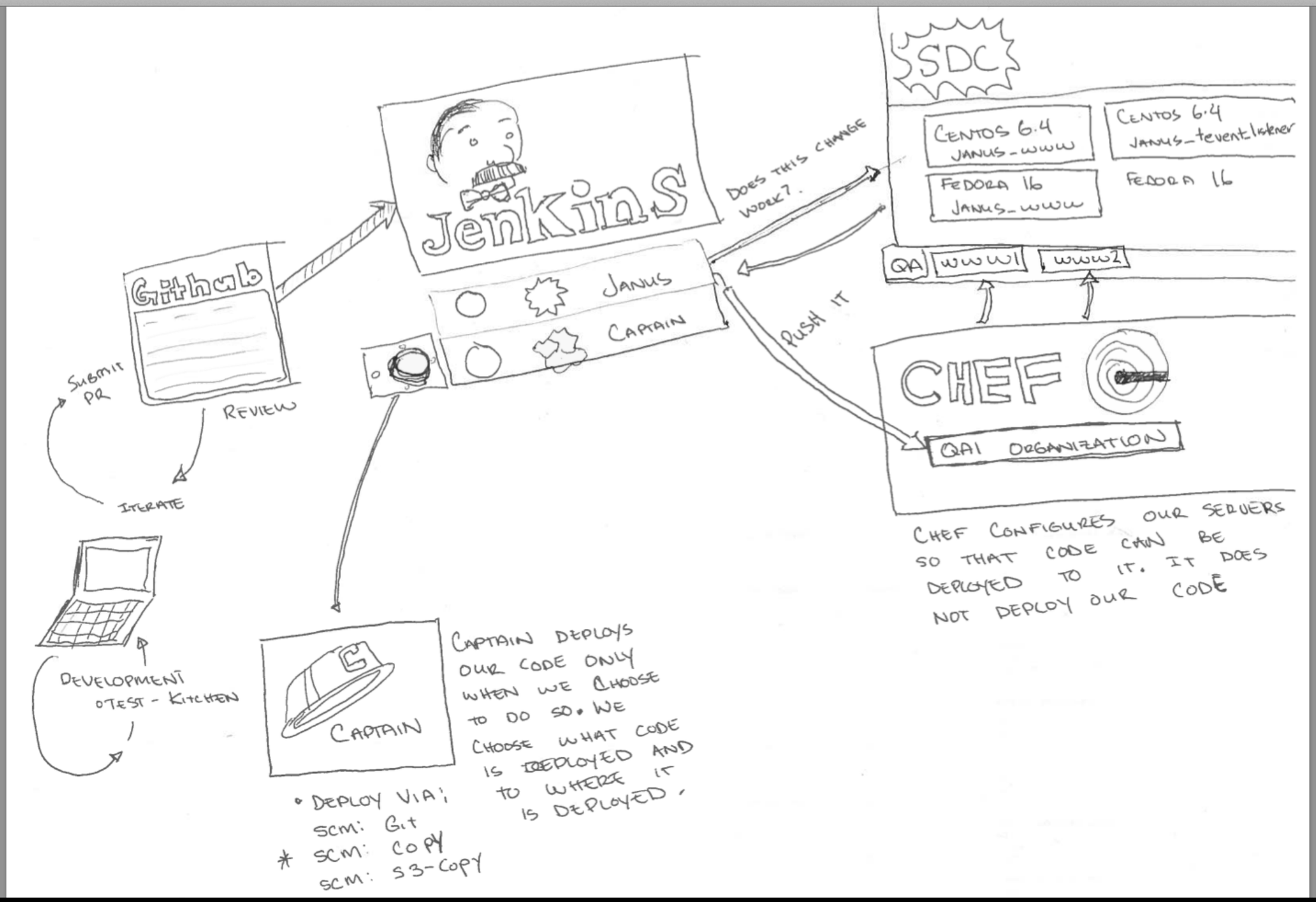
chef: test driven tour

mo

github: mokhan/chef-talk.git

2015_05_28_11_09_49.pdf (1 page)



All | OnPrem | **Portal** | operations | +

S	W	Name ↓	Last Success
		authentication_client	11 mo - #31
		captain	9 hr 39 min - #213
		cassandra-model	2 days 5 hr - #20
		firehose-cassandra	1 day 6 hr - #30
		firehose-publisher	13 days - #23
		janus_events	7 mo 26 days - #40
		order_intake	27 days - #85
		otp-rails	1 yr 2 mo - #69
		portal-cassandra	N/A
		portal-master	13 hr - #933
		portal-master-capybara	11 hr - #664
		portal-master-js	6 hr 6 min - #756
		portal-release	12 days - #2476
		portal-release-capybara	11 hr - #719
		portal-release-js	12 days - #3494
		portal-schema-load	6 hr 6 min - #3502
		s3-sync	6 hr 16 min - #225
		s3-sync-help	5 hr 1 min - #1462
		signer-engine	1 mo 19 days - #56
		signer-rails	1 day 8 hr - #83
		threat_grid	4 mo 0 days - #42

Icon: S M L

All | OnPrem | Portal | **operations** | +

S	W	Name ↓	Last Success
		amp-util	4 mo 26 days - #5
		api-doc-cookbook	2 days 11 hr - #8
		cassandra-cookbook	2 days 9 hr - #81
		cloud-chef	1 mo 3 days - #693
		daemontools	6 hr 49 min - #892
		fireamp-firehose-cookbook	1 day 13 hr - #211
		janus	6 hr 47 min - #622
		jenkins-slave	6 hr 49 min - #632
		ruby19	6 hr 49 min - #836
		signer-cookbook	6 hr 48 min - #556

Icon: S M L

Back to Dashboard
Status
Changes
Workspace
Build Now
Delete Project
Configure
GitHub Hook Log
Job Config History

Project ruby19

Workspace
Recent Changes

Permalinks

- Last build (#836), 6 hr 50 min ago
- Last stable build (#836), 6 hr 50 min ago
- Last successful build (#836), 6 hr 50 min ago

Build History (trend)

#836	30-Sep-2015 21:09:03	
#835	30-Sep-2015 20:35:11	1011 KB
#834	30-Sep-2015 19:41:48	1009 KB
#833	30-Sep-2015 18:08:23	1013 KB
#832	30-Sep-2015 17:23:16	1011 KB
#831	30-Sep-2015 17:04:30	1009 KB
#830	30-Sep-2015 15:55:13	1012 KB

```
Finished in 4.52 seconds (files took 1.79 seconds to load)
9 examples, 0 failures

Randomized with seed 30259
```

```
       Waiting for SSH service on 10.200.70.121:22, retrying in 3 seconds
       [SSH] Established
       (ssh ready)

       Finished creating <default-centos-643> (0m41.30s).
-----> Converging <default-centos-643>...
$$$$$$ Running legacy converge for 'Joyent' Driver
       Preparing files for transfer
       Preparing dna.json
       Resolving cookbook dependencies with Berkshelf 3.2.4...
       Removing non-cookbook files before transfer
       Preparing data_bags
       Preparing solo.rb
-----> Installing Chef Omnibus (install only if missing)
       Downloading https://www.chef.io/chef/install.sh to file /tmp/install.sh
       Trying wget...
       Trying curl...
       Download complete.
       Downloading Chef  for el...
       downloading https://www.chef.io/chef/metadata?v=&prerelease=false&nightlies=false&p=el&pv=6&m=x86_64
         to file /tmp/install.sh.1423/metadata.txt
       trying wget...
       trying curl...
       url      https://opscode-omnibus-packages.s3.amazonaws.com/el/6/x86_64/chef-12.4.3-1.el6.x86_64.rpm
       md5      55c362947656f1c4d5d871fa9481a532
       sha256   a011ba87bcd89a02d1cbdffb97a295f753cbb194afef9a1b3b3ca93148fd7808
       downloaded metadata file looks valid...
       downloading https://opscode-omnibus-packages.s3.amazonaws.com/el/6/x86_64/chef-12.4.3-1.el6.x86_64.rpm
         to file /tmp/install.sh.1423/chef-12.4.3-1.el6.x86_64.rpm
       trying wget...
       Comparing checksum with sha256sum...

       WARNING WARNING WARNING WARNING WARNING WARNING WARNING WARNING WARNING

       You are installing an omnibus package without a version pin.  If you are installing
       on production servers via an automated process this is DANGEROUS and you will
       be upgraded without warning on new releases, even to new major releases.
       Letting the version float is only appropriate in desktop, test, development or
       CI/CD environments.

       WARNING WARNING WARNING WARNING WARNING WARNING WARNING WARNING WARNING

       Installing Chef
       installing with rpm...
       warning: /tmp/install.sh.1423/chef-12.4.3-1.el6.x86_64.rpm: Header V4 DSA/SHA1 Signature, key ID 83ef826a
       Preparing...                                                    (100%)#
(100%)###                                    (100%)####                                    (100%)#####
(100%)#######                                (100%)########                                (100%)######
(100%)###########                            (100%)############                            (100%)######
(100%)###############                        (100%)################                        (100%)######
(100%)###################                    (100%)#####################                   (100%)######
```

```
Thank you for installing Chef!
Transferring files to <default-centos-643>
Starting Chef Client, version 12.4.3
Compiling Cookbooks...
Converging 25 resources
Recipe: fireamp-yum::centos

    - delete file /etc/yum.repos.d/CentOS-Base.repo
  * file[/etc/yum.repos.d/CentOS-Base.repo.rpmorig] action delete (up to date)

    - delete file /etc/yum.repos.d/CentOS-Debuginfo.repo

    - delete file /etc/yum.repos.d/CentOS-Media.repo
  * file[/etc/yum.repos.d/CentOS-Vault.repo] action delete
    - delete file /etc/yum.repos.d/CentOS-Vault.repo
  * file[/etc/yum.repos.d/FIRE.repo] action delete (up to date)
  * file[/etc/yum.repos.d/FIRE-EXTRA.repo] action delete (up to date)

    - delete file /etc/yum.repos.d/basemirrorlist

    - delete file /etc/yum.repos.d/updatesmirrorlist
  * file[/etc/yum.repos.d/fireamp-centos.repo] action delete (up to date)
  * file[/etc/yum.repos.d/fireamp-centos-repolist-epel] action delete (up to date)
(up to date)
(up to date)
  * file[/etc/yum.repos.d/fireamp-centos-repolist-fireamp-security] action delete (up to date)


    - update content in file /etc/yum.repos.d/centos-os-repolist from none to 717133
```

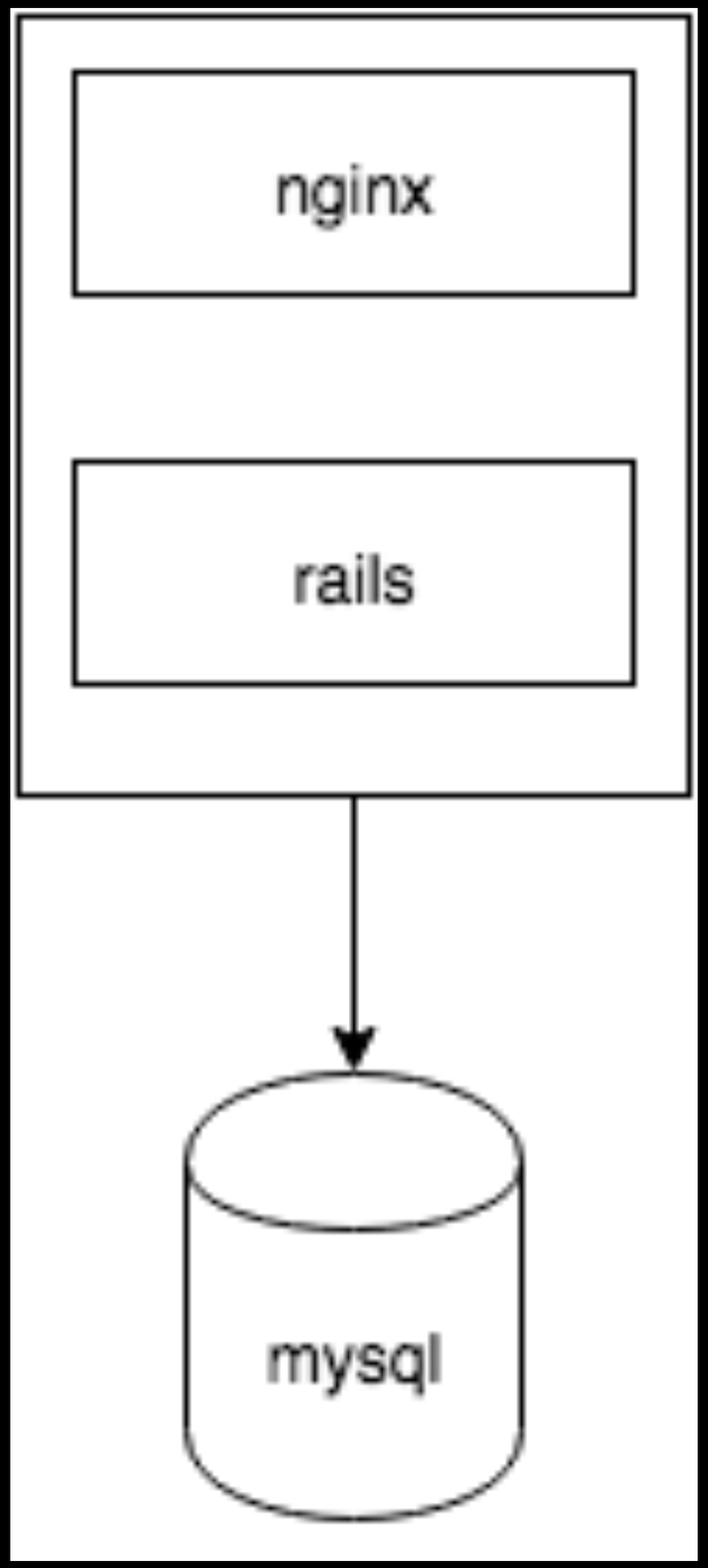
```
haproxy
  installs haproxy
  adds the haproxy configuration

deployment
  creates the deployment directory
  installs the specified version of firehose_cassandra

ruby
  installs the proper version of ruby
  installs bundler

user
  creates the firehose user
  creates the firehose group

Finished in 13.2 seconds (files took 1.47 seconds to load)
8 examples, 0 failures
```

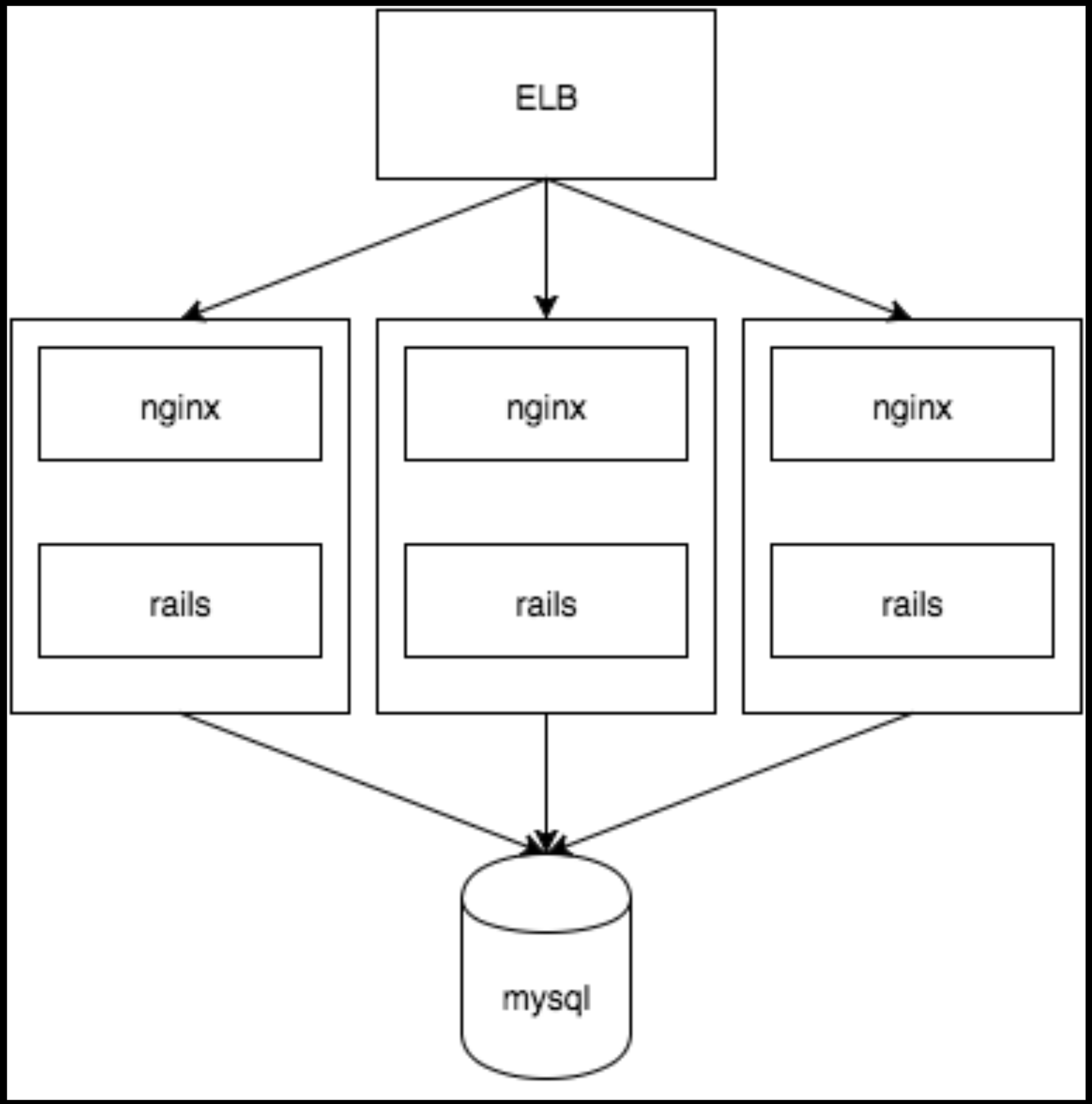
The goal

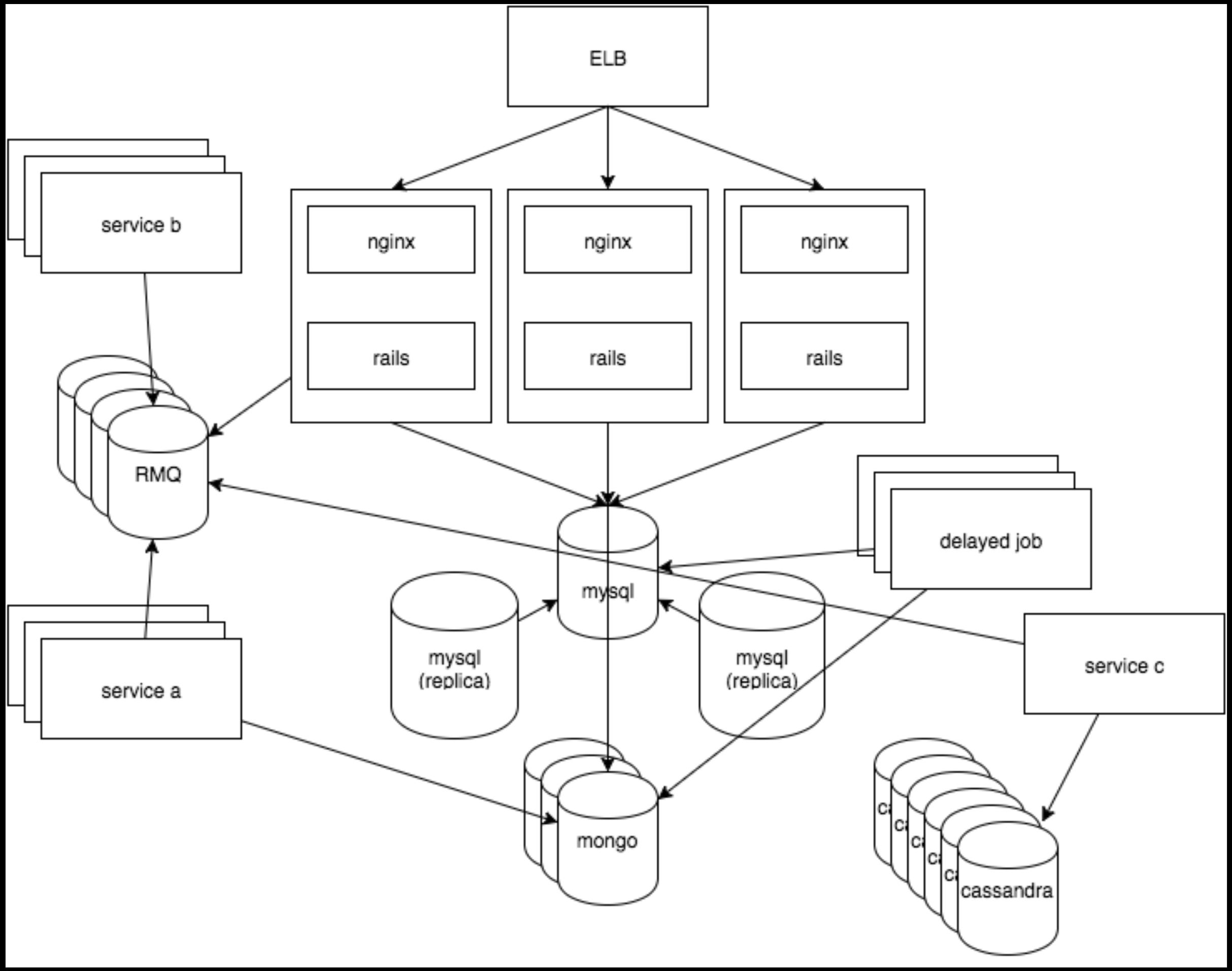
A fresh server that converges cleanly with passing integrations tests.

why chef?

- reproducible infrastructure.
- enforce policy on your infrastructure.


nginx
rails
mysql


ELB
nginx
rails
nginx
rails
nginx
rails
mysql


ELB
service b
nginx
rails
nginx
rails
nginx
rails
RMQ
delayed job
mysql
mysql
(replica)
mysql
(replica)
service a
service c
mongo
cassandra

Resources

You are using the following Amazon EC2 resources in the US East (N. Virginia) region:

413	Running Instances	127	Elastic IPs
232	Volumes	10	Snapshots
1	Key Pairs	27	Load Balancers
0	Placement Groups	94	Security Groups

what is chef?

- infrastructure as code
- configuration management
- system integration

“chef provisions servers and makes sure that software is installed and properly configured.”

– mo

vagrant + chef

(chef-apply demo)
github: mokhan/chef-apply-demo.git

```ruby
# -*- mode: ruby -*-
# vi: set ft=ruby :

Vagrant.configure("2") do |config|
  config.vm.box = "phusion/ubuntu-14.04-amd64"
  config.vm.network :forwarded_port, guest: 3000, host: 3000
  config.vm.provision :chef_apply do |chef|
    chef.recipe = File.read("config/chef_apply.rb")
    chef.version = 'latest'
  end
  config.vm.provider :vmware_workstation do |vm|
    vm.gui = false
    vm.vmx["displayname"] = "chef-apply-demo"
  end
  config.vm.provider :vmware_fusion do |v|
    v.vmx["memsize"] = "2048"
    v.vmx["numvcpus"] = "2"
  end
  config.omnibus.chef_version = :latest
  config.ssh.forward_agent = true
end
```

Vagrantfile - [ruby] [buffer:01][column:01][line:0001/0021]

```ruby
execute "apt-get_update" do
  command "apt-get update -y"
end

execute "apt-get_upgrade" do
  command "apt-get upgrade -y"
end

packages = %w{
  git-core
  memcached
  redis-server
  nginx
}

package packages do
  action :install
end

service "redis-server" do
  action [:enable, :start]
end

service "nginx" do
  action [:enable, :start]
end
```

config/chef_apply.rb - [ruby]

QuickTime Player File Edit View Window Help 100% Tue Sep 29 21:55

cloud — tmux — 158×49

```ruby
# -*- mode: ruby -*-
# vi: set ft=ruby :

Vagrant.configure("2") do |config|
  config.vm.box = "phusion/ubuntu-14.04-amd64"
  config.vm.network :forwarded_port, guest: 3000, host: 3000
  config.vm.provision :chef_apply do |chef|
    chef.recipe = File.read("config/chef_apply.rb")
    chef.version = 'latest'
  end
  config.vm.provider :vmware_workstation do |vm|
    vm.gui = false
    vm.vmx["displayname"] = "chef-apply-demo"
  end
  config.vm.provider :vmware_fusion do |v|
    v.vmx["memsize"] = "2048"
    v.vmx["numvcpus"] = "2"
  end
  config.omnibus.chef_version = :latest
  config.ssh.forward_agent = true
end
```

Vagrantfile - [ruby] [buffer:01][column:01][line:0001/0021]

```ruby
execute "apt-get_update" do
  command "apt-get update -y"
end

execute "apt-get_upgrade" do
  command "apt-get upgrade -y"
end

packages = %w{
  git-core
  memcached
  redis-server
  nginx
}

package packages do
  action :install
end

service "redis-server" do
  action [:enable, :start]
end

```

config/chef_apply.rb - [ruby] [buffer:04][column:01][line:0001/0026]

8 more lines; before #23 2 seconds ago

[21:55:45][mo@MOKHA-M-11JK:~/development/gh/chef-apply-demo] [ruby-2.2.3] [master]

λ

0 5:23:hvm- 5:bash* MOKHA-M-11JK 09/29/15 09:55

Terms

- Cookbook
- Recipe
- Resource
- Node

cook·book

/ˈkoo͡k ˌboo͡k/

noun

a book containing recipes and other information about the preparation and cooking of food.

Translations, word origin, and more definitions

- Attribute values
- File distributions
- Templates
- Extensions to Chef (libraries and custom resources)

cookbook

- attributes
- files
- metadata.rb
- recipes
- templates

```
λ tree
.
├── README.md
├── attributes
│   └── default.rb
├── chefignore
├── files
│   ├── Procfile
│   ├── config.ru
│   └── rbenv.sh
├── metadata.rb
├── recipes
│   ├── default.rb
│   ├── foreman.rb
│   ├── nginx.rb
│   └── ruby.rb
└── templates
    ├── nginx.conf.erb
    └── sv-foreman-run.erb

4 directories, 13 files
```

Ingredients

- 1/2 cup butter or margarine, melted
- 24 eggs
- 2 1/4 teaspoons salt
- 2 1/2 cups milk

Market Pantry Salted Sweet Cream Butter 4 Sticks
SEE STORE FOR PRICE
SEE DETAILS
ADVERTISEMENT

Add all ingredients to list

Directions

Prep	Cook	Ready In
10 m	25 m	35 m

1. Preheat the oven to 350 degrees F (175 degrees C).
2. Pour melted butter into a glass 9x13 inch baking dish. In a large bowl, whisk together eggs and salt until well blended. Gradually whisk in milk. Pour egg mixture into the baking dish.
3. Bake uncovered for 10 minutes, then stir, and bake an additional 10 to 15 minutes, or until eggs are set. Serve immediately.

```
1  package "epel-release" if redhat?
2  package "nginx"
3
4  user "nginx"
5
6  template "/etc/nginx/nginx.conf" do
7    action :create
8    variables(application_name: node['chef-talk']['application_name'])
9    notifies :restart, 'service[nginx]'
10 end
11
12 service "nginx" do
13   action [:enable, :start]
14 end
```

resource

```
template "/etc/nginx/nginx.conf" do
  action :create
  variables(application_name: node['chef-talk']['application_name'])
  notifies :restart, 'service[nginx]'
end
```

- type: template
- name: “/etc/nginx/nginx.conf”
- attributes: variables, notifies
- action: “:create”

About Nodes

A node is any machine—physical, virtual, cloud, network device, etc.—that is under management by Chef.

The types of nodes that can be managed by Chef include, but are not limited to, the following:

Node Type	Description
server	A physical node is typically a server or a virtual machine, but it can be any active device attached to a network that is capable of sending, receiving, and forwarding information over a communications channel. In other words, a physical node is any active device attached to a network that can run a chef-client and also allow that chef-client to communicate with a Chef server.
cloud	A cloud-based node is hosted in an external cloud-based service, such as Amazon Web Services (AWS), OpenStack, Rackspace, Google Compute Engine, or Microsoft Azure. Plugins are available for knife that provide support for external cloud-based services. knife can use these plugins to create instances on cloud-based services. Once created, the chef-client can be used to deploy, configure, and maintain those instances.
virtual machine	A virtual node is a machine that runs only as a software implementation, but otherwise behaves much like a physical machine.
network device	A network node is any networking device—a switch, a router—that is being managed by a chef-client, such as networking devices by Juniper Networks, Arista, Cisco, and F5. Use Chef to automate common network configurations, such physical and logical Ethernet link properties and VLANs, on these devices.
container	Containers are an approach to virtualization that allows a single operating system to host many working configurations, where each working configuration—a container—is assigned a single responsibility that is isolated from all other responsibilities. Containers are popular as a way to manage distributed and scalable applications and services.

Tools

- berkshelf
- chefspec
- test-kitchen
- vagrant

chef | rails

berkshelf	bundler
chefspec	rspec
test-kitchen	capybara
knife	bin/rails
https://supermarket.chef.io/	https://rubygems.org/

gem server cookbook

- CentOS
- ruby
- nginx
- start the gem server using foreman
- environment variables

```ruby
source "https://rubygems.org"

gem 'berkshelf'
gem 'chefspec'
gem 'test-kitchen'
gem 'kitchen-vagrant'
gem 'kitchen-sync'
```

Gemfile - [ruby]

```ruby
source "https://supermarket.chef.io"

metadata
```

Berksfile - [ruby]

```
[09:16:14][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3]
λ bundle install
```

```
[09:17:54][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3]
λ bundle exec berks install
Resolving cookbook dependencies...
Fetching 'chef-talk' from source at .
Fetching cookbook index from https://supermarket.chef.io...
Using chef-talk (0.1.0) from source at .
```

```
[09:22:18][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3]
λ tree | grep nginx_spec -C2
├── spec
│   ├── recipes
│   │   └── nginx_spec.rb
│   └── spec_helper.rb
└── templates
```

```ruby
require 'spec_helper'

describe "chef-talk::nginx" do
  subject do
    ChefSpec::SoloRunner.new.converge(described_recipe)
  end

  it 'installs the nginx package' do
    expect(subject).to install_package("nginx")
  end
end
```

spec/recipes/nginx_spec.rb - [ruby]

```
[09:25:03][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3] [scratch]
λ bundle exec rspec spec/recipes/nginx_spec.rb
F

Failures:

  1) chef-talk::nginx installs the nginx package
     Failure/Error: expect(subject).to install_package("nginx")
       expected "package[nginx]" with action :install to be in Chef run. Other package resources:

     # ./spec/recipes/nginx_spec.rb:9:in `block (2 levels) in <top (required)>'

Finished in 0.33161 seconds (files took 1.19 seconds to load)
1 example, 1 failure

Failed examples:

rspec ./spec/recipes/nginx_spec.rb:8 # chef-talk::nginx installs the nginx package
```

```
s/r/nginx_spec.rb  r/nginx.rb
1
2 package "nginx"
recipes/nginx.rb - [ruby]
"recipes/nginx.rb" 2L, 17C written
```

```
[11:01:03][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3] [scratch]
λ bundle exec rspec spec/recipes/nginx_spec.rb
.

Finished in 0.32531 seconds (files took 1.14 seconds to load)
1 example, 0 failures
```

s/r/nginx_spec.rb r/nginx.rb

```ruby
1 require 'spec_helper'
2
3 describe "chef-talk::nginx" do
4   subject do
5     ChefSpec::SoloRunner.new.converge(described_recipe)
6   end
7
8   it 'installs the nginx package' do
9     expect(subject).to install_package("nginx")
10  end
11
12  it 'creates the nginx user' do
13    expect(subject).to create_user("nginx")
14  end
15 end
```

spec/recipes/nginx_spec.rb - [ruby]

```
[11:02:37][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3] [scratch]
λ bundle exec rspec spec/recipes/nginx_spec.rb
.F

Failures:

  1) chef-talk::nginx creates the nginx user
     Failure/Error: expect(subject).to create_user("nginx")
       expected "user[nginx]" with action :create to be in Chef run. Other user resources:



     # ./spec/recipes/nginx_spec.rb:13:in `block (2 levels) in <top (required)>'

Finished in 0.35353 seconds (files took 1.14 seconds to load)
2 examples, 1 failure

Failed examples:

rspec ./spec/recipes/nginx_spec.rb:12 # chef-talk::nginx creates the nginx user
```

s/r/nginx_spec.rb **r/nginx.rb**

```
1
2 package "nginx"
3 user "nginx"
```

recipes/nginx.rb - [ruby]

"recipes/nginx.rb" 3L, 30C written

```
[11:03:33][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3] [scratch]
λ bundle exec rspec spec/recipes/nginx_spec.rb
..

Finished in 0.35828 seconds (files took 1.15 seconds to load)
2 examples, 0 failures
```

s/r/nginx_spec.rb r/nginx.rb

```ruby
require 'spec_helper'

describe "chef-talk::nginx" do
  subject do
    ChefSpec::SoloRunner.new.converge(described_recipe)
  end

  it 'installs the nginx package' do
    expect(subject).to install_package("nginx")
  end

  it 'creates the nginx user' do
    expect(subject).to create_user("nginx")
  end

  it 'starts nginx' do
    expect(subject).to start_service("nginx")
    expect(subject).to enable_service("nginx")
  end
end
```

spec/recipes/nginx_spec.rb - [ruby]
"spec/recipes/nginx_spec.rb" 20L, 432C written

```
[11:07:54][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3] [scratch]
λ bundle exec rspec spec/recipes/nginx_spec.rb
..F

Failures:

  1) chef-talk::nginx starts nginx
     Failure/Error: expect(subject).to start_service("nginx")
       expected "service[nginx]" with action :start to be in Chef run. Other service resources:



     # ./spec/recipes/nginx_spec.rb:17:in `block (2 levels) in <top (required)>'

Finished in 0.33881 seconds (files took 1.17 seconds to load)
3 examples, 1 failure

Failed examples:

rspec ./spec/recipes/nginx_spec.rb:16 # chef-talk::nginx starts nginx
```

s/r/nginx_spec.rb **r/nginx.rb**

```ruby

package "nginx"
user "nginx"

service "nginx" do
  action [:enable, :start]
end
```

recipes/nginx.rb - [ruby]

"recipes/nginx.rb" 7L, 81C written

```
[11:08:54][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3] [scratch]
λ bundle exec rspec spec/recipes/nginx_spec.rb
...

Finished in 0.34843 seconds (files took 1.13 seconds to load)
3 examples, 0 failures
```

```
s/r/nginx_spec.rb  r/nginx.rb
  1 require 'spec_helper'
  2
  3 describe "chef-talk::nginx" do
  4 +-- 16 lines: subject do----------------------------------------------------------------------
 20
 21   context "centos" do
 22     subject do
 23       runner = ChefSpec::SoloRunner.new({ platform: 'centos', version: '6.6' })
 24       runner.converge(described_recipe)
 25     end
 26
 27     it 'installs the extra packages for enterprise linux' do
 28       expect(subject).to install_package("epel-release")
 29     end
 30   end
 31 end
spec/recipes/nginx_spec.rb - [ruby]
"spec/recipes/nginx_spec.rb" 31L, 731C written
```

```
[11:17:50][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3] [scratch]
λ bundle exec rspec spec/recipes/nginx_spec.rb
...F

Failures:

  1) chef-talk::nginx centos installs the extra packages for enterprise linux
     Failure/Error: expect(subject).to install_package("epel-release")
       expected "package[epel-release]" with action :install to be in Chef run. Other package resources:

         yum_package[nginx]

     # ./spec/recipes/nginx_spec.rb:28:in `block (3 levels) in <top (required)>'

Finished in 0.38828 seconds (files took 1.28 seconds to load)
4 examples, 1 failure

Failed examples:

rspec ./spec/recipes/nginx_spec.rb:27 # chef-talk::nginx centos installs the extra packages for enterprise linux
```

s/r/nginx_spec.rb **r/nginx.rb**

```ruby

package "epel-release"
package "nginx"

user "nginx"

service "nginx" do
  action [:enable, :start]
end
```

recipes/nginx.rb - [ruby]

"recipes/nginx.rb" 9L, 105C written

```
[11:19:50][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3] [scratch]
λ bundle exec rspec spec/recipes/nginx_spec.rb
....

Finished in 0.35903 seconds (files took 1.11 seconds to load)
4 examples, 0 failures
```

```
s/r/nginx_spec.rb  r/nginx.rb
  1 require 'spec_helper'
  2
  3 describe "chef-talk::nginx" do
  4 +-- 16 lines: subject do-----------------------------------------------------
 20
 21 +-- 10 lines: context "centos" do--------------------------------------------
 31
 32   context "ubuntu" do
~ 33     subject do
+ 34       runner = ChefSpec::SoloRunner.new({ platform: 'ubuntu', version: '14.04' })
+ 35       runner.converge(described_recipe)
+ 36     end
 37
 38     it 'does not install epel packages' do
 39       expect(subject).not_to install_package("epel-release")
 40     end
 41   end
 42 end
spec/recipes/nginx_spec.rb - [ruby]
"spec/recipes/nginx_spec.rb" 42L, 1018C written
```

```
[11:23:41][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3] [scratch]
λ bundle exec rspec spec/recipes/nginx_spec.rb
....F

Failures:

  1) chef-talk::nginx ubuntu does not install epel packages
     Failure/Error: expect(subject).not_to install_package("epel-release")
       expected "apt_package[epel-release]" actions [:install] to not exist
     # ./spec/recipes/nginx_spec.rb:39:in `block (3 levels) in <top (required)>'

Finished in 0.37416 seconds (files took 1.14 seconds to load)
5 examples, 1 failure

Failed examples:

rspec ./spec/recipes/nginx_spec.rb:38 # chef-talk::nginx ubuntu does not install epel packages
```

s/r/nginx_spec.rb r/nginx.rb

```ruby

package "epel-release" if platform?("centos")
package "nginx"

user "nginx"

service "nginx" do
  action [:enable, :start]
end
```

recipes/nginx.rb - [ruby]

"recipes/nginx.rb" 9L, 128C written

```
[11:25:46][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3] [scratch]
λ bundle exec rspec spec/recipes/nginx_spec.rb
.....

Finished in 0.38833 seconds (files took 1.18 seconds to load)
5 examples, 0 failures
```

Your infrastructure deserves tests too.

GET STARTED >

```
---
driver:
  name: vagrant

provisioner:
  name: chef_zero

platforms:
  - name: centos-7.1
  - name: ubuntu-14.04
  - name: windows-2012r2

suites:
  - name: client
    run_list:
      - recipe[postgresql::client]
  - name: server
    run_list:
      - recipe[postgresql::server]
```

SERVERSPEC

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

```
s/r/nginx_spec.rb  r/nginx.rb  .kitchen.yml
#<% require 'kitchen-sync' %>
---
driver:
  name: vagrant

provisioner:
  name: chef_solo

platforms:
  - name: centos-7.1

suites:
  - name: default
    run_list:
      - recipe[chef-talk::nginx]
    attributes:

transport:
.kitchen.yml - [yaml]
".kitchen.yml" 19L, 238C written

[11:29:09][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3] [scratch]
λ kitchen list
Instance             Driver   Provisioner  Verifier  Transport  Last Action
default-centos-71    Vagrant  ChefSolo     Busser    Sftp       <Not Created>
```

TK Cheat Sheet

- kitchen list: show list of test instances.
- kitchen login: ssh session to a test instance.
- kitchen converge: sync changes from disk and run chef on the test instance.
- kitchen verify: sync changes from disk and run tests.
- kitchen destroy: destroy the test instance.
- kitchen test: converge, verify, destroy

s/r/nginx_spec.rb r/nginx.rb .kitchen.yml **t/i/d/s/nginx_spec.rb**

```ruby
require 'serverspec'

set :backend, :exec

describe "nginx" do
  it 'listens on port 80' do
    expect(port(80)).to be_listening
  end

  it 'runs the nginx service' do
    expect(service('nginx')).to be_running
  end
end
```

test/integration/default/serverspec/nginx_spec.rb - [ruby]

s/r/nginx_spec.rb r/nginx.rb .kitchen.yml **t/i/d/s/nginx_spec.rb**

```ruby
require 'serverspec'

set :backend, :exec

describe "nginx" do
  it 'listens on port 80' do
    expect(port(80)).to be_listening
  end

  it 'runs the nginx service' do
    expect(service('nginx')).to be_running
  end
end
```

test/integration/default/serverspec/nginx_spec.rb - [ruby] [buffer:29][column:01][line:0007/0013]

"test/integration/default/serverspec/nginx_spec.rb" 13L, 222C written

[11:44:26][mo@MOKHA-M-11JK:~/development/gh/chef-talk] [ruby-2.2.3] [scratch]

λ

0 8:18:vim* MOKHA-M-11JK 10/03/15 11:46

Travis CI

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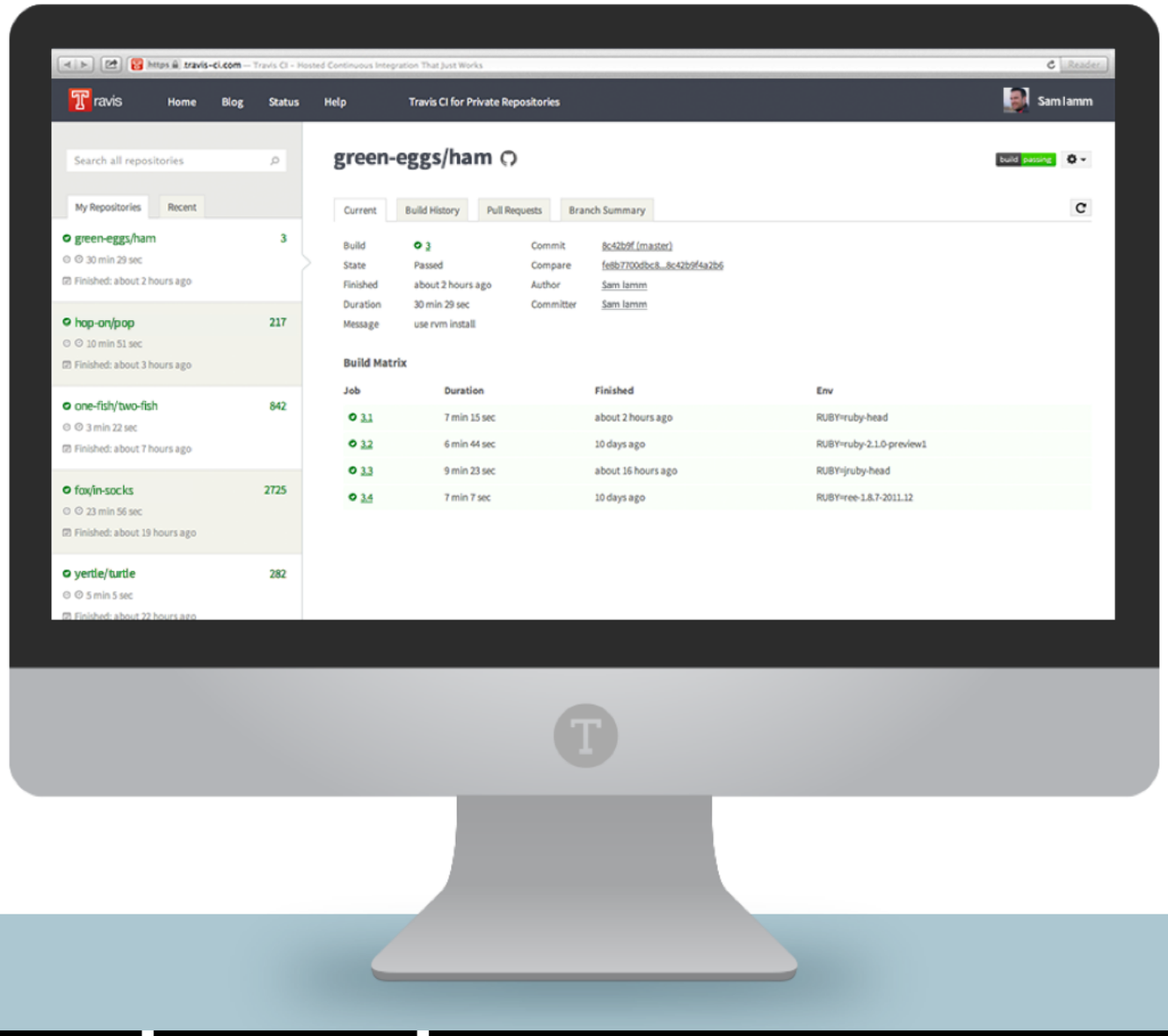

travis ci

continuous integration

```yaml
language: ruby
cache: bundler
sudo: false
rvm:
- 2.2.3
env:
- TEST_SUITE=rspec
- TEST_SUITE='rake kitchen:default-centos-64'
- TEST_SUITE='rake kitchen:default-ubuntu-1404'
+--  2 lines: before_install:-------------------------------------
before_script:
- bundle exec berks install
- cp .kitchen.ci.yml .kitchen.local.yml
script: bundle exec $TEST_SUITE
after_script:
- bundle exec kitchen destroy
```

.travis.yml - [yaml]

```yaml
---
driver:
  name: ec2
  aws_access_key_id: <%= ENV['AWS_ACCESS_KEY_ID'] %>
  aws_secret_access_key: <%= ENV['AWS_SECRET_ACCESS_KEY'] %>
  aws_ssh_key_id: <%= ENV['AWS_KEYPAIR_NAME'] %>
  security_group_ids: ["travis-ci"]
  instance_type: c3.8xlarge

platforms:
  - name: centos-6.4
  - name: ubuntu-14.04
    driver:
      image_id: ami-d85e75b0

transport:
  ssh_key: <%= ENV['EC2_SSH_KEY_PATH'] %>
  connection_timeout: 30
  connection_retries: 10
```

kitchen.ci.yml - [yaml]

mokhan / chef-talk

build passing

Current Branches Build History Pull Requests

Settings

master include ubuntu 14.04 in test kitchen ci run.

mo khan authored and committed

35 passed

Commit 3116d9b

Compare 66bbdbb..3116d9b

ran for 22 min 7 sec

less than a minute ago

Build Jobs

✓	# 35.1	Ruby: 2.2.3	TEST_SUITE=rspec	53 sec
✓	# 35.2	Ruby: 2.2.3	TEST_SUITE='rake kitchen:default-centos-64'	13 min 11 sec
✓	# 35.3	Ruby: 2.2.3	TEST_SUITE='rake kitchen:default-ubuntu-1404'	8 min 3 sec

```
735
736         nginx
737           listens on port 80
738           runs the nginx service
739
740         rackup
741           starts the rack service
742
743         ruby
744           installs the default version of ruby
745           installs bundler
746
747         Finished in 0.28434 seconds (files took 0.34371 seconds to load)
748         5 examples, 0 failures
749
750         Finished verifying <default-centos-64> (0m13.03s).
751         Finished testing <default-centos-64> (12m26.37s).
752 -----> Destroying <default-centos-64>...
753         EC2 instance <i-d7f5c377> destroyed.
754         Finished destroying <default-centos-64> (0m0.33s).
755
756 The command "bundle exec $TEST_SUITE" exited with 0.
757 store build cache                                                    cache.2
760 $ bundle exec kitchen destroy                                         after_script   0.99s
771
772 Done. Your build exited with 0.
```

Top

what’s next?

$ knife cookbook
upload chef-talk

but…

not today.

Thank you!

- https://github.com/mokhan/chef-talk
- https://github.com/mokhan/chef-apply-demo
- http://kitchen.ci/
- http://serverspec.org/
- https://github.com/sethvargo/chefspec