SALTSTACK

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What is SaltStack?

SaltStack or Salt is a Python-based open source configuration management software and remote execution engine. Supporting the "Infrastructure as Code" approach to deployment and cloud management, it competes primarily with Puppet, Chef, and Ansible.

Uses:

Python, ZeroMQ, M2Crypto, YAML, Jinja, and MsgPack

Why SaltStack?

Infrastructure as Code is the only way to insure success for scaled environments. Utilities like Salt make DevOps teams to do two things.

1. Document the process
2. Use continuous integration / continuous delivery methods

Salt is great because it is built on top of Python and uses simple Salt States in YAML and Jinja templates to deploy code, configs, and changes.

Lastly the Salt Master is the single authority in charge of deployments.

Pieces of Salt

Master - server that directs which minions get which configurations

Minion - client that receives configurations

Modules - simply python files that are executed by the minion

States - yaml/jinja files that configure the minion

Grains - interface to derive information about the minions

Pillars - interface for Salt designed to offer global values that can be distributed to all minions

What are Salt states?

```
nginx:
 pkg.installed:
   - name: {{ nginx.package }}
 service.running:
   - enable: True
   - restart: True
   - watch:
{% set conf_dir = salt['pillar.get']('nginx:conf_dir', '/etc/nginx') %}
     - file: {{ conf_dir }}/nginx.conf
     - file: {{ conf_dir }}/conf.d/default.conf
     - file: {{ conf_dir }}/conf.d/example_ssl.conf
     - pkg: nginx
```

https://github.com/saltstack-formulas/nginx-formula/tree/master/nginx

What are Salt pillars?

```
nginx:
  install_from_source: True
  use_upstart: True
  use_sysvinit: False
  user_auth_enabled: True
  with_luajit: False
  with_openresty: True
  repo_version: development  # Must be using ppa install by setting `repo_source = ppa`
  set_real_ips: # NOTE: to use this, nginx must have http_realip module enabled
    from_ips:
      - 10.10.10.0/24
    real_ip_header: X-Forwarded-For
  modules:
    headers-more:
      source: http://github.com/agentzh/headers-more-nginx-module/tarball/v0.21
      source_hash: sha1=dbf914cbf3f7b6cb7e033fa7b7c49e2f8879113b
```

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Getting started

Deploy salt master and minion via vagrant and packer