

From Monitoring to Automated Testing of your Infrastructure Code

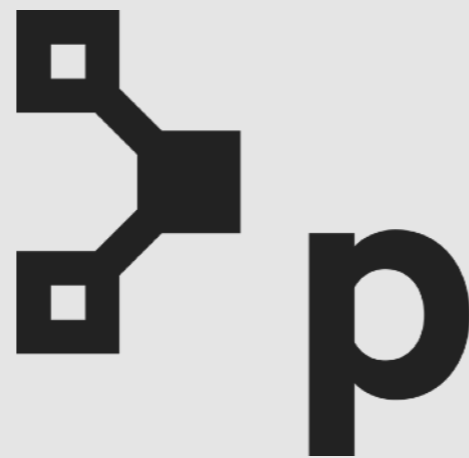
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SREcon Singapore 2018**

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Works everywhere but Adelaide



Infracode?

**Writing tests has been a best
practice in software
engineering for a while now...**

**Infrastructure code is
software, so you should
write tests for it too**

Why bother?

Let me tell you a story...

There was this bank.

Both classes get applied.

All machines now have

1.1.1.1

and that's not how you TCP/IP.

What went wrong?

**What can be done to prevent
this happening again?**

Testing to the rescue!

OK, what do we need?

Provision a machine

**Apply your code to the
machine**

Execute the tests

Examine the exit status

zero good

non-zero bad

The test harness

Time to make some choices



FAQ Github

Fork me on Github

Infrastructure Code Deserves Tests Too

Get Started

What is Kitchen?

Kitchen provides a test harness to execute infrastructure code on one or more platforms in isolation.

A driver plugin architecture is used to run code on various cloud providers and virtualization technologies such as Vagrant, Amazon EC2, and Docker. [Read more](#)

Many testing frameworks are supported out

```
---  
driver:  
  name: vagrant  
  
provisioner:  
  name: chef_zero  
  
platforms:  
  - name: ubuntu-14.04  
  - name: windows-2012r2  
  
suites:
```



neillturner / kitchen-puppet Watch 11 Star 88 Fork 81

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neillturner template docs 193f3ad on Dec 13, 2017
4 contributors

284 lines (209 sloc) | 9.73 KB Raw Blame History Copy Edit Delete

Kitchen Puppet

gem version 3.3.2 downloads 151,016 total build passing

kitchen-puppet

A Test Kitchen Provisioner for Puppet

The providers supports both puppet apply and puppet agent clients and puppet bolt.

```
---
driver:
  name: vagrant

provisioner:
  name: puppet_apply
  manifests_path: /repository/puppet_repo/manifests
  modules_path: /repository/puppet_repo/modules-mycompany
  hiera_data_path: /repository/puppet_repo/hieradata

platforms:
- name: nocm_ubuntu-12.04
  driver_plugin: vagrant
  driver_config:
    box: nocm_ubuntu-12.04
    box_url: http://puppet-vagrant-boxes.puppetlabs.com/ubuntu-server-12042-x64-vbox4210-nocm.box

suites:
- name: default
```

```
require 'spec_helper'

if os[:family] == 'ubuntu'
  describe '/etc/lsb-release' do
    it "exists" do
      expect(file('/etc/lsb-release')).to be_file
    end
  end
end

if os[:family] == 'redhat'
  describe '/etc/redhat-release' do
    it "exists" do
      expect(file('/etc/redhat-release')).to be_file
    end
  end
end
```

neillturner / kitchen-ansible Watch 16 Star 272 Fork 116

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neillturner Ansible AWX 4d5c43d on Jan 10
7 contributors

270 lines (199 sloc) | 9.77 KB Raw Blame History

kitchen-ansible

gem version 0.48.5 downloads 246,445 total build passing

A Test Kitchen Provisioner for Ansible.

The provisioner works by passing the Ansible repository based on attributes in `.kitchen.yml` & calling `ansible-playbook`.

It installs Ansible on the server and runs `ansible-playbook` using host localhost.

It has been tested against the Ubuntu 12.04/14.04/16.04, Centos 6/7 and Debian 6/7/8 boxes running in

puppetlabs / beaker Watch 200 Star 330 Fork 301

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tvpartytonight (MAINT) Fix link to folder from /doc README 2c651e9 on Jul 30, 2016

7 contributors

28 lines (21 sloc) | 1.66 KB Raw Blame History





RSpec tests for your servers configured
by CFEngine, Puppet, Ansible, Itamae or anything else.

About V2

Serverspec/Specinfra v2 has been just released. [See the document about v2.](#)

About

With Serverspec, you can write RSpec tests for checking your servers are configured correctly.

Serverspec tests your servers' actual state by executing command locally, via SSH, via WinRM, via Docker API and so on. So you don't need to install any agent softwares on your servers and can use any configuration management tools, [Puppet](#), [Ansible](#), [CFEngine](#), [Itamae](#) and so on.



Behaviour Driven Development for Ruby. Making TDD Productive and Fun.



RSPEC-PUPPET

RSpec test framework for your Puppet manifests

Getting started is easy!

(The rest is a bit more difficult though)

Install the `rspec-puppet` gem and run `rspec-puppet-init` from inside your module to set everything up.

```
$ gem install rspec-puppet
$ cd your-module
$ rspec-puppet-init
```

Then continue on to the [tutorial!](#)

[View on GitHub](#)

sstephenson / bats

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sstephenson Bats 0.4.0 7b032e4 on Aug 13, 2014

4 contributors

294 lines (221 sloc) | 9.49 KB

Raw Blame History

Bats: Bash Automated Testing System

Bats is a [TAP](#)-compliant testing framework for Bash. It provides a simple way to verify that the UNIX programs you write behave as expected.

A Bats test file is a Bash script with special syntax for defining test cases. Under the hood, each test case is just a function with a description.

```
#!/usr/bin/env bats

@test "addition using bc" {
```



- Home
- Testing with TAP
- Producers
- Consumers

Test Anything Protocol

TAP, the Test Anything Protocol, is a simple text-based interface between testing modules in a test harness. TAP started life as part of the test harness for Perl but now has implementations in C, C++, Python, PHP, Perl, Java, JavaScript, and others.

Here's what a TAP test stream looks like:

```
1..4
ok 1 - Input file opened
not ok 2 - First line of the input valid
ok 3 - Read the rest of the file
not ok 4 - Summarized correctly # TODO Not written yet
```

Testing with TAP

- [Testing with TAP](#) - How to run TAP based tests in your language of choice

**“Reasons” to not write
tests...**

**"It takes too long to write
tests"**

**"Who is going to run
them anyway?"**

New team member joins

... or you join a new team

**You can actually go
holiday**

**Could you re-use your
monitoring checks for
infacode CI testing?**

**What's your organisation
doing?**

Thank you for listening!

@jessereynolds