



Kitchen-Salt and Pytest:

Easily Test Your Salt States

SALTSTACK®



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What is Salt?

Salt States

```
apache:
  pkg.installed: []
  service.running:
    - watch:
      - pkg: apache
      - file: /etc/httpd/conf/httpd.conf
      - user: apache
  user.present:
    - uid: 87
    - gid: 87
    - home: /var/www/html
    - shell: /bin/nologin
    - require:
      - group: apache
  group.present:
    - gid: 87
    - require:
      - pkg: apache
```


Kitchen-Salt

.kitchen.yml

- Root directory of project or where kitchen command is run
- Driver
- Platforms
- Suites
- Provisioner
- Verifier
- Transport (ssh default, sftp, winrm, etc)

driver

```
driver:  
  name: docker  
  use_sudo: false  
  privileged: true  
  username: root  
  forward:  
    - 80
```

platforms

```
platforms:  
  - name: ubuntu-18.04
```


suites

```
suites:  
  - name: salt-apache
```

provisioner

```
provisioner:
  name: salt_solo
  sudo: false
  salt_install: bootstrap
  salt_bootstrap_options: -qX git v<%= @version %>
  log_level: debug
  is_file_root: true
  state_top_from_file: true
  require_chef: false
  salt_copy_filter:
    - .bundle
    - .git
    - .gitignore
    - .kitchen
    - .kitchen.yml
```

verifier

```
verifier:  
  name: shell  
  remote_exec: false  
  command: python3 -m pytest -v tests/
```

Kitchen Commands

- kitchen list
- kitchen create
- kitchen converge
- kitchen verify
- kitchen login
- kitchen test

Demo

Pytest

Pytest Example

```
def test_hello_world():  
    assert 'Hello World' == 'Hello World'  
  
def test_instance():  
    assert isinstance(True, bool)
```

Pytest Test Discovery

- Files: test_ , _test
- Test method: test

Pytest How to Run Tests

- Run all tests: `pytest - in directory`
- Run tests from one file: `pytest test_this.py`
- Substring matching: `pytest -k instance -v`

Pytest Fixtures

- Run code before every test method
- Test method uses fixture by including fixture as input parameter

Pytest Fixtures - Example

```
import pytest

@pytest.fixture
def values():
    return 10

def test_value(values):
    assert values == 10

def test_value_not(values):
    assert values > 9_
```

Demo

A large radio telescope dish is silhouetted against a dark night sky filled with stars and the Milky Way galaxy. The dish is positioned on the left side of the frame, pointing upwards and to the right. The sky is a deep black, densely populated with stars of varying brightness. A prominent, bright, and slightly hazy band of the Milky Way stretches diagonally across the upper right portion of the image. The overall mood is one of cosmic exploration and inquiry.

QUESTIONS?

THANK YOU.

