stanislavb, terminalmage, thusoy, twangboy, vr-jack)

Changelog for v2015.5.4..v2015.5.5


• ISSUE #26484: (thusoy) Git state leaks HTTPS user/pw to log (refs: #26486)
• ISSUE #26482: (thusoy) Git states doesn’t allow user-only auth (refs: #26483)
• PR #26486: (thusoy) Git: Don’t leak https user/pw to log @ 2015-08-20 16:04:52 UTC
  – PR #26483: (thusoy) Handle user-only http auth in git module (refs: #26486)
  – 28aa9b1058 Merge pull request #26486 from thusoy/git-confidential-auth
  – 5289165487 Git: Don’t leak https user/pw to log
• ISSUE #26432: (centromere) Documentation incorrectly references salt-key on the minion (refs: #26476)
• ISSUE #26403: (adelcast) Grains documentation incorrectly states they are static (refs: #26476)
• ISSUE #26329: (cro) Add note to eauth docs indicating default PAM service. (refs: #26476)
• ISSUE #26264: (grep4linux) state trees cannot have ‘dots’ in the name (refs: #26476)
• ISSUE #26233: (dove-young) pip install salt, then start master failed on Fedora 22 (refs: #26476)
• PR #26476: (jacobhammons) Minor doc bug fixes @ 2015-08-19 22:52:35 UTC
  – 679ba5ee0a Merge pull request #26476 from jacobhammons/doc-bugs
  – 499bd6378 Minor doc bug fixes Refs #26403 Refs #26432 Refs #26233 Refs #26264 Refs #26329
• ISSUE #26366: (GreatSnoopy) The development tree produces hanging, 100%cpu salt-master processes (refs: #26443)
• ISSUE #26301: (waynew) CPU pegged out running salt-master (after running command) (refs: #26443)

• ISSUE #25998: (driskell) Event subsystem discarding required events during --batch breaking it for slow running commands (refs: #26000)

• PR #26443: (cachedout) Fix connect issue in event init @ 2015-08-19 22:50:22 UTC
  - PR #26000: (driskell) Implement full event caching for subscribed tags (refs: #26443)
  - 42b8c1b3f4 Merge pull request #26443 from cachedout/fix_event_sub
  - 560977bc7e Fix connect issue in event init

• ISSUE #26434: (jfjndlay) batch error when no minions match target (refs: #26445)

• PR #26445: (cachedout) Raise clean error when no minions targeted in batch mode @ 2015-08-19 22:50:07 UTC
  - d2df1a86ad Merge pull request #26445 from cachedout/issue_26343
  - 1600f3eccd Raise clean error when no minions targeted in batch mode

• ISSUE #26482: (thusoy) Git states doesn’t allow user-only auth (refs: #26483)

• PR #26483: (thusoy) Handle user-only http auth in git module (refs: #26486) @ 2015-08-19 22:47:41 UTC
  - a9b28e9577 Merge pull request #26483 from thusoy/git-user-only-auth
  - 09fc934acc Handle user-only http auth in git module

• PR #26496: (jfjndlay) add dateutil dependency reporting @ 2015-08-19 22:46:31 UTC
  - edc04930ae Merge pull request #26496 from jfjndlay/dateutil
  - cbe330e78b add dateutil dependency reporting

• PR #26494: (cachedout) Remove unnecessary debug statements @ 2015-08-19 20:46:00 UTC
  - 4ff53b842 Merge pull request #26494 from cachedout/remove_debug_statements
  - d717a43dccc Remove unnecessary debug statements

• PR #26465: (rallytime) Back-port #26457 to 2015.5 @ 2015-08-19 16:08:16 UTC
  - PR #26457: (arthurlogilab) docstring improvement for network.ping module execution (refs: #26465)
  - f46a0da95d Merge pull request #26465 from rallytime/bp-26457
  - b3f638ff0f docstring improvement for network.ping module execution

• PR #26434: (s0undt3ch) Fix missed typo @ 2015-08-18 18:14:29 UTC
  - c1458980f3 Merge pull request #26434 from s0undt3ch/2015.5
  - 06dcaefc8a Fix missed typo

• ISSUE #26426: (alxbse) Private/public IPs are interchanged when listing nova driver cloud nodes (refs: #26430)

• PR #26430: (rallytime) List public and private ips under the correct label @ 2015-08-18 16:20:32 UTC
  - 064be710f Merge pull request #26430 from rallytime/fx-26426
  - 2ba97316c9 List public and private ips under the correct label

• PR #26431: (rallytime) Back-port #26417 to 2015.5 @ 2015-08-18 15:41:58 UTC
  - PR #26417: (scottjpack) Changed t1 -> t2 micro (refs: #26431)
  - 913451a414 Merge pull request #26431 from rallytime/bp-26417
  - 0254a2e90e Changed t1 -> t2 micro
• PR #26378: (stanislavb) Fix EC2 credentials from IAM roles for s3fs and s3 ext_pillar in 2015.5 @ 2015-08-18 14:01:53 UTC
  - 952da7abaf Merge pull request #26378 from stanislavb/2015.5
  - 39ce3127cd Let utils.aws query instance metadata

• ISSUE #26245: (bradthuber) salt v2015.5.3 gitfs.py using newer pygit2 feature than required minimum (refs: #26420)

• PR #26420: (terminalmage) Only use pygit2.errors if it exists (2015.5 branch) @ 2015-08-18 14:00:01 UTC
  - 09e96dce39 Merge pull request #26420 from terminalmage/issue26245-2015.5
  - 19a1149067 Only use pygit2.errors if it exists (2015.5 branch)

• PR #26409: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-08-17 23:19:56 UTC
  - c5eb6bd3e Merge pull request #26409 from basepi/merge-forward-2015.5
  - dafed10a9e Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - da88ca09aa Merge pull request #26242 from cro/anonldap4
    - a0d2ab1eeed Remove dead code
  - 1ecf23773e Merge pull request #26216 from cro/anonldap3
    - af132d7b89 Documentation update for anonymous bind issue.
  - 2ef54b6b13 Documentation update for anonymous bind issue.
  - 5b1836bb00 Fix issue with LDAP anonymous binds.

• ISSUE #26404: (ssgward) Syntax error in lvm.vg_absent state causing failure (refs: #26406)

• PR #26406: (jfindlay) fix syntax error in lvm exec module @ 2015-08-17 21:18:25 UTC
  - 741ca6b4db Merge pull request #26406 from jfindlay/lvm
  - 81d351f8f8 fix syntax error in lvm exec module

• PR #26405: (TheBigBear) dependency zip files moved to new site @ 2015-08-17 21:17:24 UTC
  - a7ed30e2a Merge pull request #26405 from TheBigBear/patch-8
  - 8898d64918 dependency zip files moved to new site

• PR #26298: (vr-jack) Keep $HOME from being interpreted by Master shell @ 2015-08-17 21:15:11 UTC
  - cf0523a12e Merge pull request #26298 from vr-jack/2015.5
  - 1fd6f6ce63 Keep $HOME from being interpreted by Master shell

• PR #26324: (s0undt3ch) Salt is now pip install'able in windows @ 2015-08-17 20:41:34 UTC
  - c0811d3302 Merge pull request #26324 from s0undt3ch/2015.5
  - e7cb3be2a0 Document the added options
  - 92af1ce9572 Fix argument name
  - 72d2f6b512 Add pypiwin32 >= 219 as a windows install requires.
  - b1105fc706 Allow mimicking the install setup command for develop/editable installations.
  - 26246a72ee Allow writing Salt's _version.py when installing in develop mode.
  - 71928f2194 Prefer HTTPS, fix url argument
  - 7b25430cc7 Download the necessary DLLs for windows
- 86692a92cd Install PyCrypto from a wheel in repo.saltstack.com under Windows
- 915da594c2 Skip M2Crypto in Windows.
- 1ea426e299 Move code to properly handle default requirements.
- 8fda8c0db3 M2CryptoWin[32,64] should only be installed on Salt < 2015.8.0
- 0ff2f19aeae Override the develop command in cmdclass
- a5aa752a85 Override the develop command when WITH_SETUPTOOLS is set
- 4d6841c761 Install M2CryptoWin[32,64] while installing Salt

* ISSUE #26161: (bastiaanb) salt initscripts do not set lock file in /var/lock/subsys as required on RedHat family OSes (refs: #26371)

* PR #26371: (bastiaanb) fix issue #26161: on RedHat family systems touch /var/lock/subsys/$SERVICE... @ 2015-08-17 20:39:28 UTC
  - 87151736e5 Merge pull request #26371 from bastiaanb/fix/issue-26161-salt-initscripts-dont-set-lockfile
  - ec8d4b0470 test wether RETVAL is 0 with -eq rather than =.
  - a83a5de4e1e fix issue #26161: on RedHat family systems touch /var/lock/subsys/$SERVICE to ensure the daemon will be stopped on shutdown.

* ISSUE #25801: (themalkolm) Update docs that salt.states.winrepo requires roles:salt-master in grains. (refs: #26328)

* ISSUE #25562: (jefftucker) winrepo state does not run on masterless minion (refs: #26328)

* PR #26402: (twangboy) Removed documentation no longer required @ 2015-08-17 20:35:37 UTC
  - PR #26328: (twangboy) Removed salt-master role requirement (refs: #26402)
  - 89602f56ad Merge pull request #26402 from twangboy/fix_26328
  - ad5fa03b76 Removed documentation no longer required

* PR #26392: (rallytime) Back-port #26376 to 2015.5 @ 2015-08-17 19:09:16 UTC
  - PR #26376: (TheBigBear) minor edit spelling (refs: #26392)
  - eb373e5904 Merge pull request #26392 from rallytime/bp-26376
  - a013bb5b3d minor edit

* ISSUE #16049: (ryan-lane) boto_elb.present state requires attributes argument (refs: #26342)

* PR #26342: (rallytime) Don't call boto_elb._attributes_present if no attributes were provided @ 2015-08-17 19:19:08 UTC
  - 8bb57d1631 Merge pull request #26342 from rallytime/fx-16049
  - 211f6eaf5 Fix test failures - get_attributes shouldn’t be called if none are provided
  - d8ad023e88 Don’t call boto_elb._attributes_present if no attributes were provided

* ISSUE #26155: (silenius) pip availability in states/pip_state (refs: #26160)

* PR #26389: (rallytime) Back-port #26160 to 2015.5 @ 2015-08-17 19:09:16 UTC
  - PR #26160: (silenius) proposed fix for #26155 (refs: #26389)
  - 2fd1e06343 Merge pull request #26389 from rallytime/bp-26160
  - f0bc3765d9 No logging should happen on __virtual__
  - ca406eaf3c proposed fix for #26155

30.2. Previous Releases 3081
• ISSUE #26266: (o-sleep) limit pw_user.getent() from returning entire corporate list (refs: #26300)

• PR #26300: (jfindlay) mock pwd function calls in pw_user exec module @ 2015-08-17 18:56:41 UTC
  - 0046c6cfe6 Merge pull request #26300 from jfindlay/pw_test
  - 7e94994f40 mock pwd calls in pw_user exec mod test
  - 26f5b46665 check for pwd on linux and BSD user exec mods

• ISSUE #24334: (afletch) autosign_timeout not honoured (refs: #26386)

• PR #26386: (jahamn) Fixes autosign_timeout usage in check_autosign_dir @ 2015-08-17 18:34:40 UTC
  - 709499438b Merge pull request #26386 from jahamn/fix-autosign_timeout
  - b2fa2ac9d3 Fixes autosign_timeout usage in check_autosign_dir

• ISSUE #25801: (themalkolm) Update docs that salt.states.winrepo requires roles:salt-master in grains. (refs: #26328)

• ISSUE #25562: (jefftucker) winrepo state does not run on masterless minion (refs: #26328)

• PR #26328: (twangboy) Removed salt-master role requirement (refs: #26402) @ 2015-08-17 18:30:17 UTC
  - 8d9017b815 Merge pull request #26328 from twangboy/fix_25562
  - d4ca1dcbf Removed salt-master role requirement

• ISSUE #26327: (bradthurber) mount.mountedoptsincorrect "forced unmount and mount because options (tcp) changed" (refs: #26328)

• PR #26362: (garethgreenaway) Fixes to mount state. @ 2015-08-17 17:44:55 UTC
  - 745585f574 Merge pull request #26362 from garethgreenaway/2015_5_26327_more_invisible_mount_options
  - cf53246dd Some mount options are translated to different options once a share has been mounted, eg. when specifying a protocol for NFS as either tcp or udp this option is translated into either proto=tcp or proto=udp. Change adds a lookup dictionary for these options so that a re-mount isn’t forced each time.

• PR #26379: (s0undt3ch) [2015.5] Backport #26353 @ 2015-08-17 17:19:29 UTC
  - PR #26353: (sixninetyfive) fixed a typo in setup.py (refs: #26379)
  - 7dbd80c9d8 Merge pull request #26353 from s0undt3ch/issue/backport-26353
  - 33ed315c85 fixed Packaing -> Packaging typo and added a couple comments on the setuptools/distutils abstract methods

• ISSUE #26240: (0xf10e) keystone.user_get raises exception when user is not found (refs: #26277)

• PR #26277: (rallytime) Handle exception when user is not found in keystone.user_get @ 2015-08-14 19:41:59 UTC
  - bc8ab4a5a Merge pull request #26277 from rallytime/fixed-26240
  - 0b6977335e Clean it up
  - 5edabf271 It’s a dict - git problems...
  - 39d3ebf810 Log error and return error - make returns consistent.
  - 49647d862 Handle exception when user is not found in keystone.get_user

• ISSUE #24484: (bailsman) clouds/ec2.py: create_snapshot throws exception (refs: #26326)

• PR #26326: (rallytime) Make ec2.create_snapshot return less unwieldy and more relevant @ 2015-08-14 19:40:47 UTC
- 78be3a826f Merge pull request #26326 from rallytime/create_snapshot_return
- c5395db851 Make ec2.create_snapshot return less unwieldy and more relevant

- **ISSUE #16179**: (UtahDave) Salt Cloud -l debug includes the entire bootstrap script twice in its output (refs: #26306)
- **PR #26306**: (rallytime) Move VM creation details dict to log.trace @ 2015-08-14 17:39:52 UTC
  - 44e9d3063b Merge pull request #26306 from rallytime/fix-16179
  - 670464258f Move VM creation details dict to log.trace

### 30.2.94 Salt 2015.5.6 Release Notes

**release** 2015-10-13

Version 2015.5.6 is a bugfix release for 2015.5.0.

**Statistics**

- Total Merges: 145
- Total Issue References: 71
- Total PR References: 178

- **Contributors**: 53 (Arabus, JensRantil, PierreR, SaltyCharles, TheBigBear, abh, aboe76, anluto, arthurlogilab, asyatkin, basepi, benhosmer, bersace, cachedout, carlpett, damonzheng, derphilipp, dmyerscough, dsumsky, efficks, eguven, garethgreenaway, hexedpackets, jacksontj, jacobhammons, jfindlay, jocjulian, johank, julianbrost, kev009, lorengordon, madprog, marccardinal, netroby, nmadhok, plastikos, rallytime, serge-p, spud-fkc, stanislavb, styro, systembell, tankywoo, techhat, terminalmage, thatch45, tjstansell, twangboy, vakulich, vtek21, whiteinge, zmalone, zyio)

**Security Fixes**

CVE-2015-6941 The Windows user module and salt-cloud display passwords in log when log level is set to debug or more verbose.

For the Windows user module, the password is now replaced with the string XXX-REDACTED-XXX.

For salt-cloud, debug logging no longer displays win_password and sudo_password authentication credentials.

CVE-2015-6918 Git state/execution modules log HTTPS auth credentials when log level is set to debug or more verbose.

These credentials are now replaced with REDACTED in the debug output. Thanks to Andreas Stieger <asteiger@suse.com> for bringing this to our attention.
Changelog for v2015.5.5..v2015.5.6

Generated at: 2018-05-27 22:13:00 UTC

- **PR #27582**: (jfindlay) add 2015.5.6 release notes @ 2015-09-30 22:33:48 UTC
  - 304dc68f7f Merge pull request #27582 from jfindlay/2015.5
  - 4f0d55cd6a add 2015.5.6 release notes
- **ISSUE #27518**: (srkunze) [Docs] Relationship between Mine and Grains (refs: #27557)
- **PR #27557**: (jfindlay) add doc motivating mine vs grains @ 2015-09-30 17:49:46 UTC
  - 7201ce71e4 Merge pull request #27557 from jfindlay/mine_doc
  - 3727d79bad edit mine doc for style and markup
  - 7e037a4666 add doc motivating mine vs grains
- **ISSUE #27478**: (rominh) iptables state fails to save rules (refs: #27515)
- **PR #27515**: (jfindlay) save iptables rules on SuSE @ 2015-09-30 16:09:42 UTC
  - 59c3d5f93e Merge pull request #27515 from jfindlay/suse_fire
  - 4460ad2785 save iptables rules on SuSE
- **ISSUE #27460**: (llevar) Orchestrate runner not resolving reference to a built in state (refs: #27509)
- **PR #27509**: (jfindlay) tell the user why the gluster module does not work @ 2015-09-30 15:49:16 UTC
  - 9b26357b19 Merge pull request #27509 from jfindlay/gluster_reason
  - 1ccda538d2 tell the user why the gluster module does not work
- **ISSUE #27372**: (GregMeno) pip.installed state fails when env_vars is not a dict (refs: #27379)
- **PR #27379**: (jfindlay) document and check dict type for pip env_vars @ 2015-09-30 02:56:52 UTC
  - 989733ea86 Merge pull request #27379 from jfindlay/pip_vars
  - aee51ffdef document and check dict type for pip env_vars
- **PR #27516**: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-09-29 17:53:33 UTC
  - 6d773f66c3 Merge pull request #27516 from basepi/merge-forward-2015.5
  - a08951f0fa Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - 5262f01325 Merge pull request #27335 from rallytime/cloud-logging-7
    - adeb1dcad4 Pylint Fix
    - 588c13783c Salt-cloud logging clean up for windows functions
    - 9b6000135c [2014.7] Fixup salt-cloud logging
- **ISSUE #27447**: (junster1) Fix mysql table size for salt_events (refs: #27472)
- **PR #27472**: (cachedout) Change recommended schema for data field in mysql event table @ 2015-09-29 15:49:37 UTC
  - 68d784c3dd Merge pull request #27472 from cachedout/fix_27447
  - 5e745ad6da Change recommended schema for data field in mysql event table
- **PR #27468**: (cachedout) Fix 27351 @ 2015-09-29 15:35:29 UTC
- **PR #27351**: (SaltyCharles) fix sysctl truncating newline on os x (refs: #27468)
• ISSUE #27438: (aboe76) can't set system locale on OpenSuse SUse (refs: #27479)
• PR #27479: (aboe76) fix locale on opensuse and suse #27438 @ 2015-09-29 15:34:48 UTC
  - a214c7f84e Merge pull request #27479 from aboe76/fix_locale_suse
  - a8f2dad1be fix locale on opensuse and suse #27438
• ISSUE #17103: (arthurlogilab) salt is looking for outputters in /var/cache/salt/minion/extmods/output not /var/cache/salt/minion/extmods/outputters (refs: #27483)
• PR #27483: (rallytime) Outputters should sync to output, not outputters, on the minion. @ 2015-09-29 15:33:08 UTC
  - 931f593b51 Merge pull request #27483 from rallytime/fix-17103
  - 441241eb90 Change sync_outputters to sync_output for consistency, but alias sync_outputters
  - 105528720b Outputters should sync to output, not outputters, on the minion.
• PR #27484: (rallytime) Back-port #27434 and #27470 to 2015.5 @ 2015-09-29 15:32:03 UTC
  - PR #27470: (cachedout) Minor doc fixup. (refs: #27484)
  - PR #27434: (netroby) Doc: copy key to server via ssh-copy-id (refs: #27484, #27470)
  - 9c2c028953 Merge pull request #27484 from rallytime/bp-27434-and-27470
  - 5de2ee35ab Minor doc fixup.
  - af656c7e87 Doc: copy key to server via ssh-copy-id
• ISSUE #27433: (TheBigBear) winrepo - drops "trailing zeroes" from version numbers on un-install? (refs: #27469)
• PR #27469: (twangboy) Added quotes to version numbers example @ 2015-09-28 21:54:43 UTC
  - 927874d316 Merge pull request #27469 from twangboy/fix_27433
  - a996ea46e2 Added quotes to version numbers example
• ISSUE #27342: (ariscn) File.managed silent fail for contents_pillar (refs: #27375, #27467)
• PR #27467: (cachedout) file.managed: check contents_{pillar|grain} result @ 2015-09-28 20:22:16 UTC
  - PR #27375: (jfindlay) file.managed: check contents_{pillar|grain} result (refs: #27467)
  - 382a53403f Merge pull request #27467 from cachedout/lint_27375
  - 4e54a98f5e Lint #27375
  - 278ade52d2 file.managed: check contents_{pillar|grain} result
• ISSUE #9856: (jeremyBass) for grant in grants: TypeError: 'bool' object is not iterable (refs: #27419)
• PR #27419: (rallytime) Amend error log to include multiple tips for troubleshooting. @ 2015-09-28 17:53:19 UTC
  - ed6207a438 Merge pull request #27419 from rallytime/fix-9856
  - 551396564a Amend error log to include multiple tips for troubleshooting.
• ISSUE #16753: (johtso) Duplicate selector in top file gives unhelpful traceback (refs: #27426)
• PR #27426: (rallytime) Don't stacktrace if there are conflicting id errors in highstate @ 2015-09-28 14:52:51 UTC
  - 73fa89edf7 Merge pull request #27426 from rallytime/fix-16753
  - 6cbd81e66 Don't stacktrace if there are conflicting id errors in highstate

• ISSUE #27406: (s-iraheta) salt-cloud error with Softlayer (Bare Metal Instance): TypeError: 'bool' object is not iterable and with --list-locations: Failed to get the output of 'softlayer_hw.avail_locations()': 142776 (refs: #27408)

• PR #27408: (rallytime) Fix avail_locations function for the softlayer_hw driver in 2015.5 @ 2015-09-25 23:34:50 UTC
  - 5dd1b70475 Merge pull request #27408 from rallytime/fix-2015.5
  - 39a4ae5a6c Remove hdd: 19 refs from SL docs - no longer available from SoftLayer.
  - de2f9234d Use correct default for bandwith
  - 42d8127f9 Don't set the optional_products default to a boolean, and then try to loop.
  - 9d8a3d8303 Fix avail_locations function for the softlayer_hw driver in 2015.5

• ISSUE #27389: (ryan-lane) Docs layout issue (refs: #27410)

• PR #27410: (jacobhammons) Fix css layout Refs #27389 @ 2015-09-25 22:38:48 UTC
  - 8f9a3cfbaf Merge pull request #27410 from jacobhammons/doc-updates
  - a9fdecad1 Fix css layout Refs #27389 sample typo fix in linux_acl additional module folders listed in dynamic-modules

• PR #27336: (rallytime) [2015.5] Fixup salt-cloud logging @ 2015-09-24 15:02:52 UTC
  - 3746085587 Merge pull request #27336 from rallytime/cloud-logging-five
  - 7956b36076 [2015.5] Fixup salt-cloud logging

• ISSUE #27356: (lorenigordon) file.replace fails if repl contains special regex characters and append_if_not_found=True (refs: #27358)

• PR #27358: (lorenigordon) Escape search replacement text, fixes #27356 @ 2015-09-24 13:52:46 UTC
  - 5a3be10a3e Merge pull request #27358 from lorenigordon/escape-search-replacement-text
  - 88bb1f6ff Escape search replacement text, fixes #27356

• ISSUE #19236: (bramhg) salt-cloud : Unable to add SSD disk and unable to auto-delete disk on instance termination on GCE (refs: #27345)

• PR #27345: (rallytime) Allow use of rst header links by separating options out from yaml example @ 2015-09-23 19:48:56 UTC
  - 6759f79d6d Merge pull request #27345 from rallytime/docs-for-19236
  - 1d3925bbf Add version tag for ex_disk_type option
  - f23369300c Allow use of rst header links by separating options out from yaml example

• PR #26903: (bersace) Review defaults.get @ 2015-09-23 14:52:20 UTC
  - c2efb291e2 Merge pull request #26903 from bersace/fix-defaults-modules
  - 474d7af695 fixup! Review defaults loading
  - 36141d226e fixup! Review defaults loading
  - 62b6495358 fixup! Review defaults loading
- cf0624e8b8 fixup! Review defaults loading
- 2c58bab977 fixup! Review defaults loading
- 82c5b1d8fd Review defaults loading

- **ISSUE #27316**: (efficks) Extracted state with zip format failed on Windows (refs: #27317)
- **PR #27317**: (efficks) State unzip should use unzip command instead of unzip_cmd. @ 2015-09-23 14:41:36 UTC
  - a372466922 Merge pull request #27317 from efficks/fix27316
  - bf21c101e State unzip should use unzip command instead of unzip_cmd. Issue #27316

- **ISSUE #15514**: (flyaruu) Calling a boto_route53.present state fails if the record is already there (refs: #27309)
- **PR #27309**: (rallytime) Change a value list to a comma-separated string in boto_route53.present @ 2015-09-23 14:30:50 UTC
  - bd3771e80f Merge pull request #27309 from rallytime/fix-15514
  - 9383d91ff8 Change a value list to a comma-separated string in boto_route53.present

- **ISSUE #27297**: (JensRantil) file.replace documentation improvement (refs: #27311)
- **PR #27311**: (jfindlay) discuss replacement occurrences in file doc @ 2015-09-22 22:23:10 UTC
  - b5fe944875 Merge pull request #27311 from jfindlay/maxoc
  - 8ec2e921bd discuss replacement occurrences in file doc

- **PR #27310**: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-09-22 21:08:41 UTC
  - ca4597b93a Merge pull request #27310 from basepi/merge-forward-2015.5
  - 7b75e4aed1 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - e90412d3b8 Merge pull request #27252 from jfindlay/version.2014.7
    * 3d28307a00 2014.7 -> 2014.7.0

- **ISSUE #27307**: (terminalmage) Regression in yumpkg’s refresh_db function (refs: #27308)
- **PR #27308**: (terminalmage) Fix refresh_db regression in yumpkg.py @ 2015-09-22 21:07:28 UTC
  - 982c21c79f Merge pull request #27308 from terminalmage/fix-refresh_db-regression
  - 77686fb7ce Fix refresh_db regression in yumpkg.py

- **PR #27286**: (terminalmage) Add a configurable timer for minion return retries @ 2015-09-22 16:35:07 UTC
  - 775a4f9ad0 Merge pull request #27286 from terminalmage/return_retry_timer
  - 540a7dfcf1 Add default values for new minion config options
  - 453b883820 Add a configurable timer for minion return retries

- **PR #27278**: (rallytime) Back-port #27256 to 2015.5 @ 2015-09-21 19:27:51 UTC
  - PR #27256: (julianbrost) Fix error handling in salt.modules.file.statvfs (refs: #27278)
  - 02482c0572 Merge pull request #27278 from rallytime/bp-27256
  - 1beddf311e Fix error handling in salt.modules.file.statvfs

- **PR #27277**: (rallytime) Back-port #27230 to 2015.5 @ 2015-09-21 19:06:14 UTC
  - PR #27230: (benhosmer) Fix typo in AWS doc config (refs: #27277)
  - e36c019c37 Merge pull request #27277 from rallytime/bp-27230
- PR #27253: (jfindlay) 2015.5 -> 2015.5.0 @ 2015-09-18 23:44:43 UTC
  - b22286476e Merge pull request #27253 from jfindlay/version.2015.5
  - 967e3bb72a 2015.5 -> 2015.5.0

- PR #27244: (garethgreenaway) Exception in cloud.ec2.create_snapshot @ 2015-09-18 21:41:11 UTC
  - 51a0193b54 Merge pull request #27244 from garethgreenaway/ec2_create_snapshot_no_return_data_exception
  - 820fd576b9 Fixing the cause when the r_data from aws.query is empty and an exception happens when looking for the snapshotID

- ISSUE #27215: (wfhu) cron.file override the crontab file even if there's no change (refs: #27231)

- PR #27231: (jfindlay) only write cron file if it is changed @ 2015-09-18 18:23:10 UTC
  - 26540f15bc Merge pull request #27231 from jfindlay/cronchange
  - 1e335297e2 only write cron file if it is changed

- PR #27233: (basepi) [2015.5] Add stub release notes for 2015.5.6 @ 2015-09-18 16:55:40 UTC
  - 579f37f74 Merge pull request #27233 from basepi/release.notes.stubs
  - f4563e9b7 Add stub release notes for 2015.5.6

- ISSUE #25423: (tweenk) Impossible to define a file.managed for use only as a template in "use" requisites (refs: #27208)

- PR #27208: (basepi) [2015.5] Add test.nop state @ 2015-09-18 16:50:17 UTC
  - 5fa3d2e3f2 Merge pull request #27208 from basepi/nop.state.25423
  - 9414b05b2c Add test.nop example
  - a84c6f8b9 Add test.nop state

- ISSUE #27187: (SeverinLeonhardt) ssh_known_hosts.present hashes other entries even with hash_hostname: false (refs: #27201)

- PR #27201: (jfindlay) rename hash_hostname to hash_known_hosts @ 2015-09-18 15:45:03 UTC
  - 59a07ca68 Merge pull request #27201 from jfindlay/sshhash
  - 1b620b77cd rename hash_host arg to hash_known_hosts
  - 12f14ae37c update hash_known_hosts docs in ssh module

- PR #27214: (jacksontj) Correctly support https, port 443 is not a requirement @ 2015-09-18 15:43:05 UTC
  - 560545c45 Merge pull request #27214 from jacksontj/2015.5
  - e7526dbb4 Correctly support https, port 443 is not a requirement

- ISSUE #18582: (mainframe) Allow merging file_roots and pillar_roots from different config files included from master.d (refs: #27150)

- PR #27172: (rallytime) Back-port #27150 to 2015.5 @ 2015-09-17 17:25:51 UTC
  - PR #27150: (cachedout) Merge config values from master.d/minion.d conf files (refs: #27172)
  - 7a34c7742d Merge pull request #27172 from rallytime/bp-27150
  - 0d7ee4b209 Merge config values from master.d/minion.d conf files

- PR #27194: (rallytime) Back-port #27180 to 2015.5 @ 2015-09-17 16:17:24 UTC
- PR #27180: (tankywoo) file copy ret result True if no change in test mode (refs: #27194)
- e956d88f5f Merge pull request #27194 from rallytime/bp-27180
- 327d343f file copy ret result True if no change in test mode

**PR #27176:** (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-09-17 15:00:40 UTC
- a02d043309 Merge pull request #27176 from basepi/merge-forward-2015.5
- 66f4641be3 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
- c186e5176d Merge pull request #27117 from jacobhammons/release-docs-2014.7
  - b69e11e044 made 2014.7 an archived release minor doc site updates
- 69d758ee2b Merge pull request #27114 from cachedout/warn_on_insecure_log
  - 507fb04683 Issue warning that some log levels may contain sensitive data
- a971bae8aa Merge pull request #27075 from twangboy/fix_password_2014.7
  - c6089e3215 Replaced password with redacted when displayed

**PR #27170:** (rallytime) Update Getting Started with GCE docs to use cloud.profiles or cloud.profiles.d examples @ 2015-09-16 22:23:51 UTC
- de2027426e Merge pull request #27170 from rallytime/gce-docs
- a07db909bd Update Getting Started with GCE docs to use cloud.profiles or cloud.profiles.d examples

**PR #27167:** (rallytime) Back-port #27148 to 2015.5 @ 2015-09-16 19:56:01 UTC
- PR #27148: (hexedpackets) Pass file pointers to the serialize load functions. (refs: #27167)
- 28cfd7d067 Merge pull request #27147 from rallytime/bp-27148
- d12be52355 Pass filepointers to the serialize load functions.

**ISSUE #27157:** (alxbse) salt.util.smb loads even when impacket library is missing (refs: #27168)

**PR #27168:** (techhat) Add further gating of impacket library @ 2015-09-16 18:55:56 UTC
- 4495f4f4d0 Merge pull request #27168 from techhat/gateimpacket
- cc448bfc1 Add further gating of impacket library

**ISSUE #27100:** (hexedpackets) salt-cloud --full-query does nothing when no VM profiles are configured (refs: #27166)

**PR #27166:** (rallytime) Allow a full-query for EC2, even if there are no profiles defined @ 2015-09-16 17:41:40 UTC
- 35e0f0dc30 Merge pull request #27166 from rallytime/fix-27100
- 50fb3a489a Allow a full-query for EC2, even if there are no profiles defined

**PR #27162:** (rallytime) Be explicit in using "SoftLayer" for service queries in SoftLayer drivers @ 2015-09-16 16:43:26 UTC
- f1c9de7ed9 Merge pull request #27162 from rallytime/softlayer-service
- d281068c70 Be explicit in using "SoftLayer" for service queries in SoftLayer drivers

**ISSUE #27133:** (deniswal) win_path.add causes the value data to be set as the value and vice versa (refs: #27149)

**PR #27149:** (twangboy) Fixed problem with add/remove path @ 2015-09-16 15:01:48 UTC
- 59e9df8de Merge pull request #27149 from twangboy/fix_27133
Salt Documentation, Release 3002.5

- 7992b7e20a Fixed some tests… hopefully...
- d4c8e30f5d Fixed problem with add/remove path

• ISSUE #11669: (jcockhren) salt.cloud is out of date for new google compute engine dashboard and API (refs: #27147)

• PR #27147: (rallytime) Enforce bounds in the GCE Regex @ 2015-09-15 21:51:55 UTC
  - 097fcd1017 Merge pull request #27147 from rallytime/fix-11669
  - 55312ea03f Provide a more friendly error message.
  - 36555856c7 Enforce bounds in the GCE Regex

• PR #27128: (eguven) don’t show diff for test run if show_diff=False @ 2015-09-15 14:11:55 UTC
  - f5c3f157dd Merge pull request #27128 from eguven/2015.5-fix-test-diff
  - ec2d68a84a don’t show diff for test run if show_diff=False

• PR #27116: (jacobhammons) Update latest to 2015.8, 2015.5 is now previous @ 2015-09-15 07:34:28 UTC
  - 088b1dbb3e Merge pull request #27116 from jacobhammons/release-docs-2015.5
  - 6e3236dd3 Update latest to 2015.8, 2015.5 is now previous Assorted style and minor updates

• ISSUE #25352: (m03) reg.absent reporting incorrect results (refs: #27019)

• PR #27033: (jfindlay) Merge #27019 @ 2015-09-15 07:32:17 UTC
  - PR #27019: (twangboy) Fixed reg state module for None, 0, and " values (refs: #27033)
  - 440855b182 Merge pull request #27033 from jfindlay/n0ne
  - 3334b9d548 fix comment and unit test for reg state
  - 391a09d5ac update reg state unit tests
  - ebbf2b05ca Fixed reg state module for None, 0, and " values

• ISSUE #17088: (umireon) state.dockerio.run: docked_onlyif and docked_unless do not work (refs: #26942)

• PR #26942: (Arabus) Fix docker.run @ 2015-09-14 18:10:54 UTC
  - 35fc74132a Merge pull request #26942 from Arabus/fix-docker.run
  - e61e1de1f5 Fixes value typo for dockerio.loaded state
  - 39fa11b996 further linting
  - 10d9f2b06f5 Further Linting to quiet the linter
  - 7e9f7ad070 Code Linting and cmd call fix
  - a51676e0eb Fixes #17088 olyif and unless should run on the host
  - d6f6c28b8f Fixes #17088 retcode now returns True or False based on return status
  - 8b2e7cc4f5 Syntax clarification

• PR #26977: (abh) Add support for PEERNTCP network interface configuration @ 2015-09-14 17:59:00 UTC
  - 59f2a0c7ae Merge pull request #26977 from abh/2015.5-ntppeer
  - df36d6e817f Add support for PEERNTCP network interface configuration on RH derived systems

• ISSUE #27021: (SEJeff) webutil.user_exists state does not respect test=true (refs: #27023)

• ISSUE #21533: (aspyatkin) Add option specifying user to run htpasswd module functions (refs: #21649)
• PR #27023: (jfindlay) add test support for htpasswd state mod @ 2015-09-14 17:48:00 UTC
  – PR #21649: (aspyatkin) Make enhancements to htpasswd modules (refs: #27023)
  – e05bf3951 Merge pull request #27023 from jfindlay/htwebutilpass
  – 9fd7890a6 add test support for htpasswd state mod
• PR #27074: (twangboy) Replaced password with redacted when displayed @ 2015-09-14 16:27:26 UTC
  – 9f999e0027 Merge pull request #27074 from twangboy/fix_password_2015.5
  – fdd353456 Replaced password with redacted when displayed
• PR #27073: (rallytime) Remove "use develop branch" warning from LXC tutorial @ 2015-09-11 23:51:06 UTC
  – 46b44f85ed Merge pull request #27073 from rallytime/remove-lxc-warning
  – 76c056d02b Remove "use develop branch" warning from LXC tutorial now that 2015.5.0 has been released
• PR #27054: (rallytime) Back-port #27029 to 2015.5 @ 2015-09-11 22:29:45 UTC
  – PR #27029: (spudfkc) Removed check for no package name (refs: #27054)
  – caab21d99c Merge pull request #27054 from rallytime/bp-27029
  – 0be393be22 Removed check for no package name
• PR #27053: (rallytime) Back-port #26992 to 2015.5 @ 2015-09-11 22:29:30 UTC
  – PR #26992: (plastikos) Summary requires full return information. (refs: #27053)
  – 0227e1cb57 Merge pull request #26992 from rallytime/bp-26992
  – 83798aff3c Do not use full return for documentation.
  – d95bbaa68 Summary requires full return information.
• PR #27052: (rallytime) Back-port #26930 to 2015.5 @ 2015-09-11 22:28:11 UTC
  – PR #26930: (madprog) aptpkg.mod_repo: Raise when key_url doesn't exist (refs: #27052)
  – b72a0ef86d Merge pull request #26930 from rallytime/bp-26930
  – d9787aa318 aptpkg.mod_repo: Raise when key_url doesn't exist
• PR #27049: (johanek) Run repoquery less @ 2015-09-11 22:26:12 UTC
  – 8b554dd16f Merge pull request #27049 from johanek/repoquery-dedupe
  – c113916a23 When running repoquery to check for available versions of packages, run once for all packages rather than once per package
• PR #27070: (stanislavb) Deprecate salt.utils.iam in Carbon @ 2015-09-11 22:01:57 UTC
  – PR #26561: (stanislavb) Leave salt.utils.s3 location fallback to salt.utils.aws (refs: #27070)
  – PR #26446: (stanislavb) Fetch AWS region from EC2 instance metadata (refs: #26561)
  – PR #26378: (stanislavb) Fix EC2 credentials from IAM roles for s3fs and s3 ext.pillar in 2015.5 (refs: #26446)
  – cc2cbf9869 Merge pull request #27070 from stanislavb/2015.5
  – 1e6e5d9c9c Deprecate salt.utils.iam in Carbon
• PR #27030: (jfindlay) Backport #26938 @ 2015-09-11 15:10:46 UTC
  – PR #27004: (vtek21) Fix 'dict' object has no attribute split (refs: #27024, #27030)
- PR #26938: (derphilipp) Fixes win_path module, migrates from reg.(set|get)_key to reg.(set|get)_value (refs: #27030)
- e23ca88cf Merge pull request #27030 from jfindlay/winreg
- 120fbc78e0 remove trailing line in win_path exec module
- b36a710b2 update win_path exec module unit tests
- a2dc6f2dd7 Fixes win_path module, migrates from reg.(set|get)_key to reg.(set|get)_value

• ISSUE #25581: (b18) Salt 2015.5.2 - Could not deserialize msgpack message error. (refs: #27025)
• PR #27025: (cachedout) Better try and error handling for prep_jid @ 2015-09-11 07:40:10 UTC
  - 843c28b435 Merge pull request #27025 from cachedout/issue_25581
  - ecc09d9b93 Lint
  - bfca9ebf4 Better try and error handling for prep_jid

• PR #27035: (terminalmage) useradd.py: Use contextmanager to prevent leaked filehandles @ 2015-09-11 07:39:41 UTC
  - b9bba0b39a Merge pull request #27035 from terminalmage/useradd-contextmanager
  - e430e97f6c Update user states to reflect changes to login class handling
  - f24b9979c7c useradd.py: Use contextmanager to prevent leaked filehandles

• PR #27034: (rallytime) Update softlayer docs for where to find apikey @ 2015-09-10 22:29:56 UTC
  - 1cdfdf7a92 Merge pull request #27034 from rallytime/softlayer-doc-fix
  - cb6418145 Update softlayer docs for where to find apikey

• PR #27027: (rallytime) Back-port #27013 to 2015.5 @ 2015-09-10 21:14:21 UTC
  - PR #27013: (vtek21) Fix 'dict' object has no attribute split (refs: #27024, #27030)
  - 9e06d3f01a Merge pull request #27024 from rallytime/bp-27004
  - 54d6fef4c7 Fix 'dict' object has no attribute split
  - bb29d73c71 Fix 'dict' object has no attribute split
  - 5f1a9c46aa Fix 'dict' object has no attribute split
  - 2fbd9724e Fix 'dict' object has no attribute split

• ISSUE #20522: (eliasp) modules.win_pkg.install() blindly trusts fileclient.get_url() unhandled exceptions (refs: #26972)
• PR #26972: (twangboy) Catch the 404 error from fileclient @ 2015-09-10 20:53:12 UTC
• PR #26951: (terminalmage) Fix timezone module for CentOS @ 2015-09-10 20:46:07 UTC
  - fbc95f4685 Merge pull request #26951 from terminalmage/fix-timezone
  - 30a4915762 Update tests to reflect changes to timezone module
  - b6f926919f Fix timezone module for CentOS

• PR #26875: (marccardinal) LXC gateway provisioned only when IP is provided @ 2015-09-10 19:31:32 UTC
  - f2ad5c333c Merge pull request #26875 from marccardinal/patch-2
  - 36d5a62262 LXC gateway provisioned only when IP is provided

• ISSUE #26730: (styro) _opts__['user'] on Windows minion incorrect (eg for file.symlink) (refs: #26997, #salt-stack/salt#26899_
  - PR #26997: (twangboy) Fixed symlinks for windows (don't use user root) @ 2015-09-10 18:54:50 UTC
    - PR #26899: (twangboy) file.symlink gets windows account instead of root (refs: #26997)
    - 7b2e7b1b37 Merge pull request #26997 from twangboy/fix_symlink_windows
    - 89cc02d4e0 Added versionadded
    - 835177b0c8 Fixed symlinks for windows (don't use user root)

• PR #27001: (twangboy) Added CLI Example for reg.delete_key_recursive @ 2015-09-10 17:19:43 UTC
  - 5389a85894 Merge pull request #27001 from twangboy/fix_reg_docs
  - 2980bbda17 Minor clarification
  - 4684b2dd1 Added CLI example for reg.delete_key_recursive

• PR #26996: (jacobhammons) Beacon doc updates @ 2015-09-10 16:47:49 UTC
  - 37814f5dff Merge pull request #26996 from jacobhammons/beacon-doc
  - e475e688e Fixed typo
  - 240153d9e New content added to beacon docs.

• ISSUE #26867: (joejulian) lvmpv's can show as not belonging to their vg if symlink is used (refs: #26868)

• PR #26868: (joejulian) Use the actual device name when checking vgdisplay @ 2015-09-10 16:08:16 UTC
  - 4ba7eed711 Merge pull request #26868 from joejulian/2015.5_lvm_vg_symlink_fix
  - 3dfb33849a Use the actual device name when checking vgdisplay

• PR #26955: (dsumsky) S3 ext_pillar module has broken caching mechanism (backport to 2015.5) @ 2015-09-10 14:54:01 UTC
  - 1537e945be Merge pull request #26955 from dsumsky/s3-pillar-module-cache-fix-2015.5
  - 8219acfe7 - fixed pylint warnings
  - a3b1b0ab1 - fixed broken caching in S3 ext_pillar module (file_md5 was a list) - added debugging messages - static parameters are available as module parameters now

• PR #26987: (rallytime) Back-port #26966 to 2015.5 @ 2015-09-09 18:42:51 UTC
  - PR #26966: (TheBigBear) URL has changed (refs: #26987)
  - 3e90e86b1 Merge pull request #26987 from rallytime/bp-26966
- 6a29eac003 URL has changed

- PR #26915: (rallytime) Update Joyent Cloud Tests @ 2015-09-09 15:04:50 UTC
  - eddb532713 Merge pull request #26915 from rallytime/joyent-tests
  - d4ad42d697 Update Joyent Cloud Tests

- PR #26971: (rallytime) Fix a couple of typos in reactor docs @ 2015-09-09 15:03:54 UTC
  - f86814b2ad Merge pull request #26971 from rallytime/reactor-doc-fix
  - 0214aad19 Fix a couple of typos in reactor docs

- ISSUE #26730: (styro) __opts__[\'user\'] on Windows minion incorrect (eg for file.symlink) (refs: #26997, #saltstack/salt#26899, #26899)
  - PR saltstack/salt#26899: (twangboy) file.symlink gets windows account instead of root (refs: #26976)

- PR #26976: (thatch45) Revert "file.symlink gets windows account instead of root" @ 2015-09-08 22:44:19 UTC
  - 57b1080f94 Merge pull request #26976 from saltstack/revert-26899-fix_26730
  - 6dd54e6bce Revert "file.symlink gets windows account instead of root"

- PR #26975: (whiteinge) Remove mocks from rest_cherrypy integration tests; fix groups check bug @ 2015-09-08 22:34:08 UTC
  - 67be01f5fe Merge pull request #26975 from whiteinge/rest_cherrypy-integration
  - 9a0989585b Add additional ‘groups’ check to rest_cherrypy if groups are not used
  - d68aefcfd4 Remove mocks from rest_cherrypy integration tests
  - 2aa3da8911 Rename the rest_cherrypy tests to conform to our convention

- ISSUE #26730: (styro) __opts__[\'user\'] on Windows minion incorrect (eg for file.symlink) (refs: #26997, #saltstack/salt#26899, #26899)

- PR #26899: (twangboy) file.symlink gets windows account instead of root (refs: #26997) @ 2015-09-08 21:14:30 UTC
  - 20a48f7f2e Merge pull request #26899 from twangboy/fix_26730
  - 9d9b3bb47a file.symlink gets windows account instead of root

- PR #26960: (rallytime) Fix bash code block formatting in CherryPy netapi docs @ 2015-09-08 18:14:11 UTC
  - dbc6b862f4 Merge pull request #26960 from rallytime/cherrypy-docs
  - c1420711db Fix bash code block formatting

- PR #26940: (rallytime) Fix minor doc typo in client api @ 2015-09-08 04:15:00 UTC
  - f733e048c9 Merge pull request #26940 from rallytime/api-doc-fix
  - 00fe6a225c Fix minor doc typo in client api

- ISSUE #26850: (jfindlay) salt-ssh error on 2015.8 (refs: #26852)

- PR #26871: (rallytime) Back-port #26852 to 2015.5 @ 2015-09-08 03:43:08 UTC
  - PR #26852: (basepi) [2015.8] Only reference msgpack if it imported successfully (refs: #26871)
  - de9350466e Merge pull request #26871 from rallytime/bp-26852
  - 5a4c8dd2f5 Only reference msgpack if it imported successfully

- ISSUE #26644: (gravyboat) pkgrepo should note that for ubuntu/debian all options should not be used (refs: #26800, #26851)
ISSUE #26638: (WackyOne) Suse install documentation (refs: #26800, #26851)

PR #26851: (jacobhammons) states/pkrepo examples, suse installation updates @ 2015-09-02 18:29:09 UTC
  - a563af29d3 Merge pull request #26851 from jacobhammons/doc-bugs
  - ac3bd47440 states/pkrepo examples, suse installation updates Refs #26644
    Refs #26638

ISSUE #26804: (lrhazi) gpasswd error on RHEL 5 (refs: #26817)

PR #26817: (jfindlay) modify groupadd for rhel 5 @ 2015-09-02 14:52:53 UTC
  - 5b1b394192 Merge pull request #26817 from jfindlay/grouparg
  - 82d3399f3 modify groupadd for rhel 5

ISSUE #22724: (ty2u) digital_ocean_v2.py doesn’t restore snapshot (refs: #26824)

PR #26824: (systembell) [salt-cloud] Fix creating droplet from snapshot in digital_ocean provider @ 2015-09-02 05:18:37 UTC
  - cd0e2afe3 Merge pull request #26824 from pravka/fixedroplet-creation-from-snapshot-indof2
  - 00e3192536 removing log
  - e4a82d78d9 removing stringification of every value in the image dict
  - cdc2b4584a fixing condition for slug check

ISSUE #26805: (joejulian) cur_param referenced before assignment (refs: #26823, #26820)

PR #26823: (joejulian) use dbus instead of localectl @ 2015-09-02 00:25:25 UTC
  - 4af6951a4c Merge pull request #26823 from joejulian/ctllfix
  - a9928cb143 pep8 fixes
  - 6108ec4280 Gated dbus for os families that use it
  - e154c7b16f remove trailing spaces
  - c1c1266cc3 fix indent change
  - 0a35320a7 Use dbus directly

ISSUE #26805: (joejulian) cur_param referenced before assignment (refs: #26823, #26820)

PR #26820: (jfindlay) add default param in _parse_localectl in locale mod @ 2015-09-01 22:02:17 UTC
  - a1749b76b8 Merge pull request #26820 from jfindlay/ctllfix
  - 3a2c65d5fb add default param in _parse_localectl in locale mod

ISSUE #26788: (ssgward) Windows minion user.rename gives exception (refs: #26821)

PR #26821: (twangboy) Fixed user.rename function in windows @ 2015-09-01 22:01:50 UTC
  - ff735547c4 Merge pull request #26821 from twangboy/fixed_26788
  - cf979e4877 Fixed user.rename function in windows

ISSUE #26754: (jefftucker) MySQLdb-python package should be included with windows minion installer (refs: #26803)

PR #26803: (twangboy) Added check for PyMySQL if MySQLdb import fails @ 2015-09-01 21:44:41 UTC
  - c892be3255 Merge pull request #26803 from twangboy/fix_26754
  - 23576c65eb Added check for PyMySQL if MySQLdb import fails

ISSUE #26798: (jfindlay) stack trace from linode driver (refs: #26815)
• PR #26815: (jfindlay) stringify linode id before performing str actions @ 2015-09-01 17:56:29 UTC
  - 6edfa36083 Merge pull request #26815 from jfindlay/linstr
  - 2ff5823944 stringify linode id before performing str actions

• ISSUE #2644: (gravyboat) pkgrepo should note that for ubuntu/debian all options should not be used (refs: #26800, #26851)

• ISSUE #26638: (WackyOne) Suse install documentation (refs: #26800, #26851)

• ISSUE #26192: (jefftucker) Logging documentation does not exist (refs: #26800)

• ISSUE #26108: (ahammond) documentation around scheduling and orchestration is unclear (refs: #26800)

• ISSUE #24510: (ahammond) lack of documentation around Denied Keys (refs: #26800)

• PR #26800: (jacobhammons) Doc bug fixes @ 2015-09-01 05:40:09 UTC
  - 135a8a64af Merge pull request #26800 from jacobhammons/doc-fixes
  - 5cca52a3c1 Fixed windows installer paths Refs #25567
  - 0ec036350d Updates to salt-ssh and salt-key #24510
  - 992edc3bb8 Doc bug fixes Refs #26192 Refs #26638 Refs #26108

• ISSUE #24021: (arthurlogilab) [salt-cloud saltify] AttributeError: 'str' object has no attribute 'setdefault' (refs: #26793)

• PR #26793: (rallytime) Don't stacktrace if "name" is specified as a minion id in a map file @ 2015-08-31 19:24:25 UTC
  - da161b9516 Merge pull request #26793 from rallytime/fix-name-stacktrace
  - 8601e4b341 Don't stacktrace if "name" is specified as a minion id in a map file

• ISSUE #24020: (arthurlogilab) [salt-cloud saltify] cannot use --profile saltify machine{1..3} without a map (refs: #26790)

• PR #26790: (rallytime) Update Saltify docs to be more accurate and helpful @ 2015-08-31 18:17:31 UTC
  - 7c8da0a9f6 Merge pull request #26790 from rallytime/saltify_docs
  - d53754f2b7 Update Saltify docs to be more accurate and helpful

• ISSUE #26773: (styro) salt-call minor breakage on Windows (refs: #26775)

• PR #26787: (jfindlay) merge #26775 @ 2015-08-31 17:52:45 UTC
  - PR #26775: (styro) Fix some leftover non portable exitcodes. (refs: #26787)
  - 70d0268c83 Merge pull request #26787 from jfindlay/imp
  - e5bbf59ec7 disable import lint in run.py
  - 8aef725243 Restore blank lines again.
  - 1710070f61 Restore blank line.
  - 59d61a8dea os module no longer required.
  - f1bd8b0d509 Add missing imports.
  - 7bd88089e23 Fix some non portable exitcodes. Fixes #26773

• PR #26759: (terminalmage) Backport PR #26726 to 2015.5 branch @ 2015-08-31 14:39:20 UTC
  - PR #26726: (terminalmage) Redact HTTPS Basic Auth in states/funcs which deal with git remotes (refs: #26759)
- 645998dbd3 Merge pull request #26759 from terminalmage/bp-26726
- d7f7fca7e5 More cleanup from moving auth redaction to salt.utils.url
- 07db5a7038 fix redaction
- 399871e6dd Add auth redaction flags to git exec module and use them in git state
- 776dc38d73 check for ValueError when adding http basic auth
- d2eb1f4340 Rename arguments in salt.utils.url.add_http_basic_auth
- b45f37a467 Add http basic auth tests
- 1ed42ea4fd Remove git unit tests, moving them to salt.utils.url tests
- 96a55c0559 Remove unused imports
- 1f25a859bd Redact HTTPS Basic Auth data from remote URLs in comments and changes dict
- eafeb6c7bf Automatically redact HTTPS basic auth
- 6be3f8f9e1 Add support for callbacks to influence what information about commands is logged
- c36f240a87 Add HTTPS Basic Auth funcs to salt.utils.url

• ISSUE #26628: (MadsRC) state.ipset tries to parse wrong data (refs: #26768)
• PR #26768: (garethgreenaway) Fixes to ipset in 2015.5 for #26628 @ 2015-08-29 03:24:07 UTC
  - 46a4bbb0f7 Merge pull request #26768 from garethgreenaway/26628_5_ipset_fixes
  - f0c6090c7e Fixing issue when information returned from ipset isn’t in the format we expect and it causes an exception.
• ISSUE #26732: (saltstack-bot) SmartOS pkgsrc dependency (refs: #26753)
• PR #26753: (jfindlay) import elementree from _compat in ilo exec mod @ 2015-08-28 20:56:45 UTC
  - 7a5887e8a8 Merge pull request #26753 from jfindlay/iloet
  - 211a02754f import elementree from _compat in ilo exec mod
• ISSUE #21256: (dhs-rec) Salt-Master 2015.5.5-1 on Scientific Linux 6 fails loading some primitive pillars from YAML (refs: #26736)
• PR #26736: (twangboy) Changed import from smbconnection to smb3 @ 2015-08-28 17:23:42 UTC
  - 22dbce8d61 Merge pull request #26736 from twangboy/fix_21256
  - 86f425c699 Changed import from smbconnection to smb3
• ISSUE #26705: (Galser) Salt-Master 2015.5.5-1 on Scientific Linux 6 fails loading some primitive pillars from YAML (refs: #26714)
• PR #26714: (jfindlay) add exception placeholder for older msgpacks @ 2015-08-28 16:02:35 UTC
  - 16d4e0350d Merge pull request #26714 from jfindlay/pack_except
  - ebcfa9050 add exception placeholder for older msgpacks
• PR #26710: (rallytime) Update GCE driver to return True, False or a new name in __virtual__() @ 2015-08-27 20:08:17 UTC
  - 47faa8cc16 Merge pull request #26710 from rallytime/gce_virtual_return
  - e6b74879d7 Remove unused import
  - 78e31585cf Update GCE driver to return True, False or a new name in __virtual__()
Salt Documentation, Release 3002.5

- **PR #26709**: *(rallytime)* Ensure VM name is valid before trying to create Linode VM @ 2015-08-27 20:07:49 UTC
  - cf487cf0f5 Merge pull request #26709 from rallytime/fix-14612
  - bc21094ea0 versionadded and more efficient checks
  - a3ac8e7008 Whitespace fix
  - 9a4228d906 Added unit tests for new _validate_name function and adjusted regex
  - 388815112c Ensure VM name is valid before trying to create Linode VM

- **ISSUE #9592**: *(otrempe)* pip module fails on Windows because of quoting (refs: #26617)

- **PR #26617**: *(terminalmage)* Fix Windows failures in pip module due to raw string formatting @ 2015-08-27 19:24:53 UTC
  - c3a6280f8c Merge pull request #26617 from terminalmage/issue9592
  - 96c3df1ed5 Don't accept non-list input for pkgs arg
  - 419221535b Lint fix
  - ede057eebc Fix tests to reflect args being passed as lists instead of strings
  - 03250b9df9 Pass command to cmd.run_all as list instead of joining
  - 1c90c990e7 salt/modules/pip.py: Remove raw string format flags
  - cd35df5ff8 Catch TypeErrors in timed_subprocess

- **PR #26700**: *(kev009)* Ignore the first element of kern.disks split, which is the sysctl name @ 2015-08-27 17:48:02 UTC
  - 24a4f54f39 Merge pull request #26700 from kev009/fbsd-disks-fix-2015.5
  - 3ac97f9de4 Ignore the first element of kern.disks split, which is the sysctl name

- **PR #26695**: *(terminalmage)* Better HTTPS basic auth redaction for 2015.5 branch @ 2015-08-27 15:10:38 UTC
  - 58945131b5 Merge pull request #26695 from terminalmage/better-https-auth-redaction-2015.5
  - 752d620209 Use versioninfo tuple for comparison
  - b1d253483e Better HTTPS basic auth redaction for 2015.5 branch

- **PR #26694**: *(terminalmage)* Backport #26693 to 2015.5 @ 2015-08-27 08:16:30 UTC
  - **PR #26693**: *(serge-p)* Update openbsdpkg.py (refs: #26694)
  - 4040a312f9 Merge pull request #26694 from terminalmage/bp-26693
  - 4ace92676 Update openbsdpkg.py

- **PR #26681**: *(basepi)* [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-08-26 22:03:07 UTC
  - 0b1f80fe9 Merge pull request #26681 from basepi/merge-forward-2015.5
  - 64cad371f0 Remove overmocked test
  - 40718afa1d5 Merge remote-tracking branch ‘upstream/2014.7’ into merge-forward-2015.5
  - c2c7fe06c8 Merge pull request #26667 from nmadhok/doc-fix-2014.7
    - 26be189689 Doc fix. Fixes #26656
  - 6bd3dca68 Merge pull request #26663 from jacobhammons/2014.7-version
    - b6af538070 version change for latest branch
  - 071a6112e5 Merge pull request #26636 from rallytime/cloud-test-fixes

Chapter 30. Release Notes
• c0d83d558d Don’t use id as variable
• 2b4bc1679d Keep ec2 instance creation test the same - it works better for the ec2 output
• b5b58eb31f Skip digital ocean tests since we can’t use API v1 with v2 tests
• 9ae1539c62 Update cloud tests to be more efficient and accurate

– 304542b4c6 Merge pull request #26640 from efficks/fixws2014
  • ebe5d9d85c Fix function spacing

• PR #26676: (rallytime) Back-port #26648 to 2015.5 @ 2015-08-26 19:46:01 UTC
  – PR #26648: (whiteinge) Free ‘fun’ from the function signature namespace (refs: #26676)
  – 75675a6ba9 Merge pull request #26676 from rallytime/bp-26648
  – 1af42ed36 Free ‘fun’ from the function signature namespace

• PR #26677: (rallytime) Back-port #26653 to 2015.5 @ 2015-08-26 19:45:54 UTC
  – PR #26653: (dmyerscough) You can provide a X-Auth-Token when requesting jobs (refs: #26677)
  – d7f682eb5b Merge pull request #26677 from rallytime/bp-26653
  – 497ca96039 You can provide a X-Auth-Token when requesting jobs

• PR #26675: (rallytime) Back-port #26631 to 2015.5 @ 2015-08-26 19:44:59 UTC
  – PR #26631: (PierreR) Fix get_load in postgres returner (refs: #26675)
  – 960dbba7ed Merge pull request #26675 from rallytime/bp-26631
  – 20eeccd7be Fix get_load

• PR #26655: (damonzheng) Update win_dns_client.py @ 2015-08-26 16:05:26 UTC
  – db30926ac9 Merge pull request #26655 from cheng0919/2015.5
  – fdebc01def Update win_dns_client.py
  – 1d23d5e797 Update win_dns_client.py
  – 1a45db0f7 Update win_dns_client.py

• PR #26662: (jacobhammons) update version to 2015.5 @ 2015-08-26 13:45:44 UTC
  – a04d243471 Merge pull request #26662 from jacobhammons/version
  – 4e5766fdde update version to 2015.5

• PR #26651: (jfindlay) add 2015.5.4 notes to 2015.5.5 notes @ 2015-08-26 00:25:28 UTC
  – 8a9a076ad4 Merge pull request #26651 from jfindlay/2015.5
  – dc5ee5f8f add 2015.5.4 notes to 2015.5.5 notes

• ISSUE #26497: (JensRantil) Feature request: Make salt.states.managed support local file source (refs: #26525)

• PR #26525: (jfindlay) document check_file_meta args, remove unused arg @ 2015-08-25 21:43:46 UTC
  – 5bdefdc234 Merge pull request #26525 from jfindlay/sum
  – 0297d49aa0 remove unused check_file_meta arg
  – 6a3cb1c0aa document args to file.check_file_meta exec fcn

• PR #26561: (stanislavb) Leave salt.utils.s3 location fallback to salt.utils.aws (refs: #27070) @ 2015-08-25 21:40:30 UTC
- PR #26446: (stanislavb) Fetch AWS region from EC2 instance metadata (refs: #26561)
- PR #26378: (stanislavb) Fix EC2 credentials from IAM roles for s3fs and s3 ext_pillar in 2015.5 (refs: #26446)
  
84e96458b3 Merge pull request #26561 from stanislavb/2015.5
- 50332895a1 Leave salt.utils.s3 location fallback to salt.utils.aws

- **ISSUE #22550**: (amendlik) Error deleting SSH keys using salt-cloud --destroy (refs: #26573)
- **PR #26573**: (rallytime) Don't stacktrace if using private_ips and delete_sshkeys together @ 2015-08-25 20:00:23 UTC
  
  1d729734cc Merge pull request #26573 from rallytime/destroy_ssh_keys_private_ips
  - 4267509c25 Don't stacktrace if using private_ips and delete_sshkeys

- **ISSUE #20169**: (flavianh) [salt-cloud] Add a meaningful error when /etc/salt/cloud is missing the master's address (refs: #26563)
- **PR #26563**: (rallytime) Fix error detection when salt-cloud config is missing a master's address @ 2015-08-25 20:00:11 UTC
  
  000e5a2acf Merge pull request #26563 from rallytime/fix-20169
  - 65b285d02d Only warn if master IP is unset - must be compatible with masterless minions
  - a4c87fcf57 Simplify logic
  - 593ead08cf Fix error detection when salt-cloud config is missing a master's address

- **PR #26641**: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-08-25 18:17:46 UTC
  
  19c7a6d575 Merge pull request #26641 from basepi/merge-forward-2015.5
  - a5dafa436c Already fixed on 2015.5
  - 71c0898f5 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - 4532f98a76 Merge pull request #26515 from versace/salt-env-local-sls
  - 0727af9e3d Defaults to current saltenv in state.sls

- **PR #26620**: (rallytime) Also add -Z to script args for cloud tests @ 2015-08-24 22:03:24 UTC
  
  2927859c8a Merge pull request #26620 from rallytime/more_script_args
  - 9ae27193d8 Also add -Z to script args for cloud tests

- **PR #26618**: (rallytime) Add script_args: `-P` to Ubuntu 14 profiles for nightly cloud tests @ 2015-08-24 21:15:24 UTC
  
  ed166ebd4f Merge pull request #26618 from rallytime/pip-undate-cloud-tests
  - 5a2c8825ba Extra lines
  - d28672b69e Add script_args: `-P` to Ubuntu 14 profiles for nightly cloud tests

- **PR #26612**: (rallytime) Use an available image to test against @ 2015-08-24 19:09:18 UTC
  
  6d3927bed5 Merge pull request #26612 from rallytime/fix-do-list-images-test
  - 1401255287 Use an available image to test against

- **ISSUE #15590**: (jtratner) salt-cloud gce configuration check incorrect (refs: #26576)
- **PR #26576**: (rallytime) Ensure GCE and EC2 configuration checks are correct @ 2015-08-23 18:59:46 UTC
  
  991bbf63fe Merge pull request #26576 from rallytime/fix-14604
- ac67a1d238 Ensure GCE configuration check is correct
- 421f1fde1e Ensure EC2 configuration check is correct

**ISSUE** #12225: (arthurlogilab) [salt-cloud] Attribution of floating IPs works partially in parallel mode (refs: #26580)

**PR** #26580: (rallytime) Avoid race condition when assigning floating IPs to new VMs @ 2015-08-23 18:58:48 UTC
- 746c0008a9 Merge pull request #26580 from rallytime/fix-12225
- e3f7db17cc Avoid race condition when assigning floating IPs to new VMs
- afda31be74 Create _assign_floating_ips function for DRY

**PR** #26581: (terminalmage) Skip tests that don't work with older mock @ 2015-08-22 23:06:27 UTC
- 965a4ba7cf Merge pull request #26581 from terminalmage/fix-tests
- 49d8bd1dbe Remove unused import
- 81a0d4c915 Skip tests that don't work with older mock

**ISSUE** #25478: (zyio) salt-ssh - Unable to locate current thin version (refs: #25862)

**ISSUE** #25026: (sylvia-wang) salt-ssh "Failure deploying thin" when using salt module functions (refs: #25862)

**PR** #26591: (rallytime) Back-port #26554 to 2015.5 @ 2015-08-22 21:19:02 UTC
- PR #26554: (tjstansell) /bin/sh is more portable than /bin/bash (refs: #26591)
- PR #25862: (zyio) Adding SCP_NOT_FOUND exit code (refs: #26554)
- 19992c1450 Merge pull request #26591 from rallytime/bp-26554
- 6f8bed88cb /bin/sh is more portable than /bin/bash

**PR** #26565: (cachedout) Fix many errors with __virtual__ in tests @ 2015-08-21 21:37:54 UTC
- 2cd36c7ed4 Merge pull request #26565 from cachedout/fix_virtual_warnings
- 41541e4e2b Fix many errors with __virtual__ in tests

**ISSUE** #19249: (ahetmanski) Cannot create cache_dir salt master exception. (refs: #26548)

**PR** #26553: (rallytime) Back-port #26548 to 2015.5 @ 2015-08-21 17:40:21 UTC
- PR #26548: (vakulich) Catch OSError during cache directories creation, fixes #19249 (refs: #26553)
- 5a32664efd Merge pull request #26553 from rallytime/bp-26548
- ec2b2c3e40 Catch OSError during cache directories creation, fixes #19249

**PR** #26552: (rallytime) Back-port #26542 to 2015.5 @ 2015-08-21 17:40:11 UTC
- PR #26542: (arthurlogilab) [doc] reactor documentation fix : returners (refs: #26552)
- 7e67e48656 Merge pull request #26552 from rallytime/bp-26542
- 0976b1e23b [doc] reactor documentation fix : returners

**PR** #26551: (rallytime) Back-port #26539 to 2015.5 @ 2015-08-21 17:39:22 UTC
- PR #26539: (carlpett) Doc-fix: Escape backslash in domain\username (refs: #26551)
- bcd462545d Merge pull request #26551 from rallytime/bp-26539
- 94ff4c7740 Doc-fix: Escape backslash in domain\username

**PR** #26549: (rallytime) Back-port #26524 to 2015.5 @ 2015-08-21 17:38:50 UTC
PR #26524: (JensRantil) Gracefully handle package comparison not in (-1, 0, 1) (refs: #26549)

PR #25369: (anlutro) Fix aptpkg.version_cmp (refs: #26524)

4dbf61c5af Merge pull request #26549 from rallytime/bp-26524

4763f28725 logging(cmp_version): output assertion

673b6c683d utils(version_cmp): handle comparison not in (0,1,-1)

ISSUE #26502: (ryan-lane) Adding a listener with None as ports doesn’t result in an invocation error in boto_elb (refs: #26527)

PR #26527: (jfindlay) check exists and values in boto_elb listeners @ 2015-08-21 15:27:52 UTC

1ac8287588 Merge pull request #26527 from jfindlay/elb

343e47f00c check exists and values in boto_elb listeners

PR #26446: (stanislavb) Fetch AWS region from EC2 instance metadata (refs: #26561) @ 2015-08-21 15:11:08 UTC

PR #26378: (stanislavb) Fix EC2 credentials from IAM roles for s3fs and s3 ext_pillar in 2015.5 (refs: #26446)

e4b2534aa8 Merge pull request #26446 from stanislavb/2015.5-ec2-metadata-region

57943f4f7 Fetch AWS region from EC2 instance metadata

PR #26546: (nmadhok) Do not raise KeyError when calling avail_images if VM/template is in disconnected state @ 2015-08-21 14:17:49 UTC

d721b7b2be Merge pull request #26546 from nmadhok/vmware-key-error-patch-2015.5

1dcf157256 Do not raise KeyError when calling avail_images if VM/template is in disconnected state

ISSUE #25360: (BretFisher) file.replace removes line feed if using YAML’s multiline string syntax (refs: #26481)

PR #26537: (jfindlay) Merge #26481 @ 2015-08-21 05:37:24 UTC

PR #26481: (TheBigBear) minor note: added (refs: #26537)

7da87f7abf1 Merge pull request #26537 from jfindlay/note

662e723ae0 fixup note lint in file.replace state mod

332535f2e6 Update file.py

598500034f Update file.py

ec7c7d738d minor note: added

PR #26528: (zmalone) Fixing encrypt to instructions in the 2015.5 branch @ 2015-08-20 21:49:06 UTC

c6d8e34730 Merge pull request #26528 from zmalone/2015.5

39b111c465 Fixing encrypt to instructions in the 2015.5 branch, --homedir is not necessary here.
30.2.95 Salt 2015.5.7 Release Notes

release 2015-10-13

Version 2015.5.7 is a bugfix release for 2015.5.0.

Statistics

- Total Merges: 103
- Total Issue References: 66
- Total PR References: 135
- Contributors: 46 (0xf10e, JaseFace, MasterNayru, MrCitron, Sacro, ajacoutot, arthurgilab, basepi, belvedere-trading, beverlcl, blast-hardcheese, blueeyed, bogdanr, cachedout, cbuechler, chrigl, dmyerscough, eguven, elisp, erchn, eyj, garethgreenaway, gashev, gnubyexample, gracinet, gravyboat, gwaters, hedinfaok, iggy, jackson, jacobhammons, jfindlay, lorenz, mboiana, mscciel, mmadhok, pass-by-value, plastikos, rallytime, rominf, sound3ch, silenius, sjmh, stephen144, terminalmage, twangboy)

Important: A significant orchestrate issue (issue #29110) was discovered during the release process of 2015.5.7, so it has not been officially released. Please use 2015.5.8 instead.

Changelog for v2015.5.6..v2015.5.7

Generated at: 2018-05-27 22:16:54 UTC

- PR #28864: (jfindlay) add 2015.5.7 release notes @ 2015-11-13 17:15:00 UTC
  - ec76c539b Merge pull request #28864 from jfindlay/2015.5
  - 6486b97951 add 2015.5.7 release notes

- ISSUE #27392: (ahammond) schedule running state.orchestrate fails (refs: #28731)

- PR #28731: (garethgreenaway) Fixes to salt scheduler in 2015.5, ensuring that return_job is only used on minion scheduler @ 2015-11-13 16:58:06 UTC
  - bed45f4208 Merge pull request #28731 from garethgreenaway/27392_2015_5_scheduler_return_job_master
  - 771e9f7b6f Fixing the salt scheduler so that it only attempts to return the job data to the master if the scheduled job is running from a minion's scheduler.

- PR #28857: (rallytime) Back-port #28851 to 2015.5 @ 2015-11-13 13:56:53 UTC
  - PR #28851: (rominf) [states/schedule] docstring: args, kwargs -> job_args, job_kwargs (refs: #28857)
  - 06f4932876 Merge pull request #28857 from rallytime/bp-28851
  - aa4b193f87 [states/schedule] docstring: args, kwargs -> job_args, job_kwargs

- PR #28856: (rallytime) Back-port #28853 to 2015.5 @ 2015-11-13 13:46:10 UTC
  - PR #28853: (elisp) Typo (with → which) (refs: #28856)
  - 0934a20b34 Merge pull request #28856 from rallytime/bp-28853
  - 37eeab2683 Typo (with → which)

- ISSUE #28828: (basepi) salt-ssh doesn't package tornado's new deps in the thin (refs: #28826)
- **PR #28832**: (basepi) [2015.5] Backport #28826 @ 2015-11-12 19:32:03 UTC
  - **PR #28826**: (basepi) [2015.8] Add new tornado deps to salt-ssh thin (refs: #28832)
  - eb904665dc Merge pull request #28832 from basepi/backport.28826
  - 57be72eb91 Add backports_abc and singledispatch_helpers to thin as well
  - 897cad627b Add singledispatch to the thin

- **ISSUE #8647**: (Mrten) salt '*' highstate returns 'minion did not return', salt [minion] highstate works (refs: #28833)

- **PR #28833**: (basepi) [2015.5] Increase the default gather_job_timeout @ 2015-11-12 19:31:58 UTC
  - eff811a0ad Merge pull request #28833 from basepi/increase.gather_job_timeout.8647
  - c09243dd01 Increase the default gather_job_timeout

- **PR #28829**: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-11-12 18:50:51 UTC
  - e4a036365d Merge pull request #28829 from basepi/merge-forward-2015.5
  - f8b8441485 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - 76e69b4b7f Merge pull request #28777 from rallytime/bp-28740-2014.7
    * da5fac2b36 Back-port #28740 to 2014.7
    - 45c73ebf2f Merge pull request #28716 from rallytime/bp-28705
      * 32e7bd3ea0 Account for new headers class in tornado 4.3
    - f4fe921965 Merge pull request #28717 from cachedout/umask_note
      * 1874300e08 Add note about recommended umask

- **ISSUE #25775**: (trimbleavgendoraccounta) blockdev.formatted formats but fails. Second highstate shows success. (refs: #28756)

- **ISSUE #20235**: (joejulian) blockdev.format state can fail even if it succeeds (refs: #28756)

- **PR #28756**: (MrCitron) Fix #25775 @ 2015-11-12 17:47:51 UTC
  - 93562631aa Merge pull request #28756 from MrCitron/fix-25775
  - 82075c8c89c Add logs and correct pylint error
  - e31e22d96e Fix 25775

- **PR #28783**: (chrigl) iptables.get_saved_rules does not handle family=ipv6 (refs: #28786)

- **PR #28786**: (chrigl) closes #28783 @ 2015-11-11 21:01:19 UTC
  - 30cc48e37f Merge pull request #28786 from chrigl/fix-28783
  - ba6814553 closes #28783

- **PR #28776**: (rallytime) Back-port #28740 to 2015.5 @ 2015-11-11 18:02:03 UTC
  - **PR #28740**: (MasterNayru) Add missing S3 module import (refs: #28776, #28777)
  - 8fd10b636e Merge pull request #28776 from rallytime/bp-28740-2015.5
  - 49256b7d90 Back-port #28740 to 2015.5

- **ISSUE #28732**: (dmyerscough) cherrypy API endpoint (refs: #28760)

- **ISSUE #22452**: (whiteinge) rest_cherrypy /keys URL returns empty keys for minion IDs that already exist (refs: #28760)
• ISSUE #22451: (whiteinge) rest_cherrypy /keys URL throws a 500 on the first request (refs: #28760)
• ISSUE #22442: (allanliu) rest_cherrypy /keys URL does not handle JSON requests (refs: #28760)
• PR #28760: (dmyerscough) Fixing CherryPy key bug @ 2015-11-11 15:11:18 UTC
  - 77d4b980f1 Merge pull request #28760 from dmyerscough/28732-Fix-cherrypi-api-keys-endpoint
  - 206d1684b2 Fixing CherryPy key bug
• ISSUE #28714: (gravyboat) Salt-api doesn’t work with post unless data is included. (refs: #28718)
• PR #28746: (rallytime) Back-port #28718 to 2015.5 @ 2015-11-10 18:16:40 UTC
  - PR #28718: (sjmh) Account for no POST data (refs: #28746)
  - 6f8f04975f Merge pull request #28746 from rallytime/bp-28718
  - 092f441cad Account for no POST data
• PR #28705: (cachedout) Account for new headers class in tornado 4.3 (refs: #28716) @ 2015-11-09 19:24:34 UTC
  - f40c617bad Merge pull request #28705 from cachedout/tornado_http_headers
  - 7ac6cde1ee Account for new headers class in tornado 4.3
• PR #28699: (rallytime) Back-port #28670 to 2015.5 @ 2015-11-09 18:10:58 UTC
  - PR #28670: (plastikos) psutil can fail to look-up a uid and raise a KeyError (refs: #28699)
  - 604a7b4199 Merge pull request #28699 from rallytime/bp-28670
  - e436b2396e psutil can fail to look-up a uid and raise a KeyError
• PR #28703: (rallytime) Back-port #28690 to 2015.5 @ 2015-11-09 18:01:57 UTC
  - PR #28690: (MrCitron) Fix 28689 : Check s3 ext pillar cache file before calculating expiration (refs: #28703)
  - 7bd3eb8370 Merge pull request #28703 from rallytime/bp-28690
  - a0988dab58 Fix 28689 : Check s3 ext pillar cache file before calculating expiration
  - PR saltstack/salt-bootstrap#868: (cachedout) Always refresh the Arch Linux keyring if needed (refs: #28694)
• PR #28694: (s0undt3ch) [2015.5] Update to latest bootstrap script v2015.11.09 @ 2015-11-09 17:49:53 UTC
  - 2a40f57b93 Merge pull request #28694 from s0undt3ch/2015.5
  - 0910c6ffe4 Update to latest bootstrap script v2015.11.09
• ISSUE #26592: (centromere) rabbitmq.list_vhosts removes final line from rabbitmqctl output (refs: #28669)
• PR #28669: (rallytime) Use the -q argument to strip extraneous messages from rabbitmq @ 2015-11-08 01:07:25 UTC
  - 3249b322e8 Merge pull request #28669 from rallytime/fix-26592
  - 098f8b15af Use the -q argument to strip extraneous messages from rabbitmq
• ISSUE #28577: (jacksontj) Increase in master CPU usage after upgrading to 2015.8 (refs: #28645)
• PR #28645: (jacksontj) Rework minion return_retry_timer @ 2015-11-07 03:40:28 UTC
  - PR #27286: (terminalmage) Add a configurable timer for minion return retries (refs: #28645)
  - 29e8250d0c Merge pull request #28645 from jacksontj/2015.5
  - f63c2d70a7 Rework minion return_retry_timer
• ISSUE #15177: (baskinomics) system.join_domain() does not join domain on Windows Server 2012 R2 (refs: #28668)

• PR #28668: (twangboy) Fixed join_domain and unjoin_domain for Windows @ 2015-11-07 03:40:04 UTC
  - 1bbae8aad Merge pull request #28668 from twangboy/fixed_15177
  - 745b8f75f6 Fixed some lint
  - a43eb53f28 Added version added notes in docs
  - 6b537c8640 Fixed join_domain and unjoin_domain for Windows

• ISSUE #8051: (regilero) Problems with fileinput.input inplace editing in salt.states.file.replace (refs: #28174)

• ISSUE #7999: (regilero) MULTILINE pattern cannot work in file.replace, fileinput always reads line by line. (refs: #28174)

• PR #28666: (jfindlay) define r_data before using it in file module @ 2015-11-07 00:46:27 UTC
  - PR #28174: (loregordon) Add support for multiline regex in file.replace (refs: #28666)
  - 4ad5056066 Merge pull request #28666 from jfindlay/r_data
  - 29228f445f define r_data before using it in file module

• ISSUE #24758: (zerthimon) salt-minion uses 100% CPU for periodic status.master task on a server with a lot of TCP connections (a LB). (refs: #28662)

• PR #28662: (cachedout) Add note about disabling master_alive_interval @ 2015-11-07 00:38:12 UTC
  - e129e889ad Merge pull request #28662 from cachedout/issue_24758
  - 78f4894333 Add note about disabling master_alive_interval

• PR #28627: (twangboy) Backport win_useradd @ 2015-11-06 16:57:49 UTC
  - df121d0c6c Merge pull request #28627 from twangboy/backport_win_useradd
  - 8728b6354 Backport win_useradd

• ISSUE #28398: (L4rS6) Permissions /var/cache/salt/minion/extmods (refs: #28617)

• PR #28617: (cachedout) Set restrictive umask on module sync @ 2015-11-05 23:43:28 UTC
  - 64a20228c6 Merge pull request #28617 from cachedout/umask_module_sync
  - 227792e158 Set restrictive umask on module sync

• ISSUE #28621: (gravyboat) Puppet module documentation should be less insulting (refs: #28622)

• PR #28622: (gravyboat) Update puppet module wording @ 2015-11-05 20:34:07 UTC
  - 065f8c7fb3 Merge pull request #28622 from gravyboat/update_puppet_module_docs
  - 4ea28bed30 Update puppet module wording

• ISSUE #655: (thatch45) Add general command management to service (refs: #saltstack/salt-bootstrap#656)
  - PR saltstack/salt-bootstrap#674: (jfindlay) add support for repo.saltstack.com (refs: #28563)
  - PR saltstack/salt-bootstrap#665: (mbologna) Change to ‘dnf’ as package manager for Fedora 22- (refs: #28563)
  - PR saltstack/salt-bootstrap#656: (eyj) Add bootstrap -b flag (don’t install dependencies) (refs: #28563)
  - PR saltstack/salt-bootstrap#654: (hedinfakok) Fixes error finding python-jinja2 in RHEL 7 (refs: #28563)
  - PR saltstack/salt-bootstrap#653: (cbuechler) Make bootstrap work with FreeBSD 11-CURRENT. (refs: #28563)
• PR #28563: (s0undt3ch) [2015.5] Update to latest bootstrap script v2015.11.04 @ 2015-11-04 15:16:31 UTC
  - 08295de5a5 Merge pull request #28563 from s0undt3ch/2015.5
  - 16f4db79a0 Update to latest bootstrap script v2015.11.04

• ISSUE #28173: (twangboy) system.computer_name does not work in windows (refs: #28541)

• PR #28541: (twangboy) Fixed problem with system.set_computer_name @ 2015-11-04 14:48:54 UTC
  - 1e09f1866c Merge pull request #28541 from twangboy/fix_28173
  - 7edf5ce370 Fixed problem with system.set_computer_name

• ISSUE #28524: (bmcorser) UnicodeDecodeError in states.file (refs: #28538, #28537)
  - PR #28538: (jfindlay) decode path and url to utf-8 in url.create (refs: #28537)

• PR #28537: (jfindlay) decode filename to utf-8 in file.recurse state @ 2015-11-04 14:48:18 UTC
  - f44ed780b5 Merge pull request #28537 from jfindlay/decode_state_2015.5
  - 06e514940c decode filename to utf-8 in file.recurse state

• ISSUE #28272: (gravyboat) Update documentation contributing docs to explain how to PR against different releases (refs: #28529)

• PR #28529: (rallytime) Update contributing and documentation pages to recommend submitting against branches @ 2015-11-04 14:47:21 UTC
  - 6acfc07593 Merge pull request #28529 from rallytime/fix-28272
  - a959681858 Add link to Sending a GH PR to documentation docs
  - 1c612e2772 Update contributing and documentation pages to recommend submitting against branches

• ISSUE #28511: (nghgd) vmware clone task fails instead of waiting to completion (refs: #28546)

• PR #28548: (nmadhok) [Backport] [2015.5] Tasks can be in queued state instead of running @ 2015-11-04 04:14:25 UTC
  - PR #28546: (nmadhok) Tasks can be in queued state instead of running. (refs: #28548)
  - 025bff2bf0 Merge pull request #28548 from nmadhok/2015.5-task-error
  - 804a0a6537 Tasks can be in queued state instead of running. Fixes #28511

• ISSUE #24585: (utahcon) No version data for SALT.STATES.VIRTUALENV in wiki (refs: #28531)

• PR #28531: (rallytime) Add versionadded directives to virtualenv_mod state/module @ 2015-11-03 21:34:49 UTC
  - 63bd3e52b3 Merge pull request #28531 from rallytime/fix-24585
  - bc577b2531 Add versionadded directives to virtualenv_mod state/module

• PR #28508: (twangboy) Fixed windows tests @ 2015-11-03 19:31:12 UTC
  - ea3bf972c4 Merge pull request #28508 from twangboy/fix_unit_tests_windows
  - 0da6ff7c50 Fixed some logic
  - cfe059be55 Fixed windows tests

• PR #28525: (rallytime) Fix spacing in doc examples for boto_route53 state and module @ 2015-11-03 19:30:24 UTC
  - 73c5735fc1 Merge pull request #28525 from rallytime/route53_spacing
  - 6ab2ce615c Fix spacing in doc examples for boto_route53 state and module
• ISSUE #28243: (guettli) Docs: default value of state_auto_order ? (refs: #28517)

• PR #28517: (rallytime) Add state_auto_order defaults to True note to ordering docs @ 2015-11-03 14:04:40 UTC
  - 2d7f934f67 Merge pull request #28517 from rallytime/fix-28243
  - be8f650901 Punctuation.
  - fd846822c1 Add state_auto_order defaults to True note to ordering docs

• PR #28512: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-11-03 00:38:08 UTC
  - 63ce8f78d5 Merge pull request #28512 from basepi/merge-forward-2015.5
  - 61c382133a Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - 4bf56cad3f Merge pull request #28461 from cachedout/issue_28455
    * 097838ec0c Wrap all cache calls in state.sls in correct umask
    - f3e61db045 Merge pull request #28407 from DSRCompany/issues/24910_token_auth_fix_2014
      * b7b5bec309 Don't request creds if auth with key.

• PR #28448: (gwaters) added a note to the tutorial for redhat derivatives @ 2015-10-30 18:49:53 UTC
  - 37ceae1e88 Merge pull request #28448 from gwaters/add-redhat-notes
  - e70990704a added a note to the tutorial for those that redhat so they can use the state file too.

• PR #28406: (rallytime) Back-port #28381 to 2015.5 @ 2015-10-29 19:10:37 UTC
  - PR #28381: (JaseFace) Add FreeBSD detection for VirtualBox (refs: #28406)
  - 5ef50d60cd Merge pull request #28406 from rallytime/bp-28381
  - e5322dc44 Add FreeBSD detection for VirtualBox

• PR #28413: (rallytime) Back-port #28400 to 2015.5 @ 2015-10-29 18:06:46 UTC
  - PR #28400: (msciciel) State pkg.installed: do not execute _preflight_check if not_installed list is empty in _find_install_targets (refs: #28413)
  - 30d5f7bbae Merge pull request #28413 from rallytime/bp-28400
  - ae1921b922 Do not execute _preflight_check if not_installed list is empty in _find_install_targets. Calling with empty list on rhel/centos cause execution of repoquery --whatprovides without pkg list which is memory consumptive task for host and also for red hat satellite server.

• PR #28366: (erchn) mark repo not enabled when pkgrepo state passes in disable: True @ 2015-10-29 15:55:54 UTC
  - 045d540aff Merge pull request #28366 from erchn/fix_yumpkg_mod_repo_disabled
  - 8187a4ce20 re-arrange things a bit to have less overall changes
  - f1d570f18 move todelete above disabled check, add comment
  - 64feec413f also remove disabled key from repo_opts
  - 2f2ebb7bb6 mark repo not enabled when pkgrepo state passes in disable: True

• ISSUE #28372: (beverlcl) use_carrier option for bonding network interfaces are setting invalid values (refs: #28373)

• PR #28373: (beverlcl) Fixing bug #28372 for use_carrier option on bonding network interfaces. @ 2015-10-29 14:45:57 UTC
  - 3923f4a569 Merge pull request #28373 from beverlcl/fix-use_carrier-28372
Salt Documentation, Release 3002.5

- 32cffeceb6 Fixing bug #28372 for use_carrier option on bonding network interfaces.

- **PR #28359**: (rallytime) Back-port #28358 to 2015.5 @ 2015-10-28 20:43:05 UTC
  - **PR #28358**: (arthurlogilab) docstring typo fix - list returners not runners (refs: #28359)
  - e07e3f257b Merge pull request #28359 from rallytime/bp-28358
  - 9cabc5f82b docstring typo fix - list returners not runners

- **ISSUE #28000**: (hrumph) No option to stop windows minion installer from starting service in silent mode. (refs: #28346)

- **ISSUE #27923**: (twangboy) Salt Windows Installer fails to grab existing config (refs: #28346)

- **PR #28346**: (twangboy) Fix installer @ 2015-10-28 14:21:34 UTC
  - 282be7ba5a Merge pull request #28346 from twangboy/fix_installer
  - f65e5e5275 Updated documentation to reflect the new parameter
  - a0c5223554 Fixes #27923 and #28000

- **PR #28315**: (gwaters) Adding a working example of setting pillar data on the cli @ 2015-10-28 15:27:49 UTC
  - 785f04ebc Merge pull request #28315 from gwaters/update-pillar-doc
  - b1528c0b4 adding a working example of setting pillar data on the cli

- **ISSUE #28209**: (basepi) Legacy git_pillar configs cause duplicate ext_pillar calls (refs: #28210)

- **PR #28211**: (terminalmage) Fix for ext_pillar being compiled twice in legacy git_pillar code (2015.5 branch) @ 2015-10-26 14:14:02 UTC
  - PR #28210: (terminalmage) Fix for ext_pillar being compiled twice in legacy git_pillar code (refs: #28211)
  - 45305cfc29 Merge pull request #28211 from terminalmage/legacy_git_pillar-2015.5
  - 0d6a4ac115 Remove non-functional test
  - ab991d61d9 Fix for ext_pillar being compiled twice in legacy git_pillar code (2015.5 branch)

- **ISSUE #26411**: (whiteinge) salt-call cannot send custom events without Minion daemon running (refs: #28263)

- **PR #28263**: (cachedout) New channel for event.send @ 2015-10-26 14:07:06 UTC
  - a6c8c4c407 Merge pull request #28263 from cachedout/issue_26411-1
  - 3b880af507 New channel for event.fire_master
  - 29e9533ba9 Stand up a new channel if using salt-call

- **PR #28293**: (cachedout) Minor grammar changes @ 2015-10-26 12:15:42 UTC
  - PR #28271: (gwaters) Update tutorial documentation (refs: #28293)
  - 788e1463d8 Merge pull request #28293 from cachedout/fix_28271
  - 499ed8719b Minor grammar changes to #28271

- **PR #28271**: (gwaters) Update tutorial documentation (refs: #28293) @ 2015-10-26 12:12:37 UTC
  - e178af0b90 Merge pull request #28271 from gwaters/update-tutorial-documentation
  - f6d39483d updated the tutorial with gravyboat's suggestions
  - b14fa2bf4 i think i changed the wrong header, updated to fix
  - 846b3a6ce1 I found you can not run the cp.push commands until after enabling the feature in the conf, so I wanted to update the docs so others who try these commands wont bump into the same issue I had.

30.2. Previous Releases
• ISSUE #28248: (0xf10e) conventions/formula.rst: "Gather external data" suggests unavailable jinja functionality (refs: #28280)
• PR #28280: (0xf10e) Correct Jinja function load_* to import_* @ 2015-10-25 04:11:10 UTC
  - e3eff9b909 Merge pull request #28280 from 0xf10e/patch-1
  - 6d4316b0ac Correct Jinja function load_* to import_*
• PR #28255: (cachedout) Add __cli opt @ 2015-10-23 18:44:30 UTC
  - 909fa3dc97 Merge pull request #28255 from cachedout/cli_opt
  - a2408157de Add __cli opt
• ISSUE #27374: (mool) boto_route53 state doesn’t create a record (refs: #28213)
• PR #28213: (rallytime) If record returned None, don’t continue with the state. Something went wrong @ 2015-10-23 13:54:50 UTC
  - 0fa094ae11 Merge pull request #28213 from rallytime/boto_route53_state
  - 237d64ff11 If record returned None, don’t continue with the state. Something went wrong.
• ISSUE #28217: (Ch3LL) Scheduler.present tries to add the scheudler each time (refs: #28238)
• PR #28238: (basepi) [2015.5] Fix schedule.present always differing @ 2015-10-23 13:54:50 UTC
  - 1768014705 Merge pull request #28238 from basepi/fix.schedule.present.28217
  - 087a8dc3c2 Only insert enabled if it’s a dict
  - 5b49f41fab Fix schedule comparison to adjust for ‘enabled’ being added in schedule.list
  - 2dc1262ab8 Build new item with ‘enabled’ if available
• ISSUE #8051: (regilero) Problems with fileinput.inplace editing in salt.states.file.replace (refs: #28174)
• ISSUE #7999: (regilero) MULTILINE pattern cannot work in file.replace, fileinput always reads line by line. (refs: #28174)
• PR #28174: (lorengordon) Add support for multiline regex in file.replace (refs: #28666) @ 2015-10-22 14:02:43 UTC
  - bdd48c92de Merge pull request #28174 from lorengordon/file-replace-multiline
  - acdef2da60 Update docstrings with new guidance
  - 0835b005b7 Use a test that makes the extra file read unnecessary
  - 6d6121a6e5 Use flags when checking whether content was added previously
  - 89e8dcdff4 Use flags when checking whether content was added previously
  - 5ae6b647c9 Add support for multiline regex in file.replace
• ISSUE #19673: (holyzhou) partition.mkpart in parted modules doesn’t work (refs: #28175)
• PR #28175: (twangboy) Fixes #19673 @ 2015-10-21 20:48:24 UTC
  - 2225925fb5 Merge pull request #28175 from twangboy/fix_19673
  - ae8fb208f Fixes #19673
• PR #28140: (rallytime) Add OpenBSD installation documentation to 2015.5 branch @ 2015-10-20 16:31:34 UTC
  - PR #28103: (ajacoutot) OpenBSD salt package: update list of dependencies. (refs: #28140)
- ab18dcf637 Merge pull request #28140 from rallytime/bsd-installation-doc
- 458a544d83 Add OpenBSD installation documentation to 2015.5 branch

**ISSUE #28101:** (bogdann) salt-cloud ec2 list-sizes doesn't show all available sizes (refs: #28138)

**PR #28138: (rallytime)** Back-port #28130 EC2 Sizes Only portion to 2015.5 @ 2015-10-20 16:29:09 UTC

- PR #28130: (bogdann) Ec2 upload public key and updated instances size list (refs: #28138)
- fad38eb3c3 Merge pull request #28138 from rallytime/bp-28130-sizes-only
- 6ab31e1886 Pylint
- 3e4e58a9 Added missing comma
- 6675669f Add a bunch of instance sizes and updated some outdated ones

**ISSUE #26844:** (double-yaya) The function “state.sls” is running as PID XXXX and was started at .... with jid XXXX always shows the current jid (refs: #28097)

**PR #28097: (jacksontj)** For all multi-part messages, check the headers. If the header is not ... @ 2015-10-20 15:00:18 UTC

- ce8f85836 Merge pull request #28097 from jacksontj/2015.5
- 7e044b87bc For all multi-part messages, check the headers. If the header is not your minion_id, skip the message

**ISSUE #23655:** (arthurlogilab) salt-cloud with lxc should not traceback when minion is unreachable (refs: #28117)

**PR #28117: (rallytime)** Clean up stacktrace when master can’t be reached in lxc cloud driver @ 2015-10-20 12:41:12 UTC

- 9c6b70289 Merge pull request #28117 from rallytime/fix-23655
- dfb908e405 Clean up stacktrace when master can’t be reached in lxc cloud driver

**PR #28110: (terminalmage)** Add explanation of file_client: local setting masterless mode @ 2015-10-20 12:28:05 UTC

- bf7ed0a397 Merge pull request #28110 from terminalmage/masterless-mode
- ed9003124 Add explanation of file_client: local setting masterless mode

**ISSUE #27940:** (multani) salt-cloud creating lxc containers doesn’t fire "salt/cloud/*/created" event (refs: #28109)

**PR #28109: (rallytime)** Add created reactor event to lxc cloud driver @ 2015-10-19 20:32:41 UTC

- a569ef4980 Merge pull request #28109 from rallytime/fix-27940
- 8b2245611 Add created reactor event to lxc cloud driver

**ISSUE #21845:** (kitsemets) pip.install: fails in v2015.2.0rc1 when the package is already installed (pip v1.0) (refs: #27996)

**PR #27996: (rallytime)** Don’t fail if pip package is already present and pip1 is installed @ 2015-10-19 12:59:17 UTC

- d4604f8b26 Merge pull request #27996 from rallytime/fix-21845
- f830a751c Provide empty string as default stdout instead of None
- f940eb5828 Don’t fail if pip package is already present and pip1 is installed

**PR #28056: (rallytime)** Back-port #28033 to 2015.5 @ 2015-10-19 12:55:10 UTC
- PR #28033: (twangboy) Fixed win_useradd.py (refs: #28056)
- 28b97c514f Merge pull request #28056 from rallytime/bp-28033
- af2c5ab759 Fixed win_useradd.py
- PR #28059: (rallytime) Back-port #28040 to 2015.5 @ 2015-10-18 16:17:29 UTC
  - PR #28040: (erchn) Swift rackspace fixes (refs: #28059)
  - dfc3aacc74 Merge pull request #28059 from rallytime/bp-28040
  - 76a0d4937b Revert "Allow passing in auth_version, defaulting to 2."
  - 63d5675d34 default auth_version = 2
  - 8072716888 remove extra spaces
  - 9770f56f04 cleanup whitespace, default to None to be consistent with profile
  - f4adfe98c0 Allow passing in auth_version, defaulting to 2.
  - fab1ad39af Rackspace support for swift module.
- ISSUE #27534: (llevar) file.managed can't retrieve file via ftp (refs: #28047)
- PR #28047: (cachedout) Restore FTP functionality to file client @ 2015-10-18 16:16:46 UTC
  - d1fa036b55 Merge pull request #28047 from cachedout/issue_27534
  - 6ea37ddbca Context manager
  - 4d6fcb371 Lint
  - 59018289dc Restore FTP functionality to file client
- PR #28032: (twangboy) Fixed win_path.py @ 2015-10-17 15:16:15 UTC
  - fd2ca2df1b Merge pull request #28032 from twangboy/fix_win_path
  - 2bcac93314 Fixed win_path.py
- ISSUE #26336: (jfindlay) windows user.present broken (refs: #28003)
- PR #28037: (rallytime) Back-port #28003 to 2015.5 @ 2015-10-16 20:59:52 UTC
  - PR #28003: (twangboy) Fix #26336 (refs: #28037)
  - 88c1770be4 Merge pull request #28037 from rallytime/bp-28003
  - 4f5f51f61e Fix PR #26336
- PR #28031: (jacobhammons) Updated release notes with additional CVE information @ 2015-10-16 16:19:37 UTC
  - de727d8bd2 Merge pull request #28031 from jacobhammons/relnotes6
  - 05927b6f10 Updated release notes with additional CVE information
- ISSUE #27897: (Inveracity) request to add \r escape character for salt.states.host for windows (refs: #28008)
- PR #28008: (jfindlay) platform independent line endings in hosts mod @ 2015-10-16 13:20:28 UTC
  - 16c0272849 Merge pull request #28008 from jfindlay/host_path
  - 9f7047dd3c platform independent line endings in hosts mod
- ISSUE #28010: (vakulich) Error "KeyError: 'ret'" appeared during salt.state run in orchestrate module if minion had an exception (refs: #28012)
• **PR #28012**: (rallytime) Clean up stack trace when something goes wrong with minion output @ **2015-10-16 12:40:59 UTC**
  - d41018fa8 Merge pull request #28012 from rallytime/fix-28010
  - 0d7059e0c2 Clean up stack trace when something goes wrong with minion output

• **PR #27995**: (jacobhammons) added link to grains security FAQ to targeting and pillar topics. @ **2015-10-15 21:15:31 UTC**
  - f728307001 Merge pull request #27995 from jacobhammons/pillar-doc
  - 2870af2ba3 added link to grains security FAQ to targeting and pillar topics.

• **PR #27986**: (jacobhammons) Changed current release to 5.6 and added CVE to release notes @ **2015-10-15 17:25:41 UTC**
  - efede904a7 Merge pull request #27986 from jacobhammons/dot6
  - bb61c68c11 Changed current release to 5.6 and added CVE to release notes

• **PR #27913**: (pass-by-value) Set default @ **2015-10-14 14:03:36 UTC**
  - 831ec680d9 Merge pull request #27913 from pass-by-value/proxmox_verify_ssl
  - 0b721efe37 Set default

• **PR #27876**: (terminalmage) 2015.5 branch: Fix traceback when 2015.8 git ext_pillar config schema used @ **2015-10-13 14:58:45 UTC**
  - 41cc33a0 Merge pull request #27876 from terminalmage/git_pillar-AttributeError-2015.5
  - 07794837a 2015.5 branch: Fix traceback when 2015.8 git ext_pillar config schema used

• **ISSUE #27610**: (benburkert) PR #27201 broke ssh_known_hosts with :port (refs: #27726)

• **ISSUE #27187**: (SeverinLeonhardt) ssh_known_hosts.present hashes other entries even with hash_hostname: false (refs: #27201)

• **PR #27726**: (jfindlay) deprecate hash_hostname in favor of hash_known_hosts @ **2015-10-12 16:19:09 UTC**
  - PR #27201: (jfindlay) rename hash_hostname to hash_known_hosts (refs: #27726)
  - c9c3b7760e Merge pull request #27726 from jfindlay/hashhosts
  - ee78da2c27 better check for debian userdel error

• **ISSUE #27735**: (go8ose) saltutil.find_cached_job doesn't work (refs: #27776)

• **PR #27776**: (jfindlay) return message when local jobs_cache not found @ **2015-10-12 16:11:41 UTC**
  - 18e31584b0 Merge pull request #27776 from jfindlay/local_msg
  - 03afa3cfa return message when local jobs_cache not found

• **ISSUE #27665**: (ahammond) user.absent should not "fail" if /var/spool/mail/<user> already does not exist. (refs: #27766)

• **PR #27776**: (jfindlay) better check for debian userdel error @ **2015-10-12 15:14:33 UTC**
  - 86cc7b5537 Merge pull request #27776 from jfindlay/debmail
  - ee78da2c27 better check for debian userdel error

• **ISSUE #27756**: (iggy) syslog returner formats line incorrectly (refs: #27758)

• **PR #27758**: (iggy) Remove redundant text from syslog returner @ **2015-10-12 15:09:49 UTC**
- c224386c9a Merge pull request #27758 from iggy/patch-1
- 0994fb6a8c Remove redundant text from syslog returner

• **ISSUE #27832**: (viking60) Salt fails to recognize Manjaro (as an Arch derivate) (refs: #27841)

• **PR #27841**: (terminalmage) Detect Manjaro Linux as Arch derivative @ 2015-10-12 14:53:46 UTC
  - 34a005041f Merge pull request #27841 from terminalmage/issue27832
  - 8e09fbd6a3 Detect Manjaro Linux as Arch derivative

• **ISSUE #26538**: (seanjnkns) salt.states.file.managed generates warning when used in place of salt.states.file.touch (refs: #27806)

• **PR #27852**: (rallytime) Back-port #27806 to 2015.5 @ 2015-10-12 14:53:17 UTC
  - **PR #27806**: (blast-hardcheese) Empty string is falsy (refs: #27852)
  - 3944a498ad Merge pull request #27852 from rallytime/bp-27806
  - a84bf18bc4 Empty string is falsy

• **ISSUE #27831**: (basepi) v2015.5.5 highstate outputter stacktracing for jobs.lookup_jid (refs: #27838)

• **PR #27838**: (basepi) [2015.5] Fix highstate outputter for jobs.lookup_jid @ 2015-10-09 22:26:28 UTC
  - **PR #25521**: (cachedout) Fix outputter for state.orch (refs: #27838)
  - 7508a1c474 Merge pull request #27838 from basepi/fi6.runner.highstate.outputter.27831
  - 8ae9b66d9 Don’t pop ‘outputter’, we expect it further down

• **PR #27791**: (eguven) 2015.5 postgres_user groups backport @ 2015-10-08 23:59:08 UTC
  - d178315f93 Merge pull request #27791 from eguven/2015.5-postgres-user-groups-backport
  - 2ca1d21d6 fix test
  - bc90e5bbfe improve change reporting for postgres_user groups
  - 8712bce91a backport postgres_user groups

• **PR #27759**: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-10-07 18:01:54 UTC
  - b2937ba16 Merge pull request #27759 from basepi/merge-forward-2015.5
  - 792ee084bb Merge remote-tracking branch ‘upstream/2014.7’ into merge-forward-2015.5
  - d284eb165b Merge pull request #27390 from JaseFace/schedule-missing-enabled
  - 563db71bd4 Ensure we pass on the enable setting if present, or use the default of True if not in build_schedule_item() Prior to this, when schedule.present compares the existing schedule to the one crafted by this function, enabled will actually be removed at each run. schedule.present sees a modification needs to be made, and invokes schedule.modify, which does so with enabled: True, creating and endless loop of an ‘enabled’ removal and addition.

• **ISSUE #26673**: (robkinyon) __virtual__() doesn’t work without __virtualname__ (refs: #27732)

• **PR #27732**: (jacobhammons) update docs for __virtual__ and __virtualname__ @ 2015-10-07 17:29:31 UTC
  - 4b9128b491 Merge pull request #27732 from jacobhammons/26673
  - 75cc07df10 noted that __virtual__ can return False and an error string
  - b928e1afa8 update docs for __virtual__ and __virtualname__ Refs #26673

• **PR #27747**: (Sacro) Chocolatey doesn’t have a help command. @ 2015-10-07 16:06:53 UTC
  - a13089d1c Merge pull request #27747 from Sacro/fx-chocolatey-version
- 8f1fa9e78e Chocolatey doesn't have a help command.
- PR #27733: (jacobhammons) hardening topic - updates to docs.saltstack.com theme @ 2015-10-07 01:44:00 UTC
  - 4e48651de0 Merge pull request #27733 from jacobhammons/bug-fixes
  - cbedc4f533 Updated saltstack2 theme to add SaltConf16 banner
  - 117e0c2b0e Added hardening topic based on the information in Refs #27088
- ISSUE #9051: (olenz) Add bash completion to the docs (refs: #27706)
- ISSUE #27005: (johanek) grains precedence (refs: #27706)
- ISSUE #21475: (quantonganh) Targeting with pillar should be added in to the main targeting page (refs: #27706)
- ISSUE #14876: (whiteinge) Create a pre-Salted tutorial VM (refs: #27706)
- ISSUE #13407: (gravyboat) Create page explaining how to pass variables on the command line (refs: #27706)
- PR #27706: (jacobhammons) Assorted doc bugs @ 2015-10-06 05:35:29 UTC
  - c58da846bf Merge pull request #27706 from jacobhammons/bug-fixes
  - 76dc8d710b Assorted doc bugs Refs #9051 Refs #13407 Refs #21475 Refs #14876 Refs #27005
- PR #27695: (rallytime) Back-port #27671 to 2015.5 @ 2015-10-05 21:57:36 UTC
  - PR #27671: (gashev) Added skip test_ext_pillar_env_mapping if git module does not exist. (refs: #27695)
  - 4b5e89b8a5 Merge pull request #27695 from rallytime/bp-27671
  - 2a8028595 Added skip test_ext_pillar_env_mapping if git module does not exist.
- ISSUE #27501: (yermulnik) [FreeBSD] "pkg search" behavior changed since 1.5 series (refs: #27524)
- PR #27524: (jfindlay) parse pkgng output in quiet mode for >= 1.6.1 @ 2015-10-05 21:22:40 UTC
  - cb3d92676e Merge pull request #27524 from jfindlay/pkgng_quiet
  - 5e9107b970 parse pkgng output in quiet mode for >= 1.6.0
- PR #27686: (rallytime) Back-port #27659 to 2015.5 @ 2015-10-05 21:17:59 UTC
  - PR #27659: (gnubyexample) .pub as public key is what we should send to remote (refs: #27683)
  - 3b780c6a0f Merge pull request #27659 from rallytime/bp-27656
  - 84b60ec58b fix for: https://github.com/saltstack/salt/issues/27655: handling of success in postgres_local_cache
- ISSUE #27565: (gracinet) postgres_local_cache handling of success (refs: #27656)
- PR #27684: (rallytime) Back-port #27656 to 2015.5 @ 2015-10-05 21:17:55 UTC
  - PR #27656: (gracinet) Fix #27565: handling of success in postgres_local_cache (refs: #27684)
  - f9dd4647f Merge pull request #27684 from rallytime/bp-27656
  - d3780c6a00 Fix #27655: handling of success in postgres_local_cache
- PR #27683: (rallytime) Back-port #27659 to 2015.5 @ 2015-10-05 21:17:30 UTC
  - PR #27659: (gnubyexample) .pub as public key is what we should send to remote (refs: #27683)
  - 7ca6f854ff Merge pull request #27683 from rallytime/bp-27659
  - 84b60ec58b .pub as public key is what we should send to remote
- PR #27682: (rallytime) Back-port #27566 to 2015.5 @ 2015-10-05 21:17:26 UTC
  - PR #27566: (blueeyed) returners.local_cache: fix endless loop on OSErr (refs: #27682)
- a0f3e34656 Merge pull request #27682 from rallytime/bp-27566
- 2a44255748 minor: fix/format doc for returners.local_cache.prep_jid
- fd485e2396 returners.local_cache: fix endless loop on OSError

**ISSUE #25813: (whytewolf)** deconf.set throwing exception in 2015.8.0rc2 (refs: #25928)

**PR #27681: (rallytime)** Back-port #25928 to 2015.5 @ 2015-10-05 21:17:19 UTC
- PR #25928: (cachedout) Fix stacktrace for non-existant states (refs: #27681)
- 0b9ba911c4 Merge pull request #27681 from rallytime/bp-27529
- 17e1ddf34b Fix stacktrace for non-existant states

**ISSUE #27505: (silenius)** [FreeBSD] state.service + provider daemontools is broken (refs: #27555)

**PR #27680: (rallytime)** Back-port #27535 to 2015.5 @ 2015-10-05 21:17:10 UTC
 - PR #27535: (silenius) Issue 27505 (refs: #27680)
 - 23da0d316a Merge pull request #27680 from rallytime/bp-27535
 - 04aed5e105 Versionadded change since 2015.5.6 has already been tagged
 - 5792646ba .. versionadded:: 2015.5.6
 - cbaf46e066 python <2.7 compatibility (pylint issue)
 - ece499478 s/bin/b to avoid confusion with bin()
 - 4237c5db80 add a __virtual__ to check that daemontools is installed properly
 - 6239351bc fix doc
 - 573de3ab6 fix pylint issue
 - 5eb6a0d40 fix pep8 issues
 - 298cf4f5c0 import missing logging module
 - fe0ad36609 log was missing
 - e457083465 s/systemd/FreeBSD
 - 3512712e89 forgot service name..
 - 8f193a7cc fixes #27505

**PR #27442: (JaseFace)** Ensure we pass on the enable setting if present, or use the default of True if not in build_schedule_item() @ 2015-10-05 18:01:29 UTC
 - 7d7b97eadb6 Merge pull request #27442 from JaseFace/fix-27391-for-2015.5
 - bbb63e1cc Ensure we pass on the enable setting if present, or use the default of True if not in build_schedule_item() Prior to this, when schedule.present compares the existing schedule to the one crafted by this function, enabled will actually be removed at each run. schedule.present sees a modification needs to be made, and invokes schedule.modify, which does so with enabled: True, creating and endless loop of an 'enabled' removal and addition.

**ISSUE #26320: (schlagify)** pkg & diskusage beacons not sending alerts (refs: #27641)

**PR #27641: (rallytime)** Gate the psutil import and add depends doc for diskusage beacon @ 2015-10-05 17:00:48 UTC
 - ccbba856b Merge pull request #27641 from rallytime/gate-psutil-diskusage
 - da2d93a3dd Gate the psutil import and add depends doc for diskusage beacon
• PR #27644: (rallytime) Back-port #27640 to 2015.5 @ 2015-10-05 14:55:31 UTC
  – PR #27640: (stephen144) fix typo in default pillar path (refs: #27644)
  – 0918399f9 Merge pull request #27644 from rallytime/bp-27640
  – a9063a9745 fix typo in default pillar path
• ISSUE #27609: (rallytime) GCE with various external_ip settings cause stacktraces (refs: #27612)
• PR #27612: (rallytime) Fix GCE external_ip stacktraces in 2015.5 @ 2015-10-02 15:42:20 UTC
  – 27fceedbe Merge pull request #27612 from rallytime/fix-27609
  – 8dc047dc18 If external_up is set to None, don’t stacktrace, just use the private ip.
  – 2ebf790f9f [salt-cloud] gce: don’t stacktrace if Ephemeral is given instead of ephemeral
• PR #27568: (jacobhammons) regenerated man pages @ 2015-10-01 15:39:37 UTC
  – c84a1edc1b Merge pull request #27568 from jacobhammons/man-pages-five
  – b59c03d20d regenerated man pages

30.2.96 Salt 2015.5.8 Release Notes

release 2015-12-01

Version 2015.5.8 is a bugfix release for 2015.5.0.

Statistics

• Total Merges: 17
• Total Issue References: 12
• Total PR References: 27
• Contributors: 12 (MasterNayru, TronPaul, basepi, cachedout, cxmcc, jfindlay, kevinlondon, messa, rallytime, tehmaspc, twangboy, whiteinge)

Security Fix

CVE-2015-8034 Saving state.sls cache data to disk with insecure permissions

This affects users of the state.sls function. The state run cache on the minion was being created with incorrect permissions. This file could potentially contain sensitive data that was inserted via jinja into the state SLS files. The permissions for this file are now being set correctly. Thanks to zmalone for bringing this issue to our attention.

Changelog for v2015.5.7..v2015.5.8


• ISSUE #28883: (ldelossa) Issues running select states - local variable 'salt' referenced before assignment (refs: #29113)
• PR #29164: (jfindlay) Backport #29113 @ 2015-11-24 21:26:17 UTC
  – PR #29113: (TronPaul) Kill unneeded import (refs: #29164)
  – PR #28740: (MasterNayru) Add missing S3 module import (refs: #28839, #29113)

30.2. Previous Releases 3117
- a26c10a811 Merge pull request #29164 from jfindlay/bp-29113
- 50fab35188 kill unneeded import

- PR #29138: (jfindlay) add 2015.5.8 release notes @ 2015-11-23 23:22:48 UTC
  - 4f03196e7d Merge pull request #29138 from jfindlay/2015.5
  - be045f5cb1 add 2015.5.8 release notes

- ISSUE #29110: (mohshami) 2015.8.2 broke orchestration (refs: #29122)

- ISSUE #28010: (vakulich) Error "KeyError: 'ret'" appeared during salt.state run in orchestrate module if minion had an exception (refs: #28012)
  - PR #29128: (cachedout) Set a safer default value for ret in saltmod @ 2015-11-23 17:07:40 UTC
    - PR #29122: (cachedout) Fix broken state orchestration (refs: #29128)
    - PR #28012: (rallytime) Clean up stack trace when something goes wrong with minion output (refs: #29122)
    - 219367a23d Merge pull request #29128 from cachedout/tweak_29122
    - b08858b040 Missed check
    - 584fe81ee Set a safer default value for ret in saltmod

- ISSUE #29110: (mohshami) 2015.8.2 broke orchestration (refs: #29122)

- ISSUE #28010: (vakulich) Error "KeyError: 'ret'" appeared during salt.state run in orchestrate module if minion had an exception (refs: #28012)
  - PR #29122: (cachedout) Fix broken state orchestration (refs: #29128) @ 2015-11-23 16:24:18 UTC
    - PR #28012: (rallytime) Clean up stack trace when something goes wrong with minion output (refs: #29122)
    - 2250a36647 Merge pull request #29122 from cachedout/issue_29110
    - 4b9302d794 Fix broken state orchestration

- PR #29096: (rallytime) Back-port #29093 to 2015.5 @ 2015-11-22 17:02:51 UTC
  - PR #29093: (cxbmcc) Compare gem versions as a string. (refs: #29096)
    - 200e771efb Merge pull request #29096 from rallytime/bp-29093
    - f5734423a4 Compare gem versions as a string.

- PR #29084: (rallytime) Back-port #29055 to 2015.5 @ 2015-11-20 20:37:54 UTC
  - PR #29055: (cachedout) Add section to style guide (refs: #29084)
    - d8a2018bc8 Merge pull request #29084 from rallytime/bp-29055
    - 52e650aed9 Add section to style guide

- PR #29083: (rallytime) Back-port #29053 to 2015.5 @ 2015-11-20 20:37:38 UTC
  - PR #29053: (kevinlondon) Update rabbitmq_user.py (refs: #29083)
    - b5c6f1a351 Merge pull request #29083 from rallytime/bp-29053
    - f1884de0e7 Update rabbitmq_user.py

- ISSUE #28928: (twangboy) Fix user.present 2015.5 (refs: #28932)

- PR #28932: (twangboy) Fixed user.present / user.absent in windows @ 2015-11-18 21:45:53 UTC
- PR #28627: (twangboy) Backport win_useradd (refs: #28932)
- b3e3bebef0 Merge pull request #28932 from twangboy/fix_28928
- 0653a04887 Fixed user.present / user.absent in windows

**ISSUE #26911:** (dsumsky) file.manage state does not work with Amazon S3 URLs on Windows (refs: #28630)

**ISSUE #13850:** (ryan-lane) s3:// urls in file.managed (and likely elsewhere) require s3.key and s3.keyid to be in minion config (refs: #28630)

- PR #29011: (rallytime) Back-port #28630 to 2015.5 @ 2015-11-18 17:50:05 UTC
  - PR #28630: (messa) Use S3 credentials from Pillar (refs: #29011)
  - a2e4a227e0 Merge pull request #29011 from rallytime/bp-28630
  - 7baccc1b05 Lint - newline before def
  - 9e5c16d4da Reading S3 credentials from Pillar
  - a3216f813d Fixed requests HTTPError handler, it was still in urllib2 style

- **PR #28982:** (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-11-18 00:49:32 UTC
  - 1a4cd6002f Merge pull request #28982 from basepi/merge-forward-2015.5
  - bfbb109fbd Merge remote-tracking branch `upstream/2014.7` into merge-forward-2015.5
  - 4b8ddd0af8 Merge pull request #28839 from cachedout/revert_28740
  - 215b26c06f Revert #28740

- **ISSUE #28947:** (dmyerscough) sdb modules are not synced out (refs: #28949)

- **PR #28949:** (whiteinge) Add sync_sdb execution function @ 2015-11-17 15:35:38 UTC
  - edd26d763a Merge pull request #28949 from whiteinge/sync-sdb
  - f0e9ab25b Add sync_sdb execution function

- **ISSUE #28888:** (twangboy) Fix file.comment (refs: #28930)

- **PR #28930:** (twangboy) Added missing import mmap required by file.py @ 2015-11-16 23:17:23 UTC
  - 43da1b4ce0 Merge pull request #28930 from twangboy/fix_28888
  - f5c489eaad Added missing import mmap required by file.py

- **PR #28908:** (rallytime) A couple of spelling fixes for doc conventions page. @ 2015-11-16 02:29:35 UTC
  - 2488b873b8 Merge pull request #28908 from rallytime/doc-convention-spelling
  - 6e6eddb77 A couple of spelling fixes for doc conventions page.

- **ISSUE #22442:** (allanliu) rest_cherrypyp /keys URL does not handle JSON requests (refs: #28902)

- **PR #28902:** (whiteinge) Fix missing JSON support for /keys endpoint @ 2015-11-15 15:36:05 UTC
  - 827a1ae020 Merge pull request #28902 from whiteinge/json-keys
  - 9745903301 Fix missing JSON support for /keys endpoint

- **PR #28897:** (rallytime) Back-port #28873 to 2015.5 @ 2015-11-15 00:43:35 UTC
  - PR #28873: (tehmaspc) Fix salt-cloud help output typo (refs: #28897)
  - d23bd49130 Merge pull request #28897 from rallytime/bp-28873
  - 077e671ead Fix salt-cloud help output typo
• ISSUE #28870: (basepi) mdadm commands failing (refs: #28871)

• PR #28871: (basepi) [2015.5] Fix command generation for mdadm.assemble @ 2015-11-13 21:54:33 UTC
  – a9dc8b6ca6 Merge pull request #28871 from basepi/mdadm.fix.28870
  – 323bc2d2ac Fix command generation for mdadm.assemble

30.2.97 Salt 2015.5.9 Release Notes

release 2016-01-11

Version 2015.5.9 is a bugfix release for 2015.5.0.

Statistics

• Total Merges: 45
• Total Issue References: 21
• Total PR References: 48
• Contributors: 21 (abednarik, aletourneau, attiasr, basepi, cachedout, clan, clarkperkins, cro, dmyerscough, jacobhammons, jfindlay, jsutton, justinta, lorengordon, markckimball, mpreziuso, rallytime, terminalmage, titilambert, twangboy, zmalone)

Changelog for v2015.5.8..v2015.5.9


• PR #30248: (jfindlay) add 2015.5.9 release notes @ 2016-01-08 23:13:10 UTC
  – 92889db638 Merge pull request #30248 from jfindlay/2015.5
  – 741f7aba31 add 2015.5.9 release notes

• PR #30237: (jacobhammons) Updated man pages and doc version for 2015.5.9 @ 2016-01-08 18:10:05 UTC
  – 7a329d89d7 Merge pull request #30237 from jacobhammons/man-pages-prev
  – 2431ce45c3 Updated man page and doc conf.py copyright year to 2016
  – fe3da1c174 Updated man pages and doc version for 2015.5.9

• PR #30207: (rallytime) Use correct spacing in rabbitmq state examples @ 2016-01-07 18:37:35 UTC
  – 2c0b725924 Merge pull request #30207 from rallytime/rabbitmq_states_doc_fix
  – 8d48c24182 Use correct spacing in rabbitmq state examples

• PR #30191: (jacobhammons) Updated doc site banners @ 2016-01-06 22:37:40 UTC
  – b49cf910f4 Merge pull request #30191 from jacobhammons/banner-prev
  – c3390955b0 Updated doc site banners

• ISSUE #29633: (twellspring) user.present does not modify home directory (refs: #30125)

• PR #30125: (abednarik) Update user home event when createhome is set to False @ 2016-01-05 18:15:38 UTC
  – 9363d6f5b6 Merge pull request #30125 from abednarik/update_user_home
  – 56544a77f6 Update user home event when createhome is set to False
• ISSUE #10155: (jhenry82) Option to select a random master in multi-master mode (refs: #30127)

• PR #30127: (jsutton) Updating documentation and example minion config for random_master/master_shuffle. @ 2016-01-04 19:30:50 UTC
  - 1a5d585d91 Merge pull request #30127 from jsutton/clarify-documentation-for-random_master
  - 01dbf385ef Adding random_master to reference and updating master_shuffle. Adding master_shuffle to the minion example config file as it is needed for multi-master PKI.

• PR #30110: (markckimball) Fixed flag sent to salt.utils.http in order for verify_ssl to work correctly @ 2015-12-31 21:17:53 UTC
  - 28b1bbe77 Merge pull request #30110 from markckimball/fix-verify_ssl-in-joyent-cloud
  - e1c08cb269 Fixed flag sent to salt.utils.http in order for verify_ssl to work appropriately.

• PR #30093: (zmalone) Noting that file_roots and "state tree" should both be avoided @ 2015-12-30 22:40:05 UTC
  - 040412b0b1 Merge pull request #30093 from zmalone/pillar-notes
  - cbfd58afe Noting that file_roots and "state tree" should both be avoided, because in some environments, the actual states show up another level down. Adding notes about why this is undesirable.

• ISSUE #28120: (jtylers) Clear text passwords (refs: #30097)

• PR #30097: (cachedout) Note concern about cleartext password in docs for shadow.gen_password @ 2015-12-30 22:37:33 UTC
  - 25edefc93a Merge pull request #30097 from cachedout/note_on_password_process_list
  - 58aec884ef Note concern about cleartext password in docs for shadow.gen_password

• PR #30089: (mpreziuso) Fixes terminology and adds more accurate details about the algorithms @ 2015-12-30 20:02:18 UTC
  - 6b1c3a6bf2 Merge pull request #30089 from mpreziuso/patch-1
  - 50533add40 Fixes terminology and adds more accurate details about the algorithms

• ISSUE #29921: (anlutro) pygit 0.21 not fully supported? (refs: #30086)

• PR #30086: (cachedout) Document that gitfs needs recent libs @ 2015-12-30 19:26:05 UTC
  - 200d09385d Merge pull request #30086 from cachedout/issue_29921
  - 8c29e6d6a Document that gitfs needs recent libs

• ISSUE #27835: (bertjwregeer) [FreeBSD] salt-ssh hangs forever (refs: #30070)

• PR #30070: (cachedout) Add documentation on debugging salt-ssh @ 2015-12-29 23:00:06 UTC
  - 404414bf57 Merge pull request #30070 from cachedout/issue_27835
  - 60431e342a Add documentation on debugging salt-ssh

• PR #30059: (mpreziuso) Fixes wrong function scope @ 2015-12-29 16:12:06 UTC
  - 84db1221d Merge pull request #30059 from mpreziuso/patch-1
  - 1cb1c2da07 Fixes wrong function scope

• PR #30025: (justinta) Skipping some Boto tests until resolved moto issue @ 2015-12-28 15:21:45 UTC
  - PR #29725: (cachedout) Disable some boto tests per resolution of moto issue (refs: #30025)
  - 1ec69b1a06 Merge pull request #30025 from jand/boto_tests
  - e706642152 Skipping some Boto tests until resolved moto issue
- **ISSUE #28956**: (racooper) Netscaler module doc enhancements (refs: #29949)
- **PR #29949**: (aletourneau) Enhanced netscaler docstring @ 2015-12-22 20:26:52 UTC
  - 0f91021c59 Merge pull request #29949 from aletourneau/2015.5
  - c855fe262 Fixed trailing white spaces
  - 864801e002 fixed version
  - 041d9346c4 Enhanced netscaler docstring
- **PR #29941**: (cachedout) Fix spelling error in boto_vpc @ 2015-12-22 15:49:54 UTC
  - 229d3eb60b Merge pull request #29941 from cachedout/boto_spelling
  - b11bf07b8 Fix spelling error in boto_vpc
- **ISSUE #29880**: (githubcdr) Salt pkg.uptodate fails on Arch linux (refs: #29908)
- **PR #29908**: (cachedout) Allow kwargs to be passed to pacman provide for update func @ 2015-12-22 15:04:18 UTC
  - 69c5ada636 Merge pull request #29908 from cachedout/issue_29880
  - 4cd77b4118 Allow kwargs to be passed to pacman provide for update func
- **ISSUE #27056**: (ogali) pkgng provider on FreeBSD does not do BATCH=yes (refs: #29909)
- **PR #29909**: (abednarik) FreeBSD pkgng fix for non-interactive install. @ 2015-12-22 15:03:50 UTC
  - ad0de4563 Merge pull request #29909 from abednarik/freebsd_pkgng_non_interactive_fix
  - 8ac213001a FreeBSD pkgng fix for non-interactive install.
- **ISSUE #24698**: (cmhe) docker.installed not working (salt 2015.5.0, docker 1.6.2, dockerpy 0.5.3) (refs: #29730)
- **PR #29730**: (rallytime) Update docker-py version requirement to 0.6.0 for dockerio.py files @ 2015-12-16 14:44:40 UTC
  - 43f3d166c Merge pull request #29730 from rallytime/fix-24698
  - 120fd5fd0 Update docker-py version requirement to 0.6.0 for dockerio.py files
- **ISSUE #23343**: (micaelbergeron) npm state ignore the requested version (refs: #29715)
- **ISSUE #18647**: (hundt) Version number in npm state name does not result in correct version being installed (refs: #29715)
- **PR #29715**: (rallytime) Install correct package version, if provided, for npm state. @ 2015-12-15 23:19:45 UTC
  - c393a4175a Merge pull request #29715 from rallytime/fix-23343
  - a0ed857c37 Install correct package version, if provided, for npm state.
- **PR #29721**: (terminalmage) Fix display of multiline strings when iterating over a list @ 2015-12-15 22:16:10 UTC
  - 1310afbbc2 Merge pull request #29721 from terminalmage/nested-output-multiline-fix
  - 761be9cb93 Fix display of multiline strings when iterating over a list
- **ISSUE #29488**: (Shad0w1nk) salt.cloud.clouds.vmware.revert_to_snapshot crash when using the default value (refs: #29646)
- **PR #29646**: (rallytime) Don’t stacktrace on kwargs.get if kwargs=None @ 2015-12-15 19:02:58 UTC
  - 52cc07cec9 Merge pull request #29646 from rallytime/fix-29488
  - c5fa9e351 Don’t stacktrace on kwargs.get if kwargs=None
Salt Documentation, Release 3002.5

30.2. Previous Releases

- ISSUE #29661: (mosuowhq) bug report when creating VM in /salt/cloud/clouds/nova.py (refs: #29673)
- PR #29673: (rallytime) Default value should be False and not 'False' @ 2015-12-14 18:08:44 UTC
  - f606c23e8 Merge pull request #29673 from rallytime/fix-29661
  - e4a7a1157 Default value should be False and not 'False'
- PR #29527: (jfindlay) 2015.5.7 notes: add note about not being released @ 2015-12-08 21:08:26 UTC
  - f7c8e7baf Merge pull request #29527 from jfindlay/2015.5
  - 1a804f0c9 2015.5.7 notes: add note about not being released
- PR #29539: (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-12-08 19:14:51 UTC
  - 867d550271 Merge pull request #29539 from basepi/merge-forward-2015.5
  - 2c94ba430 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - 85aa70a6cb Merge pull request #29392 from jacobhammons/2014.7
    * d7f0db1d8 updated version number to not reference a specific build from the latest branch
- ISSUE #12072: (vk00226) Passing user-data when provisioning ec2 instances (refs: #29504)
- PR #29504: (rallytime) Document userdata_file option for EC2 driver @ 2015-12-08 16:54:33 UTC
  - 65deb8bb5 Merge pull request #29504 from rallytime/ec2-doc-fix
  - 8357c95dc2 Document userdata_file option for EC2 driver
- ISSUE #29101: (jessbreckenridge) Salt-cloud 2015.8.0 - del_*_vols_on_destroy does not work according to docs (refs: #29507)
- PR #29507: (rallytime) Switch volumes and del_*_on_destroy example ordering @ 2015-12-08 16:50:11 UTC
  - 65deb8bb5 Merge pull request #29507 from rallytime/ec2-doc-fix
  - 90b4823eb2 Switch volumes and del_*_on_destroy example ordering
- ISSUE #28862: (trevor-h) salt-cloud uppercase timeout options no longer recognized (refs: #29469)
- PR #29469: (abednarik) Added Documentation note in salt cloud. @ 2015-12-07 18:27:46 UTC
  - 0918c9294f Merge pull request #29469 from abednarik/doc_note_for_saltcloud_connection_timeout
  - 8e5c3e366a Added Documentation note in salt cloud.
- PR #29461: (dmyerscough) Fix resource limits, systemd sets the default too small @ 2015-12-05 16:26:34 UTC
  - e43c7c05a6 Merge pull request #29461 from dmyerscough/fix-resource-limits
  - 85aa3b033 Fix resource limits, systemd sets the default number of open files to 4096 causing te master to complain about limits when you have a large number of keys
- ISSUE #28526: (clarkperkins) yumpkg.installed broken in salt v2015.8.1 on CentOS 6 minions (refs: #28656)
- PR #29439: (rallytime) Back-port #28656 to 2015.5 @ 2015-12-04 22:56:17 UTC
  - PR #28656: (clarkperkins) #28526 fixed yumpkg module issue with pkg.installed (refs: #29439)
  - 730f0db1d8 Merge pull request #29439 from clarkperkins/bp-28656
  - 2f11bb021f #28526 fixed yumpkg module
- PR #29418: (jacobhammons) Added CVE 2015-8034 to 2015.5.8 release notes @ 2015-12-04 03:02:53 UTC
  - 197210d52e Merge pull request #29418 from jacobhammons/dot8
  - 4fs1a737f9 Added CVE 2015-8034 to 2015.5.8 release notes
- **PR #29389**: (jacobhammons) updated version numbers in documentation @ 2015-12-03 16:27:23 UTC
  - b3452f2a1a Merge pull request #29389 from jacobhammons/2015.5
  - 82471f2f36 updated version numbers
- **ISSUE #26898**: (twangboy) Symlinks in Windows (2015.8) (refs: #28191)
- **PR #28501**: (twangboy) Requested fixes for 26898 @ 2015-12-03 01:12:12 UTC
  - **PR #28420**: (jfindlay) fix removal of symbolic links on windows in the file state (refs: #28501)
  - 6a7a95f28a Merge pull request #28501 from twangboy/jmoney_26898
  - c0cf33332c Fixed some Lint...
  - df17fc59d3 Merge pull request #6 from jfindlay/twang_test
    - bc7e0cfe64 add file.symlink unit tests
    - 9381dc7215 orthogonalize file.symlink unit tests
  - 8f462ba044 Merge pull request #5 from cachedout/fix_twangboy_test
    - 5293150d25 Fix tests
  - 7d39091c91 Fixed some more lint
  - 3dbd62af2c Fixed some tests… hopefully
  - f187db3288 Removed unnecessary logic
  - 89ebd268e6 Added file attributes restore on fail
  - 9ec72ca724 fix file state unit tests for win symlink feature
  - 69c32a663e Fixed some lint
  - 638dec5027 Fixed some tests... let’s see if they’re really are
  - 5ed7a99792 Replaced instances of shutil.rmtree in file state
  - 2651ce509f Fix file.remove for windows
- **ISSUE #29344**: (justinta) file.search broken on python 2.6 with empty files (refs: #29348)
- **PR #29348**: (justinta) Fixes an file.search on python2.6 @ 2015-12-02 23:26:36 UTC
  - 760a521603 Merge pull request #29348 from jtand/file_search_fix
  - 04f82b4d4fd Fixes an file.search on python2.6
- **ISSUE #29206**: (mschiff) ssh_known_hosts.present creates wrong known_hosts lines (refs: #29276)
- **PR #29267**: (rallytime) Back-port #29267 to 2015.5 @ 2015-12-02 19:37:42 UTC
  - 51ea88d489 Merge pull request #29336 from rallytime/bp-29276
  - 3a0e19debb Prevent adding port twice when adding entry in known hosts
- **PR #29268**: (rallytime) Back-port #29268 to 2015.5 @ 2015-12-02 19:37:05 UTC
  - 51ea88d489 Merge pull request #29336 from rallytime/bp-29276
  - 3a0e19debb Prevent adding port twice when adding entry in known hosts
- **PR #29280**: (rallytime) Back-port #29280 to 2015.5 @ 2015-12-02 19:37:05 UTC
  - 28255af52a Merge pull request #29333 from rallytime/bp-29280
  - 28255af52a Merge pull request #29333 from rallytime/bp-29280
- 722d02ff4a Lint
- 4a0040c1b4 [Doc] Add note for SVN state

- **PR #29316:** (basepi) [2015.5] Merge forward from 2014.7 to 2015.5 @ 2015-12-01 20:20:23 UTC
  - 14e94b3593 Merge pull request #29316 from basepi/merge-forward-2015.5
  - 33f40b3c47 Merge remote-tracking branch 'upstream/2014.7' into merge-forward-2015.5
  - d2fb2109a3 Merge pull request #29296 from douaradda/patch-3
  - d2885390f4 Use process KillMode on Debian systems also

- **PR #29216:** (clan) size is 0 doesn’t mean no data, e.g, /proc/version @ 2015-11-30 20:01:43 UTC
  - 6a2ffdb7c Merge pull request #29216 from clan/file_search_on_proc_file
  - 91a20c07a1 try mmap first
  - 8aa4f2053e remove extra space to fix lint failure
  - d34e6b1a9a use read only if has read() method
  - 3209c1db5 size is 0 doesn't mean no data, e.g, /proc/version

- **PR #29261:** (attiasr) fix incorrect reinstallation of windows pkg @ 2015-11-30 18:28:42 UTC
  - d6aae8d7b Merge pull request #29261 from attiasr/patch-1
  - 7a99b90596 add log and return if pkg already installed
  - 1843c7ab8e fix incorrect reinstallation of windows pkg

- **PR #29214:** (cro) Doc for salt.utils.http should say verify_ssl not ssl_verify. @ 2015-11-25 23:55:38 UTC
  - 923618867 Merge pull request #29214 from cro/ssl_verify_ssl
  - e9c13c561b Doc bug--salt.utils.http takes verify_ssl not ssl_verify.

- **ISSUE #29202:** (lorengordon) Broken ca bundle lookup in salt.utils.http.get_ca_bundle (refs: #29204)

- **PR #29204:** (lorengordon) Use os.path.join to return full path to ca bundle @ 2015-11-25 20:00:42 UTC
  - df7b35a86b Merge pull request #29204 from lorengordon/fix-29202
  - b1dae5e6fe Use os.path.join to return full path to ca bundle

### 30.2.98 Salt 2014.7.0 Release Notes - Codename Helium

This release is the largest Salt release ever, with more features and commits then any previous release of Salt. Everything from the new RAET transport to major updates in Salt Cloud and the merging of Salt API into the main project.

**Important:** The Fedora/RHEL/CentOS salt-master package has been modified for this release. The following components of Salt have been broken out and placed into their own packages:

- salt-syndic
- salt-cloud
- salt-ssh
When the **salt-master** package is upgraded, these components will be removed, and they will need to be manually installed.

---

**Important**: Compound/pillar matching have been temporarily disabled for the **mine** and **publish** modules for this release due to the possibility of inferring pillar data using pillar glob matching. A proper fix is now in the 2014.7 branch and scheduled for the 2014.7.1 release, and compound matching and non-globbing pillar matching will be re-enabled at that point.

Compound and pillar matching for normal salt commands are unaffected.

---

**New Transport!**

**RAET Transport Option**

This has been a HUGE amount of work, but the beta release of Salt with RAET is ready to go. RAET is a reliable queuing transport system that has been developed in partnership with a number of large enterprises to give Salt an alternative to ZeroMQ and a way to get Salt to scale well beyond tens of thousands of servers. Unlike ZeroMQ, RAET is completely asynchronous in every aspect of its operation and has been developed using the flow programming paradigm. This allows for many new capabilities to be added to Salt in the upcoming releases.

Please keep in mind that this is a beta release of RAET and we hope for bugs to be worked out, performance to be better realized and more in the 2015.5.0 release.

Simply stated, users running Salt with RAET should expect some hiccups as we hammer out the update. This is a BETA release of Salt RAET.

**Salt SSH Enhancements**

Salt SSH has just entered a new league, with substantial updates and improvements to make salt-ssh more reliable and easier then ever! From new features like the ansible roster and fileserver backends to the new pypi salt-ssh installer to lowered deps and a swath of bugfixes, salt-ssh is basically reborn!

**Install salt-ssh Using pip**

Salt-ssh is now pip-installable!

https://pypi.org/project/salt-ssh/

Pip will bring in all of the required deps, and while some deps are compiled, they all include pure python implementations, meaning that any compile errors which may be seen can be safely ignored.

```
pip install salt-ssh
```
Fileserver Backends

Salt-ssh can now use the salt fileserver backend system. This allows for the gitfs, hgfs, s3, and many more ways to centrally store states to be easily used with salt-ssh. This also allows for a distributed team to easily use a centralized source.

Saltfile Support

The new saltfile system makes it easy to have a user specific custom extended configuration.

Ext Pillar

Salt-ssh can now use the external pillar system. Making it easier then ever to use salt-ssh with teams.

No More sshpass

Thanks to the enhancements in the salt vt system, salt-ssh no longer requires sshpass to send passwords to ssh. This also makes the manipulation of ssh calls substantially more flexible, allowing for intercepting ssh calls in a much more fluid way.

Pure Python Shim

The salt-ssh call originally used a shell script to discover what version of python to execute with and determine the state of the ssh code deployment. This shell script has been replaced with a pure python version making it easy to increase the capability of the code deployment without causing platform inconsistency issues with different shell interpreters.

Custom Module Delivery

Custom modules are now seamlessly delivered. This makes the deployment of custom grains, states, execution modules and returners a seamless process.

CP Module Support

Salt-ssh now makes simple file transfers easier then ever! The cp module allows for files to be conveniently sent from the salt fileserver system down to systems.

More Thin Directory Options

Salt ssh functions by copying a subset of the salt code, or salt thin down to the target system. In the past this was always transferred to /tmp/salt and cached there for subsequent commands.

Now, salt thin can be sent to a random directory and removed when the call is complete with the -W option. The new -W option still uses a static location but will clean up that location when finished.

The default salt thin location is now user defined, allowing multiple users to cleanly access the same systems.
State System Enhancements

**New Imperative State Keyword "Listen"**

The new `listen` and `listen_in` keywords allow for completely imperative states by calling the `mod_watch()` routine after all states have run instead of re-ordering the states.

**Mod Aggregate Runtime Manipulator**

The new `mod_aggregate` system allows for the state system to rewrite the state data during execution. This allows for state definitions to be aggregated dynamically at runtime.

The best example is found in the `pkg` state. If `mod_aggregate` is turned on, then when the first `pkg` state is reached, the state system will scan all of the other running states for `pkg` states and take all other packages set for install and install them all at once in the first `pkg` state.

These runtime modifications make it easy to run groups of states together. In future versions, we hope to fill out the `mod_aggregate` system to build in more and more optimizations.

For more documentation on `mod_aggregate`, see the documentation.

**New Requisites: onchanges and onfail**

The new `onchanges` and `onchanges_in` requisites make a state apply only if there are changes in the required state. This is useful to execute post hooks after changes occur on a system.

The other new requisites, `onfail`, and `onfail_in`, allow for a state to run in reaction to the failure of another state.

For more information about these new requisites, see the requisites documentation.

**Global onlyif and unless**

The `onlyif` and `unless` options can now be used for any state declaration.

**Use names to expand and override values**

The `names` declaration in Salt’s state system can now override or add values to the expanded data structure. For example:

```yaml
my_users:
  user.present:
    - names:
      - larry
      - curly
      - moe:
        - shell: /bin/zsh
        - groups:
          - wheel
        - shell: /bin/bash
```
Major Features

Scheduler Additions

The Salt scheduler system has received MAJOR enhancements, allowing for cron-like scheduling and much more granular timing routines. See [here](#) for more info.

Red Hat 7 Family Support

All the needed additions have been made to run Salt on RHEL 7 and derived OSes like CentOS and Scientific.

Fileserver Backends in salt-call

Fileserver backends like gitfs can now be used without a salt master! Just add the fileserver backend configuration to the minion config and execute salt-call. This has been a much-requested feature and we are happy to finally bring it to our users.

Amazon Execution Modules

An entire family of execution modules further enhancing Salt’s Amazon Cloud support. They include the following:

- **Autoscale Groups** (includes state support) -- related: *Launch Control* states
- **Cloud Watch** (includes state support)
- **Elastic Cache** (includes state support)
- **Elastic Load Balancer** (includes state support)
- **IAM Identity and Access Management** (includes state support)
- **Route53 DNS** (includes state support)
- **Security Groups** (includes state support)
- **Simple Queue Service** (includes state support)

LXC Runner Enhancements

BETA The Salt LXC management system has received a number of enhancements which make running an LXC cloud entirely from Salt an easy proposition.

Next Gen Docker Management

The Docker support in Salt has been increased at least ten fold. The Docker API is now completely exposed and Salt ships with Docker data tracking systems which make automating Docker deployments very easy.
Peer System Performance Improvements

The peer system communication routines have been refined to make the peer system substantially faster.

SDB

Encryption at rest for configs

GPG Renderer

Encrypted pillar at rest

OpenStack Expansion

Lots of new OpenStack stuff

Queues System

Ran change external queue systems into Salt events

Multi Master Failover Additions

Connecting to multiple masters is more dynamic then ever

Chef Execution Module

Managing Chef with Salt just got even easier!

salt-api Project Merge

The salt-api project has been merged into Salt core and is now available as part of the regular salt-master package install. No API changes were made, the salt-api script and init scripts remain intact.

salt-api has always provided Yet Another Pluggable Interface to Salt (TM) in the form of "netapi" modules. These are modules that bind to a port and start a service. Like many of Salt’s other module types, netapi modules often have library and configuration dependencies. See the documentation for each module for instructions.

See also:

The full list of netapi modules.
Synchronous and Asynchronous Execution of Runner and Wheel Modules

`salt.runner.RunnerClient` and `salt.wheel.WheelClient` have both gained complimentary `cmd_sync` and `cmd_async` methods allowing for synchronous and asynchronous execution of any Runner or Wheel module function, all protected using Salt's `external authentication` system. `salt-api` benefits from this addition as well.

**rest_cherrypy** Additions

The `rest_cherrypy` netapi module provides the main REST API for Salt.

**Web Hooks**

This release of course includes the Web Hook additions from the most recent `salt-api` release, which allows external services to signal actions within a Salt infrastructure. External services such as Amazon SNS, Travis-CI, or GitHub, as well as internal services that cannot or should not run a Salt minion daemon can be used as first-class components in Salt's rich orchestration capabilities.

The raw HTTP request body is now available in the event data. This is sometimes required information for checking an HMAC signature in order to verify a HTTP request. As an example, Amazon or GitHub requests are signed this way.

**Generating and Accepting Minion Keys**

The `/key` convenience URL generates a public and private key for a minion, automatically pre-accepts the public key on the Salt Master, and returns both keys as a tarball for download.

This allows for easily bootstrapping the key on a new minion with a single HTTP call, such as with a Kickstart script, all using regular shell tools.

```
curl -ss http://salt-api.example.com:8000/keys \
   -d mid=jerry \n   -d username=kickstart \n   -d password=kickstart \n   -d eauth=pam \n   -o jerry-salt-keys.tar
```

**Fileserver Backend Enhancements**

All of the fileserver backends have been overhauled to be faster, lighter, and more reliable. The VCS backends (`gitfs`, `hgfs`, and `svnfs`) have also received a lot of new features.

Additionally, most config parameters for the VCS backends can now be configured on a per-remote basis, allowing for global config parameters to be overridden for a specific `gitfs/hgfs/svnfs` remote.
New **gitfs** Features

**Pygit2 and Dulwich**

In addition to supporting GitPython, support for **pygit2** (0.20.3 and newer) and **dulwich** have been added. Provided a compatible version of **pygit2** is installed, it will now be the default provider. The config parameter **gitfs_provider** has been added to allow one to choose a specific provider for gitfs.

**Mountpoints**

Prior to this release, to serve a file from gitfs at a salt fileserver URL of `salt://foo/bar/baz.txt`, it was necessary to ensure that the parent directories existed in the repository. A new config parameter **gitfs_mountpoint** allows gitfs remotes to be exposed starting at a user-defined `salt://` URL.

**Environment Whitelisting/Blacklisting**

By default, gitfs will expose all branches and tags as Salt fileserver environments. Two new config parameters, **gitfs_env_whitelist** and **gitfs_env_blacklist**, allow more control over which branches and tags are exposed. More detailed information on how these two options work can be found in the **Gitfs Walkthrough**.

**Expanded Authentication Support**

As of **pygit2** 0.20.3, both http(s) and SSH key authentication are supported, and Salt now also supports both authentication methods when using **pygit2**. Keep in mind that **pygit2** 0.20.3 is not yet available on many platforms, so those who had been using authenticated git repositories with a passphraseless key should stick to GitPython if a new enough **pygit2** is not yet available for the platform on which the master is running.

A full explanation of how to use authentication can be found in the **Gitfs Walkthrough**.

New **hgfs** Features

**Mountpoints**

This feature works exactly like its **gitfs counterpart**. The new config parameter is called **hgfs_mountpoint**.

**Environment Whitelisting/Blacklisting**

This feature works exactly like its **gitfs counterpart**. The new config parameters are called **hgfs_env_whitelist** and **hgfs_env_blacklist**.
New **svnfs** Features

Mountpoints

This feature works exactly like its **gitfs** counterpart. The new config parameter is called **svnfs_mountpoint**.

Environment Whitelisting/Blacklisting

This feature works exactly like its **gitfs** counterpart. The new config parameters are called **svnfs_env_whitelist** and **svnfs_env_blacklist**.

Configurable Trunk/Branches/Tags Paths

Prior to this release, the paths where trunk, branches, and tags were located could only be in directories named "trunk", "branches", and "tags" directly under the root of the repository. Three new config parameters (**svnfs_trunk**, **svnfs_branches**, and **svnfs_tags**) allow SVN repositories which are laid out differently to be used with svnfs.

New **minionfs** Features

Mountpoint

This feature works exactly like its **gitfs** counterpart. The new config parameter is called **minionfs_mountpoint**. The one major difference is that, as minionfs doesn’t use multiple remotes (it just serves up files pushed to the master using `cp.push`) there is no such thing as a per-remote configuration for **minionfs_mountpoint**.

Changing the Saltenv from Which Files are Served

A new config parameter (**minionfs_env**) allows minionfs files to be served from a Salt fileserver environment other than **base**.

Minion Whitelisting/Blacklisting

By default, minionfs will expose the pushed files from all minions. Two new config parameters, **minionfs_whitelist**, and **minionfs_blacklist**, allow minionfs to be restricted to serve files from only the desired minions.

Pyobjects Renderer

Salt now ships with with the **Pyobjects Renderer** that allows for construction of States using pure Python with an idiomatic object interface.
New Modules

In addition to the Amazon modules mentioned above, there are also several other new execution modules:

- Oracle
- Random
- Redis
- Amazon Simple Queue Service
- Block Device Management
- CoreOS etcd
- Genesis
- InfluxDB
- Server Density
- Twilio Notifications
- Varnish
- ZNC IRC Bouncer
- SMTP

New Runners

- Map/Reduce Style
- Queue

New External Pillars

- CoreOS etcd

New Salt-Cloud Providers

- Aliyun ECS Cloud
- LXC Containers
- Proxmox (OpenVZ containers & KVM)

Salt Call Change

When used with a returner, salt-call now contacts a master if --local is not specified.
Deprecations

**salt.modules.virtualenv_mod**

- Removed deprecated `memoize` function from `salt/utils/__init__.py` (deprecated)
- Removed deprecated `no_site_packages` argument from `create` function (deprecated)
- Removed deprecated `check_dns` argument from `minion_config` and `apply_minion_config` functions (deprecated)
- Removed deprecated `OutputOptionsWithTextMixIn` class from `salt/utils/parsers.py` (deprecated)
- Removed the following deprecated functions from `salt/modules/ps.py`: `-physical_memory_usage` (deprecated) `-virtual_memory_usage` (deprecated) `-cached_physical_memory` (deprecated) `-physical_memory_buffers` (deprecated)
- Removed deprecated cloud arguments from `cloud_config` function in `salt/config.py`: `-vm_config` (deprecated) `-vm_config_path` (deprecated)
- Removed deprecated `libcloud_version` function from `salt/cloud/libcloudfuncs.py` (deprecated)
- Removed deprecated `CloudConfigMixIn` class from `salt/utils/parsers.py` (deprecated)

### 30.2.99 Salt 2014.7.1 Release Notes

**release** 2015-01-12

Version 2014.7.1 is a bugfix release for 2014.7.0.

The changes include:

- Fixed gitfs serving symlinks in `file.recurse` states ([issue #17700](issue #17700))
- Fixed holding of multiple packages (YUM) when combined with version pinning ([issue #18468](issue #18468))
- Fixed use of Jinja templates in masterless mode with non-roots fileserver backend ([issue #17963](issue #17963))
- Re-enabled pillar and compound matching for mine and publish calls. Note that pillar globbing is still disabled for those modes, for security reasons. ([issue #17194](issue #17194))
- Fix for `tty: True` in `salt-ssh` ([issue #16847](issue #16847))
- Fix for supervisor states when supervisor not installed to system python ([issue #18044](issue #18044))
- Fix for logging when `log_level='quiet'` for `cmd.run` ([issue #19479](issue #19479))

### 30.2.100 Salt 2014.7.2 Release Notes

**release** 2015-02-09

Version 2014.7.2 is a bugfix release for 2014.7.0.

The changes include:

- Fix erroneous warnings for systemd service enabled check ([issue #19606](issue #19606))
- Fix FreeBSD kernel module loading, listing, and persistence `kmod` ([issue #197151](issue #197151), [issue #19682](issue #19682))

### 30.2. Previous Releases
• Allow case-sensitive npm package names in the `npm state`. This may break behavior for people expecting the state to lowercase their npm package names for them. The `npm module` was never affected by mandatory lowercasing. ([issue #20329](https://gitlab.com/saltstack/salt/issues/20329))

• Deprecate the `activate` parameter for `pip.install` for both the module and the state. If `bin_env` is given and points to a virtualenv, there is no need to activate that virtualenv in a shell for `pip` to install to the virtualenv.

• Fix a file-locking bug in `gitfs` ([issue #18839](https://gitlab.com/saltstack/salt/issues/18839))

• Deprecated `archive_user` in favor of standardized `user` parameter in `state` and added `group` parameter.

### 30.2.101 Salt 2014.7.3 Release Notes

**release** 2015-03-25

Version 2014.7.3 is a bugfix release for 2014.7.0.

Changes:

• Multi-master minions mode no longer route fileclient operations asymetrically. This fixes the source of many multi-master bugs where the minion would become unresponsive from one or more masters.

• Fix bug wherein `network.iface` could produce stack traces.

• `net.arp` will no longer be made available unless `arp` is installed on the system.

• Major performance improvements to Saltnado

• Allow KVM module to operate under KVM itself or VMware Fusion

• Various fixes to the Windows installation scripts

• Fix issue where the syndic would not correctly propagate loads to the master job cache.

• Improve error handling on invalid `/etc/network/interfaces` file in salt networking modules

• Fix bug where a response status was not checked for in `fileclient.get_url`

• Enable eauth when running salt in batch mode

• Increase timeout in Boto Route53 module

• Fix bugs with Salt's 'tar' module option parsing

• Fix parsing of NTP servers on Windows

• Fix issue with blockdev tuning not reporting changes correctly

• Update to the latest Salt bootstrap script

• Update Linode salt-cloud driver to use either linode-python or apache-libcloud

• Fix for `s3.query` function to return correct headers

• Fix for `s3.head` returning `None` for files that exist

• Fix the `disable` function in `win_service` module so that the service is disabled correctly

• Fix race condition between master and minion when making a directory when both daemons are on the same host

• Fix an issue where `file.recurse` would fail at the root of an `svn` repo when the repo has a mountpoint

• Fix an issue where `file.recurse` would fail at the root of an `hgfs` repo when the repo has a mountpoint
• Fix an issue where file.recurse would fail at the root of an gitfs repo when the repo has a mountpoint
• Add status.master capability for Windows.
• Various fixes to ssh_known_hosts
• Various fixes to states.network bonding for Debian
• The debian_ip.get_interfaces module no longer removes nameservers.
• Better integration between grains.virtual and systemd-detect-virt and virt-what
• Fix traceback in sysctl.present state output
• Fix for issue where mount.mounted would fail when superopts were not a part of mount.active (extended=True). Also mount.mounted various fixes for Solaris and FreeBSD.
• Fix error where datetimes were not correctly safeguarded before being passed into msgpack.
• Fix file.replace regressions. If the pattern is not found, and if dry run is False, and if backup is False, and if a pre-existing file exists with extension .bak, then that backup file will be overwritten. This backup behavior is a result of how fileinput works. Fixing it requires either passing through the file twice (the first time only to search for content and set a flag), or rewriting file.replace so it doesn’t use fileinput
• VCS filreserver fixes/optimizations
• Catch fileserver configuration errors on master start
• Raise errors on invalid gitfs configurations
• set_locale when locale file does not exist (Redhat family)
• Fix to correctly count active devices when created mdadm array with spares
• Fix to correctly target minions in batch mode
• Support ssh:// urls using the gitfs dulwhich backend
• New fileserver runner
• Fix various bugs with argument parsing to the publish module.
• Fix disk.usage for Synology OS
• Fix issue with tags occurring twice with docker.pulled
• Fix incorrect key error in SMTP returner
• Fix condition which would remount loopback filesystems on every state run
• Remove requisites from listens after they are called in the state system
• Make system implementation of service.running aware of legacy service calls
• Fix issue where publish.publish would not handle duplicate responses gracefully.
• Accept Kali Linux for aptpkg salt execution module
• Fix bug where cmd.which could not handle a dirname as an argument
• Fix issue in ps.pgrep where exceptions were thrown on Windows.

Known issues:

• In multimaster mode, a minion may become temporarily unresponsive if modules or pillars are refreshed at the same time that one or more masters are down. This can be worked around by setting `auth_timeout` and `auth_tries` down to shorter periods.
30.2.102 Salt 2014.7.4 Release Notes

release 2015-03-30

Version 2014.7.4 is a bugfix release for 2014.7.0.

This is a security release. The security issues fixed have only been present since 2014.7.0, and only users of the two listed modules are vulnerable. The following CVEs have been resolved:

- CVE-2015-1838 SaltStack: insecure /tmp file handling in salt/modules/serverdensity_device.py
- CVE-2015-1839 SaltStack: insecure /tmp file handling in salt/modules/chef.py

Changes:

- Multi-master minions mode no longer route fileclient operations asymmetrically. This fixes the source of many multi-master bugs where the minion would become unresponsive from one or more masters.
- Fix bug wherein network.iface could produce stack traces.
- net.arp will no longer be made available unless arp is installed on the system.
- Major performance improvements to SaltNado
- Allow KVM module to operate under KVM itself or VMware Fusion
- Various fixes to the Windows installation scripts
- Fix issue where the syndic would not correctly propagate loads to the master job cache.
- Improve error handling on invalid /etc/network/interfaces file in salt networking modules
- Fix bug where a response status was not checked for in fileclient.get_url
- Enable eauth when running salt in batch mode
- Increase timeout in Boto Route53 module
- Fix bugs with Salt's `tar` module option parsing
- Fix parsing of NTP servers on Windows
- Fix issue with blockdev tuning not reporting changes correctly
- Update to the latest Salt bootstrap script
- Update Linode salt-cloud driver to use either linode-python or apache-libcloud
- Fix for s3.query function to return correct headers
- Fix for s3.head returning None for files that exist
- Fix the disable function in win_service module so that the service is disabled correctly
- Fix race condition between master and minion when making a directory when both daemons are on the same host
- Fix an issue where file.recurse would fail at the root of an svn repo when the repo has a mountpoint
- Fix an issue where file.recurse would fail at the root of an hgfs repo when the repo has a mountpoint
- Fix an issue where file.recurse would fail at the root of an gitfs repo when the repo has a mountpoint
- Add status.master capability for Windows.
- Various fixes to ssh_known_hosts
- Various fixes to states.network bonding for Debian
- The debian_ip.get_interfaces module no longer removes nameservers.
• Better integration between grains.virtual and systemd-detect-virt and virt-what

• Fix traceback in sysctl.present state output

• Fix for issue where mount.mounted would fail when superopts were not a part of mount.active (extended=True). Also mount.mounted various fixes for Solaris and FreeBSD.

• Fix error where datetimes were not correctly safeguarded before being passed into msgpack.

• Fix file.replace regressions. If the pattern is not found, and if dry run is False, and if backup is False, and if a pre-existing file exists with extension .bak, then that backup file will be overwritten. This backup behavior is a result of how fileinput works. Fixing it requires either passing through the file twice (the first time only to search for content and set a flag), or rewriting file.replace so it doesn’t use fileinput

• VCS filreserver fixes/optimizations

• Catch fileserserver configuration errors on master start

• Raise errors on invalid gitfs configurations

• set_locale when locale file does not exist (Redhat family)

• Fix to correctly count active devices when created mdadm array with spares

• Fix to correctly target minions in batch mode

• Support ssh:// urls using the gitfs dulwich backend

• New fileserserver runner

• Fix various bugs with argument parsing to the publish module.

• Fix disk.usage for Synology OS

• Fix issue with tags occurring twice with docker.pulled

• Fix incorrect key error in SMTP returner

• Fix condition which would remount loopback filesystems on every state run

• Remove requisites from listens after they are called in the state system

• Make system implementation of service.running aware of legacy service calls

• Fix issue where publish.publish would not handle duplicate responses gracefully.

• Accept Kali Linux for aptpkg salt execution module

• Fix bug where cmd.which could not handle a dirname as an argument

• Fix issue in ps.pgrep where exceptions were thrown on Windows.

Known issues:

• In multimaster mode, a minion may become temporarily unresponsive if modules or pillars are refreshed at the same time that one or more masters are down. This can be worked around by setting 'auth_timeout' and 'auth_tries' down to shorter periods.

• There are known issues with batch mode operating on the incorrect number of minions. This bug can be patched with the change in Pull Request #22464.

• The fun, state, and unless keywords are missing from the state internals, which can cause problems running some states. This bug can be patched with the change in Pull Request #22365.
30.2.103 Salt 2014.7.5 Release Notes

release 2015-04-16

Version 2014.7.5 is a bugfix release for 2014.7.0.

Changes:

- Fixed a key error bug in salt-cloud
- Updated man pages to better match documentation
- Fixed bug concerning high CPU usage with salt-ssh
- Fixed bugs with remounting cvfs and fuse filesystems
- Fixed bug with alowing requisite tracking of entire sls files
- Fixed bug with aptpkg.mod_repo returning OK even if apt-add-repository fails
- Increased frequency of ssh terminal output checking
- Fixed malformed locale string in localmod module
- Fixed checking of available version of package when accept_keywords were changed
- Fixed bug to make git.latest work with empty repositories
- Added **kwargs to service.mod_watch which removes warnings about enable and __reqs__ not being supported by the function
- Improved state comments to not grow so quickly on failed requisites
- Added force argument to service to trigger force_reload
- Fixed bug to andle pkgrepo keyids that have been converted to int
- Fixed module.portage_config bug with appending accept_keywords
- Fixed bug to correctly report disk usage on windows minion
- Added the ability to specify key prefix for S3 ext_pillar
- Fixed issues with batch mode operating on the incorrect number of minions
- Fixed a bug with the proxmox cloud provider stacktracing on disk definition
- Fixed a bug with the changes dictionary in the file state
- Fixed the TCP keep alive settings to work better with SREQ caching
- Fixed many bugs within the iptables state and module
- Fixed bug with states by adding fun, state, and unless to the state runtime internal keywords listing
- Added ability to eAuth against Active Directory
- Fixed some salt-ssh issues when running on Fedora 21
- Fixed grains.get_or_set_hash to work with multiple entries under same key
- Added better explanations and more examples of how the Reactor calls functions to docs
- Fixed bug to not pass ex_config_drive to libcloud unless it's explicitly enabled
- Fixed bug with pip.install on windows
- Fixed bug where puppet.run always returns a 0 retcode
- Fixed race condition bug with minion scheduling via pillar
• Made efficiency improvements and bug fixes to the windows installer
• Updated environment variables to fix bug with pygit2 when running salt as non-root user
• Fixed cas behavior on data module -- data.cas was not saving changes
• Fixed GPG rendering error
• Fixed strace error in virt.query
• Fixed stacktrace when running chef-solo command
• Fixed possible bug wherein uncaught exceptions seem to make zmq3 tip over when threading is involved
• Fixed argument passing to the reactor
• Fixed glibc caching to prevent bug where salt-minion getaddrinfo in dns_check() never got updated name-servers

Known issues:
• In multimaster mode, a minion may become temporarily unresponsive if modules or pillars are refreshed at the same time that one or more masters are down. This can be worked around by setting 'auth_timeout' and 'auth_tries' down to shorter periods.

30.2.104 Salt 2014.7.6 Release Notes

release 2015-05-18

Version 2014.7.6 is a bugfix release for 2014.7.0.

Statistics

• Total Merges: 122
• Total Issue References: 66
• Total PR References: 166
• Contributors: 49 (0xf10e, Azidburn, F30, JaseFace, JohannesEbke, aletourneau, aneesusha, basepi, bastichelaar, bersace, cachedout, cedwards, cellscape, chris-prince, clan, clinta, cr1st1p, cro, dr4Ke, ericfode, ether42, gareth-greenaway, gtmanfred, hvnsweeting, jfindlay, jleroy, joejulian, justinta, kaithar, lorengordon, martinhoefling, mguegan, multani, notpeter, panticz, rallytime, rominf, rubic, s0undt3ch, skizunov, slinu3d, t0rrant, techhat, teizz, terminalmage, thatch45, twangboy, vdesjardins, vr-jack)

Security Fix

CVE-2015-4017 Certificates are not verified when connecting to server in the Aliyun and Proxmox modules

Only users of the Aliyun or Proxmox cloud modules are at risk. The vulnerability does not exist in the latest 2015.5.0 release of Salt.
Changelog for v2014.7.5..v2014.7.6


- **PR #23810**: (rallytime) Backport #23757 to 2014.7 @ 2015-05-18 15:30:21 UTC
  - **PR #23757**: (clan) use abspath, do not eliminating symlinks (refs: #23810)
  - aee0c83df Merge pull request #23810 from rallytime/bp-23757
  - fb32c32065 use abspath, do not eliminating symlinks

- **ISSUE #20198**: (jcftang) virt.get_graphics, virt.get_nics are broken, in turn breaking other things (refs: #23809, #21469)

- **PR #23809**: (rallytime) Fix virtualport section of virt.get_nics loop @ 2015-05-18 15:30:09 UTC
  - **PR #21487**: (rallytime) Backport #21469 to 2014.7 (refs: #23809)
  - **PR #21469**: (vdesjardins) fixes #20198: virt.get_graphics and virt.get_nics calls in module virt (refs: #21487)
  - 6b3352b1a Merge pull request #23809 from rallytime/virt_get_nics_fix
  - 0616fb7884 Fix virtualport section of virt.get_nics loop

- **PR #23823**: (gtmanfred) add link local for ipv6 @ 2015-05-17 12:48:25 UTC
  - 188f03f567 Merge pull request #23823 from gtmanfred/2014.7
  - 5ef06d59a add link local for ipv6

- **PR #23802**: (gtmanfred) if it is ipv6 ip_to_int will fail @ 2015-05-16 04:06:59 UTC
  - **PR #23573**: (techhat) Scan all available networks for public and private IPs (refs: #23802)
  - f3ca682f92 Merge pull request #23802 from gtmanfred/2014.7
  - 2da98b58c8 if it is ipv6 ip_to_int will fail

- **PR #23488**: (cellscape) LXC cloud fixes @ 2015-05-15 18:09:35 UTC
  - d9a0c3e82 Merge pull request #23488 from cellscape/lxc-cloud-fixes
  - 64250a67e5 Remove profile from opts after creating LXC container
  - c4047d2a71 Set destroy=True in opts when destroying cloud instance
  - 9e1311a7cd Store instance names in opts when performing cloud action
  - 934bc57c73 Correctly pass custom env to lxc-attach
  - 7fb85f7be1 Preserve test=True option in cloud states
  - 9771b5a313 Fix detection of absent LXC container in cloud state
  - fb240cf02 Report failure when failed to create/clone LXC container
  - 2d9a2bb97 Avoid shadowing variables in lxc module
  - 792e1021f2 Allow to override profile options in lxc.cloud_init_interface
  - 42bd64b9f3 Return changes on successful lxc.create from salt-cloud
  - 4409eabb83 Return correct result when creating cloud LXC container
  - 377015c881 Issue #16424: List all providers when creating salt-cloud instance without profile

- **ISSUE #22332**: (rallytime) [salt-ssh] Add a check for host in /etc/salt/roster (refs: #23748)
- PR #23748: (basepi) [2014.7] Log salt-ssh roster render errors more assertively and verbosely @ 2015-05-14 22:38:10 UTC
  - 808bbe1cb2 Merge pull request #23748 from basepi/salt-ssh.roster.host.check
  - bc5e049e0 Log entire exception for render errors in roster
  - 753de6a621 Log render errors in roster to error level
  - e01a7a90b3 Always let the real YAML error through

- ISSUE #22959: (highlyunavailable) Windows Salt hangs if file.directory is trying to write to a drive that doesn’t exist (refs: #23731)

- PR #23731: (twangboy) Fixes #22959: Trying to add a directory to an unmapped drive in windows @ 2015-05-14 21:59:14 UTC
  - 72cf360255 Merge pull request #23731 from twangboy/fix_22959
  - 88e5495b2d Fixes #22959: Trying to add a directory to an unmapped drive in windows

- PR #23730: (rallytime) Backport #23729 to 2014.7 @ 2015-05-14 21:58:34 UTC
  - PR #23729: (rallytime) Partially merge #23437 (grains fix) (refs: #23730)
  - PR #23437: (cedwards) Grains item patch (refs: #23729)
  - 2610195262 Merge pull request #23730 from rallytime/bp-23729
  - 1877cae5ca adding support for nested grains to grains.item

- PR #23688: (twangboy) Added inet_pton to utils/validate/net.py for ip.set_static_ip in windows @ 2015-05-14 16:15:56 UTC
  - 3e9df83d6 Merge pull request #23688 from twangboy/fix_23415
  - 6a91169bae Fixed unused-import pylint error
  - 5e25b3f355 fixed pylint errors
  - 1a9676626f Added inet_pton to utils/validate/net.py for ip.set_static_ip in windows

- ISSUE #23403: (iamfil) salt.runners.cloud.action fun parameter is replaced (refs: #23680)

- PR #23680: (cachedout) Rename kwarg in cloud runner @ 2015-05-13 19:44:02 UTC
  - 1b86460d73 Merge pull request #23680 from cachedout/issue_23403
  - d5986c21b4 Rename kwarg in cloud runner

- ISSUE #23548: (kkaig) grains.list_present produces incorrect (?) output (refs: #23674)

- PR #23674: (cachedout) Handle lists correctly in grains.list_present @ 2015-05-13 18:34:58 UTC
  - cd64a00ce4 Merge pull request #23674 from cachedout/issue_23548
  - da8a2f5cb3 Handle lists correctly in grains.list_present

- PR #23672: (twangboy) Fix user present @ 2015-05-13 18:30:09 UTC
  - d322a19213 Merge pull request #23672 from twangboy/fix_user_present
  - 731e7a3edd Merge branch '2014.7' of https://github.com/saltstack/salt into fix_user_present
  - 6df70a4545 Fixed user.present to create password in windows

- ISSUE #23604: (Azidburn) service.dead on systemd Minion create an Error Message (refs: #23607)

- PR #23670: (rallytime) Backport #23607 to 2014.7 @ 2015-05-13 18:27:17 UTC
- **PR #23607**: (Azidburn) Fix for #23604. No error reporting. Exitcode !=0 are ok (refs: #23670)
- 43f7025000 Merge pull request #23670 from rallytime/bp-23607
- ed30dc4642 Fix for #23604. No error reporting. Exitcode !=0 are ok

- **ISSUE #22141**: (Deshe) grains.get_or_set_hash render error if hash begins with "%" (refs: #23640)

- **PR #23661**: (rallytime) Merge #23640 with whitespace fix @ 2015-05-13 15:47:30 UTC
  - PR #23640: (cachedout) Add warning to get_or_set_hash about reserved chars (refs: #23661)
  - 0f06ac1d88 Merge pull request #23661 from rallytime/merge-23640
  - 4427f42bb6 Whitespace fix
  - dd9115466e Add warning to get_or_set_hash about reserved chars

- **ISSUE #23452**: (landergate) minion crashed with empty grain (refs: #23639)

- **PR #23639**: (cachedout) Handle exceptions raised by __virtual__ @ 2015-05-13 15:11:12 UTC
  - 84e2ef88fc Merge pull request #23639 from cachedout/issue_23452
  - d418b4a77 Syntax error!
  - 45b4015d7d Handle exceptions raised by __virtual__

- **PR #23638**: (cachedout) Convert str master to list @ 2015-05-13 15:08:19 UTC
  - bd9b94ba8c Merge pull request #23637 from cachedout/issue_23611
  - 56cb1f52e3 Fix typo
  - f6fcf19a7f Convert str master to list

- **PR #23595**: (rallytime) Backport #23549 to 2014.7 @ 2015-05-12 21:19:40 UTC
  - PR #23549: (vr-jack) Update __init__.py (refs: #23595)
  - f20ce42ce Merge pull request #23595 from rallytime/bp-23549
  - 6efcacf9ad Update __init__.py

- **ISSUE #23110**: (martinhoefling) Copying files from gitfs in file.recurse state fails (refs: #23496)

- **PR #23594**: (rallytime) Backport #23496 to 2014.7 @ 2015-05-12 21:19:34 UTC
  - PR #23496: (martinhoefling) Fix for issue #23110 (refs: #23594)
  - 1acaf86da7 Merge pull request #23594 from rallytime/bp-23496
  - d5a1d268a Fix for issue #23110 This resolves issues when the freshly created directory is removed by fileserver.update.

- **PR #23593**: (rallytime) Backport #23442 to 2014.7 @ 2015-05-12 21:19:26 UTC
  - PR #23442: (clan) add directory itself to keep list (refs: #23593)
  - 2c221c7332 Merge pull request #23593 from rallytime/bp-23442
  - 39869a15bd check w/ low['name'] only
  - 304cc499e9 another fix for file defined w/ id, but require name
  - 8814d4180e add directory itself to keep list

- **PR #23606**: (twangboy) Fixed checkbox for starting service and actually starting it @ 2015-05-12 21:18:50 UTC
• ISSUE #22908: (karanjad) Add failhard option to salt orchestration (refs: #23389)

• PR #23592: (rallytime) Backport #23389 to 2014.7 @ 2015-05-12 16:44:42 UTC
  - PR #23389: (cachedout) Correct fail_hard typo (refs: #23592)
  - 10b3f0f643 Merge pull request #23592 from rallytime/bp-23389
  - 734ce43801 Correct fail_hard typo

• PR #23573: (techhat) Scan all available networks for public and private IPs (refs: #23802) @ 2015-05-12 15:22:22 UTC
  - cd34b9b6c4 Merge pull request #23573 from techhat/novaquery
  - f92db5e92f Linting
  - 26e00d3ccc Scan all available networks for public and private IPs

• ISSUE #23479: (danielmorlock) Typo in pkg.removed for Gentoo? (refs: #23558)

• PR #23558: (jfindlay) reorder emerge command line @ 2015-05-12 15:17:46 UTC
  - 2a72cd71c2 Merge pull request #23558 from jfindlay/fx_ebuild
  - 45404fb2a6 reorder emerge command line

• ISSUE #23355: (dr4Ke) salt-ssh: 'sources: salt://' files from 'pkg' state are not included in salt_state.tgz (refs: #23530)

• PR #23530: (dr4Ke) salt-ssh state: fix including all salt:// references @ 2015-05-12 15:13:43 UTC
  - a664a3c6fd Merge pull request #23530 from dr4Ke/fx_salt-ssh_to_include_pkg_sources
  - 5df0a8008c fix pylint warning
  - d0549e56ba salt-ssh state: fix including all salt:// references

• ISSUE #23004: (b18) 2014.7.5 - Windows - pkg.list_pkgs - "nxlog" never shows up in output. (refs: #23433)

• PR #23433: (twangboy) Obtain all software from the registry @ 2015-05-11 22:47:52 UTC
  - 55c3869861 Merge pull request #23433 from twangboy/list_pkgs_fix
  - 8ab5b1b86f Fix pylint error
  - 2d11d6545e Obtain all software from the registry

• PR #23554: (jleroy) Debian: Hostname always updated @ 2015-05-11 21:57:00 UTC
  - 755bed0abd Merge pull request #23554 from jleroy/debian-hostname-fix
  - 5ff749e487 Debian: Hostname always updated

• ISSUE #23440: (jleroy) Debian: Hostname always updated
  - PR #23440: (dr4Ke) Fix grains.append in nested dictionary grains #23441 (refs: #23551)

• ISSUE #23441: (dr4Ke) grains.append should work at any level of a grain (refs: #23440, #23474)

• PR #23551: (dr4Ke) grains.append unit tests, related to #23474 @ 2015-05-11 21:54:25 UTC
  - PR #23474: (dr4Ke) Fix grains.append in nested dictionary grains #23441 (refs: #23551)
  - PR #23440: (dr4Ke) Fix grains.append in nested dictionary grains #23441 (refs: #23474)
  - 6e87ce9f5 Merge pull request #23551 from dr4Ke/grains.append_unit_tests
  - ebf9df5b2 fix pylint errors
  - c4954046ad unit tests for grains.append module function

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30.2. Previous Releases
• ISSUE #23411: (dr4Ke) grains.append should work at any level of a grain (refs: #23440, #23474)

• PR #23474: (dr4Ke) Fix grains.append in nested dictionary grains #23411 (refs: #23551) @ 2015-05-11 18:00:21 UTC

  – PR #23440: (dr4Ke) fix grains.append in nested dictionary grains #23411 (refs: #23474)
  – e96e5c5fb3 Merge pull request #23474 from dr4Ke/fix_grains.append_nested
  – a01a5bb51e grains.get, parameter delimiter, versionadded: 2014.7.6
  – b39f50475d remove debugging output
  – b6e15e295c fix grains.append in nested dictionary grains #23411

• PR #23537: (t0rrant) Update changelog @ 2015-05-11 17:02:16 UTC

  – ab7e1aad8e Merge pull request #23537 from t0rrant/patch-1
  – 8e03cc99d3 Update changelog

• PR #23538: (cro) Update date in LICENSE file @ 2015-05-11 15:19:25 UTC

  – b79fed3a92 Merge pull request #23538 from cro/licupdate
  – 345efe25c9 Update date in LICENSE file

• ISSUE #23159: (aneeshusa) Unused validator (refs: #23505)

• PR #23505: (aneeshusa) Remove unused ssh config validator. Fixes #23159. @ 2015-05-09 13:24:15 UTC

  – a123a36f05 Merge pull request #23505 from aneeshusa/remove-unused-ssh-config-validator
  – 90af1672ca Remove unused ssh config validator. Fixes #23159.

• ISSUE #20518: (ekle) module s3.get does not support eu-central-1 (refs: #23467)

• PR #23467: (slinu3d) Added AWS v4 signature support @ 2015-05-08 14:36:19 UTC

  – ca2c21a63c Merge pull request #23467 from slinu3d/2014.7
  – 0b4081d8f4 Fixed pylint error at line 363
  – 5be5eb5b14 Fixed pylink errors
  – e64f374ff8 Fixed lint errors
  – b9d1ac4f1f Added AWS v4 signature support

• PR #23444: (techhat) Add create_attach_volume to nova driver @ 2015-05-07 19:51:32 UTC

  – e6f9ee0e2e Merge pull request #23444 from techhat/novacreateattach
  – ebdb7eae2d Add create_attach_volume to nova driver

• ISSUE #529: (rubic) run salt in user space (refs: #543)

  – PR saltstack/salt-bootstrap#563: (notpeter) Ubuntu alternate ppas (refs: #23460)
  – PR #543: (rubic) updated documentation for user, fixed configuration template links (refs: #saltstack/salt-bootstrap#563')

• PR #23460: (s0undt3ch) [2014.7] Update to latest stable bootstrap script v2015.05.07 @ 2015-05-07 19:10:54 UTC

  – e331463319 Merge pull request #23460 from s0undt3ch/hotfix/bootstrap-script-2014.7
  – edcd0c41f2 Update to latest stable bootstrap script v2015.05.07
- **PR #23439**: (techhat) Add wait_for_passwd_maxtries variable @ 2015-05-07 07:28:56 UTC
  - 7a8ce1a954 Merge pull request #23439 from techhat/maxtries
  - 0ad3f2c88 Add wait_for_passwd_maxtries variable
- **PR #23422**: (cro) $HOME should not be used, some shells don't set it. @ 2015-05-06 21:02:36 UTC
  - 644eb75fec Merge pull request #23422 from cro/gce_sh_home
  - 4ef9e6ba0b Don't use $HOME to find user's directory, some shells don't set it
- **PR #23425**: (basepi) [2014.7] Fix typo in FunctionWrapper @ 2015-05-06 20:38:03 UTC
  - ef17ab4b2a Merge pull request #23425 from basepi/functionwrapper_typo
  - c39073f3e Fix typo in FunctionWrapper
- **PR #23385**: (rallytime) Backport #23346 to 2014.7 @ 2015-05-06 20:12:29 UTC
  - PR #23346: (ericfode) Allow file_map in salt-cloud to handle folders. (refs: #23385)
  - 1b13ec04c2 Merge pull request #23385 from rallytime/bp-23346
  - 9efc13c810 more linting fixes
  - cf131c9a5a cleaned up some pylint errors
  - f981699c75 added logic to sftp_file and file_map to allow folder uploads using file_map
- **PR #23414**: (jfindlay) 2015.2 → 2015.5 @ 2015-05-06 20:04:02 UTC
  - f8c7a62089 Merge pull request #23414 from jfindlay/update_branch
  - 8074d16d52 2015.2 → 2015.5
- **PR #23404**: (hvnsweeting) saltapi cherrypy: initialize var when POST body is empty @ 2015-05-06 17:35:56 UTC
  - 54b3bd43e4 Merge pull request #23404 from hvnsweeting/cherrypy-post-emptybody-fix
  - f85f8f954c initialize var when POST body is empty
- **PR #23409**: (terminalmage) Update Lithium docstrings in 2014.7 branch @ 2015-05-06 16:20:46 UTC
  - 160f703296 Merge pull request #23409 from terminalmage/update-lithium-docstrings-2014.7
  - bc97d011ba Fix sphinx typo
  - 20006b06f6 Update Lithium docstrings in 2014.7 branch
- **ISSUE #17245**: (tomashavlas) localemod does not generate locale for Arch (refs: #23397, #23307)
- **PR #23397**: (jfindlay) add more flexible whitespace to locale_gen search @ 2015-05-06 03:44:11 UTC
  - aa5fbd0a14 Merge pull request #23397 from jfindlay/fixLocaleGen
  - 0941fefd2b add more flexible whitespace to locale_gen search
- **PR #23368**: (kaithar) Backport #23367 to 2014.7 @ 2015-05-05 21:42:26 UTC
  - PR #23367: (kaithar) Put the sed insert statement back in to the output. (refs: #23368)
  - PR #18368: (basepi) Merge forward from 2014.7 to develop (refs: #23368, #23367)
  - 0c76dd4d8a Merge pull request #23368 from kaithar/bp-23367
  - 577f41972e Pylint fix
  - 8d9acd1f89 Put the sed insert statement back in to the output.
- **ISSUE #23294**: (variia) file.replace fails to append if repl string partially available (refs: #23350)
- **PR #23350**: (lorenegordon) Append/prepend: search for full line @ 2015-05-05 21:42:11 UTC
  - 3493ce1fc9 Merge pull request #23350 from lorenegordon/file.replace_assume_line
  - b60e224beb Append/prepend: search for full line
- **ISSUE #23026**: (adelcast) Incorrect salt-syndic logfile and pidfile locations (refs: #23341)
- **PR #23341**: (cachedout) Fix syndic pid and logfile path @ 2015-05-05 21:29:10 UTC
  - 7be5c48ad5 Merge pull request #23341 from cachedout/issue_23026
  - e98e5e787 Fix tests
  - 6011b437ca Fix syndic pid and logfile path
- **ISSUE #19114**: (pykler) salt-ssh and gpg pillar renderer (refs: #23347, #23272, #23188)
- **PR #23272**: (basepi) [2014.7] Allow salt-ssh minion config overrides via master config and roster (refs: #23347) @ 2015-05-05 21:28:47 UTC
  - **PR #23188**: (basepi) [2014.7] Work around bug in salt-ssh in config.get for gpg renderer (refs: #23272)
  - ea61abfa68 Merge pull request #23272 from basepi/salt-ssh.minion.config.19114
  - c223309bb7 Add versionadded
  - be7407feae Lint
  - c2c337567e Missing comma
  - 8e3e8e073a Pass the minion_opts through the FunctionWrapper
  - cb69cd07de Match the master config template in the master config reference
  - 87fc3161f9 Add Salt-SSH section to master config template
  - 91dd9dcbdc Add ssh_minion_opts to master config ref
  - c273ea146c Add minion config to salt-ssh doc
  - a0b6b760c3 Add minion_opts to roster docs
  - 521c35260 Accept minion_opts from the target information
  - e209b6e1b Process ssh_minion_opts from master config
  - 3b64214377 Revert "Work around bug in salt-ssh in config.get for gpg renderer"
  - 494953a208 Remove the strip (embracing multi-line YAML dump)
  - fe87f0fe39 Dump multi-line yaml into the SHIM
  - b751a7281c Inject local minion config into shim if available
- **ISSUE #19114**: (pykler) salt-ssh and gpg pillar renderer (refs: #23347, #23272, #23188)
- **PR #23347**: (basepi) [2014.7] Salt-SSH Backport FunctionWrapper.__contains__ @ 2015-05-05 14:13:21 UTC
  - **PR #23272**: (basepi) [2014.7] Allow salt-ssh minion config overrides via master config and roster (refs: #23347)
  - **PR #23188**: (basepi) [2014.7] Work around bug in salt-ssh in config.get for gpg renderer (refs: #23272)
  - 4f760dd9eb Merge pull request #23347 from basepi/salt-ssh.functionwrapper.contains.19114
  - 30595e3ff7 Backport FunctionWrapper.__contains__
• ISSUE #22742: (hvnsweeting) salt-master says: "This master address: 'salt' was previously resolvable but now fails to resolve!" (refs: #23344)

• PR #23344: (cachedout) Explicitely set file_client on master @ 2015-05-04 23:21:48 UTC
  02658b1e60 Merge pull request #23344 from cachedout/issue_22742
  5adc96ce7f Explicitely set file_client on master

• PR #23318: (cellscape) Honor seed argument in LXC container initialization @ 2015-05-04 20:58:12 UTC
  228b1be299 Honor seed argument in LXC container initialization

• ISSUE #17245: (tomashavlas) localemod does not generate locale for Arch (refs: #23397, #23307)

• PR #23307: (jfindlay) check for /etc/locale.gen @ 2015-05-04 20:56:32 UTC
  4ac4509c57 Merge pull request #23307 from jfindlay/fix_locale_gen

• ISSUE saltstack/salt-bootstrap#580: (bradthurber) git develop broken in centos6/rhel6/others? due to missing python tornado dep (refs: #23324)

• ISSUE saltstack/salt-bootstrap#560: (bradthurber) param to avoid git install on CentOS/RHEL? (refs: #23324)

• ISSUE #552: (jhutchins) Support require and watch under the same state dec (refs: #23324)
  PR saltstack/salt-bootstrap#589: (panticz) Fix Debian Squeeze backports mirror (refs: #23324)
  PR saltstack/salt-bootstrap#504: (rominif) opensuse 13.2: fix installation (refs: #23324)
  PR #567: (bastiancheelaar) Added upstart module (refs: #23324)

• PR #23324: (s0undt3ch) [2014.7] Update to the latest stable release of the bootstrap script v2015.05.04 @ 2015-05-04 16:28:30 UTC
  f790f42ed6 Merge pull request #23324 from s0undt3ch/hotfix/development-2014.7
  6643e47ce5 Update to the latest stable release of the bootstrap script v2015.05.04

• PR #23329: (cro) Require requests to verify cert when talking to aliyun and proxmox cloud providers @ 2015-05-04 16:18:17 UTC
  5487367baa Merge pull request #23329 from cro/cloud_verify_cert
  860db7338 Turn on ssl verify for requests.

• PR #23311: (cellscape) Fix new container initialization in LXC runner (refs: #23318) @ 2015-05-04 09:55:29 UTC
  ea2017672d Merge pull request #23311 from cellscape/fix-salt-cloud-lxc-init
  76fbb34e7d Fix new container initialization in LXC runner

• ISSUE #18880: (johtso) npm installed breaks when a module is missing (refs: #23298)

• PR #23298: (chris-prince) Fixed issue #18880 in 2014.7 branch @ 2015-05-03 15:49:41 UTC
  c3998bf568 Merge pull request #23298 from chris-prince/2014.7
  0fa25dbb58 Fixed issue #18880 in 2014.7 branch

• ISSUE #23148: (cr1st1p) virt - error handling bogus if machine image location is wrong (refs: #23151)

• PR #23292: (rallytime) Merge #23151 with pylint fixes @ 2015-05-02 03:54:12 UTC
- **PR #23151**: (cr1st1p) Fixes #23148 (refs: #23292)
- 16ecef3d466 Merge pull request #23292 from rallytime/merge-23151
- 8ff852a23a Merge #23151 with pylint fixes
- 8f1a62e82d Fixes #23148

- **PR #23274**: (basepi) [2014.7] Reduce salt-ssh debug log verbosity @ 2015-05-01 20:19:23 UTC
  - ce42315a4b Merge pull request #23274 from basepi/salt-ssh.debug.verbosity
  - ece46c68f4 Log stdout and stderr to trace
  - 085f4d79c6 Log stdout and stderr to trace as well
  - 9b9c30f5ad Reduce salt-ssh debug log verbosity

- **ISSUE #22605**: (mavenAtHouzz) Tornado websockets event Handlers registration are incorrect (refs: #23261)

- **PR #23261**: (rallytime) Fix tornado websocket event handler registration @ 2015-05-01 18:20:31 UTC
  - 7b55e4310f Merge pull request #23261 from rallytime/fix-22605
  - 4f50bf2b3 Fix tornado websocket event handler registration

- **PR #23258**: (teizz) TCP keepalives on the ret side, Revisited. @ 2015-05-01 16:13:49 UTC
  - 83ef7cb114 Merge pull request #23258 from teizz/ret_keepalive_2014_7_5
  - 0b9b6f9be The fixes by cachedout which were backported into 2015_2 were missing a single parameter thus not setting up the TCP keepalive for the ZeroMQ Channel by default.

- **ISSUE #22244**: (twellspring) iptables.append --log parameters must be after --jump LOG (refs: #23241)

- **PR #23241**: (techhat) Move iptables log options after the jump @ 2015-05-01 01:31:59 UTC
  - 8de3e8396 Merge pull request #23241 from techhat/issue23224
  - 8f7948c99 Move iptables log options after the jump

- **PR #23228**: (rallytime) Backport #23171 to 2014.7 @ 2015-04-30 21:09:45 UTC
  - **PR #23171**: (skizunov) Bugfix: `clean_proc_dir` is broken (refs: #23228)
  - f2010e499 Merge pull request #23228 from rallytime/bp-23171
  - e670e99506 Bugfix: `clean_proc_dir` is broken

- **ISSUE #22703**: (Xiol) salt-ssh does not work with list matcher (refs: #22808)

- **PR #22822**: (hvnsweeting) 22822 file directory clean @ 2015-04-30 15:25:51 UTC
  - 82c22afacc Merge pull request #22823 from hvnsweeting/22822-file-directory-clean
  - c749c276b4 fix lint - remove unnecessary parenthesis
  - cb3dfe969 refactor
- 8924b5a911 refactor: use relpath instead of do it manually
- d3060a51a3 refactor
- 5759a0e8f0 bugfix: fix file.directory clean=True when it require parent dir

• ISSUE saltstack/salt#22941: (bersace) __pillar func breaks fileserver globals (refs: #22942)
• ISSUE #22941: (bersace) __pillar func breaks fileserver globals (refs: #22977)
• PR #22977: (bersace) Fix fileserver backends __opts__ overwritten by __pillar @ 2015-04-30 15:24:56 UTC
  - PR #22942: (bersace) Fix fileserver backends global overwritten by __pillar (refs: #22977)
  - f6c0728bf8 Merge pull request #22977 from bersace/fix-fileserver-backends-pillar-side-effect
  - 5f451f63cf Fix fileserver backends __opts__ overwritten by __pillar
• ISSUE #23166: (claudiupopescu) "Error in function _minion_event" resulting in modules not loaded (refs: #23180)
• PR #23180: (jfindlay) fix typos from 36841bddd in masterapi.py @ 2015-04-30 15:22:41 UTC
  - 34206f7a38 Merge pull request #23180 from jfindlay/remote_event
  - 72066e1073 fix typos from 36841bddd in masterapi.py
• ISSUE #23153: (cr1st1p) cmdmod : run_chroot - broken in 2014.7.5 - missing kwargs (refs: #23176)
• PR #23176: (jfindlay) copy standard cmd.run* kwargs into cmd.run_chroot @ 2015-04-30 15:22:12 UTC
  - b6b82165c8 Merge pull request #23176 from jfindlay/run_chroot
  - 7dc3417b44 copy standard cmd.run* kwargs into cmd.run_chroot
• ISSUE #23192: (joejulian) supervisord mod_watch does not accept sfun (refs: #23193)
• PR #23193: (joejulian) supervisord.mod_watch should accept sfun @ 2015-04-30 04:34:21 UTC
  - effacbe294 Merge pull request #23193 from joejulian/2014.7_supervisord_accept_sfun
• ISSUE #19114: (pykler) salt-ssh and gpg pillar renderer (refs: #23347, #23272, #23188)
• PR #23188: (basepi) [2014.7] Work around bug in salt-ssh in config.get for gpg renderer (refs: #23272) @ 2015-04-30 04:34:10 UTC
  - 72fe88e5c6 Merge pull request #23188 from basepi/salt-ssh.function.wrapper.gpg.19114
  - d73997ee12 Work around bug in salt-ssh in config.get for gpg renderer
• ISSUE #21480: (msciciel) TypeError: string indices must be integers, not str (refs: #23154)
• PR #23154: (cachedout) Re-establish channel on interruption in fileclient @ 2015-04-29 16:18:59 UTC
  - 168508ec2a Merge pull request #23154 from cachedout/refresh_channel
  - 98fbsd80c38 Re-establish channel on interruption in fileclient
• ISSUE #20647: (ryan-lane) file.serialize fails to serialize due to ordered dicts (refs: #20779)
• PR #23146: (rallytime) Backport #20779 to 2014.7 @ 2015-04-28 20:45:06 UTC
  - PR #20779: (cachedout) Use declared yaml options (refs: #23146)
  - 3b53e04534 Merge pull request #23146 from rallytime/bp-20779
  - ffd18493e8 compare OrderedDicts in serializer unit test
  - a22170627c Just change serialize
- a111798e8e Use declared yaml options

- **PR #23145:** *(rallytime)* Backport #23089 to 2014.7 @ 2015-04-28 20:44:56 UTC
  - **PR #23089:** *(cachedout)* Stringify version number before lstrip (refs: #23145)
  - 88b466bf9 Merge pull request #23145 from rallytime/bp-23089
  - 93c41af23 Stringify version number before lstrip

- **ISSUE #16188:** *(drawks)* salt.modules.parted has various functions with bogus input validation. (refs: #23124)

- **PR #23144:** *(rallytime)* Backport #23124 to 2014.7 @ 2015-04-28 20:44:46 UTC
  - **PR #23124:** *(ether42)* fix parsing the output of parted in parted.list_() (refs: #23144)
  - c85d36fd29 Merge pull request #23124 from rallytime/bp-23124-2014-7
  - 6b64da706c fix parsing the output of parted

- **PR #23120:** *(terminalmage)* Don’t run os.path.relpath() if repo doesn’t have a ”root” param set @ 2015-04-28 15:46:54 UTC
  - a27b158153 Merge pull request #23120 from terminalmage/fix-gitfs-relpath
  - 1860fffd68 Don’t run os.path.relpath() if repo doesn’t have a ”root” param set

- **PR #23132:** *(clinta)* Backport b27c176 @ 2015-04-28 15:00:30 UTC
  - fcba607978 Merge pull request #23132 from clinta/patch-2
  - a824d727d1 Backport b27c176

- **ISSUE #23085:** *(xenophonf)* Use “s3fs” (not “s3”) in fileserver_roots (refs: #23097)

- **PR #23108:** *(rallytime)* Backport #23097 to 2014.7 @ 2015-04-28 03:58:05 UTC
  - **PR #23097:** *(rallytime)* Change s3 to s3fs in fileserver_roots docs example (refs: #23108)
  - 399857f20b Merge pull request #23108 from rallytime/bp-23097
  - fa889845df Change s3 to s3fs in fileserver_roots docs example

- **ISSUE #22171:** *(basepi)* We should only call returner.save_load once per jid (refs: #22199)

- **PR #23112:** *(basepi)* [2014.7] Backport #22199 to fix mysql returner save_load errors @ 2015-04-28 03:55:44 UTC
  - **PR #22199:** *(basepi)* [2015.2] Put a bandaid on the save_load duplicate issue (mysql returner) (refs: #23112)
  - 5541537c32 Merge pull request #23112 from basepi/mysql_returner_save_load
  - 0127012ed3 Put a bandaid on the save_load duplicate issue
  - **PR saltstack/salt#22925:** *(rallytime)* Backport #22895 to 2014.7 (refs: #23113)

- **PR #23113:** *(rallytime)* Revert ”Backport #22895 to 2014.7” @ 2015-04-28 03:27:29 UTC
- **PR #22895**: (aletourneau) pam_tally counter was not reset to 0 after a successful login (refs: #23113, #22925, `#saltstack/salt`#22925)  
- dfe2066b25 Merge pull request #23113 from saltstack/revert-22925-bp-22895  
- b957ea8977 Revert "Backport #22895 to 2014.7"

- **ISSUE #23013**: (ghost) gitfs regression with authenticated repos (refs: #23094)

- **PR #23094**: (terminalmage) pygit2: disable cleaning of stale refs for authenticated remotes @ 2015-04-27 20:51:28 UTC  
  - 21515f3c23 Merge pull request #23094 from terminalmage/issue23013  
  - aaf7b04f79 pygit2: disable cleaning of stale refs for authenticated remotes

- **PR #23048**: (jfindlay) py-2.6 compat for `utils/boto.py` ElementTree exception @ 2015-04-25 22:05:45 UTC  
  - d45aa21dca Merge pull request #23048 from jfindlay/ET_error  
  - 64e42cbb5f py-2.6 compat for `utils/boto.py` ElementTree exception

- **ISSUE #22981**: (syphernl) Locale state throwing traceback when generating not (yet) existing locale (refs: #23025)

- **PR #23025**: (jfindlay) catch exceptions on bad system locales/encodings @ 2015-04-25 16:56:30 UTC  
  - d25a5c102f Merge pull request #23025 from jfindlay/fix_sys_locale  
  - 9c4d62bb00 catch exceptions on bad system locales/encodings

- **PR #22932**: (hvnsweeting) bugfix: also manipulate dir_mode when source not defined @ 2015-04-25 16:54:58 UTC  
  - 5e44b59a14 Merge pull request #22932 from hvnsweeting/file-append-bugfix  
  - 3f368de14a do not use assert in execution module  
  - 9d4fd4a8c8 bugfix: also manipulate dir_mode when source not defined

- **ISSUE #23021**: (ether42) `ps.pgrep` raises NoSuchProcess (refs: #23055)

- **PR #23055**: (jfindlay) prevent ps module errors on accessing dead procs @ 2015-04-24 22:39:49 UTC  
  - c2416a425f Merge pull request #23055 from jfindlay/fix_ps  
  - c2dc7adeb1 prevent ps module errors on accessing dead procs

- **PR #23031**: (jfindlay) convert exception e.message to just e @ 2015-04-24 18:38:13 UTC  
  - bf9158a83 Merge pull request #23031 from jfindlay/exception  
  - 856bad1c31 convert exception e.message to just e

- **PR #23015**: (hvnsweeting) if status of service is stop, there is not an error with it @ 2015-04-24 14:35:10 UTC  
  - 7747f3342e Merge pull request #23015 from hvnsweeting/set-non-error-lvl-for-service-status-log  
  - 92ea163513 if status of service is stop, there is not an error with it

- **ISSUE #22993**: (jetpak) salt-minion restart causes all spawned daemons to die on centos7 (systemd) (refs: #23000)

- **PR #23000**: (jfindlay) set systemd service killMode to process for minion @ 2015-04-24 03:42:39 UTC  
  - 2e09789156 Merge pull request #23000 from jfindlay/systemd_kill  
  - 3d575e29c4 set systemd service killMode to process for minion

30.2. Previous Releases
• ISSUE #22707: (arthurlogilab) retry_dns of master configuration is missing from the documentation (refs: #22999)

• PR #22999: (justinta) Added retry_dns to minion doc. @ 2015-04-24 03:30:24 UTC
  - b5c059ab26 Merge pull request #22999 from jtid/fix_22707
  - 8486e17ab3 Added retry_dns to minion doc.

• PR #22990: (techhat) Use the proper cloud conf variable @ 2015-04-23 17:48:07 UTC
  - 27dc877bfd Merge pull request #22990 from techhat/2014.7
  - d33bcb2c2c1 Use the proper cloud conf variable

• PR #22976: (multani) Improve state_output documentation @ 2015-04-23 12:24:22 UTC
  - 13dff652c6 Merge pull request #22976 from multani/fix/state-output-doc
  - 19efd419b5 Improve state_output documentation

• PR #22955: (terminalmage) Fix regression introduced yesterday in dockerio module @ 2015-04-22 18:56:39 UTC
  - 89fa18500c Merge pull request #22955 from terminalmage/dockerio-run-fix
  - b4472ad1b2 Fix regression introduced yesterday in dockerio module

• PR #22954: (rallytime) Backport #22909 to 2014.7 @ 2015-04-22 18:56:20 UTC
  - PR #22909: (mguegan) Fix compatibility with pkgin > 0.7 (refs: #22954)
  - 46ef227911 Merge pull request #22954 from rallytime/bp-22909
  - 70c13d969 Fix compatibility with pkgin > 0.7

• ISSUE #18720: (Reiner030) timeouts when setting Route53 records (refs: #22856)

• PR #22856: (jfindlay) increase timeout and decrease tries for route53 records @ 2015-04-22 16:47:01 UTC
  - c9ae593461 Merge pull request #22856 from jfindlay/route53_timeout
  - ba4a786984 add route53 record sync wait, default=False
  - ea2fd50660 increase timeout and tries for route53 records

• PR #22946: (s0undt3ch) Test with a more recent pip version to avoid a traceback @ 2015-04-22 16:25:17 UTC
  - a178d444b8 Merge pull request #22946 from s0undt3ch/2014.7
  - bc87749e2c Test with a more recent pip version to avoid a traceback

• ISSUE #22571: (BoomerB) same error message as on issue #18504 (refs: #22945)

• PR #22945: (garethgreenaway) Fixes to scheduler @ 2015-04-22 16:25:00 UTC
  - de339bef0a Merge pull request #22945 from garethgreenaway/22571_2014_7_schedule_pillar_refresh_seconds_exceptions
  - bfa6d25ed8 Fixing a reported issue when using a scheduled job from pillar with splay. _seconds element that acted as a backup of the actual seconds was being removed when pillar was refreshed and causing exceptions. This fix moves some splay related code out of the if else condition so it’s checked whether the job is in the job queue or not.

• ISSUE #18843: (calvinhp) State user.present will fail to create home if user exists and homedir doesn’t (refs: #22933, #22887)

• PR #22887: (hvnsweeting) fix #18843 @ 2015-04-22 15:47:05 UTC
  - 12d2b91d85 Merge pull request #22887 from hvnsweeting/18843-fix-user-present-home
  - 7fe7b089fd run user.chhome once to avoid any side-effect when run it twice
- 19de9954ee clarify the usage of home arg
- d6dc09a64 enhance doc, as usermod on ubuntu 12.04 will not CREATE home
- 0ce4d7fe6 refactoring: force to use boolean
- 849d19ed7 log debug the creating dir process
- c4e95b9f48 fix #18843: usermod won’t create a dir if old home does not exist

• ISSUE #2417: (ffa) Module standards (refs: #22829)

• ISSUE #21140: (holms) locale.present state executed successfully, although originally fails (refs: #22930, #22829)

• PR #22930: (jfindlay) localemod.gen_locale now always returns a boolean @ 2015-04-22 15:37:39 UTC
  - PR #22829: (F30) Always return a boolean in genlocale() (refs: #22930)
  - b7de7bdf47 Merge pull request #22930 from jfindlay/localegen_bool
  - 39999f89e localemod.gen_locale now always returns a boolean

• ISSUE #18843: (calvinhp) State user.present will fail to create home if user exists and homedir doesn’t (refs: #22933, #22887)

• PR #22933: (hvnsweeting) add test for #18843 @ 2015-04-22 15:27:18 UTC
  - 11bcf14979 Merge pull request #22933 from hvnsweeting/18843-test
  - b13db32fde add test for #18843

• PR #22925: (rallytime) Backport #22895 to 2014.7 @ 2015-04-22 02:30:26 UTC
  - PR #22895: (aletourneau) pam_tally counter was not reset to 0 after a succesfull login (refs: #23113, #22925, saltstack/salt`#22925`_
  - 6890752dd3 Merge pull request #22925 from rallytime/bp-22895
  - 3852d96213 Pylint fix
  - 907829ad3 Fixed pylint issues
  - 5ebf159554 Cleaned up pull request
  - a08ac478f6 pam_tally counter was not reset to 0 after a succesfull login

• ISSUE #22790: (whiteinge) jobs.list_jobs runner tracebacks on 'missing' argument (refs: #22914)

• PR #22914: (cachedout) Call proper returner function in jobs.list_jobs @ 2015-04-22 00:49:01 UTC
  - eca37ebc11 Merge pull request #22914 from cachedout/issue_22790
  - d828d6fd58 Call proper returner function in jobs.list_jobs

• PR #22918: (JaseFace) Add a note to the git_pillar docs stating that GitPython is the only currently supported provider @ 2015-04-22 00:48:26 UTC
  - 44f3409b01 Merge pull request #22918 from JaseFace/git-pillar-provider-doc-note
  - 0ae5c23d4 Add a note to the git_pillar docs stating that GitPython is the only currently supported provider

• PR #22907: (techhat) Properly merge cloud config to create profiles @ 2015-04-21 22:02:44 UTC
  - 31461f573 Merge pull request #22907 from techhat/cloudconfig
  - 3bf4e66112 Properly merge cloud config to create profiles

30.2. Previous Releases 3155
ISSUE #22782: (0xf10e) Turning everything into OrderedDicts broke states.keystone.user_present() (refs: #22894)

PR #22894: (0xf10e) Fix issue #22782 @ 2015-04-21 18:55:18 UTC
- f0939754a0 Merge pull request #22894 from 0xf10e/2014.7
- 58fa24c7fa Clarify doc on kwarg 'roles' for user_present().
- f0ae2eb84f Improve readability by renaming tenant_role

ISSUE #12003: (MarkusMuellerAU) [state.dockerio] docker.run TypeError: run() argument after ** must be a mapping, not str (refs: #22902)

PR #22902: (rallytime) Change state example to use proper kwarg @ 2015-04-21 18:50:47 UTC
- c802ba7514 Merge pull request #22902 from rallytime/docker_doc_fix
- 8f703461b0 Change state example to use proper kwarg

PR #22898: (terminalmage) dockerio: better error message for native exec driver @ 2015-04-21 18:02:58 UTC
- 81771a7769 Merge pull request #22898 from terminalmage/issue12003
- c375309434 dockerio: better error message for native exec driver

ISSUE #22825: (paolodina) Issue using file.replace in state file (refs: #22897)

PR #22897: (rallytime) Add param documentation for file.replace state @ 2015-04-21 17:31:04 UTC
- e2ec4ec55 Merge pull request #22897 from rallytime/fix-22825
- 9c51630002 Add param documentation for file.replace state

ISSUE saltstack/salt#22844: (bersace) LocalClient file cache confuse pillar and state files (refs: #22850)

PR #22850: (bersace) Fix pillar and salt fileserver mixed @ 2015-04-21 17:04:33 UTC
- fd53889f0e Merge pull request #22850 from bersace/fix-pillar-salt-mixed
- 31b98e72eb Initialize state file client after pillar loading
- f6bebb7a31 Use saltenv

PR #22818: (twangboy) Added documentation regarding pip in windows @ 2015-04-21 03:58:59 UTC
- 1380feci1b9 Merge pull request #22818 from twangboy/upd_pip_docs
- cb999c7d70 Update pip.py
- 3cc5ce970ad Added documentation regarding pip in windows

PR #22872: (rallytime) Prevent stacktrace on os.path.exists in hosts module @ 2015-04-21 02:54:40 UTC
- b2bf17f5d5 Merge pull request #22872 from rallytime/fix_hosts_stacktrace
- c88a1ea243 Prevent stacktrace on os.path.exists in hosts module

PR #22853: (s0undt3ch) Don’t assume package installation order. @ 2015-04-21 02:42:41 UTC
- 03af523de9 Merge pull request #22853 from s0undt3ch/2014.7
- b62df62151 Don’t assume package installation order.

PR #22877: (s0undt3ch) Don’t fail on make clean just because the directory does not exist @ 2015-04-21 02:40:47 UTC
- 9211e36564 Merge pull request #22877 from s0undt3ch/hotfix/clean-docs-fix
- 95d6887949 Don’t fail on make clean just because the directory does not exist
• PR #22873: (thatch45) Type check the version since it will often be numeric @ 2015-04-21 02:38:11 UTC
  - 5bdbd08bbd Merge pull request #22873 from thatch45/type_check
  - 53b8736622 Type check the version since it will often be numeric

• PR #22870: (twangboy) Added ability to send a version with a space in it @ 2015-04-20 23:18:28 UTC
  - c965b0a035 Merge pull request #22870 from twangboy/fix_installer_again
  - 3f180cfaee Added ability to send a version with a space in it

• PR #22863: (rallytime) Backport #20974 to 2014.7 @ 2015-04-20 19:29:37 UTC
  - PR #20974: (JohannesEbke) Fix expr_match usage in salt.utils.check_whitelist_blacklist (refs: #22863)
  - 2973eb18bc Merge pull request #22863 from rallytime/bp-20974
  - 14913a4cb4 Fix expr_match usage in salt.utils.check_whitelist_blacklist

• PR #22578: (hvnsweeting) gracefully handle when salt-minion cannot decrypt key @ 2015-04-20 15:24:45 UTC
  - c45b92bb4b Merge pull request #22578 from hvnsweeting/2014-7-fix-compile-pillar
  - f75b24ad68 gracefully handle when salt-minion cannot decrypt key

• ISSUE #21979: (yrdevops) gitfs: error message not descriptive enough when libgit2 was compiled without libssh2 (refs: #22800)

• PR #22800: (terminalmage) Improve error logging for pygit2 SSH-based remotes @ 2015-04-18 17:18:55 UTC
  - 900c7a510f Merge pull request #22800 from terminalmage/issue21979
  - 8f1e0084cd Clarify that for pygit2, receiving 0 objects means repo is up-to-date
  - 9888f71d6 Add information about libssh2 requirement for pygit2 ssh auth
  - 09468d2607 Fix incorrect log message
  - 2093bf8d96 Adjust loglevels for gitfs errors
  - 9d394defe46 Improve error logging for pygit2 SSH-based remotes

• PR #22813: (twangboy) Updated instructions for building salt @ 2015-04-18 04:10:07 UTC
  - e99f2f6b28 Merge pull request #22813 from twangboy/win_doc_fix
  - adc421acdd Fixed some formatting issues
  - 8901b3b5a6 Updated instructions for building salt

• ISSUE #22708: (Bilge) salt-ssh file.accumulated error: NameError: global name 'msgpack' is not defined (refs: #22810)

• PR #22810: (basepi) [2014.7] More msgpack gating for salt-ssh @ 2015-04-17 22:28:24 UTC
  - fe1de89ad7 Merge pull request #22810 from basepi/salt-ssh.more.msgpack.gating
  - d4da8e6a44 Gate msgpack in salt/modules/saltutil.py
  - 02303b22ce Gate msgpack in salt/modules/data.py
  - d7e874f0f2 Gate salt.states.file.py msgpack

• ISSUE #17144: (xpender) salt-cloud -m fails with softlayer (refs: #22803)

• PR #22803: (rallytime) Allow map file to work with softlayer @ 2015-04-17 20:34:42 UTC
  - 11df71e16d Merge pull request #22803 from rallytime/fix-17144
  - ce88b6ad41 Allow map file to work with softlayer
• **PR #22807:** (rallytime) Add 2014.7.5 links to windows installation docs @ 2015-04-17 20:32:13 UTC
  - cd43a95212 Merge pull request #22807 from rallytime/windows_docs_update
  - 5931a582d1 Replace all 4s with 5s
  - eadaead755 Add 2014.7.5 links to windows installation docs

• **PR #22795:** (rallytime) Added release note for 2014.7.5 release @ 2015-04-17 18:05:36 UTC
  - 0b29e2c87 Merge pull request #22795 from rallytime/release_notes
  - fde1feed46 Remove extra line
  - b19b95d992 Added release note for 2014.7.5 release

• **ISSUE #22740:** (lorenegordon) New Windows installer assumes salt is installed to the current directory (refs: #22759)

• **PR #22759:** (twangboy) Final edits to the batch files for running salt @ 2015-04-17 04:31:15 UTC
  - **PR #22754:** (twangboy) Removed redundant \ and ” (refs: #22759)
  - 3c91459de2 Merge pull request #22759 from twangboy/fix_bat_one_last_time
  - 075f82e046 Final edits to the batch files for running salt

• **PR #22760:** (thatch45) Fix issues with the syndic @ 2015-04-17 04:30:48 UTC
  - 20d3f2bb83 Merge pull request #22760 from thatch45/syndic_fix
  - 2e2db624b37 Fix issues with the syndic not resolving the master when the interface is set

• **PR #22762:** (twangboy) Fixed version not showing in Add/Remove Programs @ 2015-04-17 04:29:46 UTC
  - 54c45845ab Merge pull request #22762 from twangboy/fix_installer
  - 4d25af8acf Fixed version not showing in Add/Remove Programs

### 30.2.105 Salt 2014.7.7 Release Notes

**release 2015-10-13**

Version 2014.7.7 is a bugfix release for **2014.7.0**.

**Statistics**

- Total Merges: 54
- Total Issue References: 20
- Total PR References: 60
- Contributors: 28 (AkhterAli, BretFisher, MrCitron, alekti, basepi, bersace, cachedout, corux, cro, davidjb, dumol, efficks, garethgreenaway, hvnsweeting, jacksontj, jacobhammons, jaybocc2, jfindlay, jquast, justinta, msteed, nmadhok, notpeter, puneetk, rallytime, techhat, trevor-h, twangboy)
Changelog for v2014.7.6..v2014.7.7

Generated at: 2018-05-27 20:45:04 UTC

- **PR #27335**: (rallytime) [2014.7] Fixup salt-cloud logging @ 2015-09-24 20:33:53 UTC
  - 5262f01325 Merge pull request #27335 from rallytime/cloud-logging-7
  - adeb1dead4 Pylint Fix
  - 588c13783c Salt-cloud logging clean up for windows functions
  - 9b6000135c [2014.7] Fixup salt-cloud logging
- **PR #27252**: (jfindlay) 2014.7 -> 2014.7.0 @ 2015-09-18 23:44:39 UTC
  - e90412d3b8 Merge pull request #27252 from jfindlay/version.2014.7
  - 3d28307a00 2014.7 -> 2014.7.0
- **PR #27117**: (jacobhammons) made 2014.7 an archived release @ 2015-09-15 07:35:12 UTC
  - c186e51764 Merge pull request #27117 from jacobhammons/release-docs-2014.7
  - b69e11e0a4 made 2014.7 an archived release minor doc site updates
- **PR #27114**: (cachedout) Issue warning that some log levels may contain sensitive data @ 2015-09-15 07:30:43 UTC
  - 69d758ee2b Merge pull request #27114 from cachedout/warn_on_insecure_log
  - 507fb04683 Issue warning that some log levels may contain sensitive data
- **PR #27075**: (twangboy) Replaced password with redacted when displayed @ 2015-09-14 18:36:10 UTC
  - aa71bae8aa Merge pull request #27075 from twangboy/fix_password_2014.7
  - c0689e3215 Replaced password with redacted when displayed
- **ISSUE #26656**: (ari) [documentation] error in example for salt.runner.pillar (refs: #26667)
- **PR #26667**: (nmadhok) [doc-fix] Removing special character from salt.runners.pillar and other changes @ 2015-08-26 18:24:37 UTC
  - c2c7fe06c8 Merge pull request #26667 from nmadhok/doc-fix-2014.7
  - 26be189689 Doc fix. Fixes #26656
- **PR #26663**: (jacobhammons) version change for latest branch @ 2015-08-26 14:03:35 UTC
  - 6bd3dc10a8 Merge pull request #26663 from jacobhammons/2014.7-version
  - b6af538070 version change for latest branch
- **PR #26636**: (rallytime) Refactor cloud provider tests to be more accurate @ 2015-08-25 21:28:34 UTC
  - 071a611e25 Merge pull request #26636 from rallytime/cloud-test-fixes
  - c0d83d558d Don’t use id as variable
  - 2b4bc1679d Keep ec2 instance creation test the same - it works better for the ec2 output
  - b5b58eb31f Skip digital ocean tests since we can’t use API v1 with v2 tests
  - 9ae1539c62 Update cloud tests to be more efficient and accurate
- **ISSUE #26630**: (efficks) win_service: Function has_powershell does not works on Windows XP (refs: #26640)
- **PR #26640**: (efficks) Fix function spacing @ 2015-08-25 20:01:39 UTC
- 304542b4c6 Merge pull request #26640 from efficks/fixws2014
- ebe5d9d85c Fix function spacing

- **PR #26515**: (bersace) Defaults to current saltenv in state.sls @ 2015-08-25 16:35:50 UTC
  - 4532f98a76 Merge pull request #26515 from bersace/salt-env-local-sls
  - 0727a9e3d Defaults to current saltenv in state.sls

- **PR #26242**: (cro) Remove dead code @ 2015-08-12 15:14:20 UTC
  - da8bca09aa Merge pull request #26242 from cro/anonldap4
  - a0d2ab1eed Remove dead code

- **PR #26216**: (cro) Fix LDAP configuration issue. @ 2015-08-11 18:33:43 UTC
  - 1ecf23773e Merge pull request #26216 from cro/anonldap3
  - af132d7b89 Documentation update for anonymous bind issue.
  - 2ef54b6b13 Documentation update for anonymous bind issue.
  - 5b1836bb00 Fix issue with LDAP anonymous binds.

- **PR #26116**: (corux) file.replace fails if repl string is an invalid regex and append/prepend is used @ 2015-08-10 16:44:12 UTC
  - abdf2935c4 Merge pull request #26116 from corux/fix-escape-content
  - fd913ddd36 Append/prepend: search for full line with escaped content

- **ISSUE #25751**: (basepi) Document master_finger more prominently (refs: #26088)

- **PR #26088**: (jacobhammons) Master finger @ 2015-08-07 14:31:33 UTC
  - 106356d098d Merge pull request #26088 from jacobhammons/master-finger
  - 133df7885 some small changes
  - d220ce3f7 master_finger configuration docs switch a script to use https:// instead of http:// Refs #25751

- **ISSUE #25961**: (getabc) [2015.5.3-2] salt-winrepo.git/salt-minion.sls fails certificate '*.wpengine.com' or 'wpengine.com' (refs: #26047)

- **PR #26047**: (jacobhammons) Updated windows download links in the docs to https://repo.saltstack.com @ 2015-08-05 22:59:44 UTC
  - 4bd4bc41f2 Merge pull request #26047 from jacobhammons/win-downloads
  - 7e162d181c Updated windows download links in the docs to https://repo.saltstack.com Refs #25961

- **ISSUE #25701**: (alekti) Issue #23764 regression (refs: #25750)

- **ISSUE #23764**: (es1o) source_hash from local file is not supported. (refs: #25750)

- **PR #25750**: (alekti) Add file as supported protocol for file source_hash. Fixes #25701. @ 2015-07-29 02:31:27 UTC
  - 93eb87c16 Merge pull request #25750 from alekti/2014.7
  - 2e83ae964d Add file as supported protocol for file source_hash. Fixes #23764.

- **PR #25704**: (cachedout) Ensure prior alignment with master_type in 2014.7 @ 2015-07-27 16:06:35 UTC
  - 3a15df22ac Merge pull request #25704 from cachedout/master_type_2014_7
  - c95886c9a7 Ensure prior alignment with master_type in 2014.7
• PR #25657: (MrCitron) Add the ability to specify a base pattern for carbon returner @ 2015-07-24 16:32:58 UTC
  - d1b9362a73 Merge pull request #25657 from MrCitron/pattern-carbon-returner-2014.7
  - f8b2f8079f Add the ability to specify a base pattern for metrics path used by the carbon returner
• PR #25633: (AkhterAli) Update loader.py @ 2015-07-22 20:02:41 UTC
  - 9634351fc2 Merge pull request #25633 from AkhterAli/2014.7
  - 29be4bbe11 Update loader.py
• PR #25416: (cachedout) Fix broken keyword @ 2015-07-14 19:47:10 UTC
  - cce129c88f Merge pull request #25416 from cachedout/2014.7
  - 4b4cf10b4a Fix broken keyword
• PR #25375: (cachedout) Fix error in config.py for master_type @ 2015-07-13 16:49:27 UTC
  - 53dc258c65 Merge pull request #25375 from cachedout/config_fix_2014_7
  - c041f2905f Fix error in config.py for master_type
• PR #25324: (jacobhammons) Latest help theme updates @ 2015-07-10 16:11:31 UTC
  - 2590e23d48 Merge pull request #25324 from jacobhammons/doc-theme-updates
  - 885af53d8d Latest help theme updates
• ISSUE #18447: (ryan-lane) Can't install salt with raet using pip -e git (refs: #25093)
• PR #25093: (jaybocc2) quick fix for issue #18447 @ 2015-07-01 15:56:53 UTC
  - 36d35ef59e Merge pull request #25093 from jaybocc2/2014.7
  - c6a501edba quick fix for issue #18447
• PR #25069: (puneetk) Add a helper module function called list_enabled @ 2015-06-30 20:53:51 UTC
  - 38903a94a1 Merge pull request #25069 from puneetk/patch-1
  - f0b4e606e6 Update Documentation to clarify version added
  - f8dc603e78 Pylint updates , removing whitespace
  - 532d315dd1 [Code Review update] renamed function to is_enabled from list_enabled
  - 20b462289 Update schedule.py
  - 4f1471d7fb Add a helper module function called list_enabled
• ISSUE #15209: (hubez) file.manage: source_hash not working with s3:// (2014.7.0rc1) (refs: #25011)
• PR #25011: (notpeter) Add s3 to protocols for remote source_hash (2014.7 backport) @ 2015-06-27 22:35:44 UTC
  - a7154e7471 Merge pull request #25011 from notpeter/s3_2014_7
  - 8b8af640f6 Add s3 to protocols for remote source_hash
• ISSUE #24915: (justinta) Salt-cloud not working in 2014.7.6 (refs: #24944)
• PR #24944: (techhat) Double-check main_cloud_config @ 2015-06-25 12:29:55 UTC
  - a1e4c66ea Merge pull request #24944 from techhat/issue24915
  - 59ec3081e49 Double-check main_cloud_config
• PR #24936: (justinta) Fixed ps module to not use deprecated psutil commands @ 2015-06-24 22:38:19 UTC
  - d26a5447ba Merge pull request #24936 from jtanl/psutil
- bdb7a19c36 Fixed ps module to not use depreciated psutil commands

- **ISSUE** saltstack/salt-bootstrap#473: (s1kbr0) salt-bootstrap.sh [...] git v2014.1.11 on SmartOS base64 is broken (refs: #24918)

- **PR #24918**: (BretFisher) SmartOS SMF minion startup fix @ 2015-06-24 15:44:26 UTC
  - eeb05a1b10 Merge pull request #24918 from BretFisher/minion-start-smartos-smf-fix
  - d7fb0c7fd Smartos smf minion fix

- **ISSUE #24776**: (nmadhok) --static option in salt raises ValueError and has been broken for a very long time (refs: #24777)

- **PR #24780**: (nmadhok) Backporting PR #24777 to 2014.7 branch @ 2015-06-18 09:52:56 UTC
  - PR #24779: (nmadhok) Backporting Changes to 2014.7 branch (refs: #24777)
  - PR #24778: (nmadhok) Backporting PR #24777 to 2015.2 branch (refs: #24777)
  - PR #24777: (nmadhok) Fixing issue where --static option fails with ValueError Fixes #24776 (refs: #24778, #24780)
  - 4281dfff0b Merge pull request #24780 from nmadhok/backport-2014.7-24777
  - c53b0d9a22 Backporting PR #24777 to 2014.7 branch

- **ISSUE #21318**: (thanatos) get_full_returns raises KeyError (refs: #24769)

- **ISSUE #18994**: (njhartwell) salt.client.get_cli_returns errors when called immediately after run_job (refs: #24769)

- **PR #24769**: (msteed) Fix stacktrace in get_cli_returns() @ 2015-06-18 14:31:46 UTC
  - f3c5cb2d41 Merge pull request #24769 from msteed/issue-21318
  - f40a956c0 Fix stacktrace in get_cli_returns()

- **ISSUE #17041**: (xenophonf) Confusing Salt error messages due to limited/incomplete PowerShell command error handling (refs: #24690)

- **PR #24690**: (twangboy) Report powershell output instead of error @ 2015-06-17 16:33:49 UTC
  - 59db24602f Merge pull request #24690 from twangboy/fix_17041
  - 7a015389af Added additional reporting
  - d84ad5d519 Fixed capitalization... Failed and Already
  - e9552455c4 Merge branch '2014.7' of https://github.com/saltstack/salt into fix_17041

- **ISSUE #24196**: (johnccfm) Exception when using user.present with Windows (refs: #24646)

- **PR #24646**: (twangboy) Fixed user.present on existing user @ 2015-06-15 15:04:43 UTC
  - a18dadad71 Merge pull request #24646 from twangboy/fix_24196
  - a208e1d60f Fixed user.present on existing user
  - 144bf2f67 Report powershell output instead of error

- **PR #24643**: (cro) Add reference to salt-announce mailing list @ 2015-06-12 20:31:15 UTC
  - b9948fde2 Merge pull request #24643 from cro/saltannounce
  - ecb0623d7f Add salt-announce mailing list.

- **PR #24620**: (twangboy) Fixed comment and uncomment functions in file.py @ 2015-06-12 19:36:26 UTC
  - 635121e85d Merge pull request #24620 from twangboy/fix_24215
- d7a9999be1 Fixed comment and uncomment functions in file.py

- **PR #24589**: (BretFisher) Fixed Mine example for jinja code block @ 2015-06-11 15:48:02 UTC
  - d83928a7f9 Merge pull request #24589 from BretFisher/patch-1
  - 65a11336dc Fixed Mine example for jinja code block

- **ISSUE #24427**: (fayetted) 2015.5.1-3 Windows 64Bit Minion fails to start after install (refs: #24530)

- **PR #24530**: (twangboy) Start Minion Service on Silent Install @ 2015-06-09 21:30:08 UTC
  - d376390f76 Merge pull request #24530 from twangboy/fix_24427
  - 673e1d809e Added missing panel.bmp for installer
  - cc50218b01 Start Minion Service on Silent Install

- **PR #24513**: (jquast) bugfix use of ‘iteritem’ in 2014.7 branch @ 2015-06-09 04:06:36 UTC
  - **PR #24511**: (jquast) bugfix: trailing ”...done” in rabbitmq output (refs: #24513)
  - 6ebc476bb3 Merge pull request #24513 from jquast/2014.7-bugfix-iteritem
  - 2be0180e5e bugfix use of ‘iteritem’ in 2014.7 branch

- **ISSUE #24276**: (markus.kramer.Igitt) Live salt-master Profiling with SIGUSR2 fails (refs: #24405)

- **PR #24405**: (jacksontj) Fix for #24276 @ 2015-06-04 20:50:42 UTC
  - 83f853b6ea Merge pull request #24405 from jacksontj/2014.7
  - 2c7afaeefb Fix for #24276

- **PR #24395**: (hvnsweeting) handle exceptions when received data is not in good shape @ 2015-06-04 20:08:22 UTC
  - cef919c602 Merge pull request #24395 from hvnsweeting/handle-exception-get-file
  - bb798a022e handle exceptions when received data is not in good shape

- **PR #24305**: (twangboy) Added documentation, fixed formatting @ 2015-06-04 19:40:54 UTC
  - efba1a94b4 Merge pull request #24305 from twangboy/win_path_docs
  - 36804253e6 Fixed pylint error caused by P... added r
  - bc42a4bb11 triple double quotes to triple single quotes
  - 77cd930bba Added documentation, fixed formatting

- **PR #24178**: (rallytime) Backport #24118 to 2014.7, too. @ 2015-05-27 17:49:45 UTC
  - **PR #24118**: (trevor-h) removed deprecated pymongo usage (refs: #24178)
  - 9d7331e87d Merge pull request #24178 from rallytime/bp-24118
  - e2217a09e8 removed deprecated pymongo usage as no longer functional with pymongo > 3.x

- **PR #24159**: (rallytime) Fill out modules/keystone.py CLI Examples @ 2015-05-27 15:07:11 UTC
  - 4e8c5031b0 Merge pull request #24159 from rallytime/keystone_doc_examples
  - dadac8d076 Fill out modules/keystone.py CLI Examples

- **PR #24158**: (rallytime) Fix test_valid_docs test for tls module @ 2015-05-27 15:06:05 UTC
  - fc10ee8ed5 Merge pull request #24158 from rallytime/fix_doc_error
  - 49a517e2ca Fix test_valid_docs test for tls module

30.2. Previous Releases
• **PR #24125**: (hvnsweeting) Fix rabbitmq test mode @ 2015-05-26 15:40:18 UTC
  - c0d320e6b5e Merge pull request #24125 from hvnsweeting/fixed-rabbitmq-test-mode
  - 71882c69b9 enhance log
  - 28e2594162 change according to new output of rabbitmq module functions
  - cd02128ed processes and returns better output for rabbitmq module

• **ISSUE #23464**: (tibold) cmd_iter_no_block() blocks (refs: #24093)

• **PR #24093**: (msteed) Make LocalClient.cmd_iter_no_block() not block @ 2015-05-25 15:56:42 UTC
  - 39a8f30f06 Merge pull request #24093 from msteed/issue-23464
  - fd35903d75 Fix failing test
  - 41b344c7d3 Make LocalClient.cmd_iter_no_block() not block

• **PR #24008**: (davidjb) Correct reST formatting for states.cmd documentation @ 2015-05-21 04:19:01 UTC
  - 5bbfd3045e Merge pull request #24008 from davidjb/2014.7
  - 88b8f293d4 Correct reST formatting for documentation

• **PR #23933**: (jacobhammons) sphinx saltstack2 doc theme @ 2015-05-20 18:19:19 UTC
  - 1aa0420040 Merge pull request #23933 from jacobhammons/2014.7
  - a3613e68e4 removed numbering from doc TOC
  - 78b737c5e6 removed 2015" release from release notes, updated index page to remove PDF/epub links
  - e867f7df77 Changed build settings to use saltstack2 theme and update release versions.
  - 81ed9c9f59 sphinx saltstack2 doc theme

• **PR #23965**: (hvnsweeting) handle all exceptions gitpython can raise @ 2015-05-20 15:08:03 UTC
  - 314e4db512 Merge pull request #23965 from hvnsweeting/20147-fix-gitfs-gitpython-exception
  - 2576301631 handle all exception gitpython can raise

• **PR #23939**: (basepi) Add extended changelog to 2014.7.6 release notes @ 2015-05-19 21:21:00 UTC
  - 913391207a Merge pull request #23939 from basepi/v2014.7.6release
  - 32b65dc2a9 Add extended changelog to 2014.7.6 release notes

• **ISSUE #23820**: (UtahDave) 2014.7.5 schedule error (refs: #23887)

• **PR #23888**: (garethgreenaway) Fixes to schedule module in 2014.7 @ 2015-05-19 15:46:30 UTC
  - 0031ca2631 Merge pull request #23881 from garethgreenaway/23888_schedule_list_issue
  - b207f2a433 Missing continue in the list function when deleting unused attributes.

• **ISSUE #22131**: (quixoten) "unexpected keyword argument 'merge'" on 2014.7.2 (salt-ssh) (refs: #23887)

• **PR #23887**: (basepi) [2014.7] Bring salt-ssh pillar.get in line with mainline pillar.get @ 2015-05-18 23:11:34 UTC
  - 63bd21edc2 Merge pull request #23887 from basepi/salt-ssh.pillar.get.22131
  - bc84502f46 Bring salt-ssh pillar.get in line with mainline pillar.get

• **PR #23891**: (basepi) Update the release notes index page @ 2015-05-18 23:06:52 UTC
  - 17c5810c04 Merge pull request #23891 from basepi/releasenotes
  - dec153bce6a Update the release notes index page
• PR #23888: (basepi) Update the 2014.7.6 release notes with CVE details @ 2015-05-18 22:35:51 UTC
  - a93e5f80f Merge pull request #23888 from basepi/v2014.7.6release
  - 4992b5c6b2 Update the 2014.7.6 release notes with CVE details

• PR #23871: (rallytime) Backport #23848 to 2014.7 @ 2015-05-18 20:34:04 UTC
  - PR #23848: (dumol) Updated installation docs for SLES 12. (refs: #23871)
  - 50730287bb Merge pull request #23871 from rallytime/bp-23848
  - 3790b9c3a5 Updated for SLES 12.

30.2.106 Salt 2014.7.8 Release Notes

release 2015-11-13

Version 2014.7.8 is a bugfix release for 2014.7.0.

Statistics

- Total Merges: 7
- Total Issue References: 3
- Total PR References: 10
- Contributors: 5 (DmitryKuzmenko, JaseFace, MasterNayru, cachedout, rallytime)

Changelog for v2014.7.7..v2014.7.8

Generated at: 2018-05-27 20:47:34 UTC

• PR #28839: (cachedout) Revert #28740 @ 2015-11-12 22:54:28 UTC
  - PR #28740: (MasterNayru) Add missing S3 module import (refs: #28777, #28839)
  - 4b8b00f0ab Merge pull request #28839 from cachedout/revert_28740
  - 215b26d06f Revert #28740

• PR #28777: (rallytime) Back-port #28740 to 2014.7 @ 2015-11-11 18:00:00 UTC
  - PR #28740: (MasterNayru) Add missing S3 module import (refs: #28777, #28839)
  - 76e69b4bfb Merge pull request #28777 from rallytime/bp-28740-2014.7
  - da5fac2b36 Back-port #28740 to 2014.7

• PR #28716: (rallytime) Back-port #28705 to 2014.7 @ 2015-11-10 16:15:03 UTC
  - PR #28705: (cachedout) Account for new headers class in tornado 4.3 (refs: #28716)
  - 45c73ebf2f Merge pull request #28716 from rallytime/bp-28705
  - 32e7b3dea0 Account for new headers class in tornado 4.3

• ISSUE #28199: (felskrone) Non-standard umasks might break the master (refs: #28717)

• PR #28717: (cachedout) Add note about recommended umask @ 2015-11-09 23:26:20 UTC
  - f4fe921965 Merge pull request #28717 from cachedout/umask_note
  - 1874300e08 Add note about recommended umask

30.2. Previous Releases
• ISSUE #28455: (zmalone) highstate.cache is world readable, and contains secrets (refs: #28461)

• PR #28461: (cachedout) Wrap all cache calls in state.sls in correct umask @ 2015-11-02 17:11:02 UTC
  - 4bf5cad3f Merge pull request #28461 from cachedout/issue_28455
  - 097838ec0e Wrap all cache calls in state.sls in correct umask

• ISSUE #24910: (bocig) -T, --make-token flag does NOT work- LDAP Groups (refs: #28407)

• PR #28407: (DmitryKuzmenko) Don't request creds if auth with key. @ 2015-10-29 16:12:30 UTC
  - f361db045 Merge pull request #28407 from DSRCompany/issues/24910_token_auth_fix_2014
  - b7b5bec309 Don't request creds if auth with key.

• PR #27390: (JaseFace) Ensure we pass on the enable setting if present, or use the default of True if not in build_schedule_item() @ 2015-10-05 18:09:33 UTC
  - d284eb165b Merge pull request #27390 from JaseFace/schedule-missing-enabled
  - 563db71bfc Ensure we pass on the enable setting if present, or use the default of True if not in build_schedule_item() Prior to this, when schedule.present compares the existing schedule to the one crafted by this function, enabled will actually be removed at each run. schedule.present sees a modification needs to be made, and invokes schedule.modify, which does so with enabled: True, creating and endless loop of an 'enabled' removal and addition.

30.2.107 Salt 2014.7.9 Release Notes

release 2016-03-11

Version 2014.7.9 is a bugfix release for 2014.7.0.

Statistics

• Total Merges: 5
• Total Issue References: 1
• Total PR References: 5
• Contributors: 4 (douardda, gtmanfred, jacobhammons, jfindlay)

Changelog for v2014.7.8..v2014.7.9


• PR #31834: (jfindlay) add 2014.7.8 release notes @ 2016-03-11 21:35:42 UTC
  - 218c902091 Merge pull request #31834 from jfindlay/2014.7
  - 358fad0c8 add 2014.7.8 release notes

• PR #31833: (jfindlay) add 2014.7.9 release notes @ 2016-03-11 21:19:55 UTC
  - a423c6cd04 Merge pull request #31833 from jfindlay/2014.7
  - 6910fcc584 add 2014.7.9 release notes

• PR #31826: (gtmanfred) Remove ability of authenticating user to specify pam service @ 2016-03-11 20:41:01 UTC
  - c5e7c03953 Merge pull request #31826 from gtmanfred/2014.7
- d73f70ebb2 Remove ability of authenticating user to specify pam service

- **PR #29392**: (jacobhammons) updated version number to not reference a specific build from the latest branch @ 2015-12-03 15:54:31 UTC
  - 85aa70a6cb Merge pull request #29392 from jacobhammons/2014.7
  - d7f0db1dd8 updated version number to not reference a specific build from the latest branch

- **ISSUE #29295**: (douardda) systemd's service file should use the 'process' KillMode option on Debian also (refs: #29296)

- **PR #29296**: (douardda) Use process KillMode on Debian systems also @ 2015-12-01 16:00:16 UTC
  - d2fb2109a3 Merge pull request #29296 from douardda/patch-3
  - d2885390f4 Use process KillMode on Debian systems also

### 30.2.108 Salt 2014.1.0 Release Notes - Codename Hydrogen

**Note**: Due to a change in master to minion communication, 2014.1.0 minions are not compatible with older-version masters. Please upgrade masters first. More info on backwards-compatibility policy [here](#), under the "Upgrading Salt" subheading.

**Note**: A change in the grammar in the state compiler makes `module.run` in requisites illegal syntax. Its use is replaced simply with the word `module`. In other words you will need to change requisites like this:

```
require:
  module.run: some_module_name
```

to:

```
require:
  module: some_module_name
```

This is a breaking change. We apologize for the inconvenience, we needed to do this to remove some ambiguity in parsing requisites.

**release** 2014-02-24

The 2014.1.0 release of Salt is a major release which not only increases stability but also brings new capabilities in virtualization, cloud integration, and more. This release brings a great focus on the expansion of testing making roughly double the coverage in the Salt tests, and comes with many new features.

2014.1.0 is the first release to follow the new date-based release naming system. See the version numbers page for more details.
Major Features

Salt Cloud Merged into Salt

Salt Cloud is a tool for provisioning salted minions across various cloud providers. Prior to this release, Salt Cloud was a separate project but this marks its full integration with the Salt distribution. A Getting Started guide and additional documentation for Salt Cloud can be found [here](#).

Google Compute Engine

Alongside Salt Cloud comes new support for the Google Compute Engine. Salt Stack can now deploy and control GCE virtual machines and the application stacks that they run.

For more information on Salt Stack and GCE, please see [this blog post](#).

Documentation for Salt and GCE can be found [here](#).

Salt Virt

Salt Virt is a cloud controller that supports virtual machine deployment, inspection, migration, and integration with many aspects of Salt.

Salt Virt has undergone a major overhaul with this release and now supports many more features and includes a number of critical improvements.

Docker Integration

Salt now ships with states and an execution module to manage Docker containers.

Substantial Testing Expansion

Salt continues to increase its unit/regression test coverage. This release includes over 300 new tests.

BSD Package Management

BSD package management has been entirely rewritten. FreeBSD 9 and older now default to using pkg_add, while FreeBSD 10 and newer will use pkgng. FreeBSD 9 can be forced to use pkgng, however, by specifying the following option in the minion config file:

```
providers:
  pkg: pkgng
```

In addition, support for installing software from the ports tree has been added. See the documentation for the ports state and execution module for more information.
Network Management for Debian/Ubuntu

Initial support for management of network interfaces on Debian-based distros has been added. See the documentation for the `network state` and the `debian_ip` for more information.

IPv6 Support for iptables State/Module

The `iptables state` and `module` now have IPv6 support. A new parameter `family` has been added to the states and execution functions, to distinguish between IPv4 and IPv6. The default value for this parameter is `ipv4`, specifying `ipv6` will use `ip6tables` to manage firewall rules.

GitFS Improvements

Several performance improvements have been made to the `Git fileserver backend`. Additionally, file states can now use any SHA1 commit hash as a fileserver environment:

```
/etc/httpd/httpd.conf:
  file.managed:
    - source: salt://webserver/files/httpd.conf
    - saltenv: 45af879
```

This applies to the functions in the `cp module` as well:

```
salt '*' cp.get_file salt://readme.txt /tmp/readme.txt saltenv=45af879
```

MinionFS

This new fileserver backend allows files which have been pushed from the minion to the master (using `cp.push`) to be served up from the salt fileserver. The path for these files takes the following format:

```
salt://minion-id/path/to/file
```

`minion-id` is the id of the "source" minion, the one from which the files were pushed to the master. `/path/to/file` is the full path of the file.

The `MinionFS Walkthrough` contains a more thorough example of how to use this backend.

`saltenv`

To distinguish between fileserver environments and execution functions which deal with environment variables, fileserver environments are now specified using the `saltenv` parameter. `env` will continue to work, but is deprecated and will be removed in a future release.
Grains Caching

A caching layer has been added to the Grains system, which can help speed up minion startup. Disabled by default, it can be enabled by setting the minion config option `grains_cache`:

```
grains_cache: True
# Seconds before grains cache is considered to be stale.
grains_cache_expiration: 300
```

If set to `True`, the grains loader will read from/write to a msgpack-serialized file containing the grains data.

Additional command-line parameters have been added to salt-call, mainly for testing purposes:

- `--skip-grains` will completely bypass the grains loader when salt-call is invoked.
- `--refresh-grains-cache` will force the grains loader to bypass the grains cache and refresh the grains, writing a new grains cache file.

Improved Command Logging Control

When using the `cmd` module, either on the CLI or when developing Salt execution modules, a new keyword argument `output_loglevel` allows for greater control over how (or even if) the command and its output are logged. For example:

```
salt '*' cmd.run 'tail /var/log/messages' output_loglevel=debug
```

The package management modules (`apt`, `yum` etc.) have been updated to log the copious output generated from these commands at loglevel `debug`.

**Note:** To keep a command from being logged, `output_loglevel=quiet` can be used.

Prior to this release, this could be done using `quiet=True`. This argument is still supported, but will be removed in a future Salt release.

PagerDuty Support

Initial support for firing events via PagerDuty has been added. See the documentation for the `pagerduty` module.

Virtual Terminal

Sometimes the subprocess module is not good enough, and, in fact, not even `askpass` is. This virtual terminal is still in its infant childhood, needs quite some love, and was originally created to replace `askpass`, but, while developing it, it immediately proved that it could do so much more. It's currently used by salt-cloud when bootstrapping salt on clouds which require the use of a password.
Proxy Minions

Initial basic support for Proxy Minions is in this release. Documentation can be found here.

Proxy minions are a developing feature in Salt that enables control of devices that cannot run a minion. Examples include network gear like switches and routers that run a proprietary OS but offer an API, or “dumb” devices that just don’t have the horsepower or ability to handle a Python VM.

Proxy minions can be difficult to write, so a simple REST-based example proxy is included. A Python bottle-based webserver can be found at https://github.com/cro/salt-proxy-rest as an endpoint for this proxy.

This is an ALPHA-quality feature. There are a number of issues with it currently, mostly centering around process control, logging, and inability to work in a masterless configuration.

Additional Bugfixes (Release Candidate Period)

Below are many of the fixes that were implemented in salt during the release candidate phase.

- Fix mount.mounted leaving conflicting entries in fstab (issue #7079)
- Fix mysql returner serialization to use json (issue #9590)
- Fix ZMQError: Operation cannot be accomplished in current state errors (issue #6306)
- Rbenv and ruby improvements
- Fix quoting issues with mysql port (issue #9568)
- Update mount module/state to support multiple swap partitions (issue #9520)
- Fix archive state to work with bsdtar
- Clarify logs for minion ID caching
- Add numeric revision support to git state (issue #9718)
- Update master_uri with master_ip (issue #9694)
- Add comment to Debian mod_repo (issue #9923)
- Fix potential undefined loop variable in rabbitmq state (issue #8703)
- Fix for salt-virt runner to delete key on VM deletion
- Fix for salt-run -d to limit results to specific runner or function (issue #9975)
- Add backtracks to jinja renderer when applicable (issue #10010)
- Fix parsing in monit module (issue #10041)
- Fix highstate output from syndic minions (issue #9732)
- Quiet logging when dealing with passwords/hashes (issue #10000)
- Fix for multiple remotes in git_pillar (issue #9932)
- Fix npm installed command (issue #10109)
- Add safeguards for utf8 errors in zcbuildout module
- Fix compound commands (issue #9746)
- Add systemd notification when master is started
- Many doc improvements
30.2.109 Salt 2014.1.1 Release Notes

release  2014-03-18

Version 2014.1.1 is a bugfix release for 2014.1.0. The changes include:

- Various doc fixes, including up-to-date Salt Cloud installation documentation.
- Renamed state.sls runner to state.orchestrate, to reduce confusion with the state.sls execution function
- Fix various bugs in the dig module (issue #10367)
- Add retry for query on certain EC2 status codes (issue #10154)
- Fix various bugs in mongodb_user state module (issue #10430)
- Fix permissions on ~/.salt_token (issue #10422)
- Add PyObjects support
- Fix launchctl module crash with missing files
- Fix saltutil.find_job for Windows (issue #10581)
- Fix OS detection for OpenSolaris (issue #10601)
- Fix broken salt-ssh key_deploy
- Add support for multiline cron comments (issue #10721)
- Fix timezone module for Arch (issue #10789)
- Fix symlink support for file.recurse (issue #10809)
- Fix multi-master bugs (issue #10732 and issue #10969)
- Fix file.patch to error when source file is unavailable (issue #10380)
- Fix pkg to handle packages set as purge in pkg.installed (issue #10719)
- Add zmqversion grain
- Fix highstate summary for masterless minions (issue #10945)
- Fix saltutil.find_job for 2014.1 masters talking to 0.17 minions (issue #11020)
- Fix file.recurse states with trailing slashes in source (issue #11002)
- Fix pkg states to allow pkgname.x86_64 (issue #7306)
- Make iptables states set a default table for flush (issue #11037)
- Added iptables --reject-with after final iptables call in iptables states (issue:10757)
- Fix improper passing of "family" in iptables states (issue #10774)
- Fix traceback in iptables.insert states (issue #10988)
- Fix zombie processes (issue #10867 and others)
- Fix batch mode to obey --return settings (issue #9146)
- Fix localclient issue that was causing batch mode breakage (issue #11094, issue #10470, and others)
- Multiple salt-ssh fixes
- FreeBSD: look in /usr/local/etc/salt for configuration by default, if installed using pip --editable.
- Add a skip_suggestions parameter to pkg.installed states which allows pre-flight check to be skipped (issue #11106)
• Fixed tag-based gitfs fileserver environments regression (issue #10956)
• Yum: fix cache of available pkgs not cleared when repos are changed (issue #11001)
• Yum: fix for plugin-provided repositories (i.e. RHN/Spacewalk) (issue #11145)
• Fix regression in chocolatey.bootstrap (issue #10541)
• Fix fail on unknown target in jobs runner (issue #11151)
• Don’t log errors for commands which are expected to sometimes exit with non-zero exit status (issue #11154, issue #11090)
• Fix test=True CLI override of config option (issue #10877)
• Log sysctl key listing at loglevel TRACE (issue #10931)

30.2.110 Salt 2014.1.10 Release Notes

release 2014-08-01

Note: Version 2014.1.9 contained a regression which caused inaccurate Salt version detection, and thus was never packaged for general release. This version contains the version detection fix, but is otherwise identical to 2014.1.9.

Version 2014.1.10 is another bugfix release for 2014.1.0. Changes include:
• Ensure salt-ssh will not continue if permissions on a temporary directory are not correct.
• Use the bootstrap script distributed with Salt instead of relying on an external resource
• Remove unused testing code
• Ensure salt states are placed into the .salt directory in salt-ssh
• Use a randomized path for temporary files in a salt-cloud deployment
• Clean any stale directories to ensure a fresh copy of salt-ssh during a deployment

Salt 2014.1.10 fixes security issues documented by CVE-2014-3563: "Insecure tmp-file creation in seed.py, salt-ssh, and salt-cloud." Upgrading is recommended.

30.2.111 Salt 2014.1.11 Release Notes

release 2014-08-29

Version 2014.1.11 is another bugfix release for 2014.1.0. Changes include:
• Fix for minion_id with byte-order mark (BOM) (issue #12296)
• Fix runas deprecation in at module
• Fix trailing slash behavior for file.makedirs_ (issue #14019)
• Fix chocolatey path (issue #13870)
• Fix git_pillar infinite loop issues (issue #14671)
• Fix json outputter null case
• Fix for minion error if one of multiple masters are down (issue #14099)
30.2.112 Salt 2014.1.12 Release Notes

release 2014-10-08

Version 2014.1.12 is another bugfix release for 2014.1.0. Changes include:

• Fix scp_file always failing (which broke salt-cloud) (issue #16437)
• Fix regression in pillar in masterless (issue #16210, issue #16416, issue #16428)

30.2.113 Salt 2014.1.13 Release Notes

release 2014-10-14

Version 2014.1.13 is another bugfix release for 2014.1.0. Changes include:

• Fix sftp_file by checking the exit status code of scp (which broke salt-cloud) (issue #16599)

30.2.114 Salt 2014.1.2 Release Notes

release 2014-04-15

Version 2014.1.2 is another bugfix release for 2014.1.0. The changes include:

• Fix username detection when su'ed to root on FreeBSD (issue #11628)
• Fix minionfs backend for file.recurse states
• Fix 32-bit packages of different arches than the CPU arch, on 32-bit RHEL/CentOS (issue #11822)
• Fix bug with specifying alternate home dir on user creation (FreeBSD) (issue #11790)
• Don’t reload site module on module refresh for MacOS
• Fix regression with running execution functions in Pillar SLS (issue #11453)
• Fix some modules missing from Windows installer
• Don’t log an error for yum commands that return nonzero exit status on non-failure (issue #11645)
• Fix bug in rabbitmq state (issue #8703)
• Fix missing ssh config options (issue #10604)
• Fix top.sls ordering (issue #10810 and issue #11691)
• Fix salt-key --list all (issue #10982)
• Fix win_servermanager install/remove function (issue #11038)
• Fix interaction with tokens when running commands as root (issue #11223)
• Fix overstate bug with find_job and **kwargs (issue #10503)
• Fix saltenv for aptpkg.mod_repo from pkgrepo state
• Fix environment issue causing file caching problems (issue #11189)
• Fix bug in __parse_key in registry state (issue #11408)
• Add minion auth retry on rejection (issue #10763)
• Fix publish_session updating the encryption key (issue #11493)
• Fix for bad AssertionError raised by GitPython (issue #11473)
• Fix debian_ip to allow disabling and enabling networking on Ubuntu (issue #11164)
• Fix potential memory leak caused by saved (and unused) events (issue #11582)
• Fix exception handling in the MySQL module (issue #11616)
• Fix environment-related error (issue #11534)
• Include psutil on Windows
• Add file.replace and file.search to Windows (issue #11471)
• Add additional file module helpers to Windows (issue #11235)
• Add pid to netstat output on Windows (issue #10782)
• Fix Windows not caching new versions of installers in winrepo (issue #10597)
• Fix hardcoded md5 hashing
• Fix kwargs in salt-ssh (issue #11609)
• Fix file backup timestamps (issue #11745)
• Fix stacktrace on sys.doc with invalid eauth (issue #11293)
• Fix git.latest with test=True (issue #11595)
• Fix file.check_perms hardcoded follow_symlinks (issue #11387)
• Fix certain pkg states for RHEL5/Cent5 machines (issue #11719)

30.2.115 Salt 2014.1.3 Release Notes

release 2014-04-15

Version 2014.1.3 is another bugfix release for 2014.1.0. It was created as a hotfix for a regression found in 2014.1.2, which was not distributed. The only change made was as follows:

• Fix regression that caused saltutil.find_job to fail, causing premature terminations of salt CLI commands.

Changes in the not-distributed 2014.1.2, also included in 2014.1.3:

• Fix username detection when su’ed to root on FreeBSD (issue #11628)
• Fix minionfs backend for file.recurse states
• Fix 32-bit packages of different arches than the CPU arch, on 32-bit RHEL/CentOS (issue #11822)
• Fix bug with specifying alternate home dir on user creation (FreeBSD) (issue #11790)
• Don’t reload site module on module refresh for MacOS
• Fix regression with running execution functions in Pillar SLS (issue #11453)
• Fix some modules missing from Windows installer
• Don’t log an error for yum commands that return nonzero exit status on non-failure (issue #11645)
• Fix bug in rabbitmq state (issue #8703)
• Fix missing ssh config options (issue #10604)
• Fix top.sls ordering (issue #10810 and issue #11691)
• Fix salt-key --list all (issue #10982)
• Fix win_servermanager install/remove function (issue #11038)
• Fix interaction with tokens when running commands as root (issue #11223)
• Fix overstate bug with find_job and **kwargs (issue #10503)
• Fix saltenv for aptpkgs.mod_repo from pkgrepo state
• Fix environment issue causing file caching problems (issue #11189)
• Fix bug in __parse_key in registry state (issue #11408)
• Add minion auth retry on rejection (issue #10763)
• Fix publish_session updating the encryption key (issue #11493)
• Fix for bad AssertionError raised by GitPython (issue #11473)
• Fix debian_ip to allow disabling and enabling networking on Ubuntu (issue #11164)
• Fix potential memory leak caused by saved (and unused) events (issue #11582)
• Fix exception handling in the MySQL module (issue #11616)
• Fix environment-related error (issue #11534)
• Include psutil on Windows
• Add file.replace and file.search to Windows (issue #11471)
• Add additional file module helpers to Windows (issue #11235)
• Add pid to netstat output on Windows (issue #10782)
• Fix Windows not caching new versions of installers in winrepo (issue #10597)
• Fix hardcoded md5 hashing
• Fix kwargs in salt-ssh (issue #11609)
• Fix file backup timestamps (issue #11745)
• Fix stacktrace on sys.doc with invalid eauth (issue #11293)
• Fix git.latest with test=True (issue #11595)
• Fix file.check_perms hardcoded follow_symlinks (issue #11387)
• Fix certain pkg states for RHEL5/Cent5 machines (issue #11719)

30.2.116 Salt 2014.1.4 Release Notes

release 2014-05-05

Version 2014.1.4 is another bugfix release for 2014.1.0. Changes include:

• Fix setup.py dependency issue (issue #12031)
• Fix handling for IOErrors under certain circumstances (issue #11783 and issue #11853)
• Fix fatal exception when /proc/1/cgroup is not readable (issue #11619)
• Fix os grains for OpenSolaris (issue #11907)
• Fix lvs.zero module argument pass-through (issue #9001)
• Fix bug in debian_ip interaction with network.system state (issue #11164)
• Remove bad binary package verification code (issue #12177)
• Fix traceback in solaris package installation (issue #12237)
• Fix file.directory state symlink handling (issue #12209)
• Remove external_ip grain
• Fix file.managed mkmkdirs issues (issue #10446)
• Fix hang on non-existent Windows drive letter for file module (issue #9880)
• Fix salt minion caching all users on the server (issue #9743)
• Add strftime formatting for ps.boot_time (issue #12428)

30.2.117 Salt 2014.1.5 Release Notes

release 2014-06-11

Version 2014.1.5 is another bugfix release for 2014.1.0. Changes include:
• Add function for finding cached job on the minion
• Fix iptables save file location for Debian (issue #11730)
• Fix for minion caching jobs when master is down
• Bump default syndic_wait to 5 to fix syndic-related problems (issue #12262)
• Add OpenBSD, FreeBSD, and NetBSD support for network.netstat (issue #12121)
• Fix false positive error in logs for makeconf state (issue #9762)
• Fix for yum fromrepo package installs when repo is disabled by default (issue #12466)
• Fix for extra blank lines in file.blockreplace (issue #12422)
• Fix grain detection for OpenVZ guests (issue #11877)
• Fix get_dns_servers function for Windows win_dns_client
• Use system locale for ports package installations
• Use correct stop/restart procedure for Debian networking in debian_ip (issue #12614)
• Fix for cmd_iter/cmd_iter_no_block blocking issues (issue #12617)
• Fix traceback when syncing custom types (issue #12883)
• Fix cleaning directory symlinks in file.directory
• Add performance optimizations for saltutil.sync_all and state.highstate
• Fix possible error in saltutil.running
• Fix for kmod modules with dashes (issue #13239)
• Fix possible race condition for Windows minions in state module reloading (issue #12370)
• Fix bug with roster for passwd option that is loaded as a non-string object (issue #13249)
• Keep duplicate version numbers from showing up in pkg.list_pks output
• Fixes for Jinja renderer, timezone module/state (issue #12724)
• Fix timedatectl parsing for systemd>=210 (issue #12728)
• Fix saltenv being written to YUM repo config files (issue #12887)
• Removed the deprecated external nodes classifier (originally accessible by setting a value for external_nodes in the master configuration file). Note that this functionality has been marked deprecated for some time and was replaced by the more general master tops system.
- More robust escaping of ldap filter strings.
- Fix trailing slash in `gitfs_root` causing files not to be available (issue #13185)

### 30.2.118 Salt 2014.1.6 Release Notes

**release** 2014-07-08

Version 2014.1.6 is another bugfix release for 2014.1.0. Changes include:

- Fix extra `iptables --help` output (Sorry!) (issue #13648, issue #13507, issue #13527, issue #13607)
- Fix `mount.active` for Solaris
- Fix support for `allow-hotplug` statement in `debian_ip` network module
- Add `sqlite3` to esky builds
- Fix `jobs.active` output (issue #9526)
- Fix the `virtual` grain for Xen (issue #13534)
- Fix `_ext_nodes` unavailable on master (issue #13535)
- Fix eauth for batch mode (issue #9605)
- Fix force-related issues with `tomcat` support (issue #12889)
- Fix `salt-minion` restart loop in Windows (issue #12086)
- Fix detection of `service` virtual module on Fedora minions
- Fix traceback with missing `ipv4` grain (issue #13838)
- Fix issue in roots backend with invalid data in `mtime_map` (issue #13836)
- Fix traceback in `jobs.active` (issue #11151)
- Fix `master_tops` and `_ext_nodes` issue (issue #13535, issue #13673)

### 30.2.119 Salt 2014.1.7 Release Notes

**release** 2014-07-09

Version 2014.1.7 is another bugfix release for 2014.1.0. Changes include:

- Fix batch mode regression (issue #14046)

This release was a hotfix release for the regression listed above which was present in the 2014.1.6 release. The changes included in 2014.1.6 are listed below:

- Fix extra `iptables --help` output (Sorry!) (issue #13648, issue #13507, issue #13527, issue #13607)
- Fix `mount.active` for Solaris
- Fix support for `allow-hotplug` statement in `debian_ip` network module
- Add `sqlite3` to esky builds
- Fix `jobs.active` output (issue #9526)
- Fix the `virtual` grain for Xen (issue #13534)
- Fix eauth for batch mode (issue #9605)
- Fix force-related issues with `tomcat` support ([issue #12889](#12889))
- Fix `KeyError` when cloud mapping
- Fix salt-minion restart loop in Windows ([issue #12086](#12086))
- Fix detection of `service` virtual module on Fedora minions
- Fix traceback with missing ipv4 grain ([issue #13838](#13838))
- Fix issue in roots backend with invalid data in `mtime_map` ([issue #13836](#13836))
- Fix traceback in `jobs.active` ([issue #11151](#11151))
- Fix `master_tops` and `_ext_nodes` issue ([issue #13535](#13535), [issue #13673](#13673))

### 30.2.120 Salt 2014.1.8 Release Notes

**release** 2014-07-30

**Note:** This release contained a regression which caused inaccurate Salt version detection, and thus was never packaged for general release. Please use version 2014.1.10 instead.

Version 2014.1.8 is another bugfix release for 2014.1.0. Changes include:
- Ensure salt-ssh will not continue if permissions on a temporary directory are not correct.
- Use the bootstrap script distributed with Salt instead of relying on an external resource
- Remove unused testing code
- Ensure salt states are placed into the `.salt` directory in salt-ssh
- Use a randomized path for temporary files in a salt-cloud deployment
- Clean any stale directories to ensure a fresh copy of salt-ssh during a deployment

### 30.2.121 Salt 2014.1.9 Release Notes

**release** 2014-07-31

**Note:** This release contained a regression which caused inaccurate Salt version detection, and thus was never packaged for general release. Please use version 2014.1.10 instead.

**Note:** Version 2014.1.8 contained a regression which caused inaccurate Salt version detection, and thus was never packaged for general release. This version contains the version detection fix, but is otherwise identical to 2014.1.8.

Version 2014.1.9 is another bugfix release for 2014.1.0. Changes include:
- Ensure salt-ssh will not continue if permissions on a temporary directory are not correct.
- Use the bootstrap script distributed with Salt instead of relying on an external resource
- Remove unused testing code
- Ensure salt states are placed into the `.salt` directory in salt-ssh
- Use a randomized path for temporary files in a salt-cloud deployment
- Clean any stale directories to ensure a fresh copy of salt-ssh during a deployment

**30.2.122  Salt 0.10.0 Release Notes**

**release** 2012-06-16

0.10.0 has arrived! This release comes with MANY bug fixes, and new capabilities which greatly enhance performance and reliability. This release is primarily a bug fix release with many new tests and many repaired bugs. This release also introduces a few new key features which were brought in primarily to repair bugs and some limitations found in some of the components of the original architecture.

**Major Features**

**Event System**

The Salt Master now comes equipped with a new event system. This event system has replaced some of the back end of the Salt client and offers the beginning of a system which will make plugging external applications into Salt. The event system relies on a local ZeroMQ publish socket and other processes can connect to this socket and listen for events. The new events can be easily managed via Salt’s event library.

**Unprivileged User Updates**

Some enhancements have been added to Salt for running as a user other than root. These new additions should make switching the user that the Salt Master is running as very painless, simply change the `user` option in the master configuration and restart the master, Salt will take care of all of the particulars for you.

**Peer Runner Execution**

Salt has long had the peer communication system used to allow minions to send commands via the salt master. 0.10.0 adds a new capability here, now the master can be configured to allow for minions to execute Salt runners via the `peer_runner` option in the salt master configuration.

**YAML Parsing Updates**

In the past the YAML parser for sls files would return the incorrect numbers when the file mode was set with a preceding 0. The YAML parser used in Salt has been modified to no longer convert these number into octal but to keep them as the correct value so that sls files can be a little cleaner to write.

**State Call Data Files**

It was requested that the minion keep a local cache of the most recent executed state run. This has been added and now with state runs the data is stored in a msgpack file in the minion’s cachedir.
Turning Off the Job Cache

A new option has been added to the master configuration file. In previous releases the Salt client would look over the Salt job cache to read in the minion return data. With the addition of the event system the Salt client can now watch for events directly from the master worker processes.

This means that the job cache is no longer a hard requirement. Keep in mind though, that turning off the job cache means that historic job execution data cannot be retrieved.

Test Updates

Minion Swarms Are Faster

To continue our efforts with testing Salt’s ability to scale the minionswarm script has been updated. The minion-swarm can now start up minions much faster than it could before and comes with a new feature allowing modules to be disabled, thus lowering the minion’s footprint when making a swarm. These new updates have allows us to test:

```
# python minionswarm.py -m 20 --master salt-master
```

Many Fixes

To get a good idea for the number of bugfixes this release offers take a look at the closed tickets for 0.10.0, this is a very substantial update:

https://github.com/saltstack/salt/issues?milestone=12&state=closed

Master and Minion Stability Fixes

As Salt deployments grow new ways to break Salt are discovered. 0.10.0 comes with a number of fixes for the minions and master greatly improving Salt stability.

30.2.123 Salt 0.10.1 Release Notes

release 2012-06-19

30.2.124 Salt 0.10.2 Release Notes

release 2012-07-30

0.10.2 is out! This release comes with enhancements to the pillar interface, cleaner ways to access the salt-call capabilities in the API, minion data caching and the event system has been added to salt minions.

There have also been updates to the ZeroMQ functions, many more tests (thanks to sponsors, the code sprint and many contributors) and a swath of bug fixes.
Major Features

Ext Pillar Modules

The ranks of available Salt modules directories sees a new member in 0.10.2. With the popularity of pillar a higher demand has arisen for `ext_pillar` interfaces to be more like regular Salt module additions. Now `ext_pillar` interfaces can be added in the same way as other modules, just drop it into the pillar directory in the salt source.

Minion Events

In 0.10.0 an event system was added to the Salt master. 0.10.2 adds the event system to the minions as well. Now event can be published on a local minion as well.

The minions can also send events back up to the master. This means that Salt is able to communicate individual events from the minions back up to the Master which are not associated with command.

Minion Data Caching

When pillar was introduced the landscape for available data was greatly enhanced. The minion's began sending grain data back to the master on a regular basis.

The new config option on the master called `minion_data_cache` instructs the Salt master to maintain a cache of the minion's grains and pillar data in the cachedir. This option is turned off by default to avoid hitting the disk more, but when enabled the cache is used to make grain matching from the salt command more powerful, since the minions that will match can be predetermined.

Backup Files

By default all files replaced by the file.managed and file.recurse states we simply deleted. 0.10.2 adds a new option. By setting the backup option to `minion` the files are backed up before they are replaced.

The backed up files are located in the cachedir under the file_backup directory. On a default system this will be at: `/var/cache/salt/file_backup`

Configuration files

`salt-master` and `salt-minion` automatically load additional configuration files from `master.d/*\.conf` respective `minion.d/*\.conf` where `master.d/minion.d` is a directory in the same directory as the main configuration file.

Salt Key Verification

A number of users complained that they had inadvertently deleted the wrong salt authentication keys. 0.10.2 now displays what keys are going to be deleted and verifies that they are the keys that are intended for deletion.
Key auto-signing

If `autosign_file` is specified in the configuration file incoming keys will be compared to the list of keynames in `autosign_file`. Regular expressions as well as globbing is supported.

The file must only be writable by the user otherwise the file will be ignored. To relax the permission and allow group write access set the `permissive_pki_access` option.

Module changes

Improved OpenBSD support

New modules for managing services and packages were provided by Joshua Elsasser to further improve the support for OpenBSD.

Existing modules like the `disk` module were also improved to support OpenBSD.

SQL Modules

The MySQL and PostgreSQL modules have both received a number of additions thanks to the work of Avi Marcus and Roman Imankulov.

ZFS Support on FreeBSD

A new ZFS module has been added by Kurtis Velarde for FreeBSD supporting various ZFS operations like creating, extending or removing zpools.

Augeas

A new Augeas module by Ulrich Dangel for editing and verifying config files.

Native Debian Service module

The support for the Debian was further improved with an new service module for Debian by Ahmad Khayyat supporting `disable` and `enable`.

Cassandra

Cassandra support has been added by Adam Garside. Currently only status and diagnostic information are supported.
Networking

The networking support for RHEL has been improved and supports bonding support as well as zeroconf configuration.

Monit

Basic monit support by Kurtis Velarde to control services via monit.

nzbget

Basic support for controlling nzbget by Joseph Hall

Bluetooth

Basic bluez support for managing and controlling Bluetooth devices. Supports scanning as well as pairing/unpairing by Joseph Hall.

Test Updates

Consistency Testing

Another testing script has been added. A bug was found in pillar when many minions generated pillar data at the same time. The new consist.py script is the tests directory was created to reproduce bugs where data should always be consistent.

Many Fixes

To get a good idea for the number of bugfixes this release offers take a look at the closed tickets for 0.10.2, this is a very substantial update:

https://github.com/saltstack/salt/issues?milestone=24&page=1&state=closed

Master and Minion Stability Fixes

As Salt deployments grow new ways to break Salt are discovered. 0.10.2 comes with a number of fixes for the minions and master greatly improving Salt stability.

30.2.125 Salt 0.10.3 Release Notes

release 2012-09-30

The latest taste of Salt has come, this release has many fixes and feature additions. Modifications have been made to make ZeroMQ connections more reliable, the beginning of the ACL system is in place, a new command line parsing system has been added, dynamic module distribution has become more environment aware, the new master_finger option and many more!
Major Features

ACL System

The new ACL system has been introduced. The ACL system allows for system users other than root to execute salt commands. Users can be allowed to execute specific commands in the same way that minions are opened up to the peer system.

The configuration value to open up the ACL system is called `client_acl` and is configured like so:

```
client_acl:
    fred:
      - test..*
      - pkg.list_pkgs
```

Where `fred` is allowed access to functions in the test module and to the `pkg.list_pkgs` function.

Master Finger Option

The `master_finger` option has been added to improve the security of minion provisioning. The `master_finger` option allows for the fingerprint of the master public key to be set in the configuration file to double verify that the master is valid. This option was added in response to a motivation to pre-authenticate the master when provisioning new minions to help prevent man in the middle attacks in some situations.

Salt Key Fingerprint Generation

The ability to generate fingerprints of keys used by Salt has been added to `salt-key`. The new option `finger` accepts the name of the key to generate and display a fingerprint for.

```
salt-key -F master
```

Will display the fingerprints for the master public and private keys.

Parsing System

Pedro Algavio, aka s0undt3ch, has added a substantial update to the command line parsing system that makes the help message output much cleaner and easier to search through. Salt parsers now have `--versions-report` besides usual `--version` info which you can provide when reporting any issues found.

Key Generation

We have reduced the requirements needed for `salt-key` to generate minion keys. You're no longer required to have salt configured and its common directories created just to generate keys. This might prove useful if you're batch creating keys to pre-load on minions.
Startup States

A few configuration options have been added which allow for states to be run when the minion daemon starts. This can be a great advantage when deploying with Salt because the minion can apply states right when it first runs. To use startup states set the `startup_states` configuration option on the minion to `highstate`.

New Exclude Declaration

Some users have asked about adding the ability to ensure that other sls files or ids are excluded from a state run. The `exclude` statement will delete all of the data loaded from the specified sls file or will delete the specified id:

```yaml
exclude:
- sls: http
- id: /etc/vimrc
```

Max Open Files

While we're currently unable to properly handle ZeroMQ's abort signals when the max open files is reached, due to the way that's handled on ZeroMQ's, we have minimized the chances of this happening without at least warning the user.

More State Output Options

Some major changes have been made to the state output system. In the past state return data was printed in a very verbose fashion and only states that failed or made changes were printed by default. Now two options can be passed to the master and minion configuration files to change the behavior of the state output. State output can be set to verbose (default) or non-verbose with the `state_verbose` option:

```yaml
state_verbose: False
```

It is noteworthy that the `state_verbose` option used to be set to `False` by default but has been changed to `True` by default in 0.10.3 due to many requests for the change.

The next option to be aware of new and called `state_output`. This option allows for the state output to be set to `full` (default) or `terse`.

The `full` output is the standard state output, but the new `terse` output will print only one line per state making the output much easier to follow when executing a large state system.

```yaml
state_output: terse
```

`state.file.append` Improvements

The salt `state.file.append()` tries not to append existing text. Previously the matching check was being made line by line. While this kind of check might be enough for most cases, if the text being appended was multi-line, the check would not work properly. This issue is now properly handled, the match is done as a whole ignoring any white space addition or removal except inside commas. For those thinking that, in order to properly match over multiple lines, salt will load the whole file into memory, that's not true. For most cases this is not important but an erroneous order to read a 4GB file, if not properly handled, like salt does, could make salt chew that amount of memory. Salt has a buffered file reader which will keep in memory a maximum of 256KB and iterates over the file in chunks of 32KB to test for the match, more than enough, if not, explain your usage on a ticket. With this change, also
salt.modules.file.contains(), salt.modules.file.contains_regex(), salt.modules.file.contains_glob() and salt.utils.find now do the searching and/or matching using the buffered chunks approach explained above.

Two new keyword arguments were also added, makedirs, and source. The first, makedirs will create the necessary directories in order to append to the specified file, of course, it only applies if we’re trying to append to a non-existing file on a non-existing directory:

```
/tmp/salttest/file-append-makedirs:
  file.append:
    text: foo
    makedirs: True
```

The second, source, allows one to append the contents of a file instead of specifying the text.

```
/tmp/salttest/file-append-source:
  file.append:
    - source: salt://testfile
```

Security Fix

A timing vulnerability was uncovered in the code which decrypts the AES messages sent over the network. This has been fixed and upgrading is strongly recommended.

30.2.126 Salt 0.10.4 Release Notes

release 2012-10-23

Salt 0.10.4 is a monumental release for the Salt team, with two new module systems, many additions to allow granular access to Salt, improved platform support and much more.

This release is also exciting because we have been able to shorten the release cycle back to under a month. We are working hard to keep up the aggressive pace and look forward to having releases happen more frequently!

This release also includes a serious security fix and all users are very strongly recommended to upgrade. As usual, upgrade the master first, and then the minion to ensure that the process is smooth.

Major Features

External Authentication System

The new external authentication system allows for Salt to pass through authentication to any authentication system to determine if a user has permission to execute a Salt command. The Unix PAM system is the first supported system with more to come!

The external authentication system allows for specific users to be granted access to execute specific functions on specific minions. Access is configured in the master configuration file, and uses the new access control system:

```
external_auth:
  pam:
    thatch:
      - 'web*':
      - test.*
      - network.*
```
The configuration above allows the user *thatch* to execute functions in the test and network modules on minions that match the `web*` target.

**Access Control System**

All Salt systems can now be configured to grant access to non-administrative users in a granular way. The old configuration continues to work. Specific functions can be opened up to specific minions from specific users in the case of external auth and client ACLs, and for specific minions in the case of the peer system.

Access controls are configured like this:

```yaml
client_acl:
  fred:
    - web\*:
      - pkg.list_pkgs
      - test.*
      - apache.*
```

**Target by Network**

A new matcher has been added to the system which allows for minions to be targeted by network. This new matcher can be called with the `-S` flag on the command line and is available in all places that the matcher system is available. Using it is simple:

```
$ salt -S '192.168.1.0/24' test.ping
$ salt -S '192.168.1.100' test.ping
```

**Nodegroup Nesting**

Previously a nodegroup was limited by not being able to include another nodegroup, this restraint has been lifted and now nodegroups will be expanded within other nodegroups with the `N@` classifier.

**Salt Key Delete by Glob**

The ability to delete minion keys by glob has been added to `salt-key`. To delete all minion keys whose minion name starts with `web`:

```
$ salt-key -d 'web*'
```

**Master Tops System**

The `external_nodes` system has been upgraded to allow for modular subsystems to be used to generate the top file data for a highstate run.

The `external_nodes` option still works but will be deprecated in the future in favor of the new `master_tops` option.

Example of using `master_tops`:

```yaml
master_tops:
  ext_nodes: cobbler-external-nodes
```
Next Level Solaris Support

A lot of work has been put into improved Solaris support by Romeo Theriault. Packaging modules (pkgadd/pkgrm and pkgutil) and states, cron support and user and group management have all been added and improved upon. These additions along with SMF (Service Management Facility) service support and improved Solaris grain detection in 0.10.3 add up to Salt becoming a great tool to manage Solaris servers with.

Security

A vulnerability in the security handshake was found and has been repaired, old minions should be able to connect to a new master, so as usual, the master should be updated first and then the minions.

Pillar Updates

The pillar communication has been updated to add some extra levels of verification so that the intended minion is the only one allowed to gather the data. Once all minions and the master are updated to salt 0.10.4 please activate pillar 2 by changing the pillar_version in the master config to 2. This will be set to 2 by default in a future release.

30.2.127 Salt 0.10.5 Release Notes

release 2012-11-15

Salt 0.10.5 is ready, and comes with some great new features. A few more interfaces have been modularized, like the outputter system. The job cache system has been made more powerful and can now store and retrieve jobs archived in external databases. The returner system has been extended to allow minions to easily retrieve data from a returner interface.

As usual, this is an exciting release, with many noteworthy additions!

Major Features

External Job Cache

The external job cache is a system which allows for a returner interface to also act as a job cache. This system is intended to allow users to store job information in a central location for longer periods of time and to make the act of looking up information from jobs executed on other minions easier.

Currently the external job cache is supported via the mongo and redis returners:

```
ext_job_cache: redis
redis.host: salt
```

Once the external job cache is turned on the new ret module can be used on the minions to retrieve return information from the job cache. This can be a great way for minions to respond and react to other minions.
OpenStack Additions

OpenStack integration with Salt has been moving forward at a blistering pace. The new nova, glance, and keystone modules represent the beginning of ongoing OpenStack integration.

The Salt team has had many conversations with core OpenStack developers and is working on linking to OpenStack in powerful new ways.

Wheel System

A new API was added to the Salt Master which allows the master to be managed via an external API. This new system allows Salt API to easily hook into the Salt Master and manage configs, modify the state tree, manage the pillar and more. The main motivation for the wheel system is to enable features needed in the upcoming web UI so users can manage the master just as easily as they manage minions.

The wheel system has also been hooked into the external auth system. This allows specific users to have granular access to manage components of the Salt Master.

Render Pipes

Jack Kuan has added a substantial new feature. The render pipes system allows Salt to treat the render system like unix pipes. This new system enables sls files to be passed through specific render engines. While the default renderer is still recommended, different engines can now be more easily merged. So to pipe the output of Mako used in YAML use this shebang line:

```
#!/mako|yaml
```

Salt Key Overhaul

The Salt Key system was originally developed as only a CLI interface, but as time went on it was pressed into becoming a clumsy API. This release marks a complete overhaul of Salt Key. Salt Key has been rewritten to function purely from an API and to use the outputter system. The benefit here is that the outputter system works much more cleanly with Salt Key now, and the internals of Salt Key can be used much more cleanly.

Modular Outputters

The outputter system is now loaded in a modular way. This means that output systems can be more easily added by dropping a python file down on the master that contains the function output.

Gzip from Fileserver

Gzip compression has been added as an option to the cp.get_file and cp.get_dir commands. This will make file transfers more efficient and faster, especially over slower network links.
Unified Module Configuration

In past releases of Salt, the minions needed to be configured for certain modules to function. This was difficult because it required pre-configuring the minions. 0.10.5 changes this by making all module configs on minions search the master config file for values.

Now if a single database server is needed, then it can be defined in the master config and all minions will become aware of the configuration value.

Salt Call Enhancements

The salt-call command has been updated in a few ways. Now, salt-call can take the --return option to send the data to a returner. Also, salt-call now reports executions in the minion proc system, this allows the master to be aware of the operation salt-call is running.

Death to pub_refresh and sub_timeout

The old configuration values pub_refresh and sub_timeout have been removed. These options were in place to alleviate problems found in earlier versions of ZeroMQ which have since been fixed. The continued use of these options has proven to cause problems with message passing and have been completely removed.

Git Revision Versions

When running Salt directly from git (for testing or development, of course) it has been difficult to know exactly what code is being executed. The new versioning system will detect the git revision when building and how many commits have been made since the last release. A release from git will look like this:

0.10.4-736-gec74d69

Svn Module Addition

Anthony Cornehl (twinshadow) contributed a module that adds Subversion support to Salt. This great addition helps round out Salt’s VCS support.

Noteworthy Changes

Arch Linux Defaults to Systemd

Arch Linux recently changed to use systemd by default and discontinued support for init scripts. Salt has followed suit and defaults to systemd now for managing services in Arch.
Salt, Salt Cloud and Openstack

With the releases of Salt 0.10.5 and Salt Cloud 0.8.2, OpenStack becomes the first (non-OS) piece of software to include support both on the user level (with Salt Cloud) and the admin level (with Salt). We are excited to continue to extend support of other platforms at this level.

## 30.2.128 Salt 0.11.0 Release Notes

**release** 2012-12-14

Salt 0.11.0 is here, with some highly sought after and exciting features. These features include the new overstate system, the reactor system, a new state run scope component called __context__, the beginning of the search system (still needs a great deal of work), multiple package states, the MySQL returner and a better system to arbitrarily reference outputters.

It is also noteworthy that we are changing how we mark release numbers. For the life of the project we have been pushing every release with features and fixes as point releases. We will now be releasing point releases for only bug fixes on a more regular basis and major feature releases on a slightly less regular basis. This means that the next release will be a bugfix only release with a version number of 0.11.1. The next feature release will be named 0.12.0 and will mark the end of life for the 0.11 series.

### Major Features

**OverState**

The overstate system is a simple way to manage rolling state executions across many minions. The overstate allows for a state to depend on the successful completion of another state.

**Reactor System**

The new reactor system allows for a reactive logic engine to be created which can respond to events within a salted environment. The reactor system uses sls files to match events fired on the master with actions, enabling Salt to react to problems in an infrastructure.

Your load-balanced group of webservers is under extra load? Spin up a new VM and add it to the group. Your fileserver is filling up? Send a notification to your sysadmin on call. The possibilities are endless!

**Module Context**

A new component has been added to the module loader system. The module context is a data structure that can hold objects for a given scope within the module.

This allows for components that are initialized to be stored in a persistent context which can greatly speed up ongoing connections. Right now the best example can be found in the cp execution module.
Multiple Package Management

A long desired feature has been added to package management. By definition Salt States have always installed packages one at a time. On most platforms this is not the fastest way to install packages. Erik Johnson, aka terminalmage, has modified the package modules for many providers and added new capabilities to install groups of packages. These package groups can be defined as a list of packages available in repository servers:

```
python_pkgs:
  pkg.installed:
    - pkgs:
      - python-mako
      - whoosh
      - python-git
```

or specify based on the location of specific packages:

```
python_pkgs:
  pkg.installed:
    - sources:
      - python-mako: http://some-rpms.org/python-mako.rpm
      - whoosh: salt://whoosh/whoosh.rpm
      - python-git: ftp://companyserver.net/python-git.rpm
```

Search System

The bones to the search system have been added. This is a very basic interface that allows for search backends to be added as search modules. The first supported search module is the whoosh search backend. Right now only the basic paths for the search system are in place, making this very experimental. Further development will involve improving the search routines and index routines for whoosh and other search backends.

The search system has been made to allow for searching through all of the state and pillar files, configuration files and all return data from minion executions.

Notable Changes

All previous versions of Salt have shared many directories between the master and minion. The default locations for keys, cached data and sockets has been shared by master and minion. This has created serious problems with running a master and a minion on the same systems. 0.11.0 changes the defaults to be separate directories. Salt will also attempt to migrate all of the old key data into the correct new directories, but if it is not successful it may need to be done manually. If your keys exhibit issues after updating make sure that they have been moved from `/etc/salt/pki` to `/etc/salt/pki/{master,minion}`.

The old setup will look like this:

```
/etc/salt/pki
|-- master.pem
|-- master.pub
|-- minions
|   |-- ragnarok.saltstack.net
|   |-- minions_pre
|   |-- minion.pem
|   |-- minion.pub
|   |-- minion_master.pub
|   |-- minions_pre
|   |-- minions_rejected
```
With the accepted minion keys in /etc/salt/pki/minions, the new setup places the accepted minion keys in /etc/salt/pki/master/minions.

```
/etc/salt/pki
|-- master
| `-- master.pem
| `-- master.pub
|-- minions
| `-- ragnarok.saltstack.net
|    `-- minions_pre
|    `-- minions_rejected
|-- minion
|    `-- minion.pem
|    `-- minion.pub
|    `-- minion_master.pub
```

30.2.129 Salt 0.11.1 Release Notes

**release** 2012-12-19

30.2.130 Salt 0.12.0 Release Notes

**release** 2013-01-15

Another feature release of Salt is here! Some exciting additions are included with more ways to make salt modular and even easier management of the salt file server.

**Major Features**

**Modular Fileserver Backend**

The new modular fileserver backend allows for any external system to be used as a salt file server. The main benefit here is that it is now possible to tell the master to directly use a git remote location, or many git remote locations, automatically mapping git branches and tags to salt environments.

**Windows is First Class!**

A new Salt Windows installer is now available! Much work has been put in to improve Windows support. With this much easier method of getting Salt on your Windows machines, we hope even more development and progress will occur. Please file bug reports on the Salt GitHub repo issue tracker so we can continue improving.

One thing that is missing on Windows that Salt uses extensively is a software package manager and a software package repository. The Salt pkg state allows sys admins to install software across their infrastructure and across operating systems. Software on Windows can now be managed in the same way. The SaltStack team built a package manager that interfaces with the standard Salt pkg module to allow for installing and removing software on Windows. In addition, a software package repository has been built on top of the Salt fileserver. A small YAML file provides the information necessary for the package manager to install and remove software.

An interesting feature of the new Salt Windows software package repository is that one or more remote git repositories can supplement the master’s local repository. The repository can point to software on the master’s fileserver or on an HTTP, HTTPS, or ftp server.
New Default Outputter

Salt displays data to the terminal via the outputter system. For a long time the default outputter for Salt has been the python pretty print library. While this has been a generally reasonable outputter, it did have many failings. The new default outputter is called "nested", it recursively scans return data structures and prints them out cleanly.

If the result of the new nested outputter is not desired any other outputter can be used via the --out option, or the output option can be set in the master and minion configs to change the default outputter.

Internal Scheduler

The internal Salt scheduler is a new capability which allows for functions to be executed at given intervals on the minion, and for runners to be executed at given intervals on the master. The scheduler allows for sequences such as executing state runs (locally on the minion or remotely via an overstate) or continually gathering system data to be run at given intervals.

The configuration is simple, add the schedule option to the master or minion config and specify jobs to run, this in the master config will execute the state.over runner every 60 minutes:

```yaml
schedule:
  overstate:
    function: state.over
    minutes: 60
```

This example for the minion configuration will execute a highstate every 30 minutes:

```yaml
schedule:
  highstate:
    function: state.highstate
    minutes: 30
```

Optional DSL for SLS Formulas

Jack Kuan, our renderer expert, has created something that is astonishing. Salt, now comes with an optional Python based DSL, this is a very powerful interface that makes writing SLS files in pure python easier than it was with the raw py renderer. As usual this can be used with the renderer shebang line, so a single sls can be written with the DSL if pure python power is needed while keeping other sls files simple with YAML.

Set Grains Remotely

A new execution function and state module have been added that allows for grains to be set on the minion. Now grains can be set via a remote execution or via states. Use the `grains.present` state or the `grains.setval` execution functions.
Gentoo Additions

Major additions to Gentoo specific components have been made. The encompasses executions modules and states ranging from supporting the make.conf file to tools like layman.

30.2.131 Salt 0.12.1 Release Notes

release 2013-01-21

30.2.132 Salt 0.13.0 Release Notes

release 2013-02-12

The lucky number 13 has turned the corner! From CLI notifications when quitting a salt command, to substantial improvements on Windows, Salt 0.13.0 has arrived!

Major Features

Improved file.recurse Performance

The file.recurse system has been deployed and used in a vast array of situations. Fixes to the file state and module have led towards opening up new ways of running file.recurse to make it faster. Now the file.recurse state will download fewer files and will run substantially faster.

Windows Improvements

Minion stability on Windows has improved. Many file operations, including file.recurse, have been fixed and improved. The network module works better, to include network.interfaces. Both 32bit and 64bit installers are now available.

Nodegroup Targeting in Peer System

In the past, nodegroups were not available for targeting via the peer system. This has been fixed, allowing the new nodegroup expr_form argument for the publish.publish function:

    salt-call publish.publish group1 test.ping expr_form=nodegroup

Blacklist Additions

Additions allowing more granular blacklisting are available in 0.13.0. The ability to blacklist users and functions in client_acl have been added, as well as the ability to exclude state formulas from the command line.
Salt Documentation, Release 3002.5

Command Line Pillar Embedding
Pillar data can now be embedded on the command line when calling state.sls and state.highstate. This
allows for on the fly changes or settings to pillar and makes parameterizing state formulas even easier. This is done
via the keyword argument:
salt '*' state.highstate pillar='{"cheese": "spam"}'

The above example will extend the existing pillar to hold the cheese key with a value of spam. If the cheese key
is already specified in the minion's pillar then it will be overwritten.
CLI Notifications
In the past hitting ctrl-C and quitting from the salt command would just drop to a shell prompt, this caused
confusion with users who expected the remote executions to also quit. Now a message is displayed showing what
command can be used to track the execution and what the job id is for the execution.
Version Specification in Multiple-Package States
Versions can now be specified within multiple-package pkg.installed states. An example can be found below:
mypkgs:
pkg.installed:
- pkgs:
- foo
- bar: 1.2.3-4
- baz

Noteworthy Changes
The configuration subsystem in Salt has been overhauled to make the opts dict used by Salt applications more
portable, the problem is that this is an incompatible change with salt-cloud, and salt-cloud will need to be updated
to the latest git to work with Salt 0.13.0. Salt Cloud 0.8.5 will also require Salt 0.13.0 or later to function.
The SaltStack team is sorry for the inconvenience here, we work hard to make sure these sorts of things do not
happen, but sometimes hard changes get in.

30.2.133 Salt 0.13.1 Release Notes
release 2013-02-15

30.2. Previous Releases

3197


Salt 0.14.0 is here! This release was held up primarily by PyCon, Scale, and illness, but has arrived! 0.14.0 comes with many new features and is breaking ground for Salt in the area of cloud management with the introduction of Salt providing basic cloud controller functionality.

Major Features

Salt - As a Cloud Controller

This is the first primitive inroad to using Salt as a cloud controller is available in 0.14.0. Be advised that this is alpha, only tested in a few very small environments.

The cloud controller is built using kvm and libvirt for the hypervisors. Hypervisors are autodetected as minions and only need to have libvirt running and kvm installed to function. The features of the Salt cloud controller are as follows:

- Basic vm discovery and reporting
- Creation of new virtual machines
- Seeding virtual machines with Salt via qemu-nbd or libguestfs
- Live migration (shared and non shared storage)
- Delete existing VMs

It is noteworthy that this feature is still Alpha, meaning that all rights are reserved to change the interface if needs be in future releases!

Libvirt State

One of the problems with libvirt is management of certificates needed for live migration and cross communication between hypervisors. The new libvirt state makes the Salt Master hold a CA and manage the signing and distribution of keys onto hypervisors, just add a call to the libvirt state in the sls formulas used to set up a hypervisor:

```
libvirt_keys:
  libvirt.keys
```
New get Functions

An easier way to manage data has been introduced. The pillar, grains, and config execution modules have been extended with the new get function. This function works much in the same way as the get method in a python dict, but with an enhancement, nested dict components can be extracted using a : delimiter.

If a structure like this is in pillar:

```python
foo:
    bar:
        baz: quo
```

Extracting it from the raw pillar in an sls formula or file template is done this way:

```python
{{ pillar['foo']['bar']['baz'] }}
```

Now with the new get function the data can be safely gathered and a default can be set allowing the template to fall back if the value is not available:

```python
{{ salt['pillar.get']['foo:bar:baz', 'qux'] }}
```

This makes handling nested structures much easier, and defaults can be cleanly set. This new function is being used extensively in the new formulae repository of salt sls formulas.

30.2.137 Salt 0.14.1 Release Notes

release 2013-04-13

30.2.138 Salt 0.15.0 Release Notes

release 2013-05-03

The many new features of Salt 0.15.0 have arrived! Salt 0.15.0 comes with many smaller features and a few larger ones.

These features range from better debugging tools to the new Salt Mine system.

Major Features

The Salt Mine

First there was the peer system, allowing for commands to be executed from a minion to other minions to gather data live. Then there was the external job cache for storing and accessing long term data. Now the middle ground is being filled in with the Salt Mine. The Salt Mine is a system used to execute functions on a regular basis on minions and then store only the most recent data from the functions on the master, then the data is looked up via targets.

The mine caches data that is public to all minions, so when a minion posts data to the mine all other minions can see it.
IPV6 Support

0.13.0 saw the addition of initial IPV6 support but errors were encountered and it needed to be stripped out. This time the code covers more cases and must be explicitly enabled. But the support is much more extensive than before.

Copy Files From Minions to the Master

Minions have long been able to copy files down from the master file server, but until now files could not be easily copied from the minion up to the master.

A new function called `cp.push` can push files from the minions up to the master server. The uploaded files are then cached on the master in the master cachedir for each minion.

Better Template Debugging

Template errors have long been a burden when writing states and pillar. 0.15.0 will now send the compiled template data to the debug log, this makes tracking down the intermittent stage templates much easier. So running `state.sls` or `state.highstate` with `-l debug` will now print out the rendered templates in the debug information.

State Event Firing

The state system is now more closely tied to the master's event bus. Now when a state fails the failure will be fired on the master event bus so that the reactor can respond to it.

Major Syndic Updates

The Syndic system has been basically re-written. Now it runs in a completely asynchronous way and functions primarily as an event broker. This means that the events fired on the syndic are now pushed up to the higher level master instead of the old method used which waited for the client libraries to return.

This makes the syndic much more accurate and powerful, it also means that all events fired on the syndic master make it up the pipe as well making a reactor on the higher level master able to react to minions further downstream.

Peer System Updates

The Peer System has been updated to run using the client libraries instead of firing directly over the publish bus. This makes the peer system much more consistent and reliable.

Minion Key Revocation

In the past when a minion was decommissioned the key needed to be manually deleted on the master, but now a function on the minion can be used to revoke the calling minion's key:

```bash
$ salt-call saltutil.revoke_auth
```
Function Return Codes

Functions can now be assigned numeric return codes to determine if the function executed successfully. While not all functions have been given return codes, many have and it is an ongoing effort to fill out all functions that might return a non-zero return code.

Functions in Overstate

The overstate system was originally created to just manage the execution of states, but with the addition of return codes to functions, requisite logic can now be used with respect to the overstate. This means that an overstate stage can now run single functions instead of just state executions.

Pillar Error Reporting

Previously if errors surfaced in pillar, then the pillar would consist of only an empty dict. Now all data that was successfully rendered stays in pillar and the render error is also made available. If errors are found in the pillar, states will refuse to run.

Using Cached State Data

Sometimes states are executed purely to maintain a specific state rather than to update states with new configs. This is grounds for the new cached state system. By adding `cache=True` to a state call the state will not be generated fresh from the master but the last state data to be generated will be used. If no previous state data is available then fresh data will be generated.

Monitoring States

The new monitoring states system has been started. This is very young but allows for states to be used to configure monitoring routines. So far only one monitoring state is available, the `disk.status` state. As more capabilities are added to Salt UI the monitoring capabilities of Salt will continue to be expanded.

30.2.139 Salt 0.15.1 Release Notes

release 2013-05-08

The 0.15.1 release has been posted, this release includes fixes to a number of bugs in 0.15.1 and a three security patches.

Security Updates

A number of security issues have been resolved via the 0.15.1 release.
Path Injection in Minion IDs

Salt masters did not properly validate the id of a connecting minion. This can lead to an attacker uploading files to the master in arbitrary locations. In particular this can be used to bypass the manual validation of new unknown minions. Exploiting this vulnerability does not require authentication.

This issue affects all known versions of Salt.

This issue was reported by Ronald Volgers.

Patch

The issue is fixed in Salt 0.15.1. Updated packages are available in the usual locations.

Specific commits:
https://github.com/saltstack/salt/commit/5427b9438e452a5a8910d9128c6aaaf45d8fd5d3
https://github.com/saltstack/salt/commit/7560908ee62351769c3cd43b03d74c1ca772cc52
https://github.com/saltstack/salt/commit/e200b8a7ff53780124e08d2bdefde7587e52bfca

RSA Key Generation Fault

RSA key generation was done incorrectly, leading to very insecure keys. It is recommended to regenerate all RSA keys.

This issue can be used to impersonate Salt masters or minions, or decrypt any transferred data.

This issue can only be exploited by attackers who are able to observe or modify traffic between Salt minions and the legitimate Salt master.

A tool was included in 0.15.1 to assist in mass key regeneration, the manage.regen_keys runner.

This issue affects all known versions of Salt.

This issue was reported by Ronald Volgers.

Patch

The issue is fixed in Salt 0.15.1. Updated packages are available in the usual locations.

Specific commits:
https://github.com/saltstack/salt/commit/5dd304276ba5745ec21fc1e6686a0b28da29e6fc

Command Injection Via ext_pillar

Arbitrary shell commands could be executed on the master by an authenticated minion through options passed when requesting a pillar.

Ext pillar options have been restricted to only allow safe external pillars to be called when prompted by the minion.

This issue affects Salt versions from 0.14.0 to 0.15.0.

This issue was reported by Ronald Volgers.
Patch

The issue is fixed in Salt 0.15.1. Updated packages are available in the usual locations.
Specific commits:
https://github.com/saltstack/salt/commit/43d8c16bd26159d827d1a945c83ac28159ec5865

30.2.140 Salt 0.15.2 Release Notes

release 2013-05-29

30.2.141 Salt 0.15.3 Release Notes

release 2013-06-01

30.2.142 Salt 0.16.0 Release Notes

release 2013-07-01

The 0.16.0 release is an exciting one, with new features in master redundancy, and a new, powerful requisite.

Major Features

Multi-Master

This new capability allows for a minion to be actively connected to multiple salt masters at the same time. This allows for multiple masters to send out commands to minions and for minions to automatically reconnect to masters that have gone down. A tutorial is available to help get started here:

Multi Master Tutorial

Prereq, the New Requisite

The new prereq requisite is very powerful! It allows for states to execute based on a state that is expected to make changes in the future. This allows for a change on the system to be preempted by another execution. A good example is needing to shut down a service before modifying files associated with it, allowing, for instance, a webserver to be shut down allowing a load balancer to stop sending requests while server side code is updated. In this case, the prereq will only run if changes are expected to happen in the prerequired state, and the prerequired state will always run after the prereq state and only if the prereq state succeeds.
Peer System Improvements

The peer system has been revamped to make it more reliable, faster, and like the rest of Salt, async. The peer calls when an updated minion and master are used together will be much faster!

Relative Includes

The ability to include an sls relative to the defined sls has been added, the new syntax id documented here:

Includes

More State Output Options

The state_output option in the past only supported full and terse, 0.16.0 add the mixed and changes modes further refining how states are sent to users' eyes.

Improved Windows Support

Support for Salt on Windows continues to improve. Software management on Windows has become more seamless with Linux/UNIX/BSD software management. Installed software is now recognized by the short names defined in the repository SLS. This makes it possible to run salt '*' pkg.version firefox and get back results from Windows and non-Windows minions alike.

When templating files on Windows, Salt will now correctly use Windows appropriate line endings. This makes it much easier to edit and consume files on Windows.

When using the cmd state the shell option now allows for specifying Windows Powershell as an alternate shell to execute cmd.run and cmd.script. This opens up Salt to all the power of Windows Powershell and its advanced Windows management capabilities.

Several fixes and optimizations were added for the Windows networking modules, especially when working with IPv6.

A system module was added that makes it easy to restart and shutdown Windows minions.

The Salt Minion will now look for its config file in c:\salt\conf by default. This means that it's no longer necessary to specify the -c option to specify the location of the config file when starting the Salt Minion on Windows in a terminal.

Multiple Targets for pkg.removed, pkg.purged States

Both pkg.removed and pkg.purged now support the pkgs argument, which allow for multiple packages to be targeted in a single state. This, as in pkg.installed, helps speed up these states by reducing the number of times that the package management tools (apt, yum, etc.) need to be run.
Random Times in Cron States

The temporal parameters in `cron.present` states (minute, hour, etc.) can now be randomized by using `random` instead of a specific value. For example, by using the `random` keyword in the `minute` parameter of a cron state, the same cron job can be pushed to hundreds or thousands of hosts, and they would each use a randomly-generated minute. This can be helpful when the cron job accesses a network resource, and it is not desirable for all hosts to run the job concurrently.

```
/path/to/cron/script:
cron.present:
    - user: root
    - minute: random
    - hour: 2
```

Since Salt assumes a value of `*` for unspecified temporal parameters, adding a parameter to the state and setting it to `random` will change that value from `*` to a randomized numeric value. However, if that field in the cron entry on the minion already contains a numeric value, then using the `random` keyword will not modify it.

Confirmation Prompt on Key Acceptance

When accepting new keys with `salt-key -a minion-id` or `salt-key -A`, there is now a prompt that will show the affected keys and ask for confirmation before proceeding. This prompt can be bypassed using the `-y` or `--yes` command line argument, as with other `salt-key` commands.

Support for Setting Password Hashes on BSD Minions

FreeBSD, NetBSD, and OpenBSD all now support setting passwords in `user.present` states.

30.2.143 Salt 0.16.1 Release Notes

```
release 2013-07-29
```

30.2.144 Salt 0.16.2 Release Notes

```
release 2013-08-01
```

Version 0.16.2 is a bugfix release for 0.16.0, and contains a number of fixes.

Windows

- Only allow Administrator's group and SYSTEM user access to C:salt. This eliminates a race condition where a non-admin user could modify a template or managed file before it is executed by the minion (which is running as an elevated user), thus avoiding a potential escalation of privileges. (issue #6361)
Grains

- Fixed detection of virtual grain on OpenVZ hardware nodes
- Gracefully handle lsb_release data when it is enclosed in quotes
- LSB grains are now prefixed with lsb_distrib_ instead of simply lsb_. The old naming is not preserved, so SLS may be affected.
- Improved grains detection on MacOS

Pillar

- Don't try to load git_pillar if not enabled in master config (issue #6052)
- Functions pillar.item and pillar.items added for parity with grains.item/grains.items. The old function pillar.data is preserved for backwards compatibility.
- Fixed minion traceback when Pillar SLS is malformed (issue #5910)

Peer Publishing

- More gracefully handle improperly quoted publish commands (issue #5958)
- Fixed traceback when timeout specified via the CLI for publish.publish, publish.full_data (issue #5959)
- Fixed unintended change in output of publish.publish (issue #5928)

Minion

- Fixed salt-key usage in minionswarm script
- Quieted warning about SALT_MINION_CONFIG environment variable on minion startup and for CLI commands run via salt-call (issue #5956)
- Added minion config parameter random_reauth_delay to stagger re-auth attempts when the minion is waiting for the master to approve its public key. This helps prevent SYN flooding in larger environments.

User/Group Management

- Implement previously-ignored unique option for user.present states in FreeBSD
- Report in state output when a group.present state attempts to use a gid in use by another group
- Fixed regression that prevents a user.present state to set the password hash to the system default (i.e. an unset password)
- Fixed multiple group.present states with the same group (issue #6439)
### File Management

- Fixed file.mkdir setting incorrect permissions ([issue #6033](#))
- Fixed cleanup of source files for templates when `/tmp` is in file_roots ([issue #6118](#))
- Fixed caching of zero-byte files when a non-empty file was previously cached at the same path
- Added HTTP authentication support to the cp module ([issue #5641](#))
- Diffs are now suppressed when binary files are changed

### Package/Repository Management

- Fixed traceback when there is only one target for `pkg.latest` states
- Fixed regression in detection of virtual packages (apt)
- Limit number of pkg database refreshes to once per `state.sls`/`state.highstate`
- YUM: Allow 32-bit packages with arches other than i686 to be managed on 64-bit systems ([issue #6299](#))
- Fixed incorrect reporting in pkgrepo.managed states ([issue #5517](#))
- Fixed 32-bit binary package installs on 64-bit RHEL-based distros, and added proper support for 32-bit packages on 64-bit Debian-based distros ([issue #6303](#))
- Fixed issue where requisites were inadvertently being put into YUM repo files ([issue #6471](#))

### Service Management

- Fixed inaccurate reporting of results in `service.running` states when the service fails to start ([issue #5894](#))
- Fixed handling of custom initscripts in RHEL-based distros so that they are immediately available, negating the need for a second state run to manage the service that the initscript controls

### Networking

- Function `network.hwaddr` renamed to `network.hw_addr` to match `network.ip_addrs` and `network.ip_addrs6`. All three functions also now work without the underscore in the name, as well.
- Fixed traceback in `bridge.show` when interface is not present ([issue #6326](#))

### SSH

- Fixed incorrect result reporting for some `ssh_known_hosts.present` states
- Fixed inaccurate reporting when `ssh_auth.present` states are run with `test=True`, when rsa/dss is used for the `enc` param instead of `ssh-rsa/ssh-dss` ([issue #5374](#))
pip

- Properly handle -f lines in pip freeze output
- Fixed regression in pip.installed states with specifying a requirements file (issue #6003)
- Fixed use of editable argument in pip.installed states (issue #6025)
- Deprecated runas parameter in execution function calls, in favor of user

MySQL

- Allow specification of MySQL connection arguments via the CLI, overriding/bypassing minion config params
- Allow mysql_user.present states to set a passwordless login (issue #5550)
- Fixed endless loop when mysql.processlist is run (issue #6297)

PostgreSQL

- Fixed traceback in postgres.user_list (issue #6352)

Miscellaneous

- Don't allow npm states to be used if npm module is not available
- Fixed alternatives.install states for which the target is a symlink (issue #6162)
- Fixed traceback in sysbench module (issue #6175)
- Fixed traceback in job cache
- Fixed tempfile cleanup for windows
- Fixed issue where SLS files using the pydsl renderer were not being run
- Fixed issue where returners were being passed incorrect information (issue #5518)
- Fixed traceback when numeric args are passed to cmd.script states
- Fixed bug causing cp.get_dir to return more directories than expected (issue #6048)
- Fixed traceback when supervisord.running states are run with test=True (issue #6053)
- Fixed tracebacks when Salt encounters problems running rbenv (issue #5888)
- Only make the monit module available if monit binary is present (issue #5871)
- Fixed incorrect behavior of img.mount_image
- Fixed traceback in tomcat.deploy_war in Windows
- Don't re-write /etc/fstab if mount fails
- Fixed tracebacks when Salt encounters problems running gem (issue #5886)
- Fixed incorrect behavior of selinux.boolean states (issue #5912)
- RabbitMQ: Quote passwords to avoid symbols being interpolated by the shell (issue #6338)
- Fixed tracebacks in extfs.mkfs and extfs.tune (issue #6462)
- Fixed a regression with the module.run state where the m_name and m_fun arguments were being ignored (issue #6464)
30.2.145 Salt 0.16.3 Release Notes

release 2013-08-09

Version 0.16.3 is another bugfix release for 0.16.0. The changes include:

- Various documentation fixes
- Fix proc directory regression (issue #6502)
- Properly detect Linaro Linux (issue #6496)
- Fix regressions in mount.mounted (issue #6522, issue #6545)
- Skip malformed state requisites (issue #6521)
- Fix regression in gitfs from bad import
- Fix for watching prereq states (including recursive requisite error) (issue #6057)
- Fix mod_watch not overriding prereq (issue #6520)
- Don't allow functions which compile states to be called within states (issue #5623)
- Return error for malformed top.sls (issue #6544)
- Fix traceback in mysql.query
- Fix regression in binary package installation for 64-bit packages on Debian-based Linux distros (issue #6563)
- Fix traceback caused by running cp.push without having set file_recv in the master config file
- Fix scheduler configuration in pillar (issue #6201)

30.2.146 Salt 0.16.4 Release Notes

release 2013-09-07

Version 0.16.4 is another bugfix release for 0.16.0, likely to be the last before 0.17.0 is released. The changes include:

- Multiple documentation improvements/additions
- Added the osfinger and osarch grains
- Properly handle 32-bit packages for debian32 on x86_64 (issue #6607)
- Fix regression in yum package installation in CentOS 5 (issue #6677)
- Fix bug in hg.latest state that would erroneously delete directories (issue #6661)
- Fix bug related to pid not existing for ps.top (issue #6679)
- Fix regression in MySQL returner (issue #6695)
- Fix IP addresses grains (ipv4 and ipv6) to include all addresses (issue #6656)
- Fix regression preventing authenticated FTP (issue #6733)
- Fix setting password for windows users (issue #6824)
- Fix file.contains on values YAML parses as non-string (issue #6817)
- Fix file.get_gid, file.get_uid, and file.chown for broken symlinks (issue #6826)
- Fix comment for service reloads in service state (issue #6851)
The 0.17.0 release is a very exciting release of Salt, this brings to Salt some very powerful new features and advances. The advances range from the state system to the test suite, covering new transport capabilities and making states easier and more powerful, to extending Salt Virt and much more!

The 0.17.0 release will also be the last release of Salt to follow the old 0.XX.X numbering system, the next release of Salt will change the numbering to be date based following this format:

<Year>.<Month>.<Minor>

So if the release happens in November of 2013 the number will be 13.11.0, the first bugfix release will be 13.11.1 and so forth.

Major Features

Halite

The new Halite web GUI is now available on PyPI. A great deal of work has been put into Halite to make it fully event driven and amazingly fast. The Halite UI can be started from within the Salt Master (after being installed from PyPI), or standalone, and does not require an external database to run. It is very lightweight!

This initial release of Halite is primarily the framework for the UI and the communication systems, making it easy to extend and build the UI up. It presently supports watching the event bus and firing commands over Salt.

At this time, Halite is not available as a package, but installation documentation is available at: http://docs.saltstack.com/topics/tutorials/halite.html

Halite is, like the rest of Salt, Open Source!

Much more will be coming in the future of Halite!

Salt SSH

The new salt-ssh command has been added to Salt. This system allows for remote execution and states to be run over ssh. The benefit here being, that salt can run relying only on the ssh agent, rather than requiring a minion to be deployed.

The salt-ssh system runs states in a compatible way as Salt and states created and run with salt-ssh can be moved over to a standard salt deployment without modification.

Since this is the initial release of salt-ssh, there is plenty of room for improvement, but it is fully operational, not just a bootstrap tool.

Rosters

Salt is designed to have the minions be aware of the master and the master does not need to be aware of the location of the minions. The new salt roster system was created and designed to facilitate listing the targets for salt-ssh.

The roster system, like most of Salt, is a plugin system, allowing for the list of systems to target to be derived from any pluggable backend. The rosters shipping with 0.17.0 are flat and scan. Flat is a file which is read in via the salt render system and the scan roster does simple network scanning to discover ssh servers.
State Auto Order

This is a major change in how states are evaluated in Salt. State Auto Order is a new feature that makes states get evaluated and executed in the order in which they are defined in the sls file. This feature makes it very easy to see the finite order in which things will be executed, making Salt now, fully imperative AND fully declarative.

The requisite system still takes precedence over the order in which states are defined, so no existing states should break with this change. But this new feature can be turned off by setting `state_auto_order: False` in the master config, thus reverting to the old lexicographical order.

state.sls Runner

The `state.sls` runner has been created to allow for a more powerful system for orchestrating state runs and function calls across the salt minions. This new system uses the state system for organizing executions.

This allows for states to be defined that are executed on the master to call states on minions via `salt-run state.sls`.

Salt Thin

Salt Thin is an exciting new component of Salt, this is the ability to execute Salt routines without any transport mechanisms installed, it is a pure python subset of Salt.

Salt Thin does not have any networking capability, but can be dropped into any system with Python installed and then `salt-call` can be called directly. The Salt Thin system, is used by the `salt-ssh` command, but can still be used to just drop salt somewhere for easy use.

Event Namespacing

Events have been updated to be much more flexible. The tags in events have all been namespaced allowing easier tracking of event names.

Mercurial Fileserver Backend

The popular git fileserver backend has been joined by the mercurial fileserver backend, allowing the state tree to be managed entirely via mercurial.

External Logging Handlers

The external logging handler system allows for Salt to directly hook into any external logging system. Currently supported are sentry and logstash.
Jenkins Testing

The testing systems in Salt have been greatly enhanced, tests for salt are now executed, via jenkins.saltstack.com, across many supported platforms. Jenkins calls out to salt-cloud to create virtual machines on Rackspace, then the minion on the virtual machine checks into the master running on Jenkins where a state run is executed that sets up the minion to run tests and executes the test suite.

This now automates the sequence of running platform tests and allows for continuous destructive tests to be run.

Salt Testing Project

The testing libraries for salt have been moved out of the main salt code base and into a standalone codebase. This has been done to ease the use of the testing systems being used in salt based projects other than Salt itself.

StormPath External Authentication

The external auth system now supports the fantastic Stormpath cloud based authentication system.

LXC Support

Extensive additions have been added to Salt for LXC support. This included the backend libs for managing LXC containers. Addition into the salt-virt system is still in the works.

macOS User/Group Support

Salt is now able to manage users and groups on Minions running macOS. However, at this time user passwords cannot be managed.

Django ORM External Pillar

Pillar data can now be derived from Django managed databases.

Fixes from RC to release

- Multiple documentation fixes
- Add multiple source files + templating for file.append (issue #6905)
- Support syconfig configuration files in systemd>=207 (issue #7351)
- Add file.search and file.replace
- Fix cross-calling execution functions in provider overrides
- Fix locale override for postgres (issue #4543)
- Fix Raspbian identification for service/pkg support (issue #7371)
- Fix cp.push file corruption (issue #6495)
- Fix ALT Linux password hash specification (issue #3474)
- Multiple salt-ssh-related fixes and improvements
30.2.148 Salt 0.17.1 Release Notes

release 2013-10-17

Note: THIS RELEASE IS NOT COMPATIBLE WITH PREVIOUS VERSIONS. If you update your master to 0.17.1, you must update your minions as well. Sorry for the inconvenience -- this is a result of one of the security fixes listed below.

The 0.17.1 release comes with a number of improvements to salt-ssh, many bugfixes, and a number of security updates.

Salt SSH has been improved to be faster, more featureful and more secure. Since the original release of Salt SSH was primarily a proof of concept, it has been very exciting to see its rapid adoption. We appreciate the willingness of security experts to review Salt SSH and help discover oversights and ensure that security issues only exist for such a tiny window of time.

SSH Enhancements

Shell Improvements

Improvements to Salt SSH's communication have been added that improve routine execution regardless of the target system's login shell.

Performance

Deployment of routines is now faster and takes fewer commands to execute.

Security Updates

Be advised that these security issues all apply to a small subset of Salt users and mostly apply to Salt SSH.

Insufficient Argument Validation

This issue allowed for a user with limited privileges to embed executions inside of routines to execute routines that should be restricted. This applies to users using external auth or client ACL and opening up specific routines.

Be advised that these patches address the direct issue. Additional commits have been applied to help mitigate this issue from resurfacing.

CVE

CVE-2013-4435
Affected Versions

0.15.0 - 0.17.0

Patches

https://github.com/saltstack/salt/commit/6d8ef68b605fd63c36bb8ed96122a75ad2e80269
https://github.com/saltstack/salt/commit/ebdef37b7e5d2b95a01d34b211c6161da67e46a
https://github.com/saltstack/salt/commit/7f190ff890e47cdd59d9d7cefa5126574660824
https://github.com/saltstack/salt/commit/8e5afe59ce6743fe5d8d510d6f463db3fca1ced
https://github.com/saltstack/salt/commit/aca78f3144f1082862e96d4f0c1b75fa382bb885
https://github.com/saltstack/salt/commit/6a9752c0b1e8f2c9505ea910434c79d732eb6e2
https://github.com/saltstack/salt/commit/b73677435ba546cfc93c1c2d840a7f9ba53410
https://github.com/saltstack/salt/commit/07972eb0a6f98574a95d84a2471596591c80d
https://github.com/saltstack/salt/commit/1e3f197726aa13ac5c3f2416000089f477f489b5

Found By

Feth Arezki, of Majerti

MITM SSH attack in salt-ssh

SSH host keys were being accepted by default and not enforced on future SSH connections. These patches set SSH host key checking by default and can be overridden by passing the -i flag to salt-ssh.

CVE

CVE-2013-4436

Affected Versions

0.17.0

Found By

Michael Scherer, Red Hat

Insecure Usage of /tmp in salt-ssh

The initial release of salt-ssh used the /tmp directory in an insecure way. These patches not only secure usage of files under /tmp in salt-ssh, but also add checksum validation for all packages sent into the now secure locations on target systems.
CVE

CVE-2013-4438

Affected Versions

0.17.0

Patches

https://github.com/saltstack/salt/commit/aa4bb77ef230758cad84381d0ec660d2dc340a
https://github.com/saltstack/salt/commit/8f92b6b2cb2e4ec3af8783eb6bf4ff06f5a352cf
https://github.com/saltstack/salt/commit/c58e56811d5a50c908df0597a0ba0b643b45ebf0
https://github.com/saltstack/salt/commit/0359db9b46e47614bff35a66ea66a76846885d2
https://github.com/saltstack/salt/commit/4348392860e0fd43701c331ac3e681cf1a8c17b0
https://github.com/saltstack/salt/commit/664d1a1cac05602fad26936f97092d98a72b61
https://github.com/saltstack/salt/commit/bab92775a576e28ff9db262f32db9cf2375bba87
https://github.com/saltstack/salt/commit/c6d34f1acff64900a3c87a2d37618ff414e5a704e

Found By

Michael Scherer, Red Hat

YAML Calling Unsafe Loading Routine

It has been argued that this is not a valid security issue, as the YAML loading that was happening was only being called after an initial gateway filter in Salt has already safely loaded the YAML and would fail if non-safe routines were embedded. Nonetheless, the CVE was filed and patches applied.

CVE

CVE-2013-4438

Patches

https://github.com/saltstack/salt/commit/339b0a51befae6b6b218ebcb55daa9cd3329a1c5

Found By

Michael Scherer, Red Hat
Failure to Drop Supplementary Group on Salt Master

If a salt master was started as a non-root user by the root user, root’s groups would still be applied to the running process. This fix changes the process to have only the groups of the running user.

CVE

CVE not considered necessary by submitter.

Affected Versions

0.11.0 - 0.17.0

Patches

https://github.com/saltstack/salt/commit/b89fa9135822d029795ab1eecd68cce2d1ced715

Found By

Michael Scherer, Red Hat

Failure to Validate Minions Posting Data

This issue allowed a minion to pose as another authorized minion when posting data such as the mine data. All minions now pass through the id challenge before posting such data.

CVE

CVE-2013-4439

Affected Versions

0.15.0 - 0.17.0

Patches

https://github.com/saltstack/salt/commit/7b850ff3d07ef678288914ac4556c01e8a1c482 https://github.com/saltstack/salt/commit/151759b2a1e1c6ce29277aa81b054219147f80fd
Found By

David Anderson

Fix Reference

Version 0.17.1 is the first bugfix release for 0.17.0. The changes include:

- Fix symbolic links in thin.tgz (issue #7482)
- Pass env through to file.patch state (issue #7452)
- Service provider fixes and reporting improvements (issue #7361)
- Add --priv option for specifying salt-ssh private key
- Fix salt-thin's salt-call on setuptools installations (issue #7516)
- Fix salt-ssh to support passwords with spaces (issue #7480)
- Fix regression in wildcard includes (issue #7455)
- Fix salt-call outputter regression (issue #7456)
- Fix custom returner support for startup states (issue #7540)
- Fix value handling in augeas (issue #7605)
- Fix regression in apt (issue #7624)
- Fix minion ID guessing to use socket.getfqdn() first (issue #7558)
- Add minion ID caching (issue #7558)
- Fix salt-key race condition (issue #7304)
- Add --include-all flag to salt-key (issue #7399)
- Fix custom grains in pillar (part of issue #5716, issue #6083)
- Fix race condition in salt-key (issue #7304)
- Fix regression in minion ID guessing, prioritize socket.getfqdn() (issue #7558)
- Cache minion ID on first guess (issue #7558)
- Allow trailing slash in file.directory state
- Fix reporting of file_roots in pillar return (issue #5449 and issue #5951)
- Remove pillar matching for mine.get (issue #7197)
- Sanitize args for multiple execution modules
- Fix yumpkg mod_repo functions to filter hidden args (issue #7656)
- Fix conflicting IDs in state includes (issue #7526)
- Fix mysql_grants.absent string formatting issue (issue #7827)
- Fix postgres.version so it won't return None (issue #7695)
- Fix for trailing slashes in mount.mounted state
- Fix rogue AttributeError in the outputter system (issue #7845)
- Fix for incorrect ssh key encodings resulting in incorrect key added (issue #7718)
• Fix for pillar/grains naming regression in python renderer (issue #7693)
• Fix args/kwarg handling in the scheduler (issue #7422)
• Fix logfile handling for file://, tcp://, and udp:// (issue #7754)
• Fix error handling in config file parsing (issue #6714)
• Fix RVM using sudo when running as non-root user (issue #2193)
• Fix client ACL and underlying logging bugs (issue #7706)
• Fix scheduler bug with returner (issue #7367)
• Fix user management bug related to default groups (issue #7690)
• Fix various salt-ssh bugs (issue #7528)
• Many various documentation fixes

### 30.2.149 Salt 0.17.2 Release Notes

release 2013-11-14

Version 0.17.2 is another bugfix release for 0.17.0. The changes include:

• Add ability to delete key with grains.delval (issue #7872)
• Fix possible state compiler stack trace (issue #5767)
• Fix architecture regression in yumpkg (issue #7813)
• Use correct ps on Debian to prevent truncating (issue #5646)
• Fix grains targeting for new grains (issue #5737)
• Fix bug with merging in git_pillar (issue #6992)
• Fix print_jobs duplicate results
• Fix apt version specification for pkg.install
• Fix possible KeyError from ext_job_cache missing option
• Fix auto_order for - names states (issue #7649)
• Fix regression in new gitfs installs (directory not found error)
• Fix escape pipe issue on Windows for file.recurse (issue #7967)
• Fix fileclient in case of master restart (issue #7987)
• Try to output warning if CLI command malformed (issue #6538)
• Fix --out=quiet to actually be quiet (issue #8000)
• Fix for state.sls in salt-ssh (issue #7991)
• Fix for MySQL grants ordering issue (issue #5817)
• Fix traceback for certain missing CLI args (issue #8016)
• Add ability to disable lspci queries on master (issue #4906)
• Fail if sls defined in topfile does not exist (issue #5998)
• Add ability to downgrade MySQL grants (issue #6606)
• Fix ssh_auth.absent traceback (issue #8043)
• Add upstart detection for Debian/Raspbian (issue #8039)
• Fix ID-related issues (issue #8052, issue #8050, and others)
• Fix for jinja rendering issues (issue #8066 and issue #8079)
• Fix argument parsing in salt-ssh (issue #7928)
• Fix some GPU detection instances (issue #6945)
• Fix bug preventing includes from other environments in SLS files
• Fix for kwargs with dashes (issue #8102)
• Fix salt.utils.which for windows '.exe' (issue #7904)
• Fix apache.adduser without apachectl (issue #8123)
• Fix issue with evaluating test kwarg in states (issue #7788)
• Fix regression in salt.client.Caller() (issue #8078)
• Fix apt-key silent failure
• Fix bug where cmd.script would try to run even if caching failed (issue #7601)
• Fix apt pkg.latest regression (issue #8067)
• Fix for mine data not being updated (issue #8144)
• Fix for noarch packages in yum
• Fix a Xen detection edge case (issue #7839)
• Fix windows __opts__ dictionary persistence (issue #7714)
• Fix version generation for when it's part of another git repo (issue #8090)
• Fix handle_iorder stacktrace so that the real syntax error is shown (issue #8114 and issue #7905)
• Fix git.latest state when a commit SHA is used (issue #8163)
• Fix various small bugs in yumpkg.py (issue #8201)
• Fix for specifying identify file in git.latest (issue #8094)
• Fix for --output-file CLI arg (issue #8205)
• Add ability to specify shutdown time for system.shutdown (issue #7833)
• Fix for salt version using non-salt git repo info (issue #8266)
• Add additional hints at impact of pkgrepo states when test=True (issue #8247)
• Fix for salt-ssh files not being owned by root (issue #8216)
• Fix retry logic and error handling in fileserver (related to issue #7755)
• Fix file.replace with test=True (issue #8279)
• Add flag for limiting file traversal in fileserver (issue #6928)
• Fix for extra mine processes (issue #5729)
• Fix for unloading custom modules (issue #7691)
• Fix for salt-ssh opts (issue #8005 and issue #8271)
• Fix compound matcher for grains (issue #7944)
• Improve error reporting in ebuild module (related to issue #5393)
• Add `dir_mode` to `file.managed` (issue #7860)
• Improve traceroute support for FreeBSD and macOS (issue #4927)
• Fix for matching minions under syndics (issue #7671)
• Improve exception handling for missing ID (issue #8259)
• Fix grain mismatch for ScientificLinux (issue #8338)
• Add configuration option for `minion_id_caching`
• Fix open mode auth errors (issue #8402)

30.2.150 Salt 0.17.3 Release Notes

release 2013-12-08

Note: 0.17.3 had some regressions which were promptly fixed in the 0.17.4 release. Please use 0.17.4 instead.

Version 0.17.3 is another bugfix release for 0.17.0. The changes include:

• Fix some jinja render errors (issue #8418)
• Fix `file.replace` state changing file ownership (issue #8399)
• Fix state ordering with the PyDSL renderer (issue #8446)
• Fix for new npm version (issue #8517)
• Fix for pip state requiring `name` even with requirements file (issue #8519)
• Fix yum logging to open terminals (issue #3855)
• Add sane maxrunning defaults for scheduler (issue #8563)
• Fix states duplicate key detection (issue #8053)
• Fix SUSE patch level reporting (issue #8428)
• Fix managed file creation umask (issue #8590)
• Fix logstash exception (issue #8635)
• Improve argument exception handling for salt command (issue #8016)
• Fix pecl success reporting (issue #8750)
• Fix launchctl module exceptions (issue #8759)
• Fix argument order in `pw_user` module
• Add warnings for failing grains (issue #8690)
• Fix hgfs problems caused by connections left open (issue #8811 and issue #8810)
• Add Debian iptables default for iptables-persistent package (issue #8889)
• Fix installation of packages with dots in pkg name (issue #8614)
• Fix noarch package installation on CentOS 6 (issue #8945)
• Fix `portage_config.enforce_nice_config` (issue #8252)
• Fix `salt.util.copyfile` umask usage (issue #8590)
• Fix rescheduling of failed jobs (issue #8941)
• Fix pkg on Amazon Linux (uses yumpkg5 now) (issue #8226)
• Fix conflicting options in postgres module (issue #8717)
• Fix ps modules for psutil >= 0.3.0 (issue #7432)
• Fix postgres module to return False on failure (issue #8778)
• Fix argument passing for args with pound signs (issue #8585)
• Fix pid of salt CLI command showing in status.pid output (issue #8720)
• Fix rvm to run gem as the correct user (issue #8951)
• Fix namespace issue in win_file module (issue #9060)
• Fix masterless state paths on windows (issue #9021)
• Fix timeout option in master config (issue #9040)

30.2.151 Salt 0.17.4 Release Notes

release 2013-12-10

Version 0.17.4 is another bugfix release for 0.17.0. The changes include:
• Fix file.replace bug when replacement str is numeric (issue #9101)
• Fix regression in file.managed (issue #9131)
• Prevent traceback when job is None. (issue #9145)

30.2.152 Salt 0.17.5 Release Notes

release 2014-01-27

Version 0.17.5 is another bugfix release for 0.17.0. The changes include:
• Fix user.present states with non-string fullname (issue #9085)
• Fix virt.init return value on failure (issue #6870)
• Fix reporting of file.blockreplace state when test=True
• Fix network.interfaces when used in cron (issue #7990)
• Fix bug in pkgrepo when switching to/from mirrorlist-based repo def (issue #9121)
• Fix infinite recursion when cache file is corrupted
• Add checking for rev and mirror/bare args in git.latest (issue #9107)
• Add cmd.watch alias (points to cmd.wait) (issue #8612)
• Fix stacktrace when prereq is not formed as a list (issue #8235)
• Fix stdin issue with lvdisplay command (issue #9128)
• Add pre-check function for range matcher (issue #9236)
• Add exception handling for psutil for processes that go missing (issue #9274)
• Allow _in requisites to match both on ID and name (issue #9061)
• Fix multiple client timeout issues (issue #7157 and issue #9302, probably others)
Salt Documentation, Release 3002.5

- Fix ZMQError: Operation cannot be accomplished in current state errors (issue #6306)
- Multiple optimization in minion auth routines
- Clarify logs for minion ID caching

30.2.153 Salt 0.6.0 release notes

The Salt remote execution manager has reached initial functionality! Salt is a management application which can be used to execute commands on remote sets of servers.

The whole idea behind Salt is to create a system where a group of servers can be remotely controlled from a single master, not only can commands be executed on remote systems, but salt can also be used to gather information about your server environment.

Unlike similar systems, like Func and MCollective, Salt is extremely simple to setup and use, the entire application is contained in a single package, and the master and minion daemons require no running dependencies in the way that Func requires Certmaster and MCollective requires activeMQ.

Salt also manages authentication and encryption. Rather than using SSL for encryption, salt manages encryption on a payload level, so the data sent across the network is encrypted with fast AES encryption, and authentication uses RSA keys. This means that Salt is fast, secure, and very efficient.

Messaging in Salt is executed with ZeroMQ, so the message passing interface is built into salt and does not require an external ZeroMQ server. This also adds speed to Salt since there is no additional bloat on the networking layer, and ZeroMQ has already proven itself as a very fast networking system.

The remote execution in Salt is "Lazy Execution", in that once the command is sent the requesting network connection is closed. This makes it easier to detach the execution from the calling process on the master, it also means that replies are cached, so that information gathered from historic commands can be queried in the future.

Salt also allows users to make execution modules in Python. Writers of these modules should also be pleased to know that they have access to the impressive information gathered from PuppetLabs' Facter application, making Salt module more flexible. In the future I hope to also allow Salt to group servers based on Facter information as well.

All in all Salt is fast, efficient, and clean, can be used from a simple command line client or through an API, uses message queue technology to make network execution extremely fast, and encryption is handled in a very fast and efficient manner. Salt is also VERY easy to use and VERY easy to extend.

You can find the source code for Salt on my GitHub page, I have also set up a few wiki pages explaining how to use and set up Salt. If you are using Arch Linux there is a package available in the Arch Linux AUR.

GitHub page: https://github.com/saltstack/salt
Wiki: https://github.com/saltstack/salt/wiki
Arch Linux Package: https://aur.archlinux.org/packages/salt-git/

I am very open to contributions, for instance I need packages for more Linux distributions as well as BSD packages and testers.

Give Salt a try, this is the initial release and is not a 1.0 quality release, but it has been working well for me! I am eager to get your feedback!
30.2.154 Salt 0.7.0 release notes

I am pleased to announce the release of Salt 0.7.0!

This release marks what is the first stable release of salt, 0.7.0 should be suitable for general use.

0.7.0 Brings the following new features to Salt:

• Integration with Facter data from puppet labs
• Allow for matching minions from the salt client via Facter information
• Minion job threading, many jobs can be executed from the master at once
• Preview of master clustering support - Still experimental
• Introduce new minion modules for stats, virtualization, service management and more
• Add extensive logging to the master and minion daemons
• Add sys.reload_functions for dynamic function reloading
• Greatly improve authentication
• Introduce the saltkey command for managing public keys
• Begin backend development preparatory to introducing butter
• Addition of man pages for the core commands
• Extended and cleaned configuration

0.7.0 Fixes the following major bugs:

• Fix crash in minions when matching failed
• Fix configuration file lookups for the local client
• Repair communication bugs in encryption
• Numerous fixes in the minion modules

The next release of Salt should see the following features:

• Stabilize the cluster support
• Introduce a remote client for salt command tiers
• salt-ftp system for distributed file copies
• Initial support for “butter”

Coming up next is a higher level management framework for salt called Butter. I want salt to stay as a simple and effective communication framework, and allow for more complicated executions to be managed via Butter.

Right now Butter is being developed to act as a cloud controller using salt as the communication layer, but features like system monitoring and advanced configuration control (a puppet manager) are also in the pipe.

Special thanks to Joseph Hall for the status and network modules, and thanks to Matthias Teege for tracking down some configuration bugs!

Salt can be downloaded from the following locations;

Arch Linux Package:
https://aur.archlinux.org/packages/salt-git/

Please enjoy the latest Salt release!
30.2.155 Salt 0.8.0 release notes

Salt 0.8.0 is ready for general consumption! The source tarball is available on GitHub for download:

A lot of work has gone into salt since the last release just 2 weeks ago, and salt has improved a great deal. A swath of new features are here along with performance and threading improvements!

The main new features of salt 0.8.0 are:

Salt-cp
Cython minion modules
Dynamic returners
Faster return handling
Lowered required Python version to 2.6
Advanced minion threading
Configurable minion modules

Salt-cp

The salt-cp command introduces the ability to copy simple files via salt to targeted servers. Using salt-cp is very simple, just call salt-cp with a target specification, the source file(s) and where to copy the files on the minions. For instance:

```
# salt-cp '*' /etc/hosts /etc/hosts
```

Will copy the local /etc/hosts file to all of the minions.

Salt-cp is very young, in the future more advanced features will be added, and the functionality will much more closely resemble the cp command.

Cython minion modules

Cython is an amazing tool used to compile Python modules down to c. This is arguably the fastest way to run Python code, and since pyzmq requires cython, adding support to salt for cython adds no new dependencies.

Cython minion modules allow minion modules to be written in cython and therefore executed in compiled c. Simply write the salt module in cython and use the file extension ".pyx" and the minion module will be compiled when the minion is started. An example cython module is included in the main distribution called cytest.pyx:

```
https://github.com/saltstack/salt/blob/master/salt/modules/cytest.pyx
```

Dynamic Returners

By default salt returns command data back to the salt master, but now salt can return command data to any system. This is enabled via the new returners modules feature for salt. The returners modules take the return data and sends it to a specific module. The returner modules work like minion modules, so any returner can be added to the minions.

This means that a custom data returner can be added to communicate the return data so anything from MySQL, Redis, MongoDB, and more!

There are 2 simple stock returners in the returners directory:

```
https://github.com/saltstack/salt/blob/master/salt/returners
```
The documentation on writing returners will be added to the wiki shortly, and returners can be written in pure
Python, or in cython.

**Configurable Minion Modules**

Minion modules may need to be configured, now the options passed to the minion configuration file can be accessed
inside of the minion modules via the `__opt__` dict.
Information on how to use this simple addition has been added to the wiki: [Writing modules]

The test module has an example of using the `__opts__` dict, and how to set default options:

https://github.com/saltstack/salt/blob/master/salt/modules/test.py

**Advanced Minion Threading**

In 0.7.0 the minion would block after receiving a command from the master, now the minion will spawn a thread
or multiprocess. By default Python threads are used because for general use they have proved to be faster, but the
minion can now be configured to use the Python multiprocessing module instead. Using multiprocessing will cause
executions that are CPU bound or would otherwise exploit the negative aspects of the Python GIL to run faster and
more reliably, but simple calls will still be faster with Python threading. The configuration option can be found in
the minion configuration file:

https://github.com/saltstack/salt/blob/master/conf/minion

**Lowered Supported Python to 2.6**

The requirement for Python 2.7 has been removed to support Python 2.6. I have received requests to take the
minimum Python version back to 2.4, but unfortunately this will not be possible, since the ZeroMQ Python bindings
do not support Python 2.4.

Salt 0.8.0 is a very major update, it also changes the network protocol slightly which makes communication with
older salt daemons impossible, your master and minions need to be upgraded together!

I could use some help bringing salt to the people! Right now I only have packages for Arch Linux, Fedora 14 and
Gentoo. We need packages for Debian and people willing to help test on more platforms. We also need help writing
more minion modules and returner modules. If you want to contribute to salt please hop on the mailing list and send
in patches, make a fork on GitHub and send in pull requests! If you want to help but are not sure where you can,
please email me directly or post to the mailing list!

I hope you enjoy salt, while it is not yet 1.0 salt is completely viable and usable!

-Thomas S. Hatch

**30.2.156 Salt 0.8.7 release notes**

It has been a month since salt 0.8.0, and it has been a long month! But Salt is still coming along strong. 0.8.7 has
a lot of changes and a lot of updates. This update makes Salt’s ZeroMQ back end better, strips Facter from the
dependencies, and introduces interfaces to handle more capabilities.

Many of the major updates are in the background, but the changes should shine through to the surface. A number
of the new features are still a little thin, but the back end to support expansion is in place.

I also recently gave a presentation to the Utah Python users group in Salt Lake City, the slides from this presentation
are available here:
The video from this presentation will be available shortly.

The major new features and changes in Salt 0.8.7 are:

- Revamp ZeroMQ topology on the master for better scalability
- State enforcement
- Dynamic state enforcement managers
- Extract the module loader into salt.loader
- Make Job ids more granular
- Replace Facter functionality with the new salt grains interface
- Support for “virtual” salt modules
- Introduce the salt-call command
- Better debugging for minion modules

The new ZeroMQ topology allows for better scalability, this will be required by the need to execute massive file transfers to multiple machines in parallel and state management. The new ZeroMQ topology is available in the aforementioned presentation.

0.8.7 introduces the capability to declare states, this is similar to the capabilities of Puppet. States in salt are declared via state data structures. This system is very young, but the core feature set is available. Salt states work around rendering files which represent Salt high data. More on the Salt state system will be documented in the near future.

The system for loading salt modules has been pulled out of the minion class to be a standalone module, this has enabled more dynamic loading of Salt modules and enables many of the updates in 0.8.7 –

https://github.com/saltstack/salt/blob/master/salt/loader.py

Salt Job ids are now microsecond precise, this was needed to repair a race condition unveiled by the speed improvements in the new ZeroMQ topology.

The new grains interface replaces the functionality of Facter, the idea behind grains differs from Facter in that the grains are only used for static system data, dynamic data needs to be derived from a call to a salt module. This makes grains much faster to use, since the grains data is generated when the minion starts.

Virtual salt modules allows for a salt module to be presented as something other than its module name. The idea here is that based on information from the minion decisions about which module should be presented can be made. The best example is the pacman module. The pacman module will only load on Arch Linux minions, and will be called pkg. Similarly the yum module will be presented as pkg when the minion starts on a Fedora/RedHat system.

The new salt-call command allows for minion modules to be executed from the minion. This means that on the minion a salt module can be executed, this is a great tool for testing Salt modules. The salt-call command can also be used to view the grains data.

In previous releases when a minion module threw an exception very little data was returned to the master. Now the stack trace from the failure is returned making debugging of minion modules MUCH easier.

Salt is nearing the goal of 1.0, where the core feature set and capability is complete!

-Thomas S Hatch
30.2.157 Salt 0.8.8 release notes

Salt 0.8.8 is here! This release adds a great deal of code and some serious new features.

Improved Documentation has been set up for salt using sphinx thanks to the efforts of Seth House. This new documentation system will act as the back end to the salt website which is still under heavy development. The new sphinx documentation system has also been used to greatly clean up the salt manpages. The salt 7 manpage in particular now contains extensive information which was previously only in the wiki. The new documentation can be found at: http://docs.saltstack.com/ We still have a lot to add, and when the domain is set up I will post another announcement.

More additions have been made to the ZeroMQ setup, particularly in the realm of file transfers. Salt 0.8.8 introduces a built in, stateless, encrypted file server which allows salt minions to download files from the salt master using the same encryption system used for all other salt communications. The main motivation for the salt file server has been to facilitate the new salt state system.

Much of the salt code has been cleaned up and a new cleaner logging system has been introduced thanks to the efforts of Pedro Algarvio. These additions will allow for much more flexible logging to be executed by salt, and fixed a great deal of my poor spelling in the salt docstrings! Pedro Algarvio has also cleaned up the API, making it easier to embed salt into another application.

The biggest addition to salt found in 0.8.8 is the new state system. The salt module system has received a new front end which allows salt to be used as a configuration management system. The configuration management system allows for system configuration to be defined in data structures. The configuration management system, or as it is called in salt, the “salt state system” supports many of the features found in other configuration managers, but allows for system states to be written in a far simpler format, executes at blazing speeds, and operates via the salt minion matching system. The state system also operates within the normal scope of salt, and requires no additional configuration to use.

The salt state system can enforce the following states with many more to come: Packages Files Services Executing commands Hosts

The system used to define the salt states is based on a data structure, the data structure used to define the salt states has been made to be as easy to use as possible. The data structure is defined by default using a YAML file rendered via a Jinja template. This means that the state definition language supports all of the data structures that YAML supports, and all of the programming constructs and logic that Jinja supports. If the user does not like YAML or Jinja the states can be defined in yaml-mako, json-jinja, or json-mako. The system used to render the states is completely dynamic, and any rendering system can be added to the capabilities of Salt, this means that a rendering system that renders XML data in a cheetah template, or whatever you can imagine, can be easily added to the capabilities of salt.

The salt state system also supports isolated environments, as well as matching code from several environments to a single salt minion.

The feature base for Salt has grown quite a bit since my last serious documentation push. As we approach 0.9.0 the goals are becoming very clear, and the documentation needs a lot of work. The main goals for 0.9.0 are to further refine the state system, fix any bugs we find, get Salt running on as many platforms as we can, and get the documentation filled out. There is a lot more to come as Salt moves forward to encapsulate a much larger scope, while maintaining supreme usability and simplicity.

If you would like a more complete overview of Salt please watch the Salt presentation: Slides:

-Thomas S Hatch
30.2.158 Salt 0.8.9 Release Notes

Salt 0.8.9 has finally arrived! Unfortunately this is much later than I had hoped to release 0.8.9, life has been very crazy over the last month. But despite challenges, Salt has moved forward!

This release, as expected, adds few new features and many refinements. One of the most exciting aspect of this release is that the development community for salt has grown a great deal and much of the code is from contributors.

Also, I have filled out the documentation a great deal. So information on States is properly documented, and much of the documentation that was out of date has been filled in.

Download!

The Salt source can be downloaded from PyPI:
https://pypi.python.org/packages/source/s/salt/salt-0.8.9.tar.gz

Here's the md5sum:
7d5aca4633bc22f59045f59e82f43b56

For instructions on how to set up Salt please see the Installation instructions.

New Features

Salt Run

A big feature is the addition of Salt run, the `salt-run` command allows for master side execution modules to be made that gather specific information or execute custom routines from the master.

Documentation for salt-run can be found here

Refined Outputters

One problem often complained about in salt was the fact that the output was so messy. Thanks to help from Jeff Schroeder a cleaner interface for the command output for the Salt CLI has been made. This new interface makes adding new printout formats easy and additions to the capabilities of minion modules makes it possible to set the printout mode or outputter for functions in minion modules.

Cross Calling Salt Modules

Salt modules can now call each other, the `__salt__` dict has been added to the predefined references in minion modules. This new feature is documented in the modules documentation.
Watch Option Added to Salt State System

Now in Salt states you can set the watch option, this will allow watch enabled states to change based on a change in the other defined states. This is similar to subscribe and notify statements in puppet.

Root Dir Option

Travis Cline has added the ability to define the option `root_dir` which allows the salt minion to operate in a subdir. This is a strong move in supporting the minion running as an unprivileged user.

Config Files Defined in Variables

Thanks again to Travis Cline, the master and minion configuration file locations can be defined in environment variables now.

New Modules

Quite a few new modules, states, returners, and runners have been made.

New Minion Modules

apt

Support for apt-get has been added, this adds greatly improved Debian and Ubuntu support to Salt!

useradd and groupadd

Support for manipulating users and groups on Unix-like systems.

moosefs

Initial support for reporting on aspects of the distributed file system, MooseFS. For more information on MooseFS please see: [http://www.moosefs.org](http://www.moosefs.org)

Thanks to Joseph Hall for his work on MooseFS support.

mount

Manage mounts and the fstab.
puppet

Execute puppet on remote systems.

shadow

Manipulate and manage the user password file.

ssh

Interact with ssh keys.

New States

user and group

Support for managing users and groups in Salt States.

mount

Enforce mounts and the fstab.

New Returners

mongo_return

Send the return information to a MongoDB server.

New Runners

manage

Display minions that are up or down.

30.2.159 Salt 0.9.0 Release Notes

release 2011-08-27

Salt 0.9.0 is here. This is an exciting release, 0.9.0 includes the new network topology features allowing peer salt commands and masters of masters via the syndic interface.

0.9.0 also introduces many more modules, improvements to the API and improvements to the ZeroMQ systems.
Download!

The Salt source can be downloaded from PyPI:
https://pypi.python.org/packages/source/s/salt/salt-0.9.0.tar.gz

Here is the md5sum:
9a925da04981e65a0f237f2e77ddab37

For instructions on how to set up Salt please see the *Installation* instructions.

New Features

Salt Syndic

The new *Syndic interface* allows a master to be commanded via another higher level salt master. This is a powerful solution allowing a master control structure to exist, allowing salt to scale to much larger levels then before.

Peer Communication

0.9.0 introduces the capability for a minion to call a publication on the master and receive the return from another set of minions. This allows salt to act as a communication channel between minions and as a general infrastructure message bus.

Peer communication is turned off by default but can be enabled via the `peer` option in the master configuration file. Documentation on the new *Peer interface*.

Easily Extensible API

The minion and master classes have been redesigned to allow for specialized minion and master servers to be easily created. An example on how this is done for the master can be found in the `master.py` salt module:

https://github.com/saltstack/salt/blob/master/salt/master.py

The `Master` class extends the `SMaster` class and set up the main master server.

The minion functions can now also be easily added to another application via the `SMinion` class, this class can be found in the `minion.py` module:

https://github.com/saltstack/salt/blob/master/salt/minion.py

Cleaner Key Management

This release changes some of the key naming to allow for multiple master keys to be held based on the type of minion gathering the master key.

The `-d` option has also been added to the salt-key command allowing for easy removal of accepted public keys.

The `--gen-keys` option is now available as well for salt-key, this allows for a salt specific RSA key pair to be easily generated from the command line.
**Improved 0MQ Master Workers**

The 0MQ worker system has been further refined to be faster and more robust. This new system has been able to handle a much larger load than the previous setup. The new system uses the IPC protocol in 0MQ instead of TCP.

**New Modules**

Quite a few new modules have been made.

**New Minion Modules**

**apache**

Work directly with apache servers, great for managing balanced web servers

**cron**

Read out the contents of a systems crontabs

**mdadm**

Module to manage raid devices in Linux, appears as the `raid` module

**mysql**

Gather simple data from MySQL databases

**ps**

Extensive utilities for managing processes

**publish**

Used by the peer interface to allow minions to make publications

**30.2.160  Salt 0.9.1 Release Notes**

    release  2011-08-29
Salt 0.9.2 has arrived! 0.9.2 is primarily a bugfix release, the exciting component in 0.9.2 is greatly improved support for salt states. All of the salt states interfaces have been more thoroughly tested and the new salt-states git repo is growing with example of how to use states.

This release introduces salt states for early developers and testers to start helping us clean up the states interface and make it ready for the world!

0.9.2 also fixes a number of bugs found on Python 2.6.

Download!

The Salt source can be downloaded from PyPI:
https://pypi.python.org/packages/source/s/salt/salt-0.9.2.tar.gz

For instructions on how to set up Salt please see the Installation instructions.

New Features

Salt-Call Additions

The salt-call command has received an overhaul, it now hooks into the outputter system so command output looks clean, and the logging system has been hooked into salt-call, so the -l option allows the logging output from salt minion functions to be displayed.

The end result is that the salt-call command can execute the state system and return clean output:

```
# salt-call state.highstate
```

State System Fixes

The state system has been tested and better refined. As of this release the state system is ready for early testers to start playing with. If you are interested in working with the state system please check out the (still very small) salt-states GitHub repo:

https://github.com/SS-archive/salt-states

This git repo is the active development branch for determining how a clean salt-state database should look and act. Since the salt state system is still very young a lot of help is still needed here. Please fork the salt-states repo and help us develop a truly large and scalable system for configuration management!
Notable Bug Fixes

Python 2.6 String Formatting

Python 2.6 does not support format strings without an index identifier, all of them have been repaired.

Cython Loading Disabled by Default

Cython loading requires a development tool chain to be installed on the minion, requiring this by default can cause problems for most Salt deployments. If Cython auto loading is desired it will need to be turned on in the minion config.

30.2.162 Salt 0.9.3 Release Notes

release 2011-11-05

Salt 0.9.3 is finally arrived. This is another big step forward for Salt, new features range from proper FreeBSD support to fixing issues seen when attaching a minion to a master over the Internet.

The biggest improvements in 0.9.3 though can be found in the state system, it has progressed from something ready for early testers to a system ready to compete with platforms such as Puppet and Chef. The backbone of the state system has been greatly refined and many new features are available.

Download!

The Salt source can be downloaded from PyPI:

https://pypi.python.org/packages/source/s/salt/salt-0.9.3.tar.gz

For instructions on how to set up Salt please see the Installation instructions.

New Features

WAN Support

Recently more people have been testing Salt minions connecting to Salt Masters over the Internet. It was found that Minions would commonly lose their connection to the master when working over the internet. The minions can now detect if the connection has been lost and reconnect to the master, making WAN connections much more reliable.

State System Fixes

Substantial testing has gone into the state system and it is ready for real world usage. A great deal has been added to the documentation for states and the modules and functions available to states have been cleanly documented.

A number of State System bugs have also been found and repaired, the output from the state system has also been refined to be extremely clear and concise.

Error reporting has also been introduced, issues found in sls files will now be clearly reported when executing Salt States.
Extend Declaration

The Salt States have also gained the extend declaration. This declaration allows for states to be cleanly modified in a post environment. Simply said, if there is an apache.sls file that declares the apache service, then another sls can include apache and then extend it:

```python
include:
  - apache

extend:
  apache:
    service:
      - require:
      - pkg: mod_python

mod_python:
  pkg:
    - installed
```

The notable behavior with the extend functionality is that it literally extends or overwrites a declaration set up in another sls module. This means that Salt will behave as though the modifications were made directly to the apache sls. This ensures that the apache service in this example is directly tied to all requirements.

Highstate Structure Specification

This release comes with a clear specification of the Highstate data structure that is used to declare Salt States. This specification explains everything that can be declared in the Salt SLS modules.

The specification is extremely simple, and illustrates how Salt has been able to fulfill the requirements of a central configuration manager within a simple and easy to understand format and specification.

SheBang Renderer Switch

It came to our attention that having many renderers means that there may be a situation where more than one State Renderer should be available within a single State Tree.

The method chosen to accomplish this was something already familiar to developers and systems administrators, a SheBang. The Python State Renderer displays this new capability.

Python State Renderer

Until now Salt States could only be declared in yaml or json using Jinja or Mako. A new, very powerful, renderer has been added, making it possible to write Salt States in pure Python:

```python
#!py

def run():
    
        """
    Install the python-mako package
        """
    return {"include": ["python"], "python-mako": {"pkg": ["installed"]}}
```
This renderer is used by making a run function that returns the Highstate data structure. Any capabilities of Python can be used in pure Python sls modules.

This example of a pure Python sls module is the same as this example in yaml:

```python
include:
  - python

python-mako:
  pkg:
    - installed
```

**FreeBSD Support**

Additional support has been added for FreeBSD, this is Salt's first branch out of the Linux world and proves the viability of Salt on non-Linux platforms.

Salt remote execution already worked on FreeBSD, and should work without issue on any Unix-like platform. But this support comes in the form of package management and user support, so Salt States also work on FreeBSD now.

The new freebsdpkg module provides package management support for FreeBSD and the new pw_user and pw_group provide user and group management.

**Module and State Additions**

**Cron Support**

Support for managing the system crontab has been added, declaring a cron state can be done easily:

```bash
date > /tmp/datesetamp:
  cron:
    - present
    - user: fred
    - minute: 5
    - hour: 3
```

**File State Additions**

The file state has been given a number of new features, primarily the directory, recurse, symlink, and absent functions.

`file.directory` Make sure that a directory exists and has the right permissions.

```
/srv/foo:
  file:
    - directory
    - user: root
    - group: root
    - mode: 1755
```

`file.symlink` Make a symlink.

```
/var/lib/www:
  file:
    - symlink
```
file.recurse  The recurse state function will recursively download a directory on the master file server and place it on the minion. Any change in the files on the master will be pushed to the minion. The recurse function is very powerful and has been tested by pushing out the full Linux kernel source.

```
file:
  - recurse
  - source: salt://linux
```

file.absent  Make sure that the file is not on the system, recursively deletes directories, files, and symlinks.

```
file:
  - absent
```

Sysctl Module and State

The sysctl module and state allows for sysctl components in the kernel to be managed easily. The sysctl module contains the following functions:

- `sysctl.show`  Return a list of sysctl parameters for this minion
- `sysctl.get`  Return a single sysctl parameter for this minion
- `sysctl.assign`  Assign a single sysctl parameter for this minion
- `sysctl.persist`  Assign and persist a simple sysctl parameter for this minion

The sysctl state allows for sysctl parameters to be assigned:

```
vm.swappiness:
  sysctl:
    - present
    - value: 20
```

Kernel Module Management

A module for managing Linux kernel modules has been added. The new functions are as follows:

- `kmod.available`  Return a list of all available kernel modules
- `kmod.check_available`  Check to see if the specified kernel module is available
- `kmod.lsmod`  Return a dict containing information about currently loaded modules
- `kmod.load`  Load the specified kernel module
- `kmod.remove`  Unload the specified kernel module

The kmod state can enforce modules be either present or absent:

```
kvm_intel:
  kmod:
    - present
```
Ssh Authorized Keys

The ssh_auth state can distribute ssh authorized keys out to minions. Ssh authorized keys can be present or absent.

```
AAAAB3NzaC1kc3MAAACBAL0sQ9fJ5bYTEyYvlRBs3DdD0o49CNfhlWHWXQRqu16rwL4KIuPrhY7hBw8tV7UNC7J9iZRN04iGod9C+Ci
...xw6NtnQVMcmZIre5Elrw30KgxCDN0mjYFNHu0YaQLBBM0sy0++tJe1KTA3A2zGj2xbW09JhEzu8xvSdF8jR0NSRXpSyU6
...x75wolBDbVzeTlxWgxhafj7P6Ncdw25Wz9wvC6ko/puww0b3rcLNqK+XCNJlsM/
...7LB8Q26iK5mRZzNsGwG7yzyNIMBekGYQ5MrdicPv5dBIP/1M6fQ0EsAXQ==
```

```
ssh_auth: present
  user: frank
  enc: dsa
  comment: 'Frank' s key'
```

30.2.163 Salt 0.9.4 Release Notes

release 2011-11-27

Salt 0.9.4 has arrived. This is a critical update that repairs a number of key bugs found in 0.9.3. But this update is not without feature additions as well! 0.9.4 adds support for Gentoo portage to the pkg module and state system. Also there are 2 major new state additions, the failhard option and the ability to set up finite state ordering with the order option.

This release also sees our largest increase in community contributions. These contributors have and continue to be the life blood of the Salt project, and the team continues to grow. I want to put out a big thanks to our new and existing contributors.

Download!

The Salt source can be downloaded from PyPI:

https://pypi.python.org/packages/source/s/salt/salt-0.9.4.tar.gz

For instructions on how to set up Salt please see the Installation instructions.

New Features

Failhard State Option

Normally, when a state fails Salt continues to execute the remainder of the defined states and will only refuse to execute states that require the failed state.

But the situation may exist, where you would want all state execution to stop if a single state execution fails. The capability to do this is called failing hard.
State Level Failhard

A single state can have a failhard set, this means that if this individual state fails that all state execution will immediately stop. This is a great thing to do if there is a state that sets up a critical config file and setting a require for each state that reads the config would be cumbersome. A good example of this would be setting up a package manager early on:

```
/etc/yum.repos.d/company.repo:
  file:
    - managed
    - source: salt://company/yumrepo.conf
    - user: root
    - group: root
    - mode: 644
    - order: 1
    - failhard: True
```

In this situation, the yum repo is going to be configured before other states, and if it fails to lay down the config file, than no other states will be executed.

Global Failhard

It may be desired to have failhard be applied to every state that is executed, if this is the case, then failhard can be set in the master configuration file. Setting failhard in the master configuration file will result in failing hard when any minion gathering states from the master have a state fail.

This is NOT the default behavior, normally Salt will only fail states that require a failed state.

Using the global failhard is generally not recommended, since it can result in states not being executed or even checked. It can also be confusing to see states failhard if an admin is not actively aware that the failhard has been set.

To use the global failhard set failhard: True in the master configuration

Finite Ordering of State Execution

When creating salt sls files, it is often important to ensure that they run in a specific order. While states will always execute in the same order, that order is not necessarily defined the way you want it.

A few tools exist in Salt to set up the correct state ordering, these tools consist of requisite declarations and order options.

The Order Option

Before using the order option, remember that the majority of state ordering should be done with requisite statements, and that a requisite statement will override an order option.

The order option is used by adding an order number to a state declaration with the option order:

```
  vim:
    pkg:
      - installed
      - order: 1
```
By adding the order option to `1` this ensures that the vim package will be installed in tandem with any other state declaration set to the order `1`.

Any state declared without an order option will be executed after all states with order options are executed.

But this construct can only handle ordering states from the beginning. Sometimes you may want to send a state to the end of the line, to do this set the order to last:

```
vim:
  pkg:
    - installed
    - order: last
```

Substantial testing has gone into the state system and it is ready for real world usage. A great deal has been added to the documentation for states and the modules and functions available to states have been cleanly documented.

A number of State System bugs have also been found and repaired, the output from the state system has also been refined to be extremely clear and concise.

Error reporting has also been introduced, issues found in sls files will now be clearly reported when executing Salt States.

**Gentoo Support**

Additional experimental support has been added for Gentoo. This is found in the contribution from Doug Renn, aka nestegg.

**30.2.164 Salt 0.9.5 Release Notes**

*release* 2012-01-15

Salt 0.9.5 is one of the largest steps forward in the development of Salt.

0.9.5 comes with many milestones, this release has seen the community of developers grow out to an international team of 46 code contributors and has many feature additions, feature enhancements, bug fixes and speed improvements.

**Warning:** Be sure to *read the upgrade instructions* about the switch to msgpack before upgrading!

**Community**

Nothing has proven to have more value to the development of Salt that the outstanding community that has been growing at such a great pace around Salt. This has proven not only that Salt has great value, but also the expandability of Salt is as exponential as I originally intended.

0.9.5 has received over 600 additional commits since 0.9.4 with a swath of new committers. The following individuals have contributed to the development of 0.9.5:

- Aaron Bull Schaefer
- Antti Kaihola
- Bas Tichelaar
- Brad Barden
This makes 21 new developers since 0.9.4 was released!

To keep up with the growing community follow Salt on Black Duck Open Hub (https://www.openhub.net/p/salt), to join the Salt development community, fork Salt on GitHub, and get coding (https://github.com/saltstack/salt)!

**Major Features**

**SPEED! Pickle to msgpack**

For a few months now we have been talking about moving away from Python pickles for network serialization, but a preferred serialization format had not yet been found. After an extensive performance testing period involving everything from JSON to protocol buffers, a clear winner emerged. Message Pack (https://msgpack.org/) proved to not only be the fastest and most compact, but also the most "salt like". Message Pack is simple, and the code involved is very small. The msgpack library for Python has been added directly to Salt.
This move introduces a few changes to Salt. First off, Salt is no longer a "noarch" package, since the msgpack lib is written in C. Salt 0.9.5 will also have compatibility issues with 0.9.4 with the default configuration.

We have gone through great lengths to avoid backwards compatibility issues with Salt, but changing the serialization medium was going to create issues regardless. Salt 0.9.5 is somewhat backwards compatible with earlier minions. A 0.9.5 master can command older minions, but only if the `serial` config value in the master is set to `pickle`. This will tell the master to publish messages in pickle format and will allow the master to receive messages in both msgpack and pickle formats.

Therefore the suggested methods for upgrading are either to just upgrade everything at once, or:

1. Upgrade the master to 0.9.5
2. Set `serial` to `pickle` in the master config
3. Upgrade the minions
4. Remove the `serial` option from the master config

Since pickles can be used as a security exploit the ability for a master to accept pickles from minions at all will be removed in a future release.

**C Bindings for YAML**

All of the YAML rendering is now done with the YAML C bindings. This speeds up all of the sls files when running states.

**Experimental Windows Support**

David Boucha has worked tirelessly to bring initial support to Salt for Microsoft Windows operating systems. Right now the Salt Minion can run as a native Windows service and accept commands.

In the weeks and months to come Windows will receive the full treatment and will have support for Salt States and more robust support for managing Windows systems. This is a big step forward for Salt to move entirely outside of the Unix world, and proves Salt is a viable cross platform solution. Big Thanks to Dave for his contribution here!

**Dynamic Module Distribution**

Many Salt users have expressed the desire to have Salt distribute in-house modules, states, renderers, returners, and grains. This support has been added in a number of ways:

**Modules via States**

Now when salt modules are deployed to a minion via the state system as a file, then the modules will be automatically loaded into the active running minion - no restart required - and into the active running state. So custom state modules can be deployed and used in the same state run.
Modules via Module Environment Directories

Under the file_roots each environment can now have directories that are used to deploy large groups of modules. These directories sync modules at the beginning of a state run on the minion, or can be manually synced via the Salt module salt.modules.saltutil.sync_all.

The directories are named:
- _modules
- _states
- _grains
- _renderers
- _returners

The modules are pushed to their respective scopes on the minions.

Module Reloading

Modules can now be reloaded without restarting the minion, this is done by calling the salt.modules.sys.reload_modules function.

But wait, there's more! Now when a salt module of any type is added via states the modules will be automatically reloaded, allowing for modules to be laid down with states and then immediately used.

Finally, all modules are reloaded when modules are dynamically distributed from the salt master.

Enable / Disable Added to Service

A great deal of demand has existed for adding the capability to set services to be started at boot in the service module. This feature also comes with an overhaul of the service modules and initial systemd support.

This means that the service state can now accept - enable: True to make sure a service is enabled at boot, and - enable: False to make sure it is disabled.

Compound Target

A new target type has been added to the lineup, the compound target. In previous versions the desired minions could only be targeted via a single specific target type, but now many target specifications can be declared.

These targets can also be separated by and/or operators, so certain properties can be used to omit a node:

```
salt -C 'webserv* and G@os:Debian or E@db.*' test.ping
```

will match all minions with ids starting with webserv via a glob and minions matching the os:Debian grain. Or minions that match the db.* regular expression.
Node Groups

Often the convenience of having a predefined group of minions to execute targets on is desired. This can be accomplished with the new nodegroups feature. Nodegroups allow for predefined compound targets to be declared in the master configuration file:

```
nodegroups:
  group1: 'L@foo.domain.com,bar.domain.com,baz.domain.com and bl*.domain.com'
  group2: 'G@os:Debian and foo.domain.com'
```

And then used via the `-N` option:

```
salt -N group1 test.ping
```

Minion Side Data Store

The data module introduces the initial approach into storing persistent data on the minions, specific to the minions. This allows for data to be stored on minions that can be accessed from the master or from the minion.

The Minion datastore is young, and will eventually provide an interface similar to a more mature key/value pair server.

Major Grains Improvement

The Salt grains have been overhauled to include a massive amount of extra data. This includes hardware data, os data and salt specific data.

Salt -Q is Useful Now

In the past the salt query system, which would display the data from recent executions would be displayed in pure Python, and it was unreadable.

0.9.5 has added the outputter system to the `-Q` option, thus enabling the salt query system to return readable output.

Packaging Updates

Huge strides have been made in packaging Salt for distributions. These additions are thanks to our wonderful community where the work to set up packages has proceeded tirelessly.

FreeBSD

Salt on FreeBSD? There a port for that:

https://svnweb.freebsd.org/ports/head/sysutils/py-salt/

This port was developed and added by Christer Edwards. This also marks the first time Salt has been included in an upstream packaging system!
Fedora and Red Hat Enterprise

Salt packages have been prepared for inclusion in the Fedora Project and in EPEL for Red Hat Enterprise 5 and 6. These packages are the result of the efforts made by Clint Savage (herlo).

Debian/Ubuntu

A team of many contributors have assisted in developing packages for Debian and Ubuntu. Salt is still actively seeking inclusion in upstream Debian and Ubuntu and the package data that has been prepared is being pushed through the needed channels for inclusion.

These packages have been prepared with the help of:

- Corey
- Aaron Toponce
- and`

More to Come

We are actively seeking inclusion in more distributions. Primarily getting Salt into Gentoo, SUSE, OpenBSD, and preparing Solaris support are all turning into higher priorities.

Refinement

Salt continues to be refined into a faster, more stable and more usable application. 0.9.5 comes with more debug logging, more bug fixes and more complete support.

More Testing, More Bug Fixes

0.9.5 comes with more bug fixes due to more testing than any previous release. The growing community and the introduction a dedicated QA environment have unearthed many issues that were hiding under the covers. This has further refined and cleaned the state interface, taking care of things from minor visual issues to repairing misleading data.

Custom Exceptions

A custom exception module has been added to throw salt specific exceptions. This allows Salt to give much more granular error information.
New Modules

**data**

The new data module manages a persistent datastore on the minion. Big thanks to bastichelaar for his help refining this module.

**freebsdkmod**

FreeBSD kernel modules can now be managed in the same way Salt handles Linux kernel modules. This module was contributed thanks to the efforts of Christer Edwards.

**gentoo_service**

Support has been added for managing services in Gentoo. Now Gentoo services can be started, stopped, restarted, enabled, disabled, and viewed.

**pip**

The pip module introduces management for pip installed applications. Thanks goes to whitinge for the addition of the pip module.

**rh_service**

The rh_service module enables Red Hat and Fedora specific service management. Now Red Hat like systems come with extensive management of the classic init system used by Red Hat.

**saltutil**

The saltutil module has been added as a place to hold functions used in the maintenance and management of salt itself. Saltutil is used to salt the salt minion. The saltutil module is presently used only to sync extension modules from the master server.

**systemd**

Systemd support has been added to Salt, now systems using this next generation init system are supported on systems running systemd.
**virtualenv**

The `virtualenv` module has been added to allow salt to create virtual Python environments. Thanks goes to whitinge for the addition of the `virtualenv` module.

**win_disk**

Support for gathering disk information on Microsoft Windows minions. The windows modules come courtesy of Utah_Dave.

**win_service**

The `win_service` module adds service support to Salt for Microsoft Windows services.

**win_useradd**

Salt can now manage local users on Microsoft Windows Systems.

**yumpkg5**

The `yumpkg` module introduces in 0.9.4 uses the yum API to interact with the yum package manager. Unfortunately, on Red Hat 5 systems salt does not have access to the yum API because the yum API is running under Python 2.4 and Salt needs to run under Python 2.6. The `yumpkg5` module bypasses this issue by shelling out to yum on systems where the yum API is not available.

**New States**

**mysql_database**

The new `mysql_database` state adds the ability to systems running a mysql server to manage the existence of mysql databases.

The mysql states are thanks to syphernl.

**mysql_user**

The `mysql_user` state enables mysql user management.
**virtualenv**

The `virtualenv` state can manage the state of Python virtual environments. Thanks to Whitinge for the `virtualenv` state.

**New Returners**

**cassandra_returner**

A returner allowing Salt to send data to a cassandra server. Thanks to Byron Clark for contributing this returner.

### 30.2.165 Salt 0.9.6 Release Notes

**release** 2012-01-21

Salt 0.9.6 is a release targeting a few bugs and changes. This is primarily targeting an issue found in the names declaration in the state system. But a few other bugs were also repaired, like missing support for grains in extmods. Due to a conflict in distribution packaging msgpack will no longer be bundled with Salt, and is required as a dependency.

**New Features**

**HTTP and ftp support in files.managed**

Now under the source option in the file.managed state a HTTP or ftp address can be used instead of a file located on the salt master.

**Allow Multiple Returners**

Now the returner interface can define multiple returners, and will also return data back to the master, making the process less ambiguous.

**Minion Memory Improvements**

A number of modules have been taken out of the minion if the underlying systems required by said modules are not present on the minion system. A number of other modules need to be stripped out in this same way which should continue to make the minion more efficient.

**Minions Can Locally Cache Return Data**

A new option, cache_jobs, has been added to the minion to allow for all of the historically run jobs to cache on the minion, allowing for looking up historic returns. By default cache_jobs is set to False.
Pure Python Template Support For file.managed

Templates in the file.managed state can now be defined in a Python script. This script needs to have a run function that returns the string that needs to be in the named file.

30.2.166 Salt 0.9.7 Release Notes

release 2012-02-15

Salt 0.9.7 is here! The latest iteration of Salt brings more features and many fixes. This release is a great refinement over 0.9.6, adding many conveniences under the hood, as well as some features that make working with Salt much better.

A few highlights include the new Job system, refinements to the requisite system in states, the mod_init interface for states, external node classification, search path to managed files in the file state, and refinements and additions to dynamic module loading.

0.9.7 also introduces the long developed (and oft changed) unit test framework and the initial unit tests.

Major Features

Salt Jobs Interface

The new jobs interface makes the management of running executions much cleaner and more transparent. Building on the existing execution framework the jobs system allows clear introspection into the active running state of the running Salt interface.

The Jobs interface is centered in the new minion side proc system. The minions now store msgpack serialized files under /var/cache/salt/proc. These files keep track of the active state of processes on the minion.

Functions in the saltutil Module

A number of functions have been added to the saltutil module to manage and view the jobs:

- running - Returns the data of all running jobs that are found in the proc directory.
- find_job - Returns specific data about a certain job based on job id.
- signal_job - Allows for a given jid to be sent a signal.
- term_job - Sends a termination signal (SIGTERM, 15) to the process controlling the specified job.
- kill_job Sends a kill signal (SIGKILL, 9) to the process controlling the specified job.

The jobs Runner

A convenience runner front end and reporting system has been added as well. The jobs runner contains functions to make viewing data easier and cleaner.

The jobs runner contains a number of functions...
active

The active function runs `saltutil.running` on all minions and formats the return data about all running jobs in a much more usable and compact format. The active function will also compare jobs that have returned and jobs that are still running, making it easier to see what systems have completed a job and what systems are still being waited on.

lookup_jid

When jobs are executed the return data is sent back to the master and cached. By default is cached for 24 hours, but this can be configured via the `keep_jobs` option in the master configuration.

Using the `lookup_jid` runner will display the same return data that the initial job invocation with the salt command would display.

list_jobs

Before finding a historic job, it may be required to find the job id. `list_jobs` will parse the cached execution data and display all of the job data for jobs that have already, or partially returned.

External Node Classification

Salt can now use external node classifiers like Cobbler’s `cobbler-ext-nodes`.

Salt uses specific data from the external node classifier. In particular the classes value denotes which sls modules to run, and the environment value sets to another environment.

An external node classification can be set in the master configuration file via the `external_nodes` option: https://salt.readthedocs.io/en/latest/ref/configuration/master.html#external-nodes

External nodes are loaded in addition to the top files. If it is intended to only use external nodes, do not deploy any top files.

State Mod Init System

An issue arose with the pkg state. Every time a package was run Salt would need to refresh the package database. This made systems with slower package metadata refresh speeds much slower to work with. To alleviate this issue the `mod_init` interface has been added to salt states.

The `mod_init` interface is a function that can be added to a state file. This function is called with the first state called. In the case of the pkg state, the `mod_init` function sets up a tag which makes the package database only refresh on the first attempt to install a package.

In a nutshell, the `mod_init` interface allows a state to run any command that only needs to be run once, or can be used to set up an environment for working with the state.
Source File Search Path

The file state continues to be refined, adding speed and capabilities. This release adds the ability to pass a list to the source option. This list is then iterated over until the source file is found, and the first found file is used.

The new syntax looks like this:

```
/etc/httpd/conf/httpd.conf:
  file:
    - managed
    - source:
      - salt://httpd/httpd.conf
      - http://myserver/httpd.conf: md5=8c1fe119e6f1fd96bc06614473509bf1
```

The source option can take sources in the list from the salt file server as well as an arbitrary web source. If using an arbitrary web source the checksum needs to be passed as well for file verification.

Refinements to the Requisite System

A few discrepancies were still lingering in the requisite system, in particular, it was not possible to have a require and a watch requisite declared in the same state declaration.

This issue has been alleviated, as well as making the requisite system run more quickly.

Initial Unit Testing Framework

Because of the module system, and the need to test real scenarios, the development of a viable unit testing system has been difficult, but unit testing has finally arrived. Only a small amount of unit testing coverage has been developed, much more coverage will be in place soon.

A huge thanks goes out to those who have helped with unit testing, and the contributions that have been made to get us where we are. Without these contributions unit tests would still be in the dark.

Compound Targets Expanded

Originally only support for and and or were available in the compound target. 0.9.7 adds the capability to negate compound targets with not.

Nodegroups in the Top File

Previously the nodegroups defined in the master configuration file could not be used to match nodes for states. The nodegroups support has been expanded and the nodegroups defined in the master configuration can now be used to match minions in the top file.
30.2.167 Salt 0.9.8 Release Notes

release 2012-03-21

Salt 0.9.8 is a big step forward, with many additions and enhancements, as well as a number of precursors to advanced future developments.

This version of Salt adds much more power to the command line, making the old hard timeout issues a thing of the past and adds keyword argument support. These additions are also available in the salt client API, making the available API tools much more powerful.

The new pillar system allows for data to be stored on the master and assigned to minions in a granular way similar to the state system. It also allows flexibility for users who want to keep data out of their state tree similar to ‘external lookup’ functionality in other tools.

A new way to extend requisites was added, the "requisite in" statement. This makes adding requires or watch statements to external state decs much easier.

Additions to requisites making them much more powerful have been added as well as improved error checking for sls files in the state system. A new provider system has been added to allow for redirecting what modules run in the background for individual states.

Support for openSUSE has been added and support for Solaris has begun serious development. Windows support has been significantly enhanced as well.

The matcher and target systems have received a great deal of attention. The default behavior of grain matching has changed slightly to reflect the rest of salt and the compound matcher system has been refined.

A number of impressive features with keyword arguments have been added to both the CLI and to the state system. This makes states much more powerful and flexible while maintaining the simple configuration everyone loves.

The new batch size capability allows for executions to be rolled through a group of targeted minions a percentage or specific number at a time. This was added to prevent the “thundering herd” problem when targeting large numbers of minions for things like service restarts or file downloads.

Upgrade Considerations

Upgrade Issues

There was a previously missed oversight which could cause a newer minion to crash an older master. That oversight has been resolved so the version incompatibility issue will no longer occur. When upgrading to 0.9.8 make sure to upgrade the master first, followed by the minions.

Debian/Ubuntu Packages

The original Debian/Ubuntu packages were called salt and included all salt applications. New packages in the ppa are split by function. If an old salt package is installed then it should be manually removed and the new split packages need to be freshly installed.

On the master:

```
# apt-get purge salt
# apt-get install salt-{master,minion}
```

On the minions:
# apt-get purge salt
# apt-get install salt-minion

And on any Syndics:

# apt-get install salt-syndic

The official Salt PPA for Ubuntu is located at: https://launchpad.net/~saltstack/+archive/ubuntu/salt

Major Features

Pillar

Pillar offers an interface to declare variable data on the master that is then assigned to the minions. The pillar data is made available to all modules, states, sls files etc. It is compiled on the master and is declared using the existing renderer system. This means that learning pillar should be fairly trivial to those already familiar with salt states.

CLI Additions

The salt command has received a serious overhaul and is more powerful than ever. Data is returned to the terminal as it is received, and the salt command will now wait for all running minions to return data before stopping. This makes adding very large --timeout arguments completely unnecessary and gets rid of long running operations returning empty {} when the timeout is exceeded.

When calling salt via sudo, the user originally running salt is saved to the log for auditing purposes. This makes it easy to see who ran what by just looking through the minion logs.

The salt-key command gained the -D and --delete-all arguments for removing all keys. Be careful with this one!

Running States Without a Master

The addition of running states without a salt-master has been added to 0.9.8. This feature allows for the unmodified salt state tree to be read locally from a minion. The result is that the UNMODIFIED state tree has just become portable, allowing minions to have a local copy of states or to manage states without a master entirely.

This is accomplished via the new file client interface in Salt that allows for the salt:// URI to be redirected to custom interfaces. This means that there are now two interfaces for the salt file server, calling the master or looking in a local, minion defined file_roots.

This new feature can be used by modifying the minion config to point to a local file_roots and setting the file_client option to local.

Keyword Arguments and States

State modules now accept the **kwargs argument. This results in all data in a sls file assigned to a state being made available to the state function.

This passes data in a transparent way back to the modules executing the logic. In particular, this allows adding arguments to the pkg.install module that enable more advanced and granular controls with respect to what the state is capable of.

An example of this along with the new debconf module for installing ldap client packages on Debian:
ldap-client-packages:
  pkg:
    - debconf: salt://debconf/ldap-client.ans
    - installed
  names:
    - nslcd
    - libpam-ldapd
    - libnss-ldapd

Keyword Arguments and the CLI

In the past it was required that all arguments be passed in the proper order to the `salt` and `salt-call` commands. As of 0.9.8, keyword arguments can be passed in the form of `kwarg=argument`.

```bash
# salt -G 'type:dev' git.clone 
  repository=https://github.com/saltstack/salt.git cwd=/tmp/salt user=jeff
```

Matcher Refinements and Changes

A number of fixes and changes have been applied to the Matcher system. The most noteworthy is the change in the grain matcher. The grain matcher used to use a regular expression to match the passed data to a grain, but now defaults to a shell glob like the majority of match interfaces in Salt. A new option is available that still uses the old style regex matching to grain data called `grain-pcre`. To use regex matching in compound matches use the letter `P`.

For example, this would match any ArchLinux or Fedora minions:

```bash
# salt --grain-pcre 'os:(Arch:Fed).*' test.ping
```

And the associated compound matcher suitable for `top.sls` is `P`:

```bash
P@os:(Arch|Fed).*
```

**NOTE:** Changing the grains matcher from pcre to glob is backwards incompatible.

Support has been added for matching minions with Yahoo’s range library. This is handled by passing range syntax with `-R` or `--range` arguments to salt.

More information at: https://github.com/ytoolshed/range/wiki/%22yamlfile%22-module-file-spec

Requisite "in"

A new means to updating requisite statements has been added to make adding watchers and requires to external states easier. Before 0.9.8 the only way to extend the states that were watched by a state outside of the sls was to use an extend statement:

```yaml
include:
  - http
extend:
  apache:
    service:
      - watch:
```

(continues on next page)
But the new `Requisite in` statement allows for easier extends for requisites:

```
include:
  - http
tomcat:
    pkg:
      - installed
    watch_in:
      - service: apache
```

Requisite in is part of the extend system, so still remember to always include the sls that is being extended!

Providers

Salt predetermines what modules should be mapped to what uses based on the properties of a system. These determinations are generally made for modules that provide things like package and service management. The `apt` module maps to `pkg` on Debian and the `yum` module maps to `pkg` on Fedora for instance.

Sometimes in states, it may be necessary for a non-default module to be used for the desired functionality. For instance, an Arch Linux system may have been set up with systemd support. Instead of using the default service module detected for Arch Linux, the `systemd` module can be used:

```
http:
  service:
    - running
    - enable: True
    - provider: systemd
```

Default providers can also be defined in the minion config file:

```
providers:
  service: systemd
```

When default providers are passed in the minion config, then those providers will be applied to all functionality in Salt, this means that the functions called by the minion will use these modules, as well as states.

Requisite Glob Matching

Requisites can now be defined with glob expansion. This means that if there are many requisites, they can be defined on a single line.

To watch all files in a directory:

```
http:
  service:
    - running
    - enable: True
```

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This example will watch all defined files that match the glob `/etc/http/conf.d/*`

**Batch Size**

The new batch size option allows commands to be executed while maintaining that only so many hosts are executing the command at one time. This option can take a percentage or a finite number:

```
salt '*' -b 10 test.ping
salt -G 'os:RedHat' --batch-size 25% apache.signal restart
```

This will only run test.ping on 10 of the targeted minions at a time and then restart apache on 25% of the minions matching `os:RedHat` at a time and work through them all until the task is complete. This makes jobs like rolling web server restarts behind a load balancer or doing maintenance on BSD firewalls using carp much easier with Salt.

**Module Updates**

This is a list of notable, but non-exhaustive updates with new and existing modules.

- Windows support has seen a flurry of support this release cycle. We've gained all new `file`, `network`, and `shadow` modules. Please note that these are still a work in progress.
- For our ruby users, new `rvm` and `gem` modules have been added along with the `associated states`.
- The `virt` module gained basic Xen support.
- The `yum` module gained Scientific Linux support.
- The `pkg` module on Debian, Ubuntu, and derivatives force apt to run in a non-interactive mode. This prevents issues when package installation waits for confirmation.
- A `pkg` module for OpenSUSE's `zypper` was added.
- The `service` module on Ubuntu natively supports upstart.
- A new `debconf` module was contributed by our community for more advanced control over deb package deployments on Debian based distributions.
- The `mysql.user` state and `mysql` module gained a `password_hash` argument.
- The `cmd` module and state gained a `shell` keyword argument for specifying a shell other than `/bin/sh` on Linux / Unix systems.
- New `git` and `mercurial` modules have been added for fans of distributed version control.
In Progress Development

Master Side State Compiling

While we feel strongly that the advantages gained with minion side state compiling are very critical, it does prevent certain features that may be desired. 0.9.8 has support for initial master side state compiling, but many more components still need to be developed, it is hoped that these can be finished for 0.9.9.

The goal is that states can be compiled on both the master and the minion allowing for compilation to be split between master and minion. Why will this be great? It will allow storing sensitive data on the master and sending it to some minions without all minions having access to it. This will be good for handling ssl certificates on front-end web servers for instance.

Solaris Support

Salt 0.9.8 sees the introduction of basic Solaris support. The daemon runs well, but grains and more of the modules need updating and testing.

Windows Support

Salt states on windows are now much more viable thanks to contributions from our community! States for file, service, local user, and local group management are more fully fleshed out along with network and disk modules. Windows users can also now manage registry entries using the new "reg" module.

30.2.168 Salt 0.9.9 Release Notes

release 2012-04-27

0.9.9 is out and comes with some serious bug fixes and even more serious features. This release is the last major feature release before 1.0.0 and could be considered the 1.0.0 release candidate.

A few updates include more advanced kwargs support, the ability for salt states to more safely configure a running salt minion, better job directory management and the new state test interface.

Many new tests have been added as well, including the new minion swarm test that allows for easier testing of Salt working with large groups of minions. This means that if you have experienced stability issues with Salt before, particularly in larger deployments, that these bugs have been tested for, found, and killed.

Major Features

State Test Interface

Until 0.9.9 the only option when running states to see what was going to be changed was to print out the highstate with state.show_highstate and manually look it over. But now states can be run to discover what is going to be changed.

Passing the option test=True to many of the state functions will now cause the salt state system to only check for what is going to be changed and report on those changes.

```
salt '*' state.highstate test=True
```

Now states that would have made changes report them back in yellow.

30.2. Previous Releases
State Syntax Update

A shorthand syntax has been added to sls files, and it will be the default syntax in documentation going forward. The old syntax is still fully supported and will not be deprecated, but it is recommended to move to the new syntax in the future. This change moves the state function up into the state name using a dot notation. This is in-line with how state functions are generally referred to as well:

The new way:

```
/etc/sudoers:
    file.present:
        - source: salt://sudo/sudoers
        - user: root
        - mode: 400
```

Use and Use_in Requisites

Two new requisite statements are available in 0.9.9. The use and use_in requisite and requisite-in allow for the transparent duplication of data between states. When a state “uses” another state it copies the other state’s arguments as defaults. This was created in direct response to the new network state, and allows for many network interfaces to be configured in the same way easily. A simple example:

```
root_file:
    file.absent:
        - name: /tmp/nothing
        - user: root
        - mode: 644
        - group: root
        - use_in:
            - file: /etc/vimrc

fred_file:
    file.absent:
        - name: /tmp/nothing
        - user: fred
        - group: marketing
        - mode: 660

/files/marketing/district7.rst:
    file.present:
        - source: salt://marketing/district7.rst
        - template: jinja
        - use:
            - file: fred_file

/etc/vimrc:
    file.present:
        - source: salt://edit/vimrc
```

This makes the 2 lower state decs inherit the options from their respectively "used" state decs.
Network State

The new network state allows for the configuration of network devices via salt states and the ip salt module. This addition has been given to the project by Jeff Hutchins and Bret Palsson from Jive Communications.

Currently the only network configuration backend available is for Red Hat based systems, like Red Hat Enterprise, CentOS, and Fedora.

Exponential Jobs

Originally the jobs executed were stored on the master in the format: `<cachedir>/jobs/jid/{minion ids}

But this format restricted the number of jobs in the cache to the number of subdirectories allowed on the filesystem. Ext3 for instance limits subdirectories to 32000. To combat this the new format for 0.9.9 is: `<cachedir>/jobs/jid_hash[:2]/jid_hash[2:]/{minion ids}

So that now the number of maximum jobs that can be run before the cleanup cycle hits the job directory is substantially higher.

ssh_auth Additions

The original ssh_auth state was limited to accepting only arguments to apply to a public key, and the key itself. This was restrictive due to the way the we learned that many people were using the state, so the key section has been expanded to accept options and arguments to the key that over ride arguments passed in the state. This gives substantial power to using ssh_auth with names:

```
sshkeys:
  ssh_auth:
    - present
    - user: backup
    - enc: ssh-dss
    - options:
      - option1="value1"
      - option2="value2 flag2"
    - comment: backup
    - names:
      - override

... AAAAB3Nza1yc2EAAAABAIAAAAQEAlyE26SMFFVY5Y3vnL7AF5CRTPtAigSwU887ASf6F6a7Qr1Yd05ochiIo8z8AIKdkh4c4
      - 0rzA20MXHRQuk4
      - I48z/l0UdGhe8SpMB8zVnT3V5fnuQK/ATspmhpU66s4ntMehULC+lJLvZ40ByNmFt0Tzc2sdSkA0111==
      - 
      ... AAAAB3Nza1yc2EAAAABAIAAAAQEAlyE26SMFFVY5Y3vnL7AF5CRTPtAigSwU887ASf6F6a7Qr1Yd05ochiIo8z8AIKdkh4c4
      - 0rzA20MXHRQuk4
      - I48z/l0UdGhe8SpMB8zVnT3V5fnuQK/ATspmhpU66s4ntMehULC+lJLvZ40ByNmFt0Tzc2sdSkA0111==
      - override
      ... AAAAB3Nza1yc2EAAAABAIAAAAQEAlyE26SMFFVY5Y3vnL7AF5CRTPtAigSwU887ASf6F6a7Qr1Yd05ochiIo8z8AIKdkh4c4
      - 0rzA20MXHRQuk4
      - I48z/l0UdGhe8SpMB8zVnT3V5fnuQK/ATspmhpU66s4ntMehULC+lJLvZ40ByNmFt0Tzc2sdSkA0111==
      - override
```

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LocalClient Additions

To follow up the recent additions in 0.9.8 of additional kwargs support, 0.9.9 also adds the capability to send kwargs into commands via a dict. This addition to the LocalClient api can be used like so:

```python
import salt.client

client = salt.client.LocalClient("/etc/salt/master")
ret = client.cmd("*", "cmd.run", ["ls -l"], kwarg={"cwd": "/etc"})
```

This update has been added to all cmd methods in the LocalClient class.

Better Self Salting

One problem faced with running Salt states, is that it has been difficult to manage the Salt minion via states, this is due to the fact that if the minion is called to restart while a state run is happening then the state run would be killed. 0.9.9 slightly changes the process scope of the state runs, so now when salt is executing states it can safely restart the salt-minion daemon.

In addition to daemonizing the state run, the apt module also daemonizes. This update makes it possible to cleanly update the salt-minion package on Debian/Ubuntu systems without leaving apt in an inconsistent state or killing the active minion process mid-execution.

Wildcards for SLS Modules

Now, when including sls modules in include statements or in the top file, shell globs can be used. This can greatly simplify listing matched sls modules in the top file and include statements:

```yaml
base:
  '*':
    - files*
    - core*

include:
  - users.dev.*
  - apache.ser*
```
External Pillar

Since the pillar data is just, data, it does not need to come expressly from the pillar interface. The external pillar system allows for hooks to be added making it possible to extract pillar data from any arbitrary external interface. The external pillar interface is configured via the `ext_pillar` option. Currently interfaces exist to gather external pillar data via hiera or via a shell command that sends yaml data to the terminal:

```
ext_pillar:
  - cmd_yaml: cat /etc/salt/ext.yaml
  - hiera: /etc/hirea.yaml
```

The initial external pillar interfaces and extra interfaces can be added to the file salt/pillar.py, it is planned to add more external pillar interfaces. If the need arises a new module loader interface will be created in the future to manage external pillar interfaces.

Single State Executions

The new state.single function allows for single states to be cleanly executed. This is a great tool for setting up a small group of states on a system or for testing out the behavior of single states:

```
salt '*' state.single user.present name=wade uid=2000
```

The test interface functions here as well, so changes can also be tested against as:

```
salt '*' state.single user.present name=wade uid=2000 test=True
```

New Tests

A few exciting new test interfaces have been added, the minion swarm allows not only testing of larger loads, but also allows users to see how Salt behaves with large groups of minions without having to create a large deployment.

Minion Swarm

The minion swarm test system allows for large groups of minions to be tested against easily without requiring large numbers of servers or virtual machines. The minion swarm creates as many minions as a system can handle and roots them in the /tmp directory and connects them to a master.

The benefit here is that we were able to replicate issues that happen only when there are large numbers of minions. A number of elusive bugs which were causing stability issues in masters and minions have since been hunted down. Bugs that used to take careful watch by users over several days can now be reliably replicated in minutes, and fixed in minutes.

Using the swarm is easy, make sure a master is up for the swarm to connect to, and then use the minionswarm.py script in the tests directory to spin up as many minions as you want. Remember, this is a fork bomb, don't spin up more than your hardware can handle!

```
python minionswarm.py -m 20 --master salt-master
```
Shell Tests

The new Shell testing system allows us to test the behavior of commands executed from a high level. This allows for the high level testing of salt runners and commands like salt-key.

Client Tests

Tests have been added to test the aspects of the client APIs and ensure that the client calls work, and that they manage passed data, in a desirable way.

30.3 Upcoming Release

30.3.1 Salt 3003 Release Notes - Codename Aluminium

Salt 3003 is an unreleased upcoming feature release.

New Features

SCRAM-SHA-256 support for PostgreSQL passwords

Support for SCRAM-SHA-256 password hashes has been added to the postgres_user.present and postgres_group.present states. This allows migration away from the insecure and deprecated previous storage methods.

Execution Module Changes

Changed

- The pkg module now supports tdnf used by VMWare Photon OS. As part of this change, VMWare Photon OS's os_family grain will now resolve as RedHat. This may require changes to existing uses of grains.filter_by
- The salt-run CLI now accepts --jid which allows scripting against it.

Salt Cloud

Added

- Firewall groups support to Vultr Salt Cloud provider
Fixed

- The Google Cloud Engine salt-cloud provider now requires `apache-libcloud>=2.5.0`. Service account authentication is broken on older versions.

See also:

Legacy salt-cloud release docs

See also:

Legacy salt-api release docs
31.1 Introduction

First, you need to configure the master file. This is because all module functions require either a configured api_key (for Cloud) or a ttp_user with a tpp_password and a base_url (for Trust Platform).

For Venafi Cloud:

```yaml
venafi:
  api_key: abcdef01-2345-6789-abcd-ef0123456789
  base_url: "https://cloud.venafi.example.com/" (optional)
```

If you don't have a Venafi Cloud account, you can sign up for one on the enrollment page.

For Venafi Platform:

```yaml
venafi:
  base_url: "https://tpp.example.com/
  tpp_user: admin
  tpp_password: "Str0ngPa$$w0rd"
  trust_bundle: "/opt/venafi/bundle.pem"
```

It is not common for the Venafi Platform's REST API (WebSDK) to be secured using a certificate issued by a publicly trusted CA, therefore establishing trust for that server certificate is a critical part of your configuration. Ideally this is done by obtaining the root CA certificate in the issuing chain in PEM format and copying that file to your Salt Master (e.g. /opt/venafi/bundle.pem). You then reference that file using the 'trust_bundle' parameter as shown above.

For the Venafi module to create keys and certificates it is necessary to enable external pillars. This is done by adding the following to the /etc/salt/master file:

```yaml
ext_pillar:
  - venafi: True
```

31.2 Runner Functions

31.2.1 request

This command is used to enroll a certificate from Venafi Cloud or Venafi Platform.

- **minion_id** ID of the minion for which the certificate is being issued. Required.
- **dns_name** DNS subject name for the certificate. Required if csr_path is not specified.
**csr_path** Full path name of certificate signing request file to enroll. Required if **dns_name** is not specified.

**zone** Venafi Cloud zone ID or Venafi Platform folder that specify key and certificate policy. Defaults to "Default".
- For Venafi Cloud, the Zone ID can be found in the Zone page for your Venafi Cloud project.

**org_unit** Business Unit, Department, etc. Do not specify if it does not apply.

**org** Exact legal name of your organization. Do not abbreviate.

**loc** City/locality where your organization is legally located.

**state** State or province where your organization is legally located. Must not be abbreviated.

**country** Country where your organization is legally located; two-letter ISO code.

**key_password** Password for encrypting the private key.

The syntax for requesting a new certificate with private key generation looks like this:

```
salt-run venafi.request minion.example.com
dns_name=www.example.com
  country=US state=California loc=Sacramento
  org="Company Name" org_unit=DevOps
  zone=Internet
  key_password=SecretSauce
```

And the syntax for requesting a new certificate using a previously generated CSR looks like this:

```
salt-run venafi.request minion.example.com
csr_path=/tmp/minion.req
  zone=Internet
```

**31.2.2 show_cert**

This command is used to show last issued certificate for domain.

**dns_name** DNS subject name of the certificate to look up.

```
salt-run venafi.show_cert www.example.com
```

**31.2.3 list_domain_cache**

This command lists domains that have been cached on this Salt Master.

```
salt-run venafi.list_domain_cache
```

**31.2.4 del_cached_domain**

This command deletes a domain from the Salt Master's cache.

**domains** A domain name, or a comma-separated list of domain names, to delete from this master's cache.

```
salt-run venafi.del_cached_domain www.example.com
```
31.3 Transfer certificate to a minion

To transfer a cached certificate to a minion, you can use Venafi pillar.

Example state (SLS) file:

```yaml
/etc/ssl/cert/www.example.com.crt:
  file.managed:
    - contents_pillar: venafi:www.example.com:cert
    - replace: True

/etc/ssl/cert/www.example.com.key:
  file.managed:
    - contents_pillar: venafi:www.example.com:pkey
    - replace: True

/etc/ssl/cert/www.example.com-chain.pem:
  file.managed:
    - contents_pillar: venafi:www.example.com:chain
    - replace: True
```
Auto-Order  The evaluation of states in the order that they are defined in a SLS file. See also: ordering.

Bootstrap  A stand-alone Salt project which can download and install a Salt master and/or a Salt minion onto a host. See also: salt-bootstrap.

Compound Matcher  A combination of many target definitions that can be combined with boolean operators. See also: targeting.

EAuth  Shorthand for ‘external authentication’. A system for calling to a system outside of Salt in order to authenticate users and determine if they are allowed to issue particular commands to Salt. See also: external auth.

Environment  A directory tree containing state files which can be applied to minions. See also: top file.

Execution Function  A Python function inside an Execution Module that may take arguments and performs specific system-management tasks. See also: the list of execution modules.

External Job Cache  An external data-store that can archive information about jobs that have been run. A default returner. See also: ext_job_cache, the list of returners.

Execution Module  A Python module that contains execution functions which directly perform various system-management tasks on a server. Salt ships with a number of execution modules but users can also write their own execution modules to perform specialized tasks. See also: the list of execution modules.

External Pillar  A module that accepts arbitrary arguments and returns a dictionary. The dictionary is automatically added to a pillar for a minion.

Event  A notice emitted onto an event bus. Events are often driven by requests for actions to occur on a minion or master and the results of those actions. See also: Salt Reactor.

File Server  A local or remote location for storing both Salt-specific files such as top files or SLS files as well as files that can be distributed to minions, such as system configuration files. See also: Salt's file server.

Grain  A key-value pair which contains a fact about a system, such as its hostname, network addresses. See also: targeting with grains.

Highdata  The data structure in a SLS file the represents a set of state declarations. See also: state layers.

Highstate  The collection of states to be applied to a system. See also: state layers.

Idempotent  An action that ensures the system is in a well-known state regardless of the system’s state before the action is applied. A corollary to this is that applying the action multiple times results in no changes to the system. State module functions should be idempotent. Some state module functions, such as cmd.run are not idempotent by default but can be made idempotent with the proper use of requisites such as unless and onlyif. For more information, see wikipedia.

Jinja  A templating language which allows variables and simple logic to be dynamically inserted into static text files when they are rendered. See also: Salt's Jinja documentation.
Job  The complete set of tasks to be performed by the execution of a Salt command are a single job. See also: jobs runner.

Job Cache  A storage location for job results, which may then be queried by a salt runner or an external system. May be local to a salt master or stored externally.

Job ID  A unique identifier to represent a given job. This is often shortened to JID.

Low State  The collection of processed states after requisites and order are evaluated. See also: state layers.

Master  A central Salt daemon from which commands can be issued to listening minions.

Masterless  A minion which does not require a Salt master to operate. All configuration is local. See also: file_client.

Master Tops  A system for the master that allows hooks into external systems to generate top file data.

Mine  A facility to collect arbitrary data from minions and store that data on the master. This data is then available to all other minions. (Sometimes referred to as Salt Mine.) See also: Salt Mine.

Minion  A server running a Salt minion daemon which can listen to commands from a master and perform the requested tasks. Generally, minions are servers which are to be controlled using Salt.

Minion ID  A globally unique identifier for a minion. See also: id.

Multi-Master  The ability for a minion to be actively connected to multiple Salt masters at the same time in high-availability environments.

Node Group  A pre-defined group of minions declared in the master configuration file. See also: targeting.

Outputer  A formatter for defining the characteristics of output data from a Salt command. See also: list of outputters.

Peer Communication  The ability for minions to communicate directly with other minions instead of brokering commands through the Salt master. See also: peer communication.

Pillar  A simple key-value store for user-defined data to be made available to a minion. Often used to store and distribute sensitive data to minions. See also: Pillar, list of Pillar modules.

Proxy Minion  A minion which can control devices that are unable to run a Salt minion locally, such as routers and switches.

PyDSL  A Pythonic domain-specific-language used as a Salt renderer. PyDSL can be used in cases where adding pure Python into SLS files is beneficial. See also: PyDSL.

Reactor  An interface for listening to events and defining actions that Salt should take upon receipt of given events. See also: Reactor.

Render Pipe  Allows SLS files to be rendered by multiple renderers, with each renderer receiving the output of the previous. See also: composing renderers.

Renderer  Responsible for translating a given data serialization format such as YAML or JSON into a Python data structure that can be consumed by Salt. See also: list of renderers.

Returner  Allows for the results of a Salt command to be sent to a given data-store such as a database or log file for archival. See also: list of returners.

Roster  A flat-file list of target hosts. (Currently only used by salt-ssh.)

Runner Module  A module containing a set of runner functions. See also: list of runner modules.

Runner Function  A function which is called by the salt-run command and executes on the master instead of on a minion. See also: Runner Module.

Salt Cloud  A suite of tools used to create and deploy systems on many hosted cloud providers. See also: salt-cloud.
Salt SSH  A configuration management and remote orchestration system that does not require that any software besides SSH be installed on systems to be controlled.

Salt Thin  A subset of the normal Salt distribution that does not include any transport routines. A Salt Thin bundle can be dropped onto a host and used directly without any requirement that the host be connected to a network. Used by Salt SSH. See also: thin runner.

Salt Virt  Used to manage the creation and deployment of virtual machines onto a set of host machines. Often used to create and deploy private clouds. See also: virt runner.

SLS Module  Contains a set of state declarations.

State Compiler  Translates highdata into lowdata.

State Declaration  A data structure which contains a unique ID and describes one or more states of a system such as ensuring that a package is installed or a user is defined. See also: highstate structure.

State Function  A function contained inside a state module which can manages the application of a particular state to a system. State functions frequently call out to one or more execution modules to perform a given task.

State Module  A module which contains a set of state functions. See also: list of state modules.

State Run  The application of a set of states on a set of systems.

Syndic  A forwarder which can relay messages between tiered masters. See also: Syndic.

Target  Minion(s) to which a given salt command will apply. See also: targeting.

Top File  Determines which SLS files should be applied to various systems and organizes those groups of systems into environments. See also: top file, list of master top modules.

__virtual__  A function in a module that is called on module load to determine whether or not the module should be available to a minion. This function commonly contains logic to determine if all requirements for a module are available, such as external libraries.

Worker  A master process which can send notices and receive replies from minions. See also: worker_threads.
SALT MODULE INDEX

salt.exceptions, 1834
salt.executors.direct_call, 1010
salt.executors.docker, 1010
salt.executors.splay, 1010
salt.grains.opts, 1012
salt.grains.philips_hue, 1012
salt.log.handlers.log4mongo_mod, 279
salt.modules.aix_group, 1026
salt.modules.aix_shadow, 1027
salt.modules.azurearm_compute, 1028
salt.modules.azurearm_dns, 1033
salt.modules.azurearm_network, 1037
salt.modules.boto3_sns, 1054
salt.modules.boto_cfn, 1057
salt.modules.boto_cloudfront, 1058
salt.modules.boto_datapipline, 1060
salt.modules.boto_dynamodb, 1061
salt.modules.boto_efs, 1063
salt.modules.boto_elasticache, 1067
salt.modules.boto_elbv2, 1071
salt.modules.boto_kinesis, 1073
salt.modules.boto_s3, 1076
salt.modules.boto_secgroupl, 1077
salt.modules.boto_sns, 1080
salt.modules.celery, 1082
salt.modules.ceph, 1082
salt.modules.ciscoconfparse_mod, 1090
salt.modules.datadog_api, 1095
salt.modules.debian_service, 1096
salt.modules.devinfo, 1098
salt.modules.devmap, 1099
salt.modules.drbd, 1099
salt.modules.elasticsearch, 1100
salt.modules.etcd_mod, 1112
salt.modules.ethtool, 1114
salt.modules.gcp_addon, 1116
salt.modules.gentoo_service, 1117
salt.modules.gentoolkitmod, 1119
salt.modules.glance, 1120
salt.modules.glanceng, 1122
salt.modules.google_chat, 1124
salt.modules.grafana4, 1124
salt.modules.group, 1012
salt.modules.haproxyconn, 1132
salt.modules.idem, 1134
salt.modules.influxdb08mod, 1135
salt.modules.infoblox, 1140
salt.modules.inspectlib, 1146
salt.modules.inspectlib.dbhandle, 1146
salt.modules.inspectlib.entities, 1147
salt.modules.inspectlib.exceptions, 1146
salt.modules.inspectlib.fsdb, 1147
salt.modules.introspect, 1149
salt.modules.ipmi, 1152
salt.modules.jboss7, 1164
salt.modules.jboss7_cli, 1168
salt.modules.kernelpkg, 1012
salt.modules.kernelpkg_linux_apt, 1169
salt.modules.keystoneng, 1171
salt.modules.keystore, 1178
salt.modules.libcloud_dns, 1179
salt.modules.localtime, 1182
salt.modules.logmod, 1184
salt.modules.mod_random, 1185
salt.modules.modjk, 1186
salt.modules.nagios, 1189
salt.modules.namecheap_domains, 1191
salt.modules.namecheap_domains_dns, 1193
salt.modules.namecheap_domains_ns, 1195
salt.modules.namecheap_users, 1196
salt.modules.netaddress, 1197
salt.modules.netbox, 1198
salt.modules.netbsservice, 1205
salt.modules.neutron, 1207
salt.modules.neutronng, 1228
salt.modules.nxos_api, 1233
salt.modules.nxos_upgrade, 1237
salt.modules.omapi, 1238
salt.modules.openscap, 1239
salt.modules.philips_hue, 1239
salt.modules.pkg, 1013
salt.modules.powerpath, 1239
salt.modules.purefa, 1239
salt.modules.purefb, 1246
salt.modules.pushbullet, 1249
salt.modules.pushover_notify, 1249
salt.modules.pyenv, 1250
salt.modules.rest_sample_utils, 1252
salt.modules.s3, 1252
salt.modules.s6, 1254
salt.modules.salt_version, 1256
salt.modules.scm_mod, 1257
salt.modules.sensorhat, 1258
salt.modules.service, 1013
salt.modules.servicenow, 1261
salt.modules.shadow, 1014
salt.modules.slackware_service, 1262
salt.modules.smf_service, 1265
salt.modules.splunk, 1267
salt.modules.sqlite3, 1268
salt.modules.statuspage, 1269
salt.modules.sysctl, 1014
salt.modules.telegram, 1276
salt.modules.temp, 1276
salt.modules.test_virtual, 1277
salt.modules.testinframod, 1277
salt.modules.twilio_notify, 1277
salt.modules.uptime, 1277
salt.modules.user, 1014
salt.modules.vault, 1278
salt.modules.vbox_guest, 1281
salt.modules.win_timezone, 1283
salt.modules.xml, 1285
salt.modules.xmpp, 1286
salt.modules.zk_concurrency, 1287
salt.modules.zookeeper, 1289

P
salt.proxy.cimc, 1296
salt.proxy.cisconso, 1298
salt.proxy.docker, 1302
salt.proxy.esxvm, 1303
salt.proxy.junos, 1306
salt.proxy.nxos_api, 1307

R
salt.renderers.aws_kms, 363
salt.renderers.cheetah, 364
salt.renderers.json5, 364

s
salt.sdb.confidant, 1316
salt.sdb.consul, 1317
salt.sdb.env, 1317
salt.sdb.etcd_db, 1318
salt.sdb.keyring_db, 1319
salt.sdb.memcached, 1320
salt.sdb.redis_sdb, 1320
salt.sdb.vault, 1321
salt.serializers.configparser, 1322
salt.serializers.plist, 1322
salt.serializers.toml, 1323
salt.states.acme, 1331
salt.states.alias, 1332
salt.states.alternatives, 1333
salt.states.apache_module, 1334
salt.states.apache_site, 1334
salt.states.artifactory, 1335
salt.states.at, 1336
salt.states.aws_sqs, 1337
salt.states.azurearm_compute, 1338
salt.states.azurearm_dns, 1341
salt.states.azurearm_network, 1345
salt.states.beacon, 1361
salt.states.boto3_elasticache, 1363
salt.states.boto_asg, 1372
salt.states.boto_cloudfront, 1378
salt.states.boto_cognitoidentity, 1379
salt.states.boto_dynamodb, 1381
salt.states.boto_elasticache, 1384
salt.states.boto_elbv2, 1388
salt.states.boto_iam_role, 1390
salt.states.boto_kinesis, 1392
salt.states.boto_kms, 1394
salt.states.boto_lc, 1395
salt.states.boto_secgroup, 1398
salt.states.boto_sns, 1401
salt.states.boto_vpc, 1402
salt.states.bower, 1412
salt.states.btrfs, 1413
salt.states.chef, 1414
salt.states.chronos_job, 1415
salt.states.cimc, 1416
salt.states.composer, 1418
salt.states.cryptdev, 1420
salt.states.csf, 1421
salt.states.cyg, 1423
salt.states.ddns, 1424
salt.states.debconfmod, 1425
salt.states.dellchassis, 1427
salt.states.disk, 1432
salt.states.dvs, 1433
salt.states.elasticsearch_index, 1436
salt.states.elasticsearch_index_templates, 1437
salt.states.elasticsearch_index_template, 1437
salt.states.esel ect, 1438
salt.states.esxdat acen ter, 1438
salt.states.etcd_mod, 1439
salt.states.ethtool, 1442
salt.states.firewall, 1443
salt.states.gem, 1444
salt.states.github, 1445
salt.states.glance, 1447
salt.states.glance_image, 1448
salt.states.gnomedesk top, 1448
salt.states.gpg, 1450
salt.states.grafana4_datasource, 1451
salt.states.grafana4_org, 1452
salt.states.grafana4_user, 1453
salt.states.grafana_datasource, 1454
salt.states.grains, 1455
salt.states.helm, 1458
salt.states.highstate_doc, 1460
salt.states.http, 1460
salt.states.idem, 1462
salt.states.ifttt, 1462
salt.states.incron, 1463
salt.states.influxdb08_database, 1464
salt.states.influxdb08_user, 1465
salt.states.influxdb_continuous_query, 1465
salt.states.influxdb_database, 1466
salt.states.influxdb_retention_policy, 1466
salt.states.influxdb_user, 1467
salt.states.infoblox_a, 1467
salt.states.infoblox_cname, 1468
salt.states.infoblox_host_record, 1469
salt.states.infoblox_range, 1470
salt.states.ini_manager, 1471
salt.states.ipmi, 1473
salt.states.ipset, 1475
salt.states.jboss7, 1477
salt.states.junos, 1479
salt.states.kernelpkg, 1486
salt.states.keyboard, 1488
salt.states.keystone, 1488
salt.states.keyston e_domain, 1491
salt.states.keystone_endpoint, 1492
salt.states.keystone_group, 1493
salt.states.keystone_project, 1494
salt.states.keystone_role, 1495
salt.states.keystone_role_grant, 1495
salt.states.keystone_service, 1496
salt.states.keystone_user, 1497
salt.states.keystore, 1498
salt.states.kmod, 1498
salt.states.kmod, 1498
salt.states.layman, 1503
salt.states.lsbap, 1503
salt.states.libcloud_dns, 1506
salt.states.libcloud_loadbalancer, 1508
salt.states.libcloud_storage, 1510
salt.states.locale, 1512
salt.states.logrotate, 1512
salt.states.loop, 1513
salt.states.lvs_server, 1514
salt.states.lvs_service, 1515
salt.states.lxc, 1516
salt.states.lxd, 1519
salt.states.lxd_container, 1520
salt.states.lxd_image, 1524
salt.states.lxd_profile, 1526
salt.states.mac_xattr, 1527
salt.states.makeconf, 1527
salt.states.marathon_app, 1528
salt.states.modjk, 1528
salt.states.modjk_worker, 1529
salt.states.mongodb_database, 1530
salt.states.mongodb_user, 1531
salt.states.monit, 1532
salt.states.mount, 1532
salt.states.mssql_database, 1536
salt.states.mssql_login, 1536
salt.states.mssql_role, 1537
salt.states.mssql_user, 1537
<table>
<thead>
<tr>
<th>Salt States Module</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ssh_auth</td>
<td>1604</td>
</tr>
<tr>
<td>stateconf</td>
<td>1606</td>
</tr>
<tr>
<td>status</td>
<td>1607</td>
</tr>
<tr>
<td>statuspage</td>
<td>1607</td>
</tr>
<tr>
<td>supervsord</td>
<td>1609</td>
</tr>
<tr>
<td>syslog_ng</td>
<td>1610</td>
</tr>
<tr>
<td>syslogr</td>
<td>1611</td>
</tr>
<tr>
<td>telemetry_alert</td>
<td>1612</td>
</tr>
<tr>
<td>testinfra_mod</td>
<td>1613</td>
</tr>
<tr>
<td>timezone</td>
<td>1613</td>
</tr>
<tr>
<td>tls</td>
<td>1613</td>
</tr>
<tr>
<td>tomcat</td>
<td>1613</td>
</tr>
<tr>
<td>trafficserver</td>
<td>1616</td>
</tr>
<tr>
<td>tuned</td>
<td>1618</td>
</tr>
<tr>
<td>vault</td>
<td>1619</td>
</tr>
<tr>
<td>vbox_guest</td>
<td>1620</td>
</tr>
<tr>
<td>victorops</td>
<td>1620</td>
</tr>
<tr>
<td>win_dacl</td>
<td>1621</td>
</tr>
<tr>
<td>win_dns_client</td>
<td>1623</td>
</tr>
<tr>
<td>win_firewall</td>
<td>1623</td>
</tr>
<tr>
<td>win_iis</td>
<td>1625</td>
</tr>
<tr>
<td>win_path</td>
<td>1632</td>
</tr>
<tr>
<td>win_pki</td>
<td>1633</td>
</tr>
<tr>
<td>win_snmp</td>
<td>1634</td>
</tr>
<tr>
<td>wordpress</td>
<td>1635</td>
</tr>
<tr>
<td>x509</td>
<td>1636</td>
</tr>
<tr>
<td>xml</td>
<td>1641</td>
</tr>
<tr>
<td>xmpp</td>
<td>1642</td>
</tr>
<tr>
<td>zabbix_action</td>
<td>1642</td>
</tr>
<tr>
<td>zabbix_hostgroup</td>
<td>1644</td>
</tr>
<tr>
<td>zabbix_mediatype</td>
<td>1644</td>
</tr>
<tr>
<td>zabbix_template</td>
<td>1645</td>
</tr>
<tr>
<td>zabbix_usergroup</td>
<td>1649</td>
</tr>
<tr>
<td>zabbix_usermacro</td>
<td>1650</td>
</tr>
<tr>
<td>zabbix_valuemap</td>
<td>1651</td>
</tr>
<tr>
<td>zcbuildout</td>
<td>1652</td>
</tr>
<tr>
<td>zenoss</td>
<td>1653</td>
</tr>
<tr>
<td>zfs</td>
<td>1654</td>
</tr>
<tr>
<td>zk_concurrency</td>
<td>1657</td>
</tr>
<tr>
<td>zookeeper</td>
<td>1658</td>
</tr>
<tr>
<td>zpool</td>
<td>1660</td>
</tr>
<tr>
<td>cobbler</td>
<td>1664</td>
</tr>
<tr>
<td>mongo</td>
<td>1664</td>
</tr>
<tr>
<td>reclass_adapter</td>
<td>1665</td>
</tr>
<tr>
<td>varstack_top</td>
<td>1666</td>
</tr>
<tr>
<td>aggregation</td>
<td>1832</td>
</tr>
</tbody>
</table>
Symbols

__virtual__, 3271

-A
salt-key command line option, 988

-C
salt command line option, 981
salt-cp command line option, 984

-D
salt-key command line option, 988

-E
salt command line option, 981
salt-cp command line option, 984
salt-ssh command line option, 997

-F
salt-cloud command line option, 722
salt-key command line option, 988

-G
salt command line option, 981
salt-cp command line option, 984

-H
salt-cloud command line option, 721

-I
salt command line option, 981

-L
salt command line option, 981
salt-cp command line option, 984
salt-key command line option, 988

-L LOCATION
salt-cloud command line option, 721

-N
salt command line option, 981
salt-cp command line option, 984

-P
salt-cloud command line option, 721
salt-key command line option, 988

-Q
salt-cloud command line option, 722

-R
salt command line option, 981
salt-cp command line option, 984
salt-key command line option, 988

-S
salt command line option, 981
salt-cloud command line option, 722

-T
salt command line option, 980

-W
salt-ssh command line option, 995

--accept=ACCEPT
salt-key command line option, 988

--accept-all
salt-key command line option, 988

--action=ACTION
salt-cloud command line option, 721

--args-separator=ARGS_SEPARATOR
salt command line option, 980

--askpass
salt-ssh command line option, 996

--assume-yes
salt-cloud command line option, 721
spm command line option, 1000

--async
salt command line option, 979

--auth=EAUTH
salt command line option, 980

--auto-create
salt-key command line option, 989

--batch-size=BATCH
salt command line option, 980

--chunked
salt-cp command line option, 984

--compound
salt command line option, 981

--config-dir=CONFIG_dir
salt command line option, 979
salt-api command line option, 975
salt-call command line option, 976
salt-cloud command line option, 720
salt-cp command line option, 983
salt-key command line option, 986
salt-master command line option, 989
salt-minion command line option, 991
salt-proxy command line option, 992
salt-run command line option, 993

3277
salt-ssh command line option, 994
salt-syndic command line option, 998
--daemon
salt-api command line option, 975
salt-master command line option, 990
salt-minion command line option, 991
salt-proxy command line option, 992
salt-syndic command line option, 998
--debug
salt-extend command line option, 985
--delete=DELETE
salt-key command line option, 988
--delete-all
salt-key command line option, 988
--description
salt-extend command line option, 985
--destroy
salt-cloud command line option, 721
--doc
salt command line option, 980
salt-call command line option, 977
salt-run command line option, 993
--documentation
salt command line option, 980
salt-call command line option, 977
salt-run command line option, 993
--extension
salt-extend command line option, 985
--extra-filerefs=EXTRA_FILEREFS
salt-ssh command line option, 995
--file-root=FILE_ROOT
salt-call command line option, 977
--finger=FINGER
salt-key command line option, 988
--finger-all
salt-key command line option, 988
--force
spm command line option, 1000
--force-color
salt command line option, 982
salt-call command line option, 978
salt-cloud command line option, 723
salt-key command line option, 987
salt-ssh command line option, 997
--full-query
salt-cloud command line option, 722
--function=<FUNC-NAME> <PROVIDER>
salt-cloud command line option, 721
--gen-keys=GEN_KEYS
salt-key command line option, 988
--gen-keys-dir=GEN_KEYS_DIR
salt-key command line option, 988
--gen-signature
salt-key command line option, 989
--grain
salt command line option, 981
salt-cp command line option, 984
--grain-pcre
salt command line option, 981
salt-cp command line option, 984
--grains
salt-call command line option, 977
--hard
salt-cloud command line option, 721
--hard-crash
salt-call command line option, 977
salt-key command line option, 986
salt-run command line option, 993
salt-ssh command line option, 994
--help
salt command line option, 979
salt-api command line option, 975
salt-call command line option, 976
salt-cloud command line option, 720
salt-cp command line option, 983
salt-key command line option, 986
salt-master command line option, 989
salt-minion command line option, 991
salt-proxy command line option, 992
salt-ssh command line option, 994
salt-syndic command line option, 998
--hide-timeout
salt command line option, 980
--id=ID
salt-call command line option, 977
--identities-only
salt-ssh command line option, 996
--ignore-host-keys
salt-ssh command line option, 996
--include-all
salt-key command line option, 988
--ipcidr
salt command line option, 981
--jid=JID
salt-ssh command line option, 995
--keep-tmp
salt-cloud command line option, 721
--key-deploy
salt-ssh command line option, 996
--keys=ARG
salt-key command line option, 997
--keys=KEYSIZE
salt-key command line option, 988
--list
salt command line option, 981
salt-cp command line option, 984
--list=ARG
salt-key command line option, 988
--list-all
salt-key command line option, 987
--list-images=LIST IMAGES	salt-cloud command line option, 722
--list-locations=LIST_LOCATIONS	salt-cloud command line option, 722
--list-profiles	salt-cloud command line option, 722
--list-providers	salt-cloud command line option, 722
--list-sizes=LIST_SIZES	salt-cloud command line option, 722
--local	salt-call command line option, 977
--location=LOCATION	salt-cloud command line option, 721
--log-file=LOG_FILE	salt command line option, 980
--log-level=LOG_LEVEL	salt command line option, 980
--make-token	salt command line option, 980
--map=MAP	salt-cloud command line option, 721
--master=MASTER	salt-call command line option, 977
--max-procs	salt-ssh command line option, 995
--metadata	salt-call command line option, 977
--min-extra-modules=MIN_EXTRA_MODS	salt-ssh command line option, 995
--module-dirs=MODULE_DIRS	salt-call command line option, 977
--name	salt-extend command line option, 985
--no-color	salt command line option, 982
--no-compression	salt-cp command line option, 984
--no-host-keys	salt-ssh command line option, 996
--no-merge	salt-extend command line option, 985
--nodegroup	salt-cp command line option, 984
--out	salt command line option, 981
--out-file=OUTPUT_FILE	salt command line option, 981
--out-indent OUTPUT_INDENT	salt command line option, 981
--out-file-append	salt command line option, 981
--out-append	salt command line option, 982
--out-run	salt-extend command line option, 985
--out-string	salt command line option, 982
--out-neighbor	salt-extend command line option, 985
--nodegroup	salt-cp command line option, 984
--nodegroup	salt-extend command line option, 985
--host	salt command line option, 984
--host	salt-call command line option, 978
--host	salt-cloud command line option, 723
--host	salt-key command line option, 987
--host	salt-ssh command line option, 997
--host	salt-extend command line option, 985
--host	salt-cp command line option, 984
--host	salt-cloud command line option, 723
--host	salt-key command line option, 987
--host	salt-ssh command line option, 997
--host	salt-extend command line option, 985
--host	salt-cp command line option, 984
--host	salt-cloud command line option, 723
--host	salt-key command line option, 987
--host	salt-ssh command line option, 997
--host	salt-extend command line option, 985
--host	salt-cp command line option, 984
--host	salt-cloud command line option, 723
--host	salt-key command line option, 987
--host	salt-ssh command line option, 997
--host	salt-extend command line option, 985
--host	salt-cp command line option, 984
--host	salt-cloud command line option, 723
--host	salt-key command line option, 987
--host	salt-ssh command line option, 997
--show-deploy-args
  salt-cloud command line option, 721
--signature-path=SIGNATURE_PATH
  salt-key command line option, 989
--skip-grains
  salt-call command line option, 977
--state-output=STATE_OUTPUT
  salt command line option, 982
  salt-cloud command line option, 723
  salt-key command line option, 987
  salt-ssh command line option, 997
--state-verbose=STATE_VERBOSE
  salt command line option, 982
  salt-call command line option, 978
  salt-cloud command line option, 723
  salt-key command line option, 987
  salt-ssh command line option, 997
--static
  salt command line option, 979
  salt-ssh command line option, 995
--subset=SUBSET
  salt command line option, 979
--sudo
  salt-ssh command line option, 996
--thin
  salt-ssh command line option, 995
--thin-extra-modules=THIN_EXTRA_MODS
  salt-ssh command line option, 995
--timeout=TIMEOUT
  salt command line option, 979
  salt-cp command line option, 983
  salt-run command line option, 993
--update-bootstrap
  salt-cloud command line option, 721
--user=SSH_USER
  salt-ssh command line option, 996
--user=USER
  salt-key command line option, 986
  salt-master command line option, 990
  salt-minion command line option, 991
  salt-proxy command line option, 992
  salt-ssh command line option, 994
-d  
salt command line option, 980
salt-api command line option, 975
salt-call command line option, 977
salt-cloud command line option, 721
salt-extend command line option, 985
salt-master command line option, 990
salt-minion command line option, 991
salt-proxy command line option, 992
salt-run command line option, 993
salt-syndic command line option, 998
-delete
salt-key command line option, 988
-e  
salt-extend command line option, 985
-f  
spm command line option, 1000
-FINGER
salt-key command line option, 988
-f <FUNC-NAME> <PROVIDER>
salt-cloud command line option, 721
-g  
salt-call command line option, 977
-h  
salt command line option, 979
salt-api command line option, 975
salt-call command line option, 976
salt-cloud command line option, 720
salt-cp command line option, 983
salt-key command line option, 986
salt-master command line option, 989
salt-minion command line option, 991
salt-proxy command line option, 992
salt-run command line option, 993
salt-ssh command line option, 994
salt-syndic command line option, 998
-i  
salt-ssh command line option, 996
-keep
salt-cloud command line option, 721
-l ARG
salt-key command line option, 988
-LEVEL
salt command line option, 980
salt-api command line option, 976
salt-call command line option, 978
salt-cp command line option, 984
salt-master command line option, 990
salt-minion command line option, 991
salt-proxy command line option, 992
salt-run command line option, 994
salt-ssh command line option, 996
salt-syndic command line option, 999
-spm command line option, 1000
-MAP
salt-cloud command line option, 721
-MODULE_DIRS
salt-call command line option, 977
-n  
salt-cp command line option, 984
salt-extend command line option, 985
-o  
salt-extend command line option, 985
-PRINT
salt-key command line option, 988
-PROFILE
salt-cloud command line option, 721
-q  
salt-key command line option, 986
-r  
salt-ssh command line option, 994
-REJECT
salt-key command line option, 988
-s  
salt command line option, 979
salt-ssh command line option, 995
-t  
salt-ssh command line option, 995
-TIMEOUT
salt command line option, 979
salt-cp command line option, 983
salt-run command line option, 993
-u  
salt-cloud command line option, 721
-USER
salt-key command line option, 986
salt-master command line option, 990
salt-minion command line option, 991
salt-proxy command line option, 992
salt-syndic command line option, 998
-v  
salt-ssh command line option, 995
-VERBOSE
salt command line option, 979
-w  
salt-ssh command line option, 995
-y  
salt-cloud command line option, 721
salt-key command line option, 987
spm command line option, 1000
absent() (in module salt.states.boto_dynamodb), 1383
absent() (in module salt.states.boto_elasticache), 1385
absent() (in module salt.states.boto_iam_role), 1391
absent() (in module salt.states.boto_kinesis), 1393
absent() (in module salt.states.boto_lc), 1396
absent() (in module salt.states.boto_secg group), 1399
absent() (in module salt.states.boto_sns), 1401
absent() (in module salt.states.boto_vpc), 1404
absent() (in module salt.states.chronos_job), 1415
absent() (in module salt.states.ddns), 1424
absent() (in module salt.states.elasticsearch_index), 1436
absent() (in module salt.states.elasticsearch_index_template), 1437
absent() (in module salt.states.github), 1445
absent() (in module salt.states.glance_image), 1448
absent() (in module salt.states.gpg), 1450
absent() (in module salt.states.grafana4_database), 1451
absent() (in module salt.states.grafana4_4_org), 1452
absent() (in module salt.states.grafana4_user), 1454
absent() (in module salt.states.grafana4_datasource), 1456
absent() (in module salt.states.grains), 1455
absent() (in module salt.states.incron), 1463
absent() (in module salt.states.influxdb08_database), 1464
absent() (in module salt.states.influxdb08_user), 1465
absent() (in module salt.states.influxdb_continuous_query), 1465
absent() (in module salt.states.influxdb_database), 1466
absent() (in module salt.states.influxdb_retention_policy), 1466
absent() (in module salt.states.influxdb_user), 1467
absent() (in module salt.states.infoblox_a), 1467
absent() (in module salt.states.infoblox_cname), 1468
absent() (in module salt.states.infoblox_host_record), 1469
absent() (in module salt.states.infoblox_range), 1470
absent() (in module salt.states.ipset), 1476
absent() (in module salt.states.keystone_domain), 1492
absent() (in module salt.states.keystone_endpoint), 1493
absent() (in module salt.states.keystone_group), 1493
absent() (in module salt.states.keystone_project), 1494
absent() (in module salt.states.keystone_role), 1495
absent() (in module salt.states.keystone_role_grant), 1496
absent() (in module salt.states.keystone_service), 1496
absent() (in module salt.states.keystone_user), 1497
absent() (in module salt.states.kmod), 1499
absent() (in module salt.states.layman), 1503
absent() (in module salt.states.lvs_server), 1514
absent() (in module salt.states.lvs_service), 1515
absent() (in module salt.states.lxc), 1516
absent() (in module salt.states.lxd_container), 1520
absent() (in module salt.states.lxd_image), 1524
absent() (in module salt.states.lxd_profile), 1526
absent() (in module salt.states.makeconf), 1527
absent() (in module salt.states.marathon_app), 1528
absent() (in module salt.states.mongodb_database), 1530
absent() (in module salt.states.mongodb_user), 1531
absent() (in module salt.states.mysql_database), 1536
absent() (in module salt.states.mysql_login), 1536
absent() (in module salt.states.mysql_role), 1537
absent() (in module salt.states.mysql_user), 1537
absent() (in module salt.states.mysql_database), 1538
absent() (in module salt.states.mysql_grants), 1539
absent() (in module salt.states.neutron_network), 1541
absent() (in module salt.states.neutron_secg group), 1542
absent() (in module salt.states.neutron_secgroup_rule), 1543
absent() (in module salt.states.neutron_subnet), 1544
absent() (in module salt.states.openstack_config), 1550
absent() (in module salt.states.opervswitch_port), 1550
absent() (in module salt.states.pagerduty_escalation_policy), 1551
absent() (in module salt.states.pagerduty_service), 1555
absent() (in module salt.states.pagerduty_user), 1556
absent() (in module salt.states.postgres_cluster), 1563
absent() (in module salt.states.postgres_database), 1563
absent() (in module salt.states.postgres_language), 1566
absent() (in module salt.states.postgres_privileges), 1568
absent() (in module salt.states.postgres_schema), 1570
absent() (in module salt.states.postgres_tablespace), 1571
absent() (in module salt.states.process), 1572
absent() (in module salt.states.pyen v), 1574
absent() (in module salt.states.pyrax_queues), 1575
absent() (in module salt.states.rbenv), 1577
absent() (in module salt.states.repository), 1579
absent() (in module salt.states.reg), 1580
absent() (in module salt.states.schedule), 1593
absent() (in module salt.states.splunk), 1600
absent() (in module salt.states.splunk_search), 1601
absent() (in module salt.states.ssh_auth), 1605
absent() (in module salt.states.sysrc), 1611
absent() (in module salt.states.telemetry_alert), 1612
absent() (in module salt.states.win_dac), 1622
absent() (in module salt.states.win_path), 1632
absent() (in module salt.states.zabbix_action), 1642
absent() (in module salt.states.zabbix_hostgroup), 1644
absent() (in module salt.states.zabbix_mediatype), 1644
absent() (in module salt.states.zabbix_template), 1645
absent() (in module salt.states.zabbix_usergroup), 1649
absent() (in module salt.states.zabbix_usermacro), 1650
absent() (in module salt.states.zpool), 1661
accept_vpc_peering_connection() (in module salt.states.vpc), 1404
acceptance_wait_time
conf/minion, 162
acceptance_wait_time_max
conf/minion, 162
acls() (in module salt.states.zookeeper), 1659
activate() (in module salt.states.modjk_worker), 1529
activate_pipeline()
    (in module salt.modules.boto_datapipeline), 1060
activated() (in module salt.states.wordpress), 1635
active()
    (in module salt.modules.kernelpkg_linux_apt), 1169
add()
    (in module salt.modules.omapi), 1026
add()
    (in module salt.modules.keystore), 1178
add()
    (in module salt.modules.supervisor), 1273
add()
    (salt.modules.win_timezone.TzMapper method), 1283
add_gateway_router()
    (in module salt.modules.neutron), 1208
add_host()
    (in module salt.modules.omapi), 1238
add_interface_router()
    (in module salt.modules.neutron), 1208
add_license()
    (in module salt.modules.powerpath), 1239
add_platform()
    (in module salt.runners.asam), 1310
add_pool_member()
    (in module salt.runners.f5), 1312
add_pool_member()
    (salt.runners.f5.F5Mgmt method), 1312
add_proxymodule_to_opts
    conf/proxy, 196
add_rule()
    (in module salt.states.win_firewall), 1623
added()
    (salt.states.cyg.DictDiffer method), 1423
addGroupsToKey()
    (in module salt.runners.spacewalk), 1314
additions_install()
    (in module salt.modules.vbox_guest), 1281
additions_installed()
    (in module salt.states.vbox_guest), 1620
additions_mount()
    (in module salt.modules.vbox_guest), 1282
additions_remove()
    (in module salt.modules.vbox_guest), 1282
additions_removed()
    (in module salt.states.vbox_guest), 1620
additions_umount()
    (in module salt.modules.vbox_guest), 1282
additions_version()
    (in module salt.modules.vbox_guest), 1282
adduser()
    (in module salt.modules.aix_group), 1026
agent_settings()
    (in module salt.states.win_snmp), 1634
Aggregate
    (class in salt.utils.aggregation), 1833
generate()
    (in module salt.utils.aggregation), 1833
alias_create()
    (in module salt.modules.elasticsearch), 1100
alias_delete()
    (in module salt.modules.elasticsearch), 1101
alias_exists()
    (in module salt.modules.elasticsearch), 1101
alias_get()
    (in module salt.modules.elasticsearch), 1101
alive()
    (in module salt.proxy.junos), 1306
allow_minion_key_revoke
    conf/master, 95
allow_missing_func()
    (in module salt.executors.docker), 1010
AllowedDir
    (class in salt.modules.inspectlib.entities), 1147
always_verify_signature
    conf/minion, 186
api()
    (in module salt.runners.spacewalk), 1314
api_logfile
    conf/master, 134
api_pidfile
    conf/master, 134
api_version, 835
apikey, 835
append()
    (in module salt.states.grains), 1456
append_dict_key_value
    jinja filters, 422
append_domain
    conf/minion, 155
append_minionid_config_dirs
    conf/minion, 156
apply_rollback()
    (in module salt.proxy.cisconso), 1301
arg()
    (in module salt.runners.test), 1315
ArgumentValueError, 1834
assign_private_ip, 836
auth_events
    conf/master, 82
auth_safemode
conf/minion, 163
auth_timeout
conf/minion, 163
auth_traps_enabled() (in module salt.states.win_snmp), 1634
auth_tries
conf/minion, 163
authenticate() (in module salt.states.lxd), 1519
AuthenticationError, 1834
AuthorizationError, 1834
authorize() (in module salt.modules.boto_secgroup), 1077
authorize_cache_security_group_ingress()
(in module salt.modules.boto_elasticache), 1067
auto() (in module salt.states.boto_elasticache), 1033
auto_accept
conf/master, 89
Auto-Order, 3269
autoreject_dynamic_modules
conf/minion, 178
autoreject_file
conf/master, 90
autosign_file
conf/master, 90
autosign_grains
conf/minion, 186
autosign_grains_dir
conf/master, 90
autosign_timeout
conf/master, 89
availability_set_absent()
(in module salt.states.azurearm_compute), 1339
availability_set_create_or_update()
(in module salt.states.azurearm_compute), 1028
availability_set_delete()
(in module salt.states.azurearm_compute), 1029
availability_set_get()
(in module salt.states.azurearm_compute), 1029
availability_set_present()
(in module salt.states.azurearm_compute), 1340
availability_sets_list()
(in module salt.states.azurearm_compute), 1029
availability_sets_list_available_sizes()
(in module salt.states.azurearm_compute), 1029
available() (in module salt.modules.debian_service), 1096
available() (in module salt.modules.gentoo_service), 1117
available() (in module salt.modules.linux_service), 1182
available() (in module salt.modules.netbsdservice), 1205
available() (in module salt.modules.s6), 1254
available() (in module salt.modules.slackware_service), 1262
available() (in module salt.modules.smf_service), 1265
avg
jinba filters, 415
azurefs_update_interval
conf/master, 120
B
backup_mode
conf/minion, 161
balancer_absent() (in module salt.states.libcloud_loadbalancer), 1508
balancer_present() (in module salt.states.libcloud_loadbalancer), 1509
base64_decode
jinba filters, 424
base64_encode
jinba filters, 424
baseline_snapshot() (in module salt.states.snapper), 1600
Best Practices, 562
bindings_exist() (in module salt.states.jboss7), 1477
blade_idrac() (in module salt.states.dellchassis), 1429
bookmark_absent() (in module salt.states.zfs), 1654
bookmark_present() (in module salt.states.zfs), 1654
boolean() (in module salt.states.selinux), 1595
boot_device() (in module salt.states.ipmi), 1473
Bootstrap, 3269
bootstrap() (in module salt.states.bower), 1412
bootstrap() (in module salt.states.npm), 1546
bounce_cluster() (in module salt.states.trafficserver), 1616
bounce_local() (in module salt.states.trafficserver), 1616
build
spm command line option, 1001
built() (in module salt.states.pkgbuild), 1559
bulk_activate() (in module salt.states.modjk), 1186
bulk_disable() (in module salt.states.modjk), 1186
bulk_recover() (in module salt.states.modjk), 1187
bulk_stop() (in module salt.states.modjk), 1187
C
cache
cnf/master, 76
cache_cleaned() (in module salt.states.npm), 1546
Index
conf/minion, 156
CommandExecutionError, 1834
CommandNotFoundError, 1834
commit() (in module salt.states.junos), 1480
commit_check() (in module salt.states.junos), 1480
community_names() (in module salt.states.win_snmp), 1635
compare_changes() (in module salt.modules.glanceng), 1122
compare_changes() (in module salt.modules.keystoneng), 1171
compare_changes() (in module salt.modules.neutronng), 1228
compare_dicts
   jinja filters, 417
compare_lists
   jinja filters, 417
Compound Matcher, 3269
conf/logging
   log_datefmt, 277
   log_datefmt_logfile, 278
   log_file, 277
   log_fmt_console, 278
   log_fmt_jid, 279
   log_fmt_logfile, 278
   log_granular_levels, 278
   log_level, 277
   log_level_logfile, 277
   log_levels, 276
conf/master
   allow_minion_key_revoke, 95
   api_logfile, 134
   api_pidfile, 134
   auth_events, 82
   auto_accept, 89
   autoreject_file, 90
   autosign_file, 90
   autosign_grains_dir, 90
   autosign_timeout, 89
   azurefs_update_interval, 120
   cache, 76
   cachedir, 73
   cli_summary, 75
   color, 75
   color_theme, 75
   conf_file, 71
   cython_enable, 97
   decrypt_pillar, 122
   decrypt_pillar_default, 122
   decrypt_pillar_delimiter, 122
   decrypt_pillar_renderers, 122
   default_include, 140
   eauth_acl_module, 92
   enable_gpu_grains, 75
   enforce_mine_cache, 79
   env_order, 98
   event_publisher_niceness, 85
   event_return, 77
   event_return_blacklist, 78
   event_return_niceness, 84
   event_return_queue, 78
   event_return_whitelist, 78
   ext_job_cache, 77
   ext_pillar, 123
   ext_pillar_first, 123
   extension_modules, 71
   external_auth, 91
   extmod_blacklist, 71
   extmod_whitelist, 71
   failhard, 101
   file_buffer_size, 105
   file_ignore_glob, 105
   file_ignore_regex, 105
   file_recv, 93
   file_recv_max_size, 93
   file_roots, 106
   fileservice_backend, 103
   fileservice_followsymlinks, 103
   fileservice_inoresymlinks, 103
   fileservice_limit_traversal, 103
   fileservice_list_cache_time, 104
   fileservice_update_niceness, 84
   fileservice_verify_config, 104
   gather_job_timeout, 73
   git_pillar_base, 124
   git_pillar_branch, 125
   git_pillar_env, 125
   git_pillar_global_lock, 126
   git_pillar_includes, 127
   git_pillar_insecure_auth, 128
   git_pillar_passphrase, 129
   git_pillar_password, 128
   git_pillar_privkey, 128
   git_pillar_provider, 124
   git_pillar_pubkey, 128
   git_pillarRefspecs, 129
   git_pillar_root, 126
   git_pillar_ssl_verify, 126
   git_pillar_user, 128
   git_pillar_verify_config, 129
   gitfs_base, 108
   gitfs_disable_saltenv_mapping, 109
   gitfs_global_lock, 110
   gitfs_insecure_auth, 111
   gitfs_mountpoint, 108
   gitfs_passphrase, 112
   gitfs_password, 111
   gitfs_privkey, 112

Index 3287
gitfs_provider, 107
master_stats, 81

gitfs_pubkey, 112
master_stats_event_iter, 81

gitfs_ref_types, 109
master_top, 98

gitfs_refspecs, 113
master_use_pubkey_signature, 94

master_root, 108
max_event_size, 78

master_saltenv, 109
max_minions, 79

master_ssl_verify, 107
max_open_files, 95

master_ref_types, 109
memcache_debug, 77

master_refspecs, 113
memcache_expire_seconds, 76

master_remotes, 107
memcache_full_cleanup, 77

master_root, 108
memcache_max_items, 77

master_saltenv, 109
minion_data_cache, 76

master_saltenv_blacklist, 110
minion_data_cache_events, 82

master_saltenv_whitelist, 110
minionfs_blacklist, 119

master_ssl_verify, 107
minionfs_env, 119

http_connect_timeout, 83
minionfs_mountpoint, 119

http_request_timeout, 83
minionfs_update_interval, 120

include, 140
minionfs_whitelist, 119

interface, 69
module_dirs, 72

ipv6, 69
mworker_niceness, 84

jinja_env, 99
mworker_queue_niceness, 84

jinja_lstrip_blocks, 101
nodegroups, 139

jinja_sls_env, 99
on_demand_ext_pillar, 121

jinja_trim_blocks, 100
open_mode, 89

job_cache, 76
optimization_order, 95

job_cache_store_endtime, 79
order_masters, 134

keep_acl_in_token, 92
output, 74

keep_jobs, 73
output_file, 74

keep_size, 89
outputter_dirs, 74

log_datefmt, 138
peer, 136

log_datefmt_logfile, 138
peer_run, 137

log_file, 137
permissive_pki_access, 90

log_fmt_console, 138
pidfile, 70

log_fmt_logfile, 138
pillar_cache, 132

log_file, 137
pillar_cache_backend, 132

log_fmt_console, 138
pillar_cache_ttl, 132

log_level, 137
pillar_includes_override_sls, 131

log_level, 137
pillar_merge_lists, 131

log_rotate_backup_count, 139
pillar_roots, 121

log_rotate_max_bytes, 139
pillar_safe_render_error, 123

loop_interval, 74
pillar_raise_on_missing, 124

maintenace_niceness, 84
pillar_roots, 121

master_id, 70
pillar_safe_render_error, 123

master_job_cache, 79
pillar_source_merging_strategy, 130

master_pubkey_signature, 93
dillarenv_from_saltenv, 124

master_roots, 105
ping_on_rotate, 80

master_sign_key_name, 93
pki_dir, 71

master_sign_pubkey, 93
presence_events, 80

minion_cache, 94
preserve_minion_cache, 94

memcache_debug, 77
pub_hwm, 96

memcache_expire_seconds, 76
pub_server_niceness, 83

memcache_full_cleanup, 77
publish_port, 69

memcache_max_items, 77
publish_session, 94

memcache_DEBUG, 77
publisher_acl, 91

memcache_full_cleanup, 77
publisher_acl_blacklist, 91

memcache_max_items, 77
publish_session, 94
range_server, reactor, reactor niceness, reactor refresh interval, reactor worker hwm, reactor worker threads, renderer, req_server niceness, rest timeout, ret_port, root dir, roots update interval, roster, roster defaults, roster file, roster_workers, rotate aes key, runner dirs, s3fs update interval, show jid, show timeout, skip grains, sock dir, sock pool size, ssh identities only, ssh_list nodegroups, ssh log file, ssh minion opts, ssh passwd, ssh port, ssh priv passwd, ssh run pre_flight, ssh scan ports, ssh scan timeout, ssh sudo, ssh timeout, ssh use home key, ssh user, ssl, state aggregate, state events, state output, state output diff, state output profile, state top, state top saltenv, state verbose, sudo acl, svnfs branches, svnfs mountpoint, svnfs remotes, svnfs root, svnfs saltenv blacklist, svnfs saltenv whitelist, svnfs_tags, svnfs_trunk, svnfs_update_interval, syndic failover, syndic forward all events, syndic log file, syndic_master, syndic_master_port, syndic_pidfile, syndic_wait, tcp keepalive, tcp keepalive_cnt, tcp keepalive_intvl, tcp_master_pub_port, tcp_master_publish_pull, tcp_master_pull_port, tcp_master_workers, thin_extra_mods, timeout, token expire, token expire user override, top file merging strategy, transport, transport opts, user, userdata_template, verify_env, win_gitrepos, win_repo, winrepo_branch, winrepo_cachefile, winrepo_dir, winrepo_dir_ng, winrepo_insecure_auth, winrepo_insecure_auth, winrepo_passphrase, winrepo_password, winrepo_privkey, winrepo_provider, winrepo_pubkey, winrepo_refspecs, winrepo_remotes, winrepo_remotes_ng, winrepo_ssl_verify, winrepo_user, worker threads, yaml utf8, zmq backlog

Index
append_domain, 155
append_minionid_config_dirs, 156
auth_safemode, 163
auth_timeout, 163
auth_tries, 163
autoload_dynamic_modules, 178
autosign_grains, 186
backup_mode, 161
cache_jobs, 157
cache_sreqs, 166
cachedir, 156
clean_dynamic_modules, 178
cmd_blacklist_glob, 186
cmd_whitelist_glob, 186
color, 148
color_theme, 156
conf_file, 154
cython_enable, 172
decrypt_pillar, 181
decrypt_pillar_default, 182
decrypt_pillar_delimiter, 182
decrypt_pillar_renderers, 182
default_include, 191
default_top, 175
disable_modules, 170
disable_returners, 170
docker.compare_container_networks, 169
docker.update_mine, 169
enable_fqdns_grains, 161
enable_gpu_grains, 161
enable_legacy_startup_events, 149
enable_whitelist_modules, 170
enable_zip_modules, 172
env_order, 175
environment, 178
extmod_blacklist, 173
extmod_whitelist, 173
failhard, 191
fibre_channel_grains, 159
file_client, 179
file_recv_max_size, 183
file_roots, 179
fileserver_followsymlinks, 180
fileserver_ignoresymlinks, 180
fileserver_limit_traversal, 180
grains, 157
grains_blacklist, 157
grains_cache, 158
grains_cache_expiration, 158
grains_deep_merge, 158
grains_dirs, 171
grains_refresh_every, 159
hash_type, 180
http_connect_timeout, 167
http_request_timeout, 167
id, 155
include, 192
ipc_mode, 166
ipv6, 148
iscsi_grains, 159
keysize, 185
lock_saltenv, 178
log_datefmt, 189
log_datefmt_logfile, 189
log_file, 189
log_fmt_consoled, 189
log_fmt_logfile, 190
log_granular_levels, 190
log_level, 189
log_level_logfile, 189
log_rotate_backup_count, 190
log_rotate_max_bytes, 190
loop_interval, 165
master, 147
master_alive_interval, 150
master_failback, 150
master_failback_interval, 150
master_finger, 185
master_port, 152
master_shuffle, 150
master_sign_key_name, 185
master_tops_first, 148
master_tries, 162
master_type, 149
master_uri_format, 148
max_event_size, 149
metadata_server_grains, 159
mine_enabled, 160
mine_interval, 160
mine_return_job, 160
minion_id_caching, 155
minion_id_lowercase, 156
minion_id_remove_domain, 156
minion_id_remove_domain, 156
minion_pillar_cache, 183
module_dirs, 171
modules_max_memory, 173
multiprocessing, 188
no_proxy, 168
nvme_grains, 160
on_demand_ext_pillar, 181
open_mode, 185
optimization_order, 170
outputter_dirs, 161
pass_to_ext_pillars, 184
permissive_pki_access, 185
pillar_roots, 181
pillar_raise_on_missing, 183
pillar_roots, 181
pillarenv, 182
pillarenv_from_saltenv, 183
ping_interval, 164
pki_dir, 154
process_count_max, 188
providers, 172
proxy_host, 167
proxy_password, 168
proxy_port, 168
proxy_username, 168
pub_ret, 165
publish_port, 152
random_master, 151
random_reauth_delay, 162
random_startup_delay, 164
reactor, 187
reactor_refresh_interval, 187
reactor_worker_hwm, 188
reactor_worker_threads, 188
recon_default, 164
recon_max, 164
recon_randomize, 165
rejected_retry, 162
render_dirs, 172
renderer, 176
retry_dns, 151
retry_dns_count, 151
return_retry_timer, 165
return_retry_timer_max, 165
return_retry_tries, 166
returner_dirs, 171
root_dir, 154
saltenv, 178
sls_list, 175
snapper_states, 178
snapper_states_config, 179
sock_dir, 161
source_address, 153
source_interface_name, 152
source_publish_port, 153
source_ret_port, 153
ssl, 187
start_event_grains, 176
startup_states, 175
state_aggregate, 176
state_output, 177
state_output_diff, 177
state_output_profile, 177
state_top, 174
state_top_saltenv, 174
state_verbose, 177
states_dirs, 171
sudo_user, 154
syndic_finger, 167
tcp_keepalive, 192
tcp_keepalive_cnt, 192
tcp_keepalive_idle, 193
tcp_keepalive_intvl, 193
tcp_pub_port, 166
tcp_pull_port, 166
test, 176
top_file, 176
top_file_merging_strategy, 174
transport, 167
update_restart_services, 193
update_url, 193
use_master_when_local, 179
user, 153
utils_dirs, 172
verify_master_pubkey_sign, 185
win_gitrepos, 195
win_repo, 194
win_repo_cachefile, 195
winrepo_cache_expire_max, 194
winrepo_cache_expire_min, 194
winrepo_cachefile, 195
winrepo_dir, 194
winrepo_dir_ng, 195
winrepo_remotes, 195
winrepo_remotes_ng, 195
winrepo_source_dir, 194
zmq_monitor, 190
conf/proxy
add_proxymodule_to_opts, 196
proxy_always_alive, 197
proxy_keep_alive, 197
proxy_keep_alive_interval, 197
proxy_merge_grains_in_module, 196
conf_file
conf/master, 71
conf/minion, 154
config() (in module salt.modules.nxos_api), 1234
config() (in module salt.states.chronos_job), 1415
config() (in module salt.states.marathon_app), 1528
config() (in module salt.states.syslog_ng), 1611
config() (in module salt.states.trafficserver), 1616
config_absent() (in module salt.states.nxos), 1547
config_managed() (in module salt.states.lxd), 1520
config_present() (in module salt.states.nxos), 1547
configmap_absent() (in module
salt.states.kubernetes), 1500
configmap_present() (in module salt.states.kubernetes), 1501
configure_proxy() (in module salt.states.salt_proxy), 1588
conn() (in module salt.proxy.junos), 1306
container_absent() (in module
salt.states.libcloud_storage), 1510

Index 3291
create_device_role() (in module salt.modules.jboss7), 1199
create_device() (in module salt.modules.netbox), 1199
create_datasource() (in module salt.modules.netbox), 1199
create_cname() (in module salt.modules.netbox), 1199
create_circuit_type() (in module salt.modules.netbox), 1199
create_circuit_termination() (in module salt.modules.netbox), 1199
create_circuit_provider() (in module salt.modules.netbox), 1199
create_circuit() (in module salt.modules.netbox), 1199
create_cert_binding() (in module salt.modules.netbox), 1199
create_cache_security_group() (in module salt.modules.netbox), 1199
create_binding() (in module salt.modules.netbox), 1199
create_ipsec_site_connection() (in module salt.modules.netbox), 1199
create_inventory_item() (in module salt.modules.netbox), 1199
create_interface() (in module salt.modules.netbox), 1199
create_ipsec_policy() (in module salt.modules.netbox), 1199
create_multi() (in module salt.modules.netbox), 1199
create_network() (in module salt.modules.netbox), 1199
create_object() (in module salt.modules.netbox), 1199
create_org() (in module salt.modules.netbox), 1199
create_org_user() (in module salt.modules.netbox), 1199
create_pipeline() (in module salt.modules.netbox), 1199
create_platform() (in module salt.modules.netbox), 1199
create_pool() (in module salt.runners.f5), 1200
create_pool() (in module salt.runners.f5), 1200
create_port() (in module salt.runners.f5), 1200
create_cert_binding() (in module salt.runners.f5), 1200
create_cache_security_group() (in module salt.runners.f5), 1200
create_binding() (in module salt.runners.f5), 1200
create_ipsec_site_connection() (in module salt.runners.f5), 1200
create_inventory_item() (in module salt.runners.f5), 1200
create_interface() (in module salt.runners.f5), 1200
create_ipsec_policy() (in module salt.runners.f5), 1200
create_multi() (in module salt.runners.f5), 1200
create_network() (in module salt.runners.f5), 1200
create_object() (in module salt.runners.f5), 1200
create_org() (in module salt.runners.f5), 1200
create_org_user() (in module salt.runners.f5), 1200
create_pipeline() (in module salt.runners.f5), 1200
create_platform() (in module salt.runners.f5), 1200
create_pool() (in module salt.runners.f5), 1200
create_pool() (in module salt.runners.f5), 1200
create_port() (in module salt.runners.f5), 1200
create_cert_binding() (in module salt.runners.f5), 1200
create_cache_security_group() (in module salt.runners.f5), 1200
create_binding() (in module salt.runners.f5), 1200
create_ipsec_site_connection() (in module salt.runners.f5), 1200
create_inventory_item() (in module salt.runners.f5), 1200
create_interface() (in module salt.runners.f5), 1200
create_ipsec_policy() (in module salt.runners.f5), 1200
create_multi() (in module salt.runners.f5), 1200
create_network() (in module salt.runners.f5), 1200
create_object() (in module salt.runners.f5), 1200
create_org() (in module salt.runners.f5), 1200
create_org_user() (in module salt.runners.f5), 1200
create_pipeline() (in module salt.runners.f5), 1200
create_platform() (in module salt.runners.f5), 1200
create_pool() (in module salt.runners.f5), 1200
create_pool() (in module salt.runners.f5), 1200
create_port() (in module salt.runners.f5), 1200
create_cert_binding() (in module salt.runners.f5), 1200
create_cache_security_group() (in module salt.runners.f5), 1200
create_binding() (in module salt.runners.f5), 1200
create_ipsec_site_connection() (in module salt.runners.f5), 1200
create_inventory_item() (in module salt.runners.f5), 1200
create_interface() (in module salt.runners.f5), 1200
create_ipsec_policy() (in module salt.runners.f5), 1200
create_multi() (in module salt.runners.f5), 1200
create_network() (in module salt.runners.f5), 1200
create_object() (in module salt.runners.f5), 1200
create_org() (in module salt.runners.f5), 1200
create_org_user() (in module salt.runners.f5), 1200
create_pipeline() (in module salt.runners.f5), 1200
create_platform() (in module salt.runners.f5), 1200
create_pool() (in module salt.runners.f5), 1200
create_pool() (in module salt.runners.f5), 1200
create_port() (in module salt.runners.f5), 1200
create_record() (in module salt.modules.libcloud_dns), 1179
create_replication_group() (in module salt.modules.boto_elasticache), 1068
create_repo
  spm command line option, 1001
create_router() (in module salt.modules.neutron), 1212
create_security_group() (in module salt.modules.neutron), 1212
create_security_group_rule() (in module salt.modules.neutron), 1212
create_simple_binding() (in module salt.modules.jboss7), 1165
create_site() (in module salt.modules.netbox), 1201
create_stream() (in module salt.modules.boto_kinesis), 1074
create_subnet() (in module salt.modules.neutron), 1213
create_subnet_group() (in module salt.modules.neutron), 1212
create_table() (in module salt.modules.boto_dynamodb), 1062
create_table_from_object() (salt.modules.inspectlib.fsdb.CsvDB method), 1146
create_tags() (in module salt.modules.boto_efs), 1065
create_target_group() (in module salt.modules.boto_elbv2), 1071
create_target_group() (in module salt.modules.boto_elbv2), 1388
create_topic() (in module salt.modules.boto3_sns), 1054
create_update_dashboard() (in module salt.modules.grafana4), 1125
create_user() (in module salt.modules.grafana4), 1125
create_user() (in module salt.modules.ipmi), 1152
create_vdir() (in module salt.modules.splunk), 1267
create_vpn_service() (in module salt.modules.neutron), 1213
create_vservice() (in module salt.runners.f5), 1313
create_vservice() (salt.runners.f5.FSMgmt method), 1312
create_zone() (in module salt.modules.libcloud_dns), 1180
creategroup() (in module salt.states.wordpress), 1368
critical() (in module salt.states.x509), 1386
crl_managed() (in module salt.states.x509), 1639
csr_managed() (in module salt.states.x509), 1640
create_user() (in module salt.modules.grafana4), 1125
create_user() (in module salt.modules.ipmi), 1152
custom() (in module salt.modules.supervisord), 1273
custom-execution-modules
  jinja filters, 436
custom-jinja-filters
  jinja filters, 437
cython_enable
    conf/master, 97
    conf/minion, 172
dBHandle (class in salt.modules.inspectlib.dbhandle), 1146
DBHandleBase (class in salt.modules.inspectlib.dbhandle), 1146
deactivated() (in module salt.states.wordpress), 1635
debug() (in module salt.states.supervisord), 1609
debugging
  jinja filters, 435
decrease_stream_retention_period() (in module salt.modules.boto_kinesis), 1074
decrypt_pillar
  conf/master, 122
  conf/minion, 181
decrypt_pillar_default
  conf/master, 122
  conf/minion, 182
decrypt_pillar_delimiter
  conf/master, 122
  conf/minion, 182
decrypt_pillar_renderers
  conf/master, 122
  conf/minion, 182
default() (in module salt.modules.pyenv), 1250
DEFAULT_CACHE_PATH
  (salt.modules.inspectlib.EnvLoader attribute), 1149
<table>
<thead>
<tr>
<th>Function</th>
<th>Module</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>delete_host()</td>
<td>salt.modules.neutron</td>
<td>1214</td>
</tr>
<tr>
<td>delete_firewall_rule()</td>
<td>salt.modules.neutron</td>
<td>1214</td>
</tr>
<tr>
<td>delete_file_system()</td>
<td>salt.modules.neutron</td>
<td>1214</td>
</tr>
<tr>
<td>delete_dashboard()</td>
<td>salt.modules.neutron</td>
<td>1214</td>
</tr>
<tr>
<td>delete_cname()</td>
<td>salt.modules.namecheapDomains</td>
<td>1214</td>
</tr>
<tr>
<td>delete_invoice_item()</td>
<td>salt.states.pbm</td>
<td>1557</td>
</tr>
<tr>
<td>delete_top()</td>
<td>salt.states.pbm</td>
<td>1557</td>
</tr>
<tr>
<td>delete_vsan_policy_configured()</td>
<td>salt.states.pbm</td>
<td>1557</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.aix_group</td>
<td>1026</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.boto_cfn</td>
<td>1057</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.boto_dynamodb</td>
<td>1062</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.boto_efs</td>
<td>1068</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.boto_elasticache</td>
<td>1068</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.boto_efs</td>
<td>1078</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.boto_sns</td>
<td>1081</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.namecheap_domains</td>
<td>1195</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.s3</td>
<td>1253</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.statuspage</td>
<td>1270</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.uptime</td>
<td>1278</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.zookeeper</td>
<td>1290</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.etcd_db</td>
<td>1319</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.redis_sdb</td>
<td>1321</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.mac_xattr</td>
<td>1527</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.statuspage</td>
<td>1607</td>
</tr>
<tr>
<td>delete()</td>
<td>salt.modules.inspectlib.fsdb.CsvDB</td>
<td>1147</td>
</tr>
<tr>
<td>delete_a()</td>
<td>salt.modules.infoblox</td>
<td>1142</td>
</tr>
<tr>
<td>delete_cache_security_group()</td>
<td>salt.modules.boto_elasticache</td>
<td>1069</td>
</tr>
<tr>
<td>delete_cname()</td>
<td>salt.modules.namecheapDomains</td>
<td>1142</td>
</tr>
<tr>
<td>delete_dashboard()</td>
<td>salt.modules.grafana4</td>
<td>1126</td>
</tr>
<tr>
<td>delete_datasource()</td>
<td>salt.modules.grafana4</td>
<td>1126</td>
</tr>
<tr>
<td>delete_file_system()</td>
<td>salt.modules.boto_efs</td>
<td>1065</td>
</tr>
<tr>
<td>delete_firewall_rule()</td>
<td>salt.modules.neutron</td>
<td>1214</td>
</tr>
<tr>
<td>delete_floatingip()</td>
<td>salt.modules.neutron</td>
<td>1214</td>
</tr>
<tr>
<td>delete_host()</td>
<td>salt.modules.infoblox</td>
<td>1142</td>
</tr>
<tr>
<td>delete_host()</td>
<td>salt.modules.omapi</td>
<td>1238</td>
</tr>
<tr>
<td>delete_interface()</td>
<td>salt.modules.netbox</td>
<td>1201</td>
</tr>
<tr>
<td>delete_inventory_item()</td>
<td>salt.modules.netbox</td>
<td>1201</td>
</tr>
<tr>
<td>delete_ipaddress()</td>
<td>salt.modules.netbox</td>
<td>1202</td>
</tr>
<tr>
<td>delete_ipsec_policy()</td>
<td>salt.modules.neutron</td>
<td>1214</td>
</tr>
<tr>
<td>delete_ipsec_site_connection()</td>
<td>salt.modules.neutron</td>
<td>1214</td>
</tr>
<tr>
<td>delete_ipsec_policy()</td>
<td>salt.modules.neutron</td>
<td>1215</td>
</tr>
<tr>
<td>delete_ipv4_range()</td>
<td>salt.modules.infoblox</td>
<td>1142</td>
</tr>
<tr>
<td>delete_mount_target()</td>
<td>salt.modules.boto_efs</td>
<td>1065</td>
</tr>
<tr>
<td>delete_network()</td>
<td>salt.modules.neutron</td>
<td>1215</td>
</tr>
<tr>
<td>delete_object()</td>
<td>salt.modules.infoblox</td>
<td>1142</td>
</tr>
<tr>
<td>delete_org()</td>
<td>salt.modules.grafana4</td>
<td>1126</td>
</tr>
<tr>
<td>delete_org_user()</td>
<td>salt.modules.grafana4</td>
<td>1126</td>
</tr>
<tr>
<td>delete_pipeline()</td>
<td>salt.modules.boto_datapipeline</td>
<td>1060</td>
</tr>
<tr>
<td>delete_port()</td>
<td>salt.modules.neutron</td>
<td>1215</td>
</tr>
<tr>
<td>delete_quota()</td>
<td>salt.modules.neutron</td>
<td>1215</td>
</tr>
<tr>
<td>delete_record()</td>
<td>salt.modules.libcloud_dns</td>
<td>1180</td>
</tr>
<tr>
<td>delete_record()</td>
<td>salt.modules.servicenow</td>
<td>1261</td>
</tr>
<tr>
<td>delete_replication_group()</td>
<td>salt.modules.boto_elasticache</td>
<td>1069</td>
</tr>
<tr>
<td>delete_router()</td>
<td>salt.modules.neutron</td>
<td>1216</td>
</tr>
<tr>
<td>delete_secret()</td>
<td>salt.modules.vault</td>
<td>1280</td>
</tr>
<tr>
<td>delete_security_group()</td>
<td>salt.modules.neutron</td>
<td>1216</td>
</tr>
<tr>
<td>delete_security_group_rule()</td>
<td>salt.modules.neutron</td>
<td>1216</td>
</tr>
<tr>
<td>delete_stream()</td>
<td>salt.modules.boto_kinesis</td>
<td>1074</td>
</tr>
<tr>
<td>delete_subnet()</td>
<td>salt.modules.neutron</td>
<td>1216</td>
</tr>
<tr>
<td>delete_subnet_group()</td>
<td>salt.modules.boto_elasticache</td>
<td>1069</td>
</tr>
<tr>
<td>delete_tags()</td>
<td>salt.modules.boto_efs</td>
<td>1065</td>
</tr>
<tr>
<td>delete_tags()</td>
<td>salt.modules.boto_efs</td>
<td>1078</td>
</tr>
<tr>
<td>delete_target_group()</td>
<td>salt.modules.boto_efs</td>
<td>1078</td>
</tr>
</tbody>
</table>
enable_enhanced_monitoring()
    conf/minion, 161
enable_server()
    conf/minion, 149
enable_gpu_grains
    conf/master, 75
    conf/minion, 161
enable_legacy_startup_events
    conf/minion, 149
dns_exists()
    (in module salt.states.win_dns_client), 1623
do()
    (in module salt.modules.pyenv), 1250
do_with_python()
    (in module salt.modules.pyenv), 1250
docker.compare_container_networks
    conf/minion, 169
docker.update_mine
    conf/minion, 169
document_create()
    (in module salt.modules.elasticsearch), 1102
document_delete()
    (in module salt.modules.elasticsearch), 1103
document_exists()
    (in module salt.modules.elasticsearch), 1103
document_get()
    (in module salt.modules.elasticsearch), 1103
domain_create()
    (in module salt.modules.keystoneng), 1171
domain_delete()
    (in module salt.modules.keystoneng), 1171
domain_get()
    (in module salt.modules.keystoneng), 1171
domain_list()
    (in module salt.modules.keystoneng), 1172
domain_search()
    (in module salt.modules.keystoneng), 1172
domain_update()
    (in module salt.modules.keystoneng), 1172
downloaded()
    (in module salt.states.artifactory), 1335
downloaded()
    (in module salt.states.nexus), 1545
dump_config()
    (in module salt.modules.modjk), 1187
dvs_configured()
    (in module salt.states.dvs), 1436

e
E
EAuth, 3269
Eauth_acl_module
    conf/master, 92
EauthAuthenticationError, 1834
eclean_dist()
    (in module salt.modules.gentoolkitmod), 1119
eclean_pkg()
    (in module salt.modules.gentoolkitmod), 1119
edited_conf()
    (in module salt.states.lxc), 1516
enable()
    (in module salt.modules.debian_service), 1097
enable()
    (in module salt.modules.gentoo_service), 1117
enable()
    (in module salt.modules.netbsdservice), 1205
enable()
    (in module salt.modules.slackware_service), 1263
enable()
    (in module salt.modules.smf_service), 1265
enable_server()
    (in module salt.modulesAceptarConfig), 1132
enable_zip_modules
    conf/minion, 172
enable_at莫斯_modules
    conf/minion, 170
enable_server()
    (in module salt.modules.haproxyconf), 1132
eauth_acl_module

eauth_acl_module

Environment, 3269
get_a() (in module salt.modules.infoblox), 1142
get_acls() (in module salt.modules.zookeeper), 1291
get_all() (in module salt.modules.debian_service), 1097
get_all() (in module salt.modules.gentoo_service), 1117
get_all() (in module salt.modules.linux_service), 1182
get_all() (in module salt.modules.netbsdservice), 1205
get_all() (in module salt.modules.s6), 1255
get_all() (in module salt.modules.slackware_service), 1263
get_all() (in module salt.modules.smf_service), 1265
get_all_cache_subnet_groups() (in module salt.modules.boto_elasticache), 1069
get_all_security_groups() (in module salt.modules.boto_security_groups), 1079
get_all_subscriptions_by_topic() (in module salt.modules.boto_sns), 1081
get_all_topics() (in module salt.modules.boto_sns), 1081
get_arn() (in module salt.modules.boto_sns), 1081
get_attribute() (in module salt.modules.xml), 1285
get_backend() (in module salt.modules.haproxyconn), 1132
get_balances() (in module salt.modules.namecheap_users), 1197
get_bind_data() (in module salt.modules.libcloud_dns), 1181
get_bootdev() (in module salt.modules.ipmi), 1153
get_cache_subnet_group() (in module salt.modules.boto_elasticache), 1070
get_channel_access() (in module salt.modules.ipmi), 1153
get_channel_info() (in module salt.modules.ipmi), 1154
get_channel_max_user_count() (in module salt.modules.ipmi), 1154
get_children() (in module salt.modules.zookeeper), 1292
get_circuit_provider() (in module salt.modules.netbox), 1202
get_cname() (in module salt.modules.infoblox), 1143
get_config() (in module salt.modules.boto_elasticache), 1070
get_config() (in module salt.modules.boto_security_groups), 1079
get_config_resolver_class() (in module salt.proxy.cimc), 1297
get_conn() (in module salt.sdb.consul), 1317
get_conn_args() (in module salt.proxy.nxos_api), 1308
get_dashboard() (in module salt.modules.grafana4), 1127
get_data() (in module salt.proxy.ciscosn), 1301
get_datasource() (in module salt.modules.grafana4), 1127
get_datasources() (in module salt.modules.grafana4), 1127
get_details() (in module salt.proxy.esxvm), 1305
get_disabled() (in module salt.modules.debian_service), 1097
get_disabled() (in module salt.modules.gentoo_service), 1117
get_disabled() (in module salt.modules.netbsdservice), 1205
get_disabled() (in module salt.modules.slackware_service), 1263
get_disabled() (in module salt.modules.smf_service), 1265
get_distribution() (in module salt.modules.boto_cloudfront), 1059
get_enabled() (in module salt.modules.debian_service), 1097
get_enabled() (in module salt.modules.gentoo_service), 1118
get_enabled() (in module salt.modules.netbsdservice), 1206
get_enabled() (in module salt.modules.slackware_service), 1263
get_enabled() (in module salt.modules.smf_service), 1265
get_entity() (in module salt.modules.keystoneng), 1173
get_error_message() (in module salt.exceptions), 1837
get_file_systems() (in module salt.modules.boto_efs), 1066
get_fun() (in module salt.returners.mongo_future_return), 348
get_fun() (in module salt.returners.mongo_return), 349
get_fun() (in module salt.returners.pgjsonb), 353
get_group_host() (in module salt.modules.boto_elasticache), 1070
get_group_id() (in module salt.modules.boto_security_groups), 1079
get_health() (in module salt.modules.ipmi), 1155
get_host() (in module salt.modules.infoblox), 1143
get_host_advanced() (in module salt.modules.infoblox), 1143
get_host_domainname() (in module salt.modules.infoblox), 1143
get_host_hostname() (in module salt.modules.infoblox), 1143
get_host_ipv4addr_info() (in module salt.modules.infoblox), 1144
get_host_ipv6addr_info() (in module salt.modules.infoblox), 1144
get_temperature() (in module salt.modules.sensehat), 1259
get_temperature_from_humidity() (in module salt.modules.sensehat), 1259
get_temperature_from_pressure() (in module salt.modules.sensehat), 1259
get_template() (in module salt.modules.boto_cfn), 1057
get_test_string() (in module salt.modules.rest_sample_utils), 1252
get_tld_list() (in module salt.modules.namecheap_domains), 1192
get_topic_attributes() (in module salt.modules.boto3_sns), 1055
get_unix() (salt.modules.win_timezone.TzMapper method), 1283
get_user() (in module salt.modules.grafana4), 1128
get_user() (in module salt.modules.ipmi), 1156
get_user_access() (in module salt.modules.ipmi), 1156
get_user_data() (in module salt.modules.grafana4), 1128
get_user_name() (in module salt.modules.ipmi), 1157
get_user_orgs() (in module salt.modules.grafana4), 1129
get_users() (in module salt.modules.grafana4), 1129
get_users() (in module salt.modules.ipmi), 1157
get_value() (in module salt.modules.xml), 1285
get_virtual_machine_scale_set_network_interface() (in module salt.modules.azurearm_network), 1039
get_weight() (in module salt.modules.haproxyconn), 1132
get_win() (salt.modules.win_timezone.TzMapper method), 1283
get_zone() (in module salt.modules.libcloud_dns), 1181
get_zone() (in module salt.modules.win_timezone), 1284
get_zonecode() (in module salt.modules.win_timezone), 1284
getent() (in module salt.modules.aix_group), 1026
get_pillar_base conf/master, 124
get_pillar_branch conf/master, 125
get_pillar_env conf/master, 125
get_pillar_global_lock conf/master, 126
get_pillar_password conf/master, 128
get_pillar_privkey conf/master, 128
get_pillar_provider conf/master, 124
get_pillar_pubkey conf/master, 128
get_pillar_verify_config conf/master, 129
get_zonecode() (in module salt.modules.win_timezone), 1284
get_pillar_insecure_auth conf/master, 128
get_pillar_passphrase conf/master, 128
get_pillar_insecure_auth conf/master, 129
get_pillar_password conf/master, 128
get_pillar_privkey conf/master, 128
get_pillar_provider conf/master, 124
get_pillar_pubkey conf/master, 128
get_pillar_refspecs conf/master, 129
get_pillar_root conf/master, 126
get_pillar_ssl_verify conf/master, 126
get_pillar_user conf/master, 128
get_pillar_verify_config conf/master, 129
getfs_base conf/master, 108
getfs_disable_saltenv_mapping conf/master, 109
getfs_global_lock conf/master, 110
getfs_insecure_auth conf/master, 111
getfs_provider conf/master, 107
getfs_pubkey conf/master, 112
getfs_ref_types conf/master, 109
getfs_remotes conf/master, 113
getfs_root conf/master, 107
getfs_saltenv conf/master, 108
getfs_saltenv_blacklist conf/master, 110
Index 3301
gitfs_saltenv_whitelist
  conf/master, 110

gitfs_ssl_verify
  conf/master, 107

gitfs_update_interval
  conf/master, 111

gitfs_user
  conf/master, 111

GitLockError, 1834

GitRemoteError, 1835

glsa_check_list() (in module salt.modules.gentoolkitmod), 1120

Grain, 3269

gains
  conf/minion, 157

gains() (in module salt.proxy.cimc), 1297

gains() (in module salt.proxy.cisco), 1301

gains_blacklist
  conf/minion, 157

gains_cache
  conf/minion, 158

gains_cache_expiration
  conf/minion, 158

gains_deep_merge
  conf/minion, 158

gains_dirs
  conf/minion, 171

grains_refresh() (in module salt.proxy.cimc), 1297

grains_refresh_every
  conf/minion, 159

grant_access_to_shared_folders_to() (in module salt.modules.vbox_guest), 1282

greater_than() (in module salt.modules.salt_version), 1256

group_create() (in module salt.modules.keystoneng), 1173

group_delete() (in module salt.modules.keystoneng), 1173

group_exists() (in module salt.modules.boto_elasticache), 1070

group_get() (in module salt.modules.keystoneng), 1173

group_list() (in module salt.modules.keystoneng), 1173

group_search() (in module salt.modules.keystoneng), 1174

group_update() (in module salt.modules.keystoneng), 1174

GsiNotUpdatableError, 1383

H

has_powerpath() (in module salt.modules.powerpath), 1239

hash() (in module salt.modules.mod_random), 1185

hash_type
  conf/master, 104
  conf/minion, 180

head() (in module salt.modules.s3), 1254

hg_create() (in module salt.modules.purefa), 1240

hg_delete() (in module salt.modules.purefa), 1240

hg_remove() (in module salt.modules.purefa), 1240

hg_update() (in module salt.modules.purefa), 1240

hgfs_base
  conf/master, 114

hgfs_branch_method
  conf/master, 113

hgfs_mountpoint
  conf/master, 114

hgfs_remotes
  conf/master, 113

hgfs_root
  conf/master, 114

hgfs_saltenv_blacklist
  conf/master, 115

hgfs_saltenv_whitelist
  conf/master, 115

hgfs_update_interval
  conf/master, 115

Highdata, 3269

Highstate, 3269

hmac

http_connect_timeout
  conf/master, 83
  conf/minion, 167

http_query

http_request_timeout
  conf/master, 83
  conf/minion, 167

hwinfo() (in module salt.modules.devinfo), 1099

id

Idempotent, 3269

IgnoredDir (class in salt.modules.inspectlib.entities), 1147

image, 835
image_create() (in module salt.modules.glance), 1121
image_create() (in module salt.modules.glanceng), 1122
image_delete() (in module salt.modules.glance), 1121
image_delete() (in module salt.modules.glanceng), 1123
image_get() (in module salt.modules.glance), 1121
image_list() (in module salt.modules.glance), 1121
image_list() (in module salt.modules.glanceng), 1123
image_present() (in module salt.states.glance), 1447
image_running() (in module salt.states.nxos_upgrade), 1549
image_schema() (in module salt.modules.glance), 1121
image_search() (in module salt.modules.glance), 1123
image_show() (in module salt.modules.glance), 1121
image_update() (in module salt.modules.glance), 1122
import_cert() (in module salt.states.win_pki), 1633
include
  conf/master, 140
  conf/minion, 192
increase_stream_retention_period() (in module salt.modules.boto_kinesis), 1075
index_close() (in module salt.modules.elasticsearch), 1104
index_create() (in module salt.modules.elasticsearch), 1104
index_delete() (in module salt.modules.elasticsearch), 1104
index_exists() (in module salt.modules.elasticsearch), 1104
index_get() (in module salt.modules.elasticsearch), 1105
index_get_settings() (in module salt.modules.elasticsearch), 1105
index_open() (in module salt.modules.elasticsearch), 1105
index_put_settings() (in module salt.modules.elasticsearch), 1105
index_template_create() (in module salt.modules.elasticsearch), 1106
index_template_delete() (in module salt.modules.elasticsearch), 1106
index_template_exists() (in module salt.modules.elasticsearch), 1107
index_template_get() (in module salt.modules.elasticsearch), 1107
indices() (in module salt.modules.sqlite3), 1268
indices() (in module salt.modules.sqlite3), 1268
spm command line option, 1000
info() (in module salt.modules.aix_group), 1027
info() (in module salt.modules.elasticsearch), 1107
info() (in module salt.modules.logmod), 1184
inherit() (in module salt.states.win_dacl), 1297
init() (in module salt.proxy.cimc), 1622
init() (in module salt.proxy.ciscoson), 1301
init() (in module salt.proxy.docker), 1302
init() (in module salt.proxy.esxvm), 1305
init() (in module salt.proxy.junos), 1306
init() (in module salt.proxy.nxos_api), 1308
init() (in module salt.states.lxd), 1520
initialized() (in module salt.proxy.cimc), 1297
initialized() (in module salt.proxy.docker), 1302
initialized() (in module salt.proxy.junos), 1306
initialized() (in module salt.proxy.nxos_api), 1308
InspectorKiwiProcessorException, 1146
InspectorQueryException, 1146
InspectorSnapshotException, 1146
install
  spm command line option, 1000
  install() (in module salt.modules.pyenv), 1250
  install() (in module salt.states.alternatives), 1333
  install_config() (in module salt.states.junos), 1482
  install_os() (in module salt.states.junos), 1482
  install_pyenv() (in module salt.states.pyenv), 1574
  install_python() (in module salt.states.pyenv), 1251
  install_rbenv() (in module salt.states.rbenv), 1578
  installed() (in module salt.states.bower), 1412
  installed() (in module salt.states.composer), 1419
  installed() (in module salt.states.cyg), 1423
  installed() (in module salt.states.gem), 1444
  installed() (in module salt.states.npm), 1546
  installed() (in module salt.states.pch), 1558
  installed() (in module salt.states.pyenv), 1574
  installed() (in module salt.states.rbenv), 1578
  installed() (in module salt.states.rvm), 1588
  installed() (in module salt.states.wordpress), 1635
  installed() (in module salt.states.zcbuildout), 1652
  interface
    conf/master, 69
internet_gateway_absent() (in module salt.states.boto_vpc), 1406
internet_gateway_present() (in module salt.states.boto_vpc), 1406
intersect
  jinja filters, 416
InvalidConfigError, 1835
InvalidEntityError, 1835
ipaddr
  jinja filters, 428
ipc_mode
  conf/master, 81
conf/minion, 166
ipv4
   jinja filters, 428
ipv6
   conf/master, 69
   conf/minion, 148
   jinja filters, 428
is_binary_file
   jinja filters, 431
is_closed() (salt.modules.inspectlib.fsdb CsvDB method), 1148
is_empty_file
   jinja filters, 431
is_hex
   jinja filters, 418
is_installed() (in module salt.modules.pyenv), 1251
is_ip
   jinja filters, 427
is_ipaddr_in_ipfunc_range() (in module salt.modules.infoblox), 1145
is_ipv4
   jinja filters, 427
is_ipv6
   jinja filters, 428
is_iter
   jinja filters, 414
is_list
   jinja filters, 414
is_present() (in module salt.states.zabbix_template), 1646
is_sorted
   jinja filters, 417
is_text_file
   jinja filters, 431
iscsi_grains
   conf/minion, 159

J
Jinja, 3269
jinja filters
   append_dict_key_value, 422
   avg, 415
   base64_decode, 424
   base64_encode, 424
   calling-salt-functions, 435
   check_whitelist_blacklist, 419
   compare_dicts, 417
   compare_lists, 417
   contains_whitespace, 418
   custom-execution-modules, 436
   custom-jinja-filters, 437
   date_format, 419
   debugging, 435
difference, 416
dns_check, 430
equalto, 433
escaping-jinja, 435
exactly_n_true, 412
exactly_one_true, 413
extend_dict_key_value, 422
file_hashsum, 431
gen_mac, 429
hmac, 424
http_query, 425
intersect, 416
ipaddr, 428
ipv4, 428
ipv6, 428
is_binary_file, 431
is_empty_file, 431
is_hex, 418
is_ip, 427
is_ipv4, 427
is_ipv6, 428
is_iter, 414
is_list, 414
is_sorted, 417
is_text_file, 431
json_decode_dict, 420
json_decode_list, 420
json_encode_dict, 420
json_encode_list, 420
json_query, 426
list_files, 432
logs, 436
mac_str_to_bytes, 430
match, 433
max, 415
md5, 423
method_call, 416
min, 415
network_hosts, 429
network_size, 429
path_join, 432
quote, 413
random_hash, 421
regex_escape, 434
regex_match, 413
regex_replace, 413
regex_search, 413
sequence, 411
set_dict_key_value, 421
sha256, 423
sha512, 424
strftime, 411
substring_in_list, 418
symmetric_difference, 416
 locked() (in module salt.modules.aix_shadow), 1027
log_datefmt
   conf/logging, 277
   conf/master, 138
   conf/minion, 189
log_datefmt_logfile
   conf/logging, 278
   conf/master, 138
   conf/minion, 189
log_file
   conf/logging, 277
   conf/master, 137
   conf/minion, 189
log_fmt_console
   conf/logging, 278
   conf/master, 138
   conf/minion, 189
log_fmt_jid
   conf/logging, 279
log_fmt_logfile
   conf/logging, 278
   conf/master, 138
   conf/minion, 190
log_levels
   conf/logging, 276
log_rotate_backup_count
   conf/master, 139
   conf/minion, 190
log_rotate_max_bytes
   conf/master, 139
   conf/minion, 190
logging_levels() (in module salt.states.cimc), 1416
LoggingRuntimeError, 1835
login_failures() (in module salt.modules.aix_shadow), 1027
login_test() (in module salt.modules.influxdb08mod), 1136
logon() (in module salt.proxy.cimc), 1297
logout() (in module salt.proxy.cimc), 1297
logs
   jinja filters, 436
long_int() (in module salt.modules.boto_kinesis), 1075
loop_interval
   conf/master, 74
   conf/minion, 165
Low State, 3270
low_light() (in module salt.modules.sensehat), 1259
ls_() (in module salt.modules.etc_mod), 1112
 Master, 3270
mac_str_to_bytes
   jinja filters, 430
maintenance_niceness
   conf/master, 84
make_digest_acl() (in module salt.modules.zookeeper), 1292
make_hashable() (in module salt.states.grains), 1457
make_interface_child() (in module salt.modules.netbox), 1203
make_interface_lag() (in module salt.modules.netbox), 1203
make_map() (in module salt.states.ssh_auth), 1605
managed() (in module salt.states.keystore), 1498
managed() (in module salt.states.lap), 1503
managed() (in module salt.states.rbac_solaris), 1576
managed() (in module salt.states.statuspage), 1608
managed() (in module salt.states.sysrc), 1611
Map (class in salt.utils.aggregation), 1834
mapped() (in module salt.states.cryptdev), 1420
mapping_create() (in module salt.modules.elasticsearch), 1107
mapping_delete() (in module salt.modules.elasticsearch), 1107
mapping_get() (in module salt.modules.elasticsearch), 1107
 Master Tops, 3270
master
   conf/minion, 147
 Master Tops, 3270
master_alive_interval
   conf/master, 139
master_failback
   conf/minion, 150
master_failback_interval
   conf/minion, 150
master_finger
   conf/minion, 185
module
 master_finger
   conf/minion, 185
 master_id
   conf/master, 70
master_job_cache
   conf/master, 79
master_port
   conf/minion, 152
master_pubkey_signature
   conf/minion, 152
Index 3307
missing() (in module salt.modules.netbsd_service), 1206
missing() (in module salt.modules.sssl), 1255
missing() (in module salt.modules.slackware_service), 1263
missing() (in module salt.modules.snf_service), 1266
MissingSmb, 1835
mod_watch() (in module salt.states.at), 1336
mod_watch() (in module salt.states.etcmod), 1441
mod_watch() (in module salt.states.kernelpkg), 1487
mod_watch() (in module salt.states.mount), 1533
mod_watch() (in module salt.states.supervisord), 1609
mod_watch() (in module salt.states.tomcat), 1614
mode() (in module salt.states.quota), 1575
mode() (in module salt.states.selinix), 1596
modify() (in module salt.modules.sql3), 1268
module
salt.exceptions, 1834
salt.executors.direct_call, 1010
salt.executors.docker, 1010
salt.executors.splay, 1010
salt.grains.opts, 1012
salt.grains.philips_hue, 1012
salt.log.handlers.log4mongo_mod, 279
salt.modules.aix_group, 1026
salt.modules.aix_shadow, 1027
salt.modules.azurearm_compute, 1028
salt.modules.azurearm_dns, 1033
salt.modules.azurearm_network, 1037
salt.modules.boto3_sns, 1054
salt.modules.boto_cfn, 1057
salt.modules.boto_cloudfront, 1058
salt.modules.boto_datapipeline, 1060
salt.modules.boto_dynamodb, 1061
salt.modules.boto_efs, 1063
salt.modules.boto_elasticache, 1067
salt.modules.boto_elbv2, 1071
salt.modules.boto_kinesis, 1073
salt.modules.boto_s3, 1076
salt.modules.boto_secgroup, 1077
salt.modules.boto_sns, 1080
salt.modules.celery, 1082
salt.modules.ceph, 1082
salt.modules.ciscoconfparse_mod, 1090
salt.modules.datadog_api, 1095
salt.modules.debian_service, 1096
salt.modules.devinfo, 1098
salt.modules.devmap, 1099
salt.modules.drbd, 1099
salt.modules.elasticsearch, 1100
salt.modules.etcd_mod, 1112
salt.modules.ethtool, 1114
salt.modules.gcp_addon, 1116
salt.modules.gentoo_service, 1117
salt.modules.gentoolkitmod, 1119
salt.modules.glance, 1120
salt.modules.glanceng, 1122
salt.modules.google_chat, 1124
salt.modules.grafana4, 1124
salt.modules.group, 1012
salt.modules.haproxyconn, 1132
salt.modules.idem, 1134
salt.modules.influxdb08mod, 1135
salt.modules.infoblox, 1140
salt.modules.inspectlib, 1146
salt.modules.inspectlib.dbhandle, 1146
salt.modules.inspectlib.entities, 1147
salt.modules.inspectlib.exceptions, 1146
salt.modules.inspectlib.fsdb, 1147
salt.modules.introspect, 1149
salt.modules.iosconfig, 1149
salt.modules.ipmi, 1152
salt.modules.jboss7, 1164
salt.modules.jboss7_cli, 1168
salt.modules.kernelpkg, 1012
salt.modules.kernelpkg_linux_apt, 1169
salt.modules.keystoneng, 1171
salt.modules.keystore, 1178
salt.modules.libcloud_dns, 1179
salt.modules.libcloud_service, 1182
salt.modules.logmod, 1184
salt.modules.mod_random, 1185
salt.modules.modjk, 1186
salt.modules.nagios, 1189
salt.modules.namecheap_domains, 1191
salt.modules.namecheap_domains_dns, 1193
salt.modules.namecheap_domains_ns, 1195
salt.modules.namecheap_users, 1196
salt.modules.netaddress, 1197
salt.modules.netbox, 1198
salt.modules.netbsdservice, 1205
salt.modules.neutron, 1207
salt.modules.neutronng, 1228
salt.modules.nxos_api, 1233
salt.modules.nxos_upgrade, 1237
salt.modules.omapi, 1238
salt.modules.openscap, 1239
salt.modules.philips_hue, 1239
salt.modules.pkg, 1013
salt.modules.powerpath, 1239
salt.modules.purefa, 1239
salt.modules.purefb, 1246
salt.modules.pushbullet, 1249
<table>
<thead>
<tr>
<th>Salt States Module</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>salt.states.bower</td>
<td>1412</td>
</tr>
<tr>
<td>salt.states.btrfs</td>
<td>1413</td>
</tr>
<tr>
<td>salt.states.chef</td>
<td>1414</td>
</tr>
<tr>
<td>salt.states.chronos_job</td>
<td>1415</td>
</tr>
<tr>
<td>salt.states.cimc</td>
<td>1416</td>
</tr>
<tr>
<td>salt.states.composer</td>
<td>1418</td>
</tr>
<tr>
<td>salt.states.cryptdev</td>
<td>1420</td>
</tr>
<tr>
<td>salt.states.csf</td>
<td>1421</td>
</tr>
<tr>
<td>salt.states.cyg</td>
<td>1423</td>
</tr>
<tr>
<td>salt.states.ddns</td>
<td>1424</td>
</tr>
<tr>
<td>salt.states.debconfmod</td>
<td>1425</td>
</tr>
<tr>
<td>salt.states.dellcassis</td>
<td>1427</td>
</tr>
<tr>
<td>salt.states.disk</td>
<td>1432</td>
</tr>
<tr>
<td>salt.states.dvs</td>
<td>1433</td>
</tr>
<tr>
<td>salt.states.elasticsearch_index</td>
<td>1436</td>
</tr>
<tr>
<td>salt.states.elasticsearch_index_templates</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1437</td>
</tr>
<tr>
<td>salt.states.eseselect</td>
<td>1438</td>
</tr>
<tr>
<td>salt.states.esxdatalcenter</td>
<td>1438</td>
</tr>
<tr>
<td>salt.states.etc_mod</td>
<td>1439</td>
</tr>
<tr>
<td>salt.states.ethtool</td>
<td>1442</td>
</tr>
<tr>
<td>salt.states.firewall</td>
<td>1443</td>
</tr>
<tr>
<td>salt.states.gem</td>
<td>1444</td>
</tr>
<tr>
<td>salt.states.github</td>
<td>1445</td>
</tr>
<tr>
<td>salt.states.glance</td>
<td>1447</td>
</tr>
<tr>
<td>salt.states.glance_image</td>
<td>1448</td>
</tr>
<tr>
<td>salt.states.gnomedesktop</td>
<td>1448</td>
</tr>
<tr>
<td>salt.states.gpg</td>
<td>1450</td>
</tr>
<tr>
<td>salt.states.grafana4_datasource</td>
<td>1451</td>
</tr>
<tr>
<td>salt.states.grafana4_org</td>
<td>1452</td>
</tr>
<tr>
<td>salt.states.grafana4_user</td>
<td>1453</td>
</tr>
<tr>
<td>salt.states.grafana4_datacenter</td>
<td>1454</td>
</tr>
<tr>
<td>salt.states.grains</td>
<td>1455</td>
</tr>
<tr>
<td>salt.states.helm</td>
<td>1458</td>
</tr>
<tr>
<td>salt.states.highstate_doc</td>
<td>1460</td>
</tr>
<tr>
<td>salt.states.http</td>
<td>1460</td>
</tr>
<tr>
<td>salt.states.idem</td>
<td>1462</td>
</tr>
<tr>
<td>salt.states.ifttt</td>
<td>1462</td>
</tr>
<tr>
<td>salt.states.incron</td>
<td>1463</td>
</tr>
<tr>
<td>salt.states.influxdb08_database</td>
<td>1464</td>
</tr>
<tr>
<td>salt.states.influxdb08_user</td>
<td>1465</td>
</tr>
<tr>
<td>salt.states.influxdb_continuous_query</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td>1465</td>
</tr>
<tr>
<td>salt.states.influxdb_database</td>
<td>1466</td>
</tr>
<tr>
<td>salt.states.influxdb_retention_policy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1466</td>
</tr>
<tr>
<td>salt.states.influxdb_user</td>
<td>1467</td>
</tr>
<tr>
<td>salt.states.infobox_a</td>
<td>1467</td>
</tr>
<tr>
<td>salt.states.infobox_cname</td>
<td>1468</td>
</tr>
<tr>
<td>salt.states.infobox_host_record</td>
<td>1469</td>
</tr>
<tr>
<td>salt.states.infobox_range</td>
<td>1470</td>
</tr>
<tr>
<td>salt.states.ini_manage</td>
<td>1471</td>
</tr>
<tr>
<td>salt.states.ipmi</td>
<td>1473</td>
</tr>
<tr>
<td>salt.states.ipset</td>
<td>1475</td>
</tr>
<tr>
<td>salt.states.jboss7</td>
<td>1477</td>
</tr>
<tr>
<td>salt.states.junos</td>
<td>1479</td>
</tr>
<tr>
<td>salt.states.kernelpkg</td>
<td>1486</td>
</tr>
<tr>
<td>salt.states.keyboard</td>
<td>1488</td>
</tr>
<tr>
<td>salt.states.keystone</td>
<td>1488</td>
</tr>
<tr>
<td>salt.states.keystone_domain</td>
<td>1491</td>
</tr>
<tr>
<td>salt.states.keystone_endpoint</td>
<td>1492</td>
</tr>
<tr>
<td>salt.states.keystone_group</td>
<td>1493</td>
</tr>
<tr>
<td>salt.states.keystone_project</td>
<td>1494</td>
</tr>
<tr>
<td>salt.states.keystone_role</td>
<td>1495</td>
</tr>
<tr>
<td>salt.states.keystone_role_grant</td>
<td>1495</td>
</tr>
<tr>
<td>salt.states.keystone_service</td>
<td>1496</td>
</tr>
<tr>
<td>salt.states.keystone_user</td>
<td>1497</td>
</tr>
<tr>
<td>salt.states.keystone</td>
<td>1498</td>
</tr>
<tr>
<td>salt.states.libcloud_dns</td>
<td>1506</td>
</tr>
<tr>
<td>salt.states.libcloud_loadbalancer</td>
<td>1508</td>
</tr>
<tr>
<td>salt.states.libcloud_storage</td>
<td>1510</td>
</tr>
<tr>
<td>salt.states.locale</td>
<td>1512</td>
</tr>
<tr>
<td>salt.states.logrotate</td>
<td>1512</td>
</tr>
<tr>
<td>salt.states.loop</td>
<td>1513</td>
</tr>
<tr>
<td>salt.states.lvs_server</td>
<td>1514</td>
</tr>
<tr>
<td>salt.states.lvs_service</td>
<td>1515</td>
</tr>
<tr>
<td>salt.states.lxc</td>
<td>1516</td>
</tr>
<tr>
<td>salt.states.lxd</td>
<td>1519</td>
</tr>
<tr>
<td>salt.states.lxd_container</td>
<td>1520</td>
</tr>
<tr>
<td>salt.states.lxd_image</td>
<td>1524</td>
</tr>
<tr>
<td>salt.states.lxd_profile</td>
<td>1526</td>
</tr>
<tr>
<td>salt.states.mac_xattr</td>
<td>1527</td>
</tr>
<tr>
<td>salt.states.makeconf</td>
<td>1527</td>
</tr>
<tr>
<td>salt.states.marathon_app</td>
<td>1528</td>
</tr>
<tr>
<td>salt.states.modjk</td>
<td>1528</td>
</tr>
<tr>
<td>salt.states.modjk_worker</td>
<td>1529</td>
</tr>
<tr>
<td>salt.states.mongod_database</td>
<td>1530</td>
</tr>
<tr>
<td>salt.states.mongod_user</td>
<td>1531</td>
</tr>
<tr>
<td>salt.states.monit</td>
<td>1532</td>
</tr>
<tr>
<td>salt.states.mount</td>
<td>1532</td>
</tr>
<tr>
<td>salt.states.mssql_database</td>
<td>1536</td>
</tr>
<tr>
<td>salt.states.mssql_login</td>
<td>1536</td>
</tr>
<tr>
<td>salt.states.mssql_role</td>
<td>1537</td>
</tr>
<tr>
<td>salt.states.mssql_user</td>
<td>1537</td>
</tr>
<tr>
<td>salt.states.msteams</td>
<td>1538</td>
</tr>
<tr>
<td>salt.states.mysql_database</td>
<td>1538</td>
</tr>
<tr>
<td>salt.states.mysql_grants</td>
<td>1538</td>
</tr>
<tr>
<td>salt.states.neutron_network</td>
<td>1541</td>
</tr>
<tr>
<td>salt.states.neutron_secgroup</td>
<td>1542</td>
</tr>
<tr>
<td>salt.states.neutron_secgroup_rule</td>
<td>1543</td>
</tr>
<tr>
<td>salt.states.neutron_subnet</td>
<td>1543</td>
</tr>
<tr>
<td>salt.states.netscaler</td>
<td>1543</td>
</tr>
<tr>
<td>salt.states.netscaler_modjk</td>
<td>1543</td>
</tr>
<tr>
<td>salt.states.netscaler_modjk_worker</td>
<td>1543</td>
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<td>salt.states.netscaler</td>
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<td>salt.states.netscaler_modjk</td>
<td>1543</td>
</tr>
<tr>
<td>salt.states.netscaler_modjk_worker</td>
<td>1543</td>
</tr>
</tbody>
</table>
salt.states.nexus, 1545
salt.states.npm, 1546
salt.states.nxos, 1547
salt.states.nxos_upgrade, 1549
salt.states.openstack_config, 1550
salt.states.openvswitch_bridge, 1550
salt.states.openvswitch_port, 1551
salt.states.opsgenie, 1551
salt.states.pagerduty, 1552
salt.states.pagerduty escalation_policy, 1553
salt.states.pagerduty_schedule, 1554
salt.states.pagerduty_service, 1555
salt.states.pagerduty_user, 1556
salt.states.pbm, 1556
salt.states.pecl, 1558
salt.states.pkgbuild, 1559
salt.states.pkgng, 1562
salt.states.portage_config, 1562
salt.states.postgres_cluster, 1563
salt.states.postgres_database, 1563
salt.states.postgres_inittab, 1565
salt.states.postgres_language, 1566
salt.states.postgres_privileges, 1567
salt.states.postgres_schema, 1570
salt.states.postgres_tablespace, 1571
salt.states.powerpath, 1572
salt.states.process, 1572
salt.states.pushover, 1572
salt.states.pyenv, 1573
salt.states.pyrax_queues, 1575
salt.states.quota, 1575
salt.states.rabbitmq_plugin, 1576
salt.states.rbac_solaris, 1576
salt.states.rbenv, 1577
salt.states.rdp, 1578
salt.states.redismod, 1578
salt.states.reg, 1579
salt.states.rvm, 1586
salt.states.salt_proxy, 1588
salt.states.selinux, 1592
salt.states.saltutil, 1595
salt.states.saltstack, 1597
salt.states.smtp, 1598
salt.states.snapper, 1598
salt.states.splunk, 1600
salt.states.splunk_search, 1601
salt.states.sqlite3, 1602
salt.states.ssh_auth, 1604
salt.states.stateconf, 1606
salt.states.status, 1607
salt.states.statuspage, 1607
salt.states.supervisord, 1609
salt.states.sysctl, 1610
salt.states.syslog_ng, 1610
salt.states.sysrc, 1611
salt.states.telemetry_alert, 1612
salt.states.testinfra, 1613
salt.states.timezone, 1613
salt.states.tls, 1613
salt.states.tomcat, 1613
salt.states.trafficserver, 1616
salt.states.tuned, 1618
salt.states.uptime, 1619
salt.states.vault, 1619
salt.states.vbox_guest, 1620
salt.states.victorops, 1620
salt.states.win_dacl, 1621
salt.states.win_dns_client, 1623
salt.states.win_firewall, 1623
salt.states.win_iis, 1625
salt.states.win_path, 1632
salt.states.win_pki, 1633
salt.states.win_snmp, 1634
salt.states.wordpress, 1635
salt.states.x509, 1636
salt.states.xml, 1641
salt.states.xmpp, 1642
salt.states.zabbix_action, 1642
salt.states.zabbix_hostgroup, 1644
salt.states.zabbix_mediatype, 1644
salt.states.zabbix_template, 1645
salt.states.zabbix_usergroup, 1649
salt.states.zabbix_usermacro, 1650
salt.states.zabbix_usermap, 1651
salt.states.zcbuildout, 1652
salt.states.zenoss, 1653
salt.states.zfs, 1654
salt.states.zk_concurrency, 1657
salt.states.zookeeper, 1658
salt.states.zpool, 1660
salt.tops.cobbler, 1664
salt.tops.mongo, 1664
salt.tops.reclass_adapter, 1665
salt.tops.varstack_top, 1666
salt.utils.aggregation, 1832
module() (in module salt.states.selinux), 1596
module_dirs
conf/master, 72
conf/minion, 171
module_executors() (in module salt.proxy.docker), 1302
module_install() (in module salt.states.selinux), 1596
module_remove() (in module salt.states.selinux), 1596
modules_max_memory
pillar_safe_render_error
conf/master, 123

pillar_source_merging_strategy
conf/master, 130

pillarenv
conf/minion, 182

pillarenv_from_saltenv
conf/master, 124
cconf/minion, 183

ping() (in module salt.modules.elasticsearch), 1108

ping() (in module salt.modules.test_virtual), 1277

ping() (in module salt.proxy.junos), 1306

ping_interval
conf/minion, 164

ping_on_rotate
conf/master, 80

pipeline_create()
(module salt.modules.elasticsearch), 1108

pipeline_delete()
(module salt.modules.elasticsearch), 1108

pipeline_get()
(module salt.modules.elasticsearch), 1108

pipeline_id_from_name()
(module salt.modules.elasticsearch), 1061

pipeline_simulate()
(module salt.modules.elasticsearch), 1109

PkgParseError, 1835

pki_dir
conf/master, 71
cconf/minion, 154

pod_absent()
(module salt.states.kubernetes), 1502

pod_present()
(module salt.states.kubernetes), 1502

policy_present()
(module salt.states.vault), 1619

poll_interval, 835

pool_absent()
(module salt.states.boto_cognitoidentity), 1380

pool_add()
(module salt.states.ceph), 1088

pool_del()
(module salt.states.ceph), 1088

pool_list()
(module salt.states.ceph), 1088

pool_present()
(module salt.states.boto_cognitoidentity), 1380

port_policy_absent()
(module salt.states.selininux), 1596

port_policy_present()
(module salt.states.selininux), 1596

portgroups_configured()
(module salt.states.dvs), 1436

ports_open()
(module salt.states.csf), 1421

post_card()
(module salt.states.msteams), 1538

post_event()
(module salt.modules.datadog_api), 1095

post_message()
(module salt.modules.pushover_notify), 1249

post_message()
(module salt.modules.telegram), 1276

post_message()
(module salt.states.pushover), 1573

power()
(module salt.states.ipmi), 1473

power_configuration()
(module salt.states.cimc), 1417

poweroff()
(module salt.runners.drac), 1311

poweron()
(module salt.runners.drac), 1311

prep_jid()
(module salt.returners.carbon_return), 345

prep_jid()
(module salt.returners.mongodb), 1297

prep_jid()
(module salt.returners.cassandra_return), 345

prep_jid()
(module salt.returners.django), 346

prep_jid()
(module salt.returners.mongo_future_return), 348

prep_jid()
(module salt.returners.mongo_return), 349

prep_jid()
(module salt.returners.pgjsonb), 353

prep_jid()
(module salt.returners.sentry_return), 356

prepare_return()
(module salt.proxy.junos), 292

presence_events
conf/master, 80

present()
(module salt.states.aliast), 1332

present()
(module salt.states.beacon), 1362

present()
(module salt.states.boto_asg), 1375

present()
(module salt.states.boto_cloudfront), 1379

present()
(module salt.states.boto_dynamodb), 1383

present()
(module salt.states.boto_elasticache), 1386

present()
(module salt.states.boto_iam_role), 1391

present()
(module salt.states.boto_kinesis), 1393

present()
(module salt.states.boto_s3), 1397

present()
(module salt.states.boto_s3n), 1400

present()
(module salt.states.boto_sns), 1402

present()
(module salt.states.boto_vpc), 1408

present()
(module salt.states.dnsm), 1425

present()
(module salt.states.elasticsearch_index), 1436

present()
(module salt.states.elasticsearch_index_template), 1437

present()
(module salt.states.github), 1445

present()
(module salt.states.glance_image), 1448

present()
(module salt.states.gpg), 1450

present()
(module salt.states.grafana4_data sourced), 1451
present() (in module salt.states.grafana4_org), 1453
present() (in module salt.states.grafana4_user), 1454
present() (in module salt.states.grafana4_datasource), 1455
present() (in module salt.states.grains), 1457
present() (in module salt.states.httpd), 1463
present() (in module salt.states.influxdb08_database), 1464
present() (in module salt.states.influxdb08_user), 1465
present() (in module salt.states.influxdb_continuous_query), 1465
present() (in module salt.states.influxdb_database), 1466
present() (in module salt.states.influxdb_retention_policy), 1466
present() (in module salt.states.influxdb_user), 1467
present() (in module salt.states.infoblox_a), 1467
present() (in module salt.states.infoblox_cname), 1468
present() (in module salt.states.infoblox_host_record), 1469
present() (in module salt.states.infoblox_range), 1470
present() (in module salt.states.ipset), 1476
present() (in module salt.states.keystone_domain), 1492
present() (in module salt.states.keystone_endpoint), 1493
present() (in module salt.states.keystone_group), 1493
present() (in module salt.states.keystone_project), 1494
present() (in module salt.states.keystone_role), 1495
present() (in module salt.states.keystone_role_grant), 1496
present() (in module salt.states.keystone_service), 1496
present() (in module salt.states.kmod), 1499
present() (in module salt.states.layman), 1503
present() (in module salt.states.locale), 1512
present() (in module salt.states.lvs_server), 1515
present() (in module salt.states.lvs_service), 1515
present() (in module salt.states.lxc), 1517
present() (in module salt.states.lxd_container), 1522
present() (in module salt.states.lxd_image), 1524
present() (in module salt.states.lxd_profile), 1526
present() (in module salt.states.makeconf), 1527
present() (in module salt.states.mongod_user), 1531
present() (in module salt.states.mysql_database), 1536
present() (in module salt.states.mysql_login), 1536
present() (in module salt.states.mysql_role), 1537
present() (in module salt.states.mysql_user), 1537
present() (in module salt.states.mysql_database), 1538
present() (in module salt.states.mysql_grants), 1540
present() (in module salt.states.neutron_network), 1541
present() (in module salt.states.neutron_secgroup), 1542
present() (in module salt.states.pagerduty_escalation_policy), 1553
present() (in module salt.states.pagerduty_schedule), 1554
present() (in module salt.states.pagerduty_service), 1555
present() (in module salt.states.pagerduty_user), 1556
present() (in module salt.states.postgres_cluster), 1563
present() (in module salt.states.postgres_database), 1564
present() (in module salt.states.postgres_initdb), 1565
present() (in module salt.states.postgres_language), 1566
present() (in module salt.states.postgres_privileges), 1569
present() (in module salt.states.postgres_schema), 1570
present() (in module salt.states.postgres_tablespace), 1571
present() (in module salt.states.pyrax_queues), 1575
present() (in module salt.states.reg), 1581
present() (in module salt.states.schedule), 1593
present() (in module salt.states.splunk), 1601
present() (in module salt.states.splunk_search), 1601
present() (in module salt.states.ssh_auth), 1606
present() (in module salt.states.sysctl), 1610
present() (in module salt.states.telemetry_alert), 1612
present() (in module salt.states.win_dacl), 1622
present() (in module salt.states.zabbix_action), 1643
present() (in module salt.states.zabbix_hostgroup), 1644
present() (in module salt.states.zabbix_mediatype), 1645
present() (in module salt.states.zabbix_template), 1646
present() (in module salt.states.zabbix_usergroup), 1649
present() (in module salt.states.zabbix_usermacro), 1650
present() (in module salt.states.zabbix_valuemap), 1651
present() (in module salt.states.zookeeper), 1659
present() (in module salt.states.zpool), 1662
preserve_minion_cache
conf/master, 94
primary_suffix() (in module salt.states.win_dns_client), 1623
private_key_managed() (in module salt.states.x509), 1640
process() (in module salt.states.status), 1607
process_count_max
conf/minion, 188
project_absent() (in module salt.states.keystone), 1490
project_create() (in module salt.modules.keystoneng), 1174
project_delete() (in module salt.modules.keystoneng), 1174
project_get() (in module salt.modules.keystoneng), 1174
project_list() (in module salt.modules.keystoneng), 1174
project_present() (in module salt.states.keystone), 1490
project_search() (in module salt.modules.keystoneng), 1175
project_update() (in module salt.modules.keystoneng), 1175
promoted() (in module salt.states.zfs), 1655
properties() (in module salt.states.btrfs), 1413
providers
conf/minion, 172
Proxy Minion, 3270
proxy_always_alive
conf/proxy, 197
proxy_host
conf/minion, 167
proxy_keep_alive
conf/proxy, 197
proxy_keep_alive_interval
cnf/proxy, 197
proxy_merge_grains_in_module
conf/proxy, 196
proxy_password
conf/minion, 168
proxy_port
conf/minion, 168
proxy_username
conf/minion, 168
proxytype() (in module salt.proxy.junos), 1306
pruned() (in module salt.states.bower), 1413
pub_hwm
conf/master, 96
pub_ret
conf/minion, 165
pub_server_niceness
conf/master, 83
public_ip_address_absent() (in module salt.states.azurearm_network), 1354
public_ip_address_create_or_update() (in module salt.modules.azurearm_network), 1044
public_ip_address_delete() (in module salt.modules.azurearm_network), 1044
public_ip_address_get() (in module salt.modules.azurearm_network), 1044
public_ip_address_present() (in module salt.states.azurearm_network), 1354
public_ip_addresses_list() (in module salt.modules.azurearm_network), 1044
public_ip_addresses_list_all() (in module salt.modules.azurearm_network), 1045
publish_port
conf/master, 69
conf/minion, 152
publish_session
conf/master, 94
publisher_acl
conf/master, 91
publisher_acl_blacklist
conf/master, 91
PublishError, 1835
purge() (in module salt.modules.ceph), 1089
purge() (salt.modules.inspectlib.dbhandle.DBHandleBase method), 1146
purge() (salt.modules.inspectlib.fsdb.CsvDB method), 1148
push_note() (in module salt.modules.pushbullet), 1249
put() (in module salt.modules.s3), 1254
put() (in module salt.modules.scp_mod), 1258
put_pipeline_definition() (in module salt.modules.boto_datapipeline), 1061
pxe() (in module salt.runners.drac), 1311
PyDSL, 3270
Q
query() (in module salt.modules.influxdb08mod), 1137
query() (in module salt.states.http), 1460
quote
jinja filters, 413
R
rand_int() (in module salt.modules.mod_random), 1185
random_hash
jinja filters, 421
random_master
conf/minion, 151
Returner, 3270
role_get() (in module salt.modules.keystoneng), 1175
role_list() (in module salt.modules.keystoneng), 1175
role_present() (in module salt.states.keystone), 1490
role_revoke() (in module salt.modules.keystoneng), 1176
role_search() (in module salt.modules.keystoneng), 1176
role_update() (in module salt.modules.keystoneng), 1176
rollback() (in module salt.states.junos), 1484
root_dir
conf/master, 71
conf/minion, 154
roots_update_interval
conf/master, 106
Roster, 3270
roster
conf/master, 85
roster_defaults
conf/master, 85
roster_file
conf/master, 85
rosters
conf/master, 86
rotate_aes_key
conf/master, 94
route_absent() (in module salt.states.azurearm_network), 1355
route_create() (in module salt.modules.gcp_addon), 1116
route_create_or_update() (in module salt.modules.azurearm_network), 1045
route_delete() (in module salt.modules.azurearm_network), 1045
route_filter_create_or_update() (in module salt.modules.azurearm_network), 1045
route_filter_delete() (in module salt.modules.azurearm_network), 1046
route_filter_get() (in module salt.modules.azurearm_network), 1046
route_filter_rule_create_or_update() (in module salt.modules.azurearm_network), 1046
route_filter_rule_delete() (in module salt.modules.azurearm_network), 1047
route_filter_rule_get() (in module salt.modules.azurearm_network), 1047
route_filter_rules_list() (in module salt.modules.azurearm_network), 1047
route_filters_list_all() (in module salt.modules.azurearm_network), 1048
route_get() (in module salt.states.keystone), 1490
route_assignment_list() (in module salt.modules.keystoneng), 1175
route_create() (in module salt.modules.keystoneng), 1175
route_delete() (in module salt.modules.keystoneng), 1175
route_create_or_update() (in module salt.modules.gcp_addon), 1116
route_get() (in module salt.modules.azurearm_network), 1048
route_present() (in module salt.states.azurearm_network), 1355
route_table_absent() (in module salt.states.azurearm_network), 1356
route_table_absent() (in module salt.states.boto_vpc), 1409
route_table_create_or_update() (in module salt.modules.azurearm_network), 1048
route_table_delete() (in module salt.modules.azurearm_network), 1048
route_table_get() (in module salt.modules.azurearm_network), 1048
route_table_present() (in module salt.states.azurearm_network), 1356
route_table_present() (in module salt.states.boto_vpc), 1409
route_tables_list() (in module salt.modules.azurearm_network), 1049
route_tables_list_all() (in module salt.modules.azurearm_network), 1049
routes_list() (in module salt.modules.azurearm_network), 1049
row_absent() (in module salt.states.sqlite3), 1603
row_present() (in module salt.states.sqlite3), 1603
rpc() (in module salt.modules.nxos_api), 1235
rpc() (in module salt.proxy.nxos_api), 1308
rpc() (in module salt.states.junos), 1484
rule_absent() (in module salt.states.csf), 1422
rule_present() (in module salt.states.csf), 1422
run() (in module salt.modules.linux_service), 1183
run() (in module salt.modules.nagios), 1190
run_all() (in module salt.modules.nagios), 1190
run_all_pillar() (in module salt.modules.nagios), 1190
run_command() (in module salt.modules.jboss7_cli), 1169
run_operation() (in module salt.modules.jboss7_cli), 1169
run_pillar() (in module salt.modules.nagios), 1190
run_task() (in module salt.modules.nagios), 1190
running() (in module salt.states.lxc), 1518
running() (in module salt.states.lxd_container), 1523
running() (in module salt.states.marathon_app), 1528
running() (in module salt.states.supervisord), 1609
running_serviceOwners() (in module salt.modules.introspect), 1149

S
s3fs_update_interval conf/master, 121
Salt Cloud, 3270
salt command line option
-C, 981
-E, 981
-G, 981
-I, 981
-L, 981
-N, 981
-R, 981
-S, 981
-T, 980
module
--args-separator=ARGS_SEPARATOR, 980
--async, 979
--auth=EAUTH, 980
--batch-size=BATCH, 980
--compound, 981
--config-dir=CONFIG_dir, 979
--doc, 980
--documentation, 980
--force-color, 982
--grain, 981
--grain-pcre, 981
--help, 979
--hide-timeout, 980
--ipcdir, 981
--list, 981
--log-file=LOG_FILE, 980
--log-file-level=LOG_LEVEL_LOGFILE, 980
--log-level=LOG_LEVEL, 980
--make-token, 980
--no-color, 982
--nodegroup, 981
--out, 981
--out-file=OUTPUT_FILE, 982
--out-file-append, 982
--out-indent OUTPUT_INDENT, 981
--output-file=OUTPUT_FILE, 982
--output-file-append, 982
--output-indent OUTPUT_INDENT, 981
--pcre, 981
--pillar, 981
--range, 981
--return=RETURNER, 980
--state_output=STATE_OUTPUT, 982
--state_verbose=STATE_VERBOSE, 982
--static, 979
--subset=SUBSET, 979
--timeout=TIMEOUT, 979

Index 3321
--verbose, 979
--version, 979
--version-report, 979
-a EAUTH, 980
-b BATCH, 980
-c CONFIG_DIR, 979
-d, 980
-h, 979
-l LOG_LEVEL, 980
-s, 979
-t TIMEOUT, 979
-v VERBOSE, 979
Salt Mine, 399
Salt Reactor, 679
Salt SSH, 3271
Salt Thin, 3271
Salt Virt, 3271
salt.exceptions
module, 1834
salt.executors.direct_call
module, 1010
salt.executors.docker
module, 1010
salt.executors.splay
module, 1010
salt.grains.opts
module, 1012
salt.grains.philips_hue
module, 1012
salt.log.handlers.log4mongo_mod
module, 279
salt.modules.aix_group
module, 1026
salt.modules.aix_shadow
module, 1027
salt.modules.azurearm_compute
module, 1028
salt.modules.azurearm_dns
module, 1033
salt.modules.azurearm_network
module, 1037
salt.modules.boto3_sns
module, 1054
salt.modules.boto_cfn
module, 1057
salt.modules.boto_cloudfront
module, 1058
salt.modules.boto_datapipeline
module, 1060
salt.modules.boto_dynamodb
module, 1061
salt.modules.boto_efs
module, 1063
salt.modules.boto_elasticache
module, 1067
salt.modules.boto_elbv2
module, 1071
salt.modules.boto_kinesis
module, 1073
salt.modules.boto_s3
module, 1076
salt.modules.boto_secgroup
module, 1077
salt.modules.boto_sns
module, 1080
salt.modules.celery
module, 1082
salt.modules.ceph
module, 1082
salt.modules.ciscoconfparse_mod
module, 1090
salt.modules.datadog_api
module, 1095
salt.modules.debian_service
module, 1096
salt.modules.devinfo
module, 1098
salt.modules.devmap
module, 1099
salt.modules.drbd
module, 1099
salt.modules.elasticsearch
module, 1100
salt.modules.etcd_mod
module, 1112
salt.modules.ethtool
module, 1114
salt.modules.gcp_addon
module, 1116
salt.modules.gentoo_service
module, 1117
salt.modules.globokitmod
module, 1119
salt.modules.glance
module, 1120
salt.modules.glanceng
module, 1122
salt.modules.google_chat
module, 1124
salt.modules.grafana4
module, 1124
salt.modules.group
module, 1012
salt.modules.haproxyconn
module, 1132
salt.modules.idem
module, 1134
salt.modules.influxdb08mod
<table>
<thead>
<tr>
<th>Module</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>salt.modules.sqlite3</code></td>
<td>1267</td>
</tr>
<tr>
<td><code>salt.modules.statuspage</code></td>
<td>1269</td>
</tr>
<tr>
<td><code>salt.modules.supervisord</code></td>
<td>1273</td>
</tr>
<tr>
<td><code>salt.modules.sysctl</code></td>
<td>1014</td>
</tr>
<tr>
<td><code>salt.modules.telegram</code></td>
<td>1276</td>
</tr>
<tr>
<td><code>salt.modules.temp</code></td>
<td>1276</td>
</tr>
<tr>
<td><code>salt.modules.test_virtual</code></td>
<td>1277</td>
</tr>
<tr>
<td><code>salt.modules.testinframod</code></td>
<td>1277</td>
</tr>
<tr>
<td><code>salt.modules.twilio_notify</code></td>
<td>1277</td>
</tr>
<tr>
<td><code>salt.modules.uptime</code></td>
<td>1277</td>
</tr>
<tr>
<td><code>salt.modules.user</code></td>
<td>1014</td>
</tr>
<tr>
<td><code>salt.modules.vault</code></td>
<td>1278</td>
</tr>
<tr>
<td><code>salt.modules.vbox_guest</code></td>
<td>1281</td>
</tr>
<tr>
<td><code>salt.modules.win_timezone</code></td>
<td>1283</td>
</tr>
<tr>
<td><code>salt.modules.xml</code></td>
<td>1285</td>
</tr>
<tr>
<td><code>salt.modules.xmpp</code></td>
<td>1286</td>
</tr>
<tr>
<td><code>salt.modules.zk_concurrency</code></td>
<td>1287</td>
</tr>
<tr>
<td><code>salt.modules.zookeeper</code></td>
<td>1289</td>
</tr>
<tr>
<td><code>salt.proxy.cimc</code></td>
<td>1296</td>
</tr>
<tr>
<td><code>salt.proxy.cisconso</code></td>
<td>1298</td>
</tr>
<tr>
<td><code>salt.proxy.docker</code></td>
<td>1302</td>
</tr>
<tr>
<td><code>salt.proxy.esxvm</code></td>
<td>1303</td>
</tr>
<tr>
<td><code>salt.proxy.junos</code></td>
<td>1306</td>
</tr>
<tr>
<td><code>salt.proxy.nxos_api</code></td>
<td>1307</td>
</tr>
<tr>
<td><code>salt.renderers.aws_kms</code></td>
<td>364</td>
</tr>
<tr>
<td><code>salt.renderers.genshi</code></td>
<td>364</td>
</tr>
<tr>
<td><code>salt.renderers.hjson</code></td>
<td>364</td>
</tr>
<tr>
<td><code>salt.renderers.json5</code></td>
<td>364</td>
</tr>
<tr>
<td><code>salt.renderers.appoptics_return</code></td>
<td>343</td>
</tr>
<tr>
<td><code>salt.renderers.carbon_return</code></td>
<td>344</td>
</tr>
<tr>
<td><code>salt.renderers.cassandra_return</code></td>
<td>345</td>
</tr>
<tr>
<td><code>salt.renderers.django_return</code></td>
<td>346</td>
</tr>
<tr>
<td><code>salt.renderers.librato_return</code></td>
<td>346</td>
</tr>
<tr>
<td><code>salt.renderers.local</code></td>
<td>347</td>
</tr>
<tr>
<td><code>salt.renderers.mongo_future_return</code></td>
<td>347</td>
</tr>
<tr>
<td><code>salt.renderers.mongo_return</code></td>
<td>349</td>
</tr>
<tr>
<td><code>salt.renderers.nagios_nrdp_return</code></td>
<td>350</td>
</tr>
<tr>
<td><code>salt.renderers.pgjsonb</code></td>
<td>351</td>
</tr>
<tr>
<td><code>salt.renderers.pushover_returner</code></td>
<td>354</td>
</tr>
<tr>
<td><code>salt.renderers.sentry_return</code></td>
<td>355</td>
</tr>
<tr>
<td><code>salt.renderers.sms_return</code></td>
<td>356</td>
</tr>
<tr>
<td><code>salt.renderers.telegram_return</code></td>
<td>356</td>
</tr>
<tr>
<td><code>salt.renderers.zabbix_return</code></td>
<td>358</td>
</tr>
<tr>
<td><code>salt.runners.asam</code></td>
<td>1310</td>
</tr>
<tr>
<td><code>salt.runners.drac</code></td>
<td>1311</td>
</tr>
<tr>
<td><code>salt.runners.f5</code></td>
<td>1312</td>
</tr>
<tr>
<td><code>salt.runners.launchd</code></td>
<td>1313</td>
</tr>
<tr>
<td><code>salt.runners.spacewalk</code></td>
<td>1313</td>
</tr>
<tr>
<td><code>salt.runners.test</code></td>
<td>1315</td>
</tr>
<tr>
<td><code>salt.sdb.confidant</code></td>
<td>1316</td>
</tr>
<tr>
<td><code>salt.sdb.consul</code></td>
<td></td>
</tr>
<tr>
<td>Module</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>salt.sdb.env</td>
<td>1317</td>
</tr>
<tr>
<td>salt.sdb.etcd_db</td>
<td>1318</td>
</tr>
<tr>
<td>salt.sdb.keyring_db</td>
<td>1319</td>
</tr>
<tr>
<td>salt.sdb.memcached</td>
<td>1320</td>
</tr>
<tr>
<td>salt.sdb.redis_sdb</td>
<td>1320</td>
</tr>
<tr>
<td>salt.sdb.vault</td>
<td>1321</td>
</tr>
<tr>
<td>salt.serializers.configparser</td>
<td>1322</td>
</tr>
<tr>
<td>salt.serializers.plist</td>
<td>1322</td>
</tr>
<tr>
<td>salt.serializers.toml</td>
<td>1323</td>
</tr>
<tr>
<td>salt.states.acme</td>
<td>1331</td>
</tr>
<tr>
<td>salt.states.alias</td>
<td>1332</td>
</tr>
<tr>
<td>salt.states.alternatives</td>
<td>1333</td>
</tr>
<tr>
<td>salt.states.apache_module</td>
<td>1334</td>
</tr>
<tr>
<td>salt.states.apache_site</td>
<td>1334</td>
</tr>
<tr>
<td>salt.states.artifactory</td>
<td>1335</td>
</tr>
<tr>
<td>salt.states.at</td>
<td>1336</td>
</tr>
<tr>
<td>salt.states.aws_sqs</td>
<td>1337</td>
</tr>
<tr>
<td>salt.states.azurearm_compute</td>
<td>1338</td>
</tr>
<tr>
<td>salt.states.azurearm_dns</td>
<td>1341</td>
</tr>
<tr>
<td>salt.states.azurearm_network</td>
<td>1345</td>
</tr>
<tr>
<td>salt.states.beacon</td>
<td>1361</td>
</tr>
<tr>
<td>salt.states.boto3_elasticache</td>
<td>1363</td>
</tr>
<tr>
<td>salt.states.boto_asg</td>
<td>1372</td>
</tr>
<tr>
<td>salt.states.boto_cloudfront</td>
<td>1378</td>
</tr>
<tr>
<td>salt.states.boto_cognitoidentity</td>
<td>1379</td>
</tr>
<tr>
<td>salt.states.boto_dynamodb</td>
<td>1381</td>
</tr>
<tr>
<td>salt.states.boto_elasticache</td>
<td>1384</td>
</tr>
<tr>
<td>salt.states.boto_elbv2</td>
<td>1388</td>
</tr>
<tr>
<td>salt.states.boto_iam_role</td>
<td>1390</td>
</tr>
<tr>
<td>salt.states.boto_kinesis</td>
<td>1392</td>
</tr>
<tr>
<td>salt.states.boto_kms</td>
<td>1394</td>
</tr>
<tr>
<td>salt.states.boto_lc</td>
<td>1395</td>
</tr>
<tr>
<td>salt.states.boto_secgroup</td>
<td>1398</td>
</tr>
<tr>
<td>salt.states.boto_sns</td>
<td>1401</td>
</tr>
<tr>
<td>salt.states.boto_vpc</td>
<td>1402</td>
</tr>
<tr>
<td>salt.states.bower</td>
<td>1412</td>
</tr>
<tr>
<td>salt.states.btrfs</td>
<td>1413</td>
</tr>
<tr>
<td>salt.states.chef</td>
<td>1414</td>
</tr>
<tr>
<td>salt.states.chronos_job</td>
<td>1415</td>
</tr>
<tr>
<td>salt.states.cimc</td>
<td>1416</td>
</tr>
<tr>
<td>salt.states.composer</td>
<td>1418</td>
</tr>
<tr>
<td>salt.states.cryptdev</td>
<td>1420</td>
</tr>
<tr>
<td>salt.states.csf</td>
<td>1421</td>
</tr>
<tr>
<td>salt.states.cyg</td>
<td>1423</td>
</tr>
<tr>
<td>salt.states.ddns</td>
<td>1424</td>
</tr>
<tr>
<td>salt.states.debconfmod</td>
<td>1425</td>
</tr>
<tr>
<td>salt.states.dellchassis</td>
<td>1427</td>
</tr>
<tr>
<td>salt.states.disk</td>
<td>1432</td>
</tr>
<tr>
<td>salt.states.dvs</td>
<td>1433</td>
</tr>
<tr>
<td>salt.states.elasticsearch_index</td>
<td>1436</td>
</tr>
<tr>
<td>salt.states.elasticsearch_index_template</td>
<td>1437</td>
</tr>
<tr>
<td>salt.states.esselect</td>
<td>1438</td>
</tr>
<tr>
<td>salt.states.esxdatadcenter</td>
<td>1438</td>
</tr>
<tr>
<td>salt.states.etcd_mod</td>
<td>1322</td>
</tr>
</tbody>
</table>
module, 1512
salt.states.logrotate
module, 1512
salt.states.loop
module, 1513
salt.states.lvs_server
module, 1514
salt.states.lvs_service
module, 1515
salt.states.lxc
module, 1516
salt.states.lxd
module, 1519
salt.states.lxd_container
module, 1520
salt.states.lxd_image
module, 1524
salt.states.lxd_profile
module, 1526
salt.states.mac_xattr
module, 1527
salt.states.makeconf
module, 1527
salt.states.marathon_app
module, 1528
salt.states.modjk
module, 1528
salt.states.modjk_worker
module, 1529
salt.states.mongodb_database
module, 1530
salt.states.mongodb_user
module, 1531
salt.states.monit
module, 1532
salt.states.mount
module, 1532
salt.states.mssql_database
module, 1536
salt.states.mssql_login
module, 1536
salt.states.mssql_role
module, 1537
salt.states.mssql_user
module, 1537
salt.states.msteams
module, 1538
salt.states.mysql_database
module, 1538
salt.states.mysql_grants
module, 1539
salt.states.neutron_network
module, 1541
salt.states.neutron_secgroup
module, 1542
salt.states.neutron_secgroup_rule
module, 1543
salt.states.neutron_subnet
module, 1543
salt.states.nexus
module, 1545
salt.states.npm
module, 1546
salt.states.nxos
module, 1547
salt.states.nxos_upgrade
module, 1549
salt.states.openstack_config
module, 1550
salt.states.openvswitch_bridge
module, 1550
salt.states.openvswitch_port
module, 1551
salt.states.opsgenie
module, 1551
salt.states.pagerduty
module, 1552
salt.states.pagerduty_escalation_policy
module, 1553
salt.states.pagerduty_schedule
module, 1554
salt.states.pagerduty_service
module, 1555
salt.states.pagerduty_user
module, 1556
salt.states.pbm
module, 1556
salt.states.pecl
module, 1558
salt.states.pkgbuild
module, 1559
salt.states.pkgng
module, 1562
salt.states.portage_config
module, 1562
salt.states.postgres_cluster
module, 1563
salt.states.postgres_database
module, 1563
salt.states.postgres_initdb
module, 1565
salt.states.postgres_language
module, 1566
salt.states.postgres_privileges
module, 1567
salt.states.postgres_schema
module, 1570
salt.states.postgres_tablespace
Salt Documentation, Release 3002.5

module, 1571
salt.states.powerpath
  module, 1572
salt.states.process
  module, 1572
salt.states.pushover
  module, 1572
salt.states.pyenv
  module, 1573
salt.states.pyrax_queues
  module, 1575
salt.states.quota
  module, 1575
salt.states.rabbitmq_plugin
  module, 1576
salt.states.rbac_solaris
  module, 1576
salt.states.rbenv
  module, 1577
salt.states.rdp
  module, 1578
salt.states.redismod
  module, 1578
salt.states.reg
  module, 1579
salt.states.rvm
  module, 1586
salt.states.salt_proxy
  module, 1588
salt.states.saltutil
  module, 1589
salt.states.schedule
  module, 1592
salt.states.selinux
  module, 1595
salt.states.slack
  module, 1597
salt.states.smtp
  module, 1598
salt.states.snapper
  module, 1598
salt.states.splunk
  module, 1600
salt.states.splunk_search
  module, 1601
salt.states.sqlite3
  module, 1602
salt.states.ssh_auth
  module, 1604
salt.states.stateconf
  module, 1606
salt.states.status
  module, 1607
salt.states.statuspage
  module, 1607
salt.states.supervisord
  module, 1609
salt.states.sysctl
  module, 1610
salt.states.syslog_ng
  module, 1610
salt.states.sysrc
  module, 1611
salt.states.telemetry_alert
  module, 1612
salt.states.testinframod
  module, 1613
salt.states.timezone
  module, 1613
salt.states.tls
  module, 1613
salt.states.tomcat
  module, 1613
salt.states.trafficserver
  module, 1616
salt.states.tuned
  module, 1618
salt.states.uptime
  module, 1619
salt.states.vault
  module, 1619
salt.states.vbox_guest
  module, 1620
salt.states.victorops
  module, 1620
salt.states.win_dacl
  module, 1621
salt.states.win_dns_client
  module, 1623
salt.states.win_firewall
  module, 1623
salt.states.win_iis
  module, 1625
salt.states.win_path
  module, 1632
salt.states.win_pki
  module, 1633
salt.states.win_snmp
  module, 1634
salt.states.wordpress
  module, 1635
salt.states.x509
  module, 1636
salt.states.xml
  module, 1641
salt.states.xmpp
  module, 1642
salt.states.zabbix_action
  module, 1645
module, 1642
salt.states.zabbix_hostgroup
    module, 1644
salt.states.zabbix_mediatype
    module, 1644
salt.states.zabbix_template
    module, 1645
salt.states.zabbix_usergroup
    module, 1649
salt.states.zabbix_usermacro
    module, 1650
salt.states.zabbix_valuemap
    module, 1651
salt.states.zcbuildout
    module, 1652
salt.states.zenoss
    module, 1653
salt.states.zfs
    module, 1654
salt.states.zk_concurrency
    module, 1657
salt.states.zookeeper
    module, 1658
salt.states.zpool
    module, 1660
salt.tops.cobbler
    module, 1664
salt.tops.mongo
    module, 1664
salt.tops.reclass_adapter
    module, 1665
salt.tops.varstack_top
    module, 1666
salt.utils.aggregation
    module, 1832
salt-api command line option
    --config-dir=CONFIG_dir, 975
    --daemon, 975
    --help, 975
    --log-file=LOG_FILE, 976
    --log-file-level=LOG_LEVEL, 976
    --pid-file=PIDFILE, 975
    --version, 975
    --versions-report, 975
    -c CONFIG_DIR, 976
    -d, 977
    -g, 977
    -h, 976
    -l LOG_LEVEL, 978
    -m MODULE_DIRS, 977
salt-call command line option
    --config-dir=CONFIG_dir, 976
    --doc, 977
    --documentation, 977
    --file-root=FILE_ROOT, 977
    --force-color, 978
    --grains, 977
    --hard-crash, 977
    --help, 976
    --id=ID, 977
    --local, 977
    --log-file=LOG_FILE, 978
    --log-file-level=LOG_LEVEL, 978
    --log-level=LOG_LEVEL, 978
    --master=MASTER, 977
    --metadata, 977
    --module-dirs=MODULE_DIRS, 977
    --no-color, 978
    --out, 978
    --out-file=OUTPUT_FILE, 978
    --out-file-append, 978
    --out-indent OUTPUT_INDENT, 978
    --output-file=OUTPUT_FILE, 978
    --output-file-append, 978
    --output-indent OUTPUT_INDENT, 978
    --pillar-root=PILLAR_ROOT, 977
    --refresh-grains-cache, 977
    --recode-passthrough, 977
    --return RETURNER, 977
    --skip-grains, 977
    --state_output=STATE_OUTPUT, 978
    --state_verbose=STATE_VERBOSE, 978
    --state-output=STATE_OUTPUT, 978
    --state-verbose=STATE_VERBOSE, 978
    --version, 976
    --versions-report, 976
    -c CONFIG_DIR, 976
    -d, 977
    -g, 977
    -h, 976
    -l LOG_LEVEL, 978
    -m MODULE_DIRS, 977
salt-cloud command line option
    -F, 722
    -H, 721
    -L LOCATION, 721
    -P, 721
    -Q, 722
    -S, 722
    --action=ACTION, 721
    --assume-yes, 721
    --config-dir=CONFIG_dir, 720
    --destroy, 721
    --force-color, 723
    --full-query, 722
    --function=<FUNC-NAME> <PROVIDER>, 721

Index 3329
--hard, 721
--help, 720
--keep-temp, 721
--list-images=LIST_IMAGES, 722
--list-locations=LIST_LOCATIONS, 722
--list-profiles, 722
--list-providers, 722
--list-sizes=LIST_SIZES, 722
--location=LOCATION, 721
--map=MAP, 721
--no-color, 723
--out, 722
--out-file=OUTPUT_FILE, 723
--out-file-append, 723
--out-indent OUTPUT_INDENT, 722
--out-file=OUTPUT_FILE, 723
--out-file-append, 723
--out-indent OUTPUT_INDENT, 722
--parallel, 721
--profile=PROFILE, 721
--query, 722
--script-args=SCRIPT_ARGS, 721
--set-password=<USERNAME>
  <PROVIDER>, 722
--show-deploy-args, 721
--state_output=STATE_OUTPUT, 723
--state-verbose=STATE_VERBOSE, 723
--state-output=STATE_OUTPUT, 723
--state-verbose=STATE_VERBOSE, 723
--update-bootstrap, 721
--version, 720
--versions-report, 720
-a ACTION, 721
-c CONFIG_DIR, 720
-d, 721
-f <FUNC-NAME> <PROVIDER>, 721
-h, 720
-k, 721
-m MAP, 721
-p PROFILE, 721
-u, 721
-y, 721
salt-cp command line option
-C, 724
-E, 724
-G, 724
-L, 724
-N, 724
-R, 724
--chunked, 724
--config-dir=CONFIG_dir, 724
--grain, 724
--grain-pcre, 724
--help, 983
--list, 984
--log-file=LOG_FILE, 984
--log-file-level=LOG_LEVEL_LOGFILE, 984
--log-level=LOG_LEVEL, 984
--no-compression, 984
--nodegroup, 984
--pcre, 984
--range, 984
--timeout=TIMEOUT, 983
--version, 983
--versions-report, 983
-c CONFIG_DIR, 983
-h, 983
-l LOG_LEVEL, 984
-n, 984
-t TIMEOUT, 983
salt-extend command line option
--debug, 985
--description, 985
--extension, 985
--name, 985
--no-merge, 985
--salt-directory, 985
-d, 985
-e, 985
-n, 985
-o, 985
salt-key command line option
-A, 988
-D, 988
-F, 988
-L, 988
-P, 988
-R, 988
--accept=ACCEPT, 988
--accept-all, 988
--auto-create, 989
--config-dir=CONFIG_dir, 986
--delete=DELETE, 988
--delete-all, 988
--force-color, 987
--finger=FINGER, 988
--finger-all, 988
--include-all, 988
--keysize=KEYSIZE, 988
--list=ARG, 988
--list-all, 988
--log-file=LOG_FILE, 987
--log-file-level=LOG_LEVEL_LOGFILE, 987
--no-color, 987
--out, 987
--out-file=OUTPUT_FILE, 987
--out-file-append, 987
--out-indent OUTPUT-indent, 987
--print=PRINT, 988
--print-all, 988
--priv=PRIV, 989
--pub=PUB, 989
--quiet, 986
--reject=REJECT, 988
--reject-all, 988
--rotate-aes-key=ROTATE_AES_KEY, 987
--signature-path=SIGNATURE_PATH, 989
--state_output=STATE_OUTPUT, 987
--state-verbose=STATE_VERBOSE, 987
--state-output=STATE_OUTPUT, 987
--state-verbose=STATE_VERBOSE, 987
--user=USER, 986
--version, 986
--versions-report, 986
--yes, 987
-a ACCEPT, 988
-c CONFIG_DIR, 986
-d DELETE, 988
-f FINGER, 988
-h, 986
-l ARG, 988
-p PRINT, 988
-q, 986
-r REJECT, 988
-u USER, 986
-y, 987
salt-master command line option
--config-dir=CONFIG_dir, 991
--daemon, 991
--help, 991
--log-file=LOG_FILE, 991
--log-file-level=LOG_LEVEL_LOGFILE, 991
--log-level=LOG_LEVEL, 991
--pid-file PIDFILE, 991
--user=USER, 991
--version, 991
--versions-report, 991
-c CONFIG_DIR, 991
-d, 991
-h, 991
-l LOG_LEVEL, 991
-u USER, 991
salt-minion command line option
--config-dir=CONFIG_dir, 991
--daemon, 991
--help, 991
--log-file=LOG_FILE, 991
--log-file-level=LOG_LEVEL_LOGFILE, 991
--log-level=LOG_LEVEL, 991
--pid-file PIDFILE, 991
--user=USER, 991
--version, 991
--versions-report, 991
-c CONFIG_DIR, 991
-d, 991
-h, 991
-l LOG_LEVEL, 991
-u USER, 991
salt-proxy command line option
--config-dir=CONFIG_dir, 992
--daemon, 992
--help, 992
--log-file=LOG_FILE, 992
--log-file-level=LOG_LEVEL_LOGFILE, 992
--log-level=LOG_LEVEL, 992
--pid-file PIDFILE, 992
--proxyid, 992
--user=USER, 992
--version, 992
--versions-report, 992
-c CONFIG_DIR, 992
-d, 992
-h, 992
-l LOG_LEVEL, 992
-u USER, 992
salt-run command line option
--config-dir=CONFIG_dir, 993
--doc, 993
--documentation, 993
--hard-crash, 993
--help, 993
--log-file=LOG_FILE, 994
--log-file-level=LOG_LEVEL_LOGFILE, 994
--log-level=LOG_LEVEL, 994
--timeout=TIMEOUT, 993
--version, 993
--versions-report, 993
-c CONFIG_DIR, 993
-d, 993
-h, 993
-l LOG_LEVEL, 994

Index 3331
salt-ssh command line option
-`t` `TIMEOUT`, 993

salt-syndic command line option
-`c` `CONFIG_DIR`, 998
-`d` , 998
-`h` , 998
-`l` `LOG_LEVEL`, 999
-`u` `USER`, 998
SaltReqTimeoutError, 1836
SaltRunnerError, 1836
SaltSyndicMasterError, 1836
SaltSystemExit, 1836
SaltWheelError, 1837

same() (in module salt.states.ckan glaring), 1423
save_load() (in module salt.returners.jinja, 346
save_load() (in module salt.returners.mongo_future, 348
save_load() (in module salt.returners.pqsondb), 353
save_load() (in module salt.returners.zabbix_return), 358

Scalar() (in module salt.utils.aggregation), 1834
schedule_downtime() (in module salt.modules.datadog_api), 1096
scheduled_snapshot() (in module salt.states.zfs), 1655

schema_get() (in module salt.modules.glance), 1122
search_template_create() (in module salt.modules.elasticsearch), 1110
search_template_delete() (in module salt.modules.elasticsearch), 1110
search_template_get() (in module salt.modules.elasticsearch), 1110

secret_absent() (in module salt.states.kubernetes), 1502
secret_present() (in module salt.states.kubernetes), 1502
sections_absent() (in module salt.states.ini_manage), 1472
sections_present() (in module salt.states.ini_manage), 1472
security_group_create() (in module salt.modules.neutronng), 1229
security_group_delete() (in module salt.modules.neutronng), 1230
security_group_get() (in module salt.modules.neutronng), 1230
security_group_rule_create() (in module salt.modules.neutronng), 1230
security_group_rule_delete() (in module salt.modules.neutronng), 1231
security_group_rule_update() (in module salt.modules.neutronng), 1231
security_rule_absent() (in module salt.states.azurearm_network), 1357
security_rule_create_or_update() (in module salt.modules.azurearm_network), 1049
security_rule_delete() (in module salt.modules.azurearm_network), 1051
security_rule_get() (in module salt.modules.azurearm_network), 1051
security_rule_present() (in module salt.states.azurearm_network), 1557

security_rules_list() (in module salt.modules.azurearm_network), 1051
seed() (in module salt.modules.mod_random), 1185
send_message() (in module salt.modules.google_chat), 1124

send_msg() (in module salt.modules.xmpp), 1286
send_msg() (in module salt.states.smtp), 1350
send_msg() (in module salt.states.xmpp), 1642
send_msg_multi() (in module salt.states.xmpp), 1287
send_msg_multi() (in module salt.states.xmpp), 1642
send_sms() (in module salt.states.twilio_notify), 1277

SendMsgBot (class in salt.modules.xmpp), 1286
SendMsgBot (class in salt.returners.xmpp_return), 358

sequence

jinja filters, 411
Sequence (class in salt.utils.aggregation), 1834

serialize() (in module salt.serializers.configparser), 1322
serialize() (in module salt.serializers.plist), 1323
serialize() (in module salt.serializers.toml), 1323
service_absent() (in module salt.states.keystone), 1490
service_absent() (in module salt.states.kubernetes), 1502
service_create() (in module salt.states.kubernetes), 1502
service_delete() (in module salt.states.keystone), 1176
service_delete() (in module salt.states.keystone), 1176
service_get() (in module salt.states.keystone), 1176
service_highstate() (in module salt.states.introspect), 1149
service_list() (in module salt.states.keystone), 1177
service_present() (in module salt.states.keystone), 1490
service_present() (in module salt.states.kubernetes), 1502
service_search() (in module salt.states.keystone), 1177
service_update() (in module salt.states.keystone), 1177

set() (in module salt.states.zookeeper), 1293
set() (in module salt.states.debootstrap), 1426
set() (in module salt.states.stateconf), 1606
set() (in module salt.states.stateconf), 1113
set() (in module salt.states.etcd, 1317
set() (in module salt.states.etcd), 1318
set() (in module salt.states.etcd_db), 1319
set() (in module salt.states.keeper_db), 1320
set() (in module salt.states.memcached), 1320
set_value() (in module salt.modules.xml), 1285
set_weight() (in module salt.modules.haproxyconn), 1133
set_zone() (in module salt.modules.win_timezone), 1285
setup_clouds() (in module salt.modules.glanceng), 1123
setup_clouds() (in module salt.modules.keystoneng), 1177
setup_clouds() (in module salt.modules.neutronng), 1231

sha256
jinja filters, 423
sha512
jinja filters, 424
shadow_hash() (in module salt.modules.mod_random), 1185
show() (in module salt.modules.nxos_api), 1236
show_backends() (in module salt.modules.haproxyconn), 1134

show_coalesce() (in module salt.modules.ethtool), 1115
show_driver() (in module salt.modules.ethtool), 1115
show_firewall() (in module salt.modules.neutron), 1221
show_firewall_rule() (in module salt.modules.neutron), 1221
show Floatingip() (in module salt.modules.neutron), 1221
show_frontends() (in module salt.modules.haproxyconn), 1134
show_ikepolicy() (in module salt.modules.neutron), 1222
show_image() (in module salt.modules.sensehat), 1260
show_ipsec_site_connection() (in module salt.modules.neutron), 1222
show_ipsec_policy() (in module salt.modules.neutron), 1222

show jid
conf/master, 74
show_letter() (in module salt.modules.sensehat), 1260
show_message() (in module salt.modules.sensehat), 1260
show_network() (in module salt.modules.neutron), 1222
show_offload() (in module salt.modules.ethtool), 1115
show port() (in module salt.modules.neutron), 1223
show quota() (in module salt.modules.neutron), 1223
show ring() (in module salt.modules.ethtool), 1115
<table>
<thead>
<tr>
<th>Function</th>
<th>Module</th>
<th>Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>show_router()</td>
<td>salt.modules.neutron</td>
<td>1223</td>
</tr>
<tr>
<td>show_security_group()</td>
<td>salt.modules.neutron</td>
<td>1224</td>
</tr>
<tr>
<td>show_security_group_rule()</td>
<td>salt.modules.neutron</td>
<td>1224</td>
</tr>
<tr>
<td>show_subnet()</td>
<td>salt.modules.neutron</td>
<td>1224</td>
</tr>
<tr>
<td>show_timeout</td>
<td></td>
<td></td>
</tr>
<tr>
<td>show_vpn_service()</td>
<td>salt.modules.neutron</td>
<td>1224</td>
</tr>
<tr>
<td>shutdown()</td>
<td>salt.proxy.cimc</td>
<td>1297</td>
</tr>
<tr>
<td>shutdown()</td>
<td>salt.proxy.ciscoconso</td>
<td>1302</td>
</tr>
<tr>
<td>shutdown()</td>
<td>salt.proxy.docker</td>
<td>1302</td>
</tr>
<tr>
<td>shutdown()</td>
<td>salt.proxy.esxvm</td>
<td>1305</td>
</tr>
<tr>
<td>shutdown()</td>
<td>salt.proxy.junos</td>
<td>1306</td>
</tr>
<tr>
<td>shutdown()</td>
<td>salt.proxy.nxos_api</td>
<td>1308</td>
</tr>
<tr>
<td>shutdown()</td>
<td>salt.module.states.junos</td>
<td>1485</td>
</tr>
<tr>
<td>sock_dir</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sources_add()</td>
<td>salt.states.gem</td>
<td>1444</td>
</tr>
<tr>
<td>sources_remove()</td>
<td>salt.states.gem</td>
<td>1445</td>
</tr>
<tr>
<td>spm command line option</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--assume-yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--build</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--create_repo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--files</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--info</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--install</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--local</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--remove</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--update_repo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sqlite_version()</td>
<td>salt.module.sqlite3</td>
<td>1268</td>
</tr>
<tr>
<td>ssh_identities_only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ssh_interface</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ssh_list_nodegroups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ssh_log_file</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ssh_minion_opt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ssh_port</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ssh_priv_passwd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ssh_passwd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Function</td>
<td>Module</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>str_encode()</td>
<td>salt.modules.mod_random</td>
<td>1186</td>
</tr>
<tr>
<td>stream()</td>
<td>salt.runners.test</td>
<td>1315</td>
</tr>
<tr>
<td>strftime()</td>
<td>jinja filters</td>
<td>411</td>
</tr>
<tr>
<td>string()</td>
<td>salt.states.redismod</td>
<td>1579</td>
</tr>
<tr>
<td>subnet_absent()</td>
<td>salt.states.azurearm_network</td>
<td>1359</td>
</tr>
<tr>
<td>subnet_absent()</td>
<td>salt.states.boto_vpc</td>
<td>1410</td>
</tr>
<tr>
<td>subnet_create()</td>
<td>salt.modules.neutronng</td>
<td>1231</td>
</tr>
<tr>
<td>subnet_create_or_update()</td>
<td>salt.modules.azurearm_network</td>
<td>1051</td>
</tr>
<tr>
<td>subnet_delete()</td>
<td>salt.states.azurearm_network</td>
<td>1052</td>
</tr>
<tr>
<td>subnet_delete()</td>
<td>salt.modules.neutronng</td>
<td>1232</td>
</tr>
<tr>
<td>subnet_group_absent()</td>
<td>salt.states.boto_elasticache</td>
<td>1387</td>
</tr>
<tr>
<td>subnet_group_exists()</td>
<td>salt.states.boto_elasticache</td>
<td>1071</td>
</tr>
<tr>
<td>subnet_group_present()</td>
<td>salt.states.boto_elasticache</td>
<td>1387</td>
</tr>
<tr>
<td>subnet_present()</td>
<td>salt.states.azurearm_network</td>
<td>1359</td>
</tr>
<tr>
<td>subnet_present()</td>
<td>salt.states.boto_vpc</td>
<td>1410</td>
</tr>
<tr>
<td>subnet_update()</td>
<td>salt.modules.neutronng</td>
<td>1232</td>
</tr>
<tr>
<td>subnets_list()</td>
<td>salt.modules.azurearm_network</td>
<td>1052</td>
</tr>
<tr>
<td>subscribe()</td>
<td>salt.modules.boto3_sns</td>
<td>1056</td>
</tr>
<tr>
<td>subscribe()</td>
<td>salt.modules.boto_sns</td>
<td>1081</td>
</tr>
<tr>
<td>substring_in_list</td>
<td>jinja filters</td>
<td>418</td>
</tr>
<tr>
<td>subvolume_created()</td>
<td>salt.states.btrfs</td>
<td>1413</td>
</tr>
<tr>
<td>subvolume_deleted()</td>
<td>salt.states.btrfs</td>
<td>1414</td>
</tr>
<tr>
<td>sudo_acl</td>
<td>conf/master</td>
<td>91</td>
</tr>
<tr>
<td>sudo_user</td>
<td>conf/master</td>
<td>91</td>
</tr>
<tr>
<td>svnfs_branches</td>
<td>conf/master</td>
<td>117</td>
</tr>
<tr>
<td>svnfs_mountpoint</td>
<td>conf/master</td>
<td>116</td>
</tr>
<tr>
<td>svnfs_remotes</td>
<td>conf/master</td>
<td>116</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Function</th>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>svnfs_root</td>
<td>conf/master</td>
<td>117</td>
</tr>
<tr>
<td>svnfs_saltenv_blacklist</td>
<td>conf/master</td>
<td>118</td>
</tr>
<tr>
<td>svnfs_saltenv_whitelist</td>
<td>conf/master</td>
<td>118</td>
</tr>
<tr>
<td>svnfs_tags</td>
<td>conf/master</td>
<td>117</td>
</tr>
<tr>
<td>svnfs_trunk</td>
<td>conf/master</td>
<td>117</td>
</tr>
<tr>
<td>svnfs_update_interval</td>
<td>conf/master</td>
<td>118</td>
</tr>
<tr>
<td>swap()</td>
<td>salt.states.mount</td>
<td>836</td>
</tr>
<tr>
<td>sync_all()</td>
<td>salt.states.saltutil</td>
<td>1589</td>
</tr>
<tr>
<td>sync_beacons()</td>
<td>salt.states.saltutil</td>
<td>1589</td>
</tr>
<tr>
<td>sync_clouds()</td>
<td>salt.states.saltutil</td>
<td>1589</td>
</tr>
<tr>
<td>sync_engines()</td>
<td>salt.states.saltutil</td>
<td>1589</td>
</tr>
<tr>
<td>sync_executors()</td>
<td>salt.states.saltutil</td>
<td>1589</td>
</tr>
<tr>
<td>sync_grains()</td>
<td>salt.states.saltutil</td>
<td>1589</td>
</tr>
<tr>
<td>sync_log_handlers()</td>
<td>salt.states.saltutil</td>
<td>1589</td>
</tr>
<tr>
<td>sync_matchers()</td>
<td>salt.states.saltutil</td>
<td>1590</td>
</tr>
<tr>
<td>sync_modules()</td>
<td>salt.states.saltutil</td>
<td>1590</td>
</tr>
<tr>
<td>sync_output()</td>
<td>salt.states.saltutil</td>
<td>1590</td>
</tr>
<tr>
<td>sync_outputters()</td>
<td>salt.states.saltutil</td>
<td>1590</td>
</tr>
<tr>
<td>sync_pillar()</td>
<td>salt.states.saltutil</td>
<td>1590</td>
</tr>
<tr>
<td>sync_proxymodules()</td>
<td>salt.states.saltutil</td>
<td>1590</td>
</tr>
<tr>
<td>sync_renderers()</td>
<td>salt.states.saltutil</td>
<td>1590</td>
</tr>
<tr>
<td>sync_returners()</td>
<td>salt.states.saltutil</td>
<td>1590</td>
</tr>
<tr>
<td>sync_sdb()</td>
<td>salt.states.saltutil</td>
<td>1591</td>
</tr>
<tr>
<td>sync_serializers()</td>
<td>salt.states.saltutil</td>
<td>1591</td>
</tr>
<tr>
<td>sync_states()</td>
<td>salt.states.saltutil</td>
<td>1591</td>
</tr>
<tr>
<td>sync_thorium()</td>
<td>salt.states.saltutil</td>
<td>1591</td>
</tr>
<tr>
<td>sync_utils()</td>
<td>salt.states.saltutil</td>
<td>1591</td>
</tr>
<tr>
<td>Syndic</td>
<td>3271</td>
<td></td>
</tr>
<tr>
<td>syndic_failover</td>
<td>conf/master</td>
<td>135</td>
</tr>
<tr>
<td>syndic_finger</td>
<td>conf/minion</td>
<td>167</td>
</tr>
<tr>
<td>syndic_forward_all_events</td>
<td>conf/master</td>
<td>136</td>
</tr>
<tr>
<td>syndic_log_file</td>
<td>conf/master</td>
<td>135</td>
</tr>
</tbody>
</table>
syndic_master
  conf/master, 134
syndic_master_port
  conf/master, 135
syndic_pidfile
  conf/master, 135
syndic_wait
  conf/master, 136
syslog() (in module salt.states.cimc), 1417
system() (in module salt.states.keyboard), 1488
system() (in module salt.states.locale), 1512
system() (in module salt.states.timezone), 1613

T

Table_absent() (in module salt.states.sqlite3), 1603
Table_present() (in module salt.states.sqlite3), 1603
Tables() (in module salt.modules.sqlite3), 1268
Target, 3271
target_group_exists() (in module salt.modules.boto_elbv2), 1073
targets_deregistered() (in module salt.states.boto_elbv2), 1389
targets_registered() (in module salt.states.boto_elbv2), 1390
tcp_keepalive
  conf/master, 141
cnf/minion, 192
tcp_keepalive_cnt
  conf/master, 141
cnf/minion, 192
tcp_keepalive_idle
  conf/master, 141
cnf/minion, 193
tcp_keepalive_intvl
  conf/master, 141
cnf/minion, 193
tcp_master_pub_port
  conf/master, 81
tcp_master_publish_pull
  conf/master, 82
tcp_master_pull_port
  conf/master, 82
tcp_master_workers
  conf/master, 82
tcp_pub_port
  conf/minion, 166
tcp_pull_port
  conf/minion, 166
team_absent() (in module salt.states.github), 1446
team_present() (in module salt.states.github), 1446

TemplateError, 1837
tenant_absent() (in module salt.states.keystone), 1490
tenant_present() (in module salt.states.keystone), 1490
term() (in module salt.modules.s6), 1255
test
cnf/minion, 176
testing_off() (in module salt.states.csf), 1422
testing_on() (in module salt.states.csf), 1422
thin_extra_mods
  conf/master, 88
TimedProcTimeoutError, 1837
timeout
  conf/master, 73
TimeoutError, 1837
to_bool
  jinja filters, 412
to_bytes
  jinja filters, 420
to_camelcase
  jinja filters, 426
to_num
  jinja filters, 419
to_snake_case
  jinja filters, 426
toJson
  jinja filters, 421
token_expire
  conf/master, 92
token_expire_user_override
  conf/master, 92
TokenAuthenticationError, 1837
Top File, 3271
top() (in module salt.tops.cobbler), 1664
top() (in module salt.tops.monge), 1665
top() (in module salt.tops.reclass_adapter), 1666
top() (in module salt.tops.varstack_top), 1666
top_file
  conf/minion, 176
top_file_merging_strategy
  conf/master, 97
cnf/minion, 174
topic_exists() (in module salt.states.boto3_sns), 1056
transport
  conf/master, 80
cnf/minion, 167
transport_opts
  conf/master, 80
traverse
  jinja filters, 425
tree() (in module salt.modules.etcd_mod), 1113
tree() (in module salt.modules.iosconfig), 1151
trigger_event() (in module salt.states.ifttt), 1462
TzMapper (class in salt.modules.win_timezone), 1283
update_global_secondary_index() (in module salt.modules.boto_dynamodb), 1063
update_host() (in module salt.modules.infoblox), 1145
update_image_properties() (in module salt.modules.glanceng), 1123
update_interface() (in module salt.modules.netbox), 1204
update_network() (in module salt.modules.neutron), 1226
update_object() (in module salt.modules.infoblox), 1145
update_org() (in module salt.modules.grafana4), 1130
update_org_address() (in module salt.modules.grafana4), 1130
update_org_pers() (in module salt.modules.grafana4), 1130
update_org_user() (in module salt.modules.grafana4), 1130
update_packaging_site() (in module salt.states.pkgng), 1562
update_port() (in module salt.modules.neutron), 1226
update_quota() (in module salt.modules.neutron), 1226
update_record_field() (in module salt.modules.servicenow), 1262
update_repo
    spm command line option, 1000
update_restart_services
    conf/minion, 193
update_router() (in module salt.modules.neutron), 1227
update_security_group() (in module salt.modules.neutron), 1227
update_simple_binding() (in module salt.modules.jboss7), 1168
update_stack() (in module salt.modules.boto_cfn), 1058
update_subnet() (in module salt.modules.neutron), 1227
update_url
    conf/minion, 193
update_user() (in module salt.modules.grafana4), 1131
update_user() (in module salt.modules.splunk), 1268
update_user_password() (in module salt.modules.grafana4), 1131
update_user_permissions() (in module salt.modules.grafana4), 1131
update_vpngroup() (in module salt.modules.neutron), 1228
update_zone() (in module salt.modules.libcloud_dns), 1182

U
unchanged() (salt.states.cyg.DictDiffer method), 1423
undeploy() (in module salt.modules.jboss7), 1167
undeployed() (in module salt.states.tomcat), 1614
uninstall_python() (in module salt.modules.pyenv), 1251
union
    jinja filters, 415
unique
    jinja filters, 434
unlock() (in module salt.modules.zk_concurrency), 1027
unlock() (in module salt.states.junos), 1486
unlock() (in module salt.states.zk_concurrency), 1658
unmapped() (in module salt.states.cryptdev), 1421
unmonitor() (in module salt.states.monit), 1532
unmounted() (in module salt.states.mount), 1535
unregister() (in module salt.runners.spacewalk), 1314
unsubscribe() (in module salt.modules.boto3_sns), 1056
unsubscribe() (in module salt.modules.boto_sns), 1081
until() (in module salt.states.loop), 1514
until_no_eval() (in module salt.states.loop), 1514
update() (in module salt.modules.boto_dynamodb), 1063
update() (in module salt.modules.etcd_mod), 1113
update() (in module salt.modules.namecheap_domains_ns), 1196
update() (in module salt.modules.pyenv), 1251
update() (in module salt.states.statuspage), 1272
update() (in module salt.modules.supervisord), 1275
update() (in module salt.states.composer), 1419
update() (in module salt.states.statuspage), 1608
update() (salt.modules.inspectlib.fsdb.CsvDB method), 1148
update_cname() (in module salt.modules.infoblox), 1145
update_datasource() (in module salt.modules.grafana4), 1129
update_datasource() (in module salt.modules.jboss7), 1167
update_device() (in module salt.modules.netbox), 1204
update_dict_key_value
    jinja filters, 423
update_distribution() (in module salt.modules.boto_cloudfront), 1060
update_firewall_rule() (in module salt.modules.neutron), 1225
update_floatingip() (in module salt.modules.neutron), 1225
update_global_secondary_index() (in module salt.modules.boto_dynamodb), 1063
update_host() (in module salt.modules.infoblox), 1145
update_image_properties() (in module salt.modules.glanceng), 1123
update_interface() (in module salt.modules.netbox), 1204
update_network() (in module salt.modules.neutron), 1226
update_object() (in module salt.modules.infoblox), 1145
update_org() (in module salt.modules.grafana4), 1130
update_org_address() (in module salt.modules.grafana4), 1130
update_org_pers() (in module salt.modules.grafana4), 1130
update_org_user() (in module salt.modules.grafana4), 1130
update_packaging_site() (in module salt.states.pkgng), 1562
update_port() (in module salt.modules.neutron), 1226
update_quota() (in module salt.modules.neutron), 1226
update_record_field() (in module salt.modules.servicenow), 1262
update_repo
    spm command line option, 1000
update_restart_services
    conf/minion, 193
update_router() (in module salt.modules.neutron), 1227
update_security_group() (in module salt.modules.neutron), 1227
update_simple_binding() (in module salt.modules.jboss7), 1168
update_stack() (in module salt.modules.boto_cfn), 1058
update_subnet() (in module salt.modules.neutron), 1227
update_url
    conf/minion, 193
update_user() (in module salt.modules.grafana4), 1131
update_user() (in module salt.modules.splunk), 1268
update_user_password() (in module salt.modules.grafana4), 1131
update_user_permissions() (in module salt.modules.grafana4), 1131
update_vpngroup() (in module salt.modules.neutron), 1228
update_zone() (in module salt.modules.libcloud_dns), 1182

Index
updated() (in module salt.states.cyg), 1424
upgrade() (in module salt.modules.kernelpkg_linux_apt), 1170
upgrade() (in module salt.modules.nxos_upgrade), 1237
upgrade_available() (in module salt.modules.kernelpkg_linux_apt), 1171
uplink_portgroup_configured() (in module salt.states.dvs), 1436
upload_file() (in module salt.modules.boto_s3), 1077
usages_list() (in module salt.modules.azurearm_network), 1053
use_master_when_local
  conf/minion, 179
user
  conf/master, 70
  conf/minion, 153
user() (in module salt.states.cimc), 1418
user_absent() (in module salt.states.ipmi), 1474
user_absent() (in module salt.states.keystone), 1491
user_absent() (in module salt.states.nxos), 1548
user_chpass() (in module salt.modules.influxdb08mod), 1138
user_create() (in module salt.modules.influxdb08mod), 1138
user_create() (in module salt.states.keystoneng), 1177
user_delete() (in module salt.modules.ipmi), 1163
user_delete() (in module salt.modules.keystoneng), 1177
user_exists() (in module salt.modules.influxdb08mod), 1139
user_get() (in module salt.states.keystoneng), 1177
user_list() (in module salt.modules.influxdb08mod), 1139
user_list() (in module salt.states.keystoneng), 1178
user_present() (in module salt.states.ipmi), 1474
user_present() (in module salt.states.keystone), 1491
user_present() (in module salt.states.nxos), 1548
user_remove() (in module salt.modules.influxdb08mod), 1140
user_search() (in module salt.states.keystoneng), 1178
user_update() (in module salt.states.keystoneng), 1178
userdata_template
  conf/master, 99
utils_dirs
  conf/master, 96
  conf/minion, 172
uuid
  jinja filters, 414
valid_certificate() (in module salt.states.tls), 1613
validate_template() (in module salt.modules.boto_cfn), 1058
value_present() (in module salt.states.xml), 1641
vendor() (in module salt.grains.philips_hue), 1012
verify_env
  conf/master, 73
verify_master_pubkey_sign
  conf/minion, 185
version() (in module salt.modules.modjk), 1188
version() (in module salt.modules.sqlite3), 1269
version() (in module salt.runners.drac), 1311
versions() (in module salt.modules.pyenv), 1251
virtual_machine_capture() (in module salt.modules.azurearm_compute), 1030
virtual_machine_convert_to_managed_disks()
  (in module salt.modules.azurearm_compute), 1030
virtual_machine_deallocate() (in module salt.modules.azurearm_compute), 1030
virtual_machine_generalize() (in module salt.modules.azurearm_compute), 1031
virtual_machine_get() (in module salt.modules.azurearm_compute), 1031
virtual_machine_power_off() (in module salt.modules.azurearm_compute), 1031
virtual_machine_redeploy() (in module salt.modules.azurearm_compute), 1031
virtual_machine_restart() (in module salt.modules.azurearm_compute), 1032
virtual_machine_start() (in module salt.modules.azurearm_compute), 1032
virtual_machines_list() (in module salt.modules.azurearm_compute), 1032
virtual_machines_list_all() (in module salt.modules.azurearm_compute), 1032
virtual_network_absent() (in module salt.states.azurearm_network), 1360
virtual_network_create_or_update() (in module salt.modules.azurearm_network), 1053
virtual_network_delete() (in module salt.modules.azurearm_network), 1053
virtual_network_get() (in module salt.modules.azurearm_network), 1053
virtual_network_present() (in module salt.states.azurearm_network), 1360
virtual_networks_list() (in module salt.modules.azurearm_network), 1054
virtual_networks_list_all() (in module

Index
VMwareApiError, 1837
VMwareConnectionError, 1837
VMwareFileNotFoundException, 1837
VMwareMultipleObjectsError, 1837
VMwareNotFoundError, 1837
VMwareObjectExistsError, 1837
VMwarePowerOnError, 1837
VMwareRuntimeError, 1837
VMwareSaltError, 1837
VMwareSystemError, 1837
VMwareVmCreationError, 1837
VMwareVmRegisterError, 1837
volume_absent() (in module salt.states.zfs), 1656
volume_attach() (in module salt.modules.purefa), 1244
volume_clone() (in module salt.modules.purefa), 1244
volume_create() (in module salt.modules.purefa), 1245
volume_delete() (in module salt.modules.purefa), 1245
volume_detach() (in module salt.modules.purefa), 1245
volume_eradicate() (in module salt.modules.purefa), 1245
volume_extend() (in module salt.modules.purefa), 1245
volume_present() (in module salt.states.zfs), 1656
vpc_peering_connection_absent() (in module salt.states.boto_vpc), 1411
vpc_peering_connection_present() (in module salt.states.boto_vpc), 1411
wait() (in module salt.states.tomcat), 1614
wait_for_successful_query() (in module salt.states.http), 1461
wait_rm() (in module salt.states.etcd_mod), 1441
wait_set() (in module salt.states.etcd_mod), 1441
wait_state() (in module salt.modules.haproxyconn), 1134
war_deployed() (in module salt.states.tomcat), 1615
warning() (in module salt.modules.logmod), 1184
watch() (in module salt.modules.etcd_mod), 1114
watch() (in module salt.states.at), 1337
webconfiguration_settings() (in module salt.states.win_iis), 1631
which
  jinja filters, 432
win_gitrepos
  conf/master, 142
worker_activated() (in module salt.states.modjk), 1528
worker_disable() (in module salt.modules.modjk), 1188
worker_disabled() (in module salt.states.modjk), 1528
worker_edit() (in module salt.modules.modjk), 1188
worker_recover() (in module salt.states.modjk), 1529
worker_status() (in module salt.states.modjk), 1189
worker_stop() (in module salt.modules.modjk), 1189
worker_stopped() (in module salt.states.modjk), 1529
worker_threads
   conf/master, 96
workers() (in module salt.modules.modjk), 1189
write_launchd_plist() (in module salt.runners.launchd), 1313
write_raw() (in module salt.modules.vault), 1281
write_secret() (in module salt.modules.vault), 1281

X
xccdf() (in module salt.modules.openscap), 1239
xorg() (in module salt.states.keyboard), 1488

Y
yaml_dquote
   jinja filters, 411
yaml_encode
   jinja filters, 411
yaml_squote
   jinja filters, 412
yaml_utf8
   conf/master, 102

Z
zabbix_send() (in module salt.runners.zabbix_return), 358
zap() (in module salt.modules.ceph), 1090
zap() (in module salt.modules.gentoo_service), 1119
zbx() (in module salt.runners.zabbix_return), 358
zero_cluster() (in module salt.states.trafficserver), 1618
zero_node() (in module salt.states.trafficserver), 1618
zeroize() (in module salt.states.junos), 1486
zmq_backlog
   conf/master, 96
zmq_monitor
   conf/minion, 190
zone_absent() (in module salt.states.azurearm_dns), 1344