# Installation and setup

## Chef development kit on the workstation.



## Install chef on centos7 (AWS)

# Run these commands on the cloud instance after connecting with ssh

centos@ip$ curl https://omnitruck.chef.io/install.sh | sudo bash -s -- -P chefdk -c stable -v 0.18.30

centos@ip$ chef --version

centos@ip$ sudo yum install nano -y

centos@ip$ sudo yum install vim -y

centos@ip$ exit

## Sample recipe

# This is an example of the file you should have written on your vagrant or cloud instance

# The title of the recipe is 'hello.rb'

# This ruby file will be run with the command 'sudo chef-client --local-mode hello.rb'

# The result is that a file, hello.txt, will be created in the root directory

# with the content "Hello, world!"

#

# The file, named '/hello.txt' is created

# with the content 'Hello, world!'

#

# @see https://docs.chef.io/resource\_file.html

#

file 'hello.txt' do

content 'Hello, world!'

owner ‘root’

group ‘root’

mode ‘0644’

end

## Resources



**Package resource:**

The package named 'httpd' is installed.

package 'httpd' do

action :install

end

**Service resource:**

service 'ntp' do

action [ :enable, :start ]

end

**File resource**

file '/etc/php.ini.default' do

action :delete

end

Resources reference: <https://docs.chef.io/resource_reference.html>

## About recipes:

<https://docs.chef.io/recipes.html>

# cookbooks:

<https://docs.chef.io/cookbooks.html>



# 4-3 Cookbook Components

# commands that involve editing files assume nano as the text editor

# this command list is provided to accompany the demos in the Chef Fundamentals Udemy course

# run these commands from your vagrant or cloud CentOS 7 instance

cd ~

chef --help

chef generate --help

chef generate cookbook --help

mkdir cookbooks

chef generate cookbook coobooks/workstation

tree

cat cookbooks/workstation/metadata.rb

cat cookbooks/workstation/README.md

cat cookbooks/workstation/recipes/default.rb

mv setup.rb cookbooks/workstation/recipes/

## Version control for cookbooks

# 4-4 Revision with Git

# this command list is provided to accompany the demos in the Chef Fundamentals Udemy course

# commands that involve editing files assume nano as the text editor

# run these commands from your vagrant or cloud CentOS 7 instance

cd ~

tree

which git

nano cookbooks/workstation/recipes/setup.rb

sudo chef-client -z cookbooks/workstation/recipes/setup.rb

cd cookbooks/workstation/

pwd

tree

git init

ls -a

git status

git add .

git status

git commit -m "initial workstation cookbook commit"

git status

nano recipes/setup.rb

git status

git add recipes/setup.rb

git commit -m "added ntp to setup.rb"

git status

## Setting up a web server:



# 4-5 Lab: Deploy Apache Webserver

# this command list is provided to accompany the demos in the Chef Fundamentals Udemy course

# commands that involve editing files assume nano as the text editor

# run these commands from your vagrant or cloud CentOS 7 instance

cd ~

chef generate cookbook cookbooks/apache

tree

chef generate --help

chef generate recipe cookbooks/apache/server

tree

nano cookbooks/apache/recipes/server.rb

chef exec ruby -c cookbooks/apache/recipes/server.rb

sudo chef-client -z cookbooks/apache/recipes/server.rb

curl localhost

Check syntax of the ruby file:

>chef exec ruby –c server.rb

## Chef client run



Chef-client overview: <https://docs.chef.io/chef_client_overview.html>

# 5-2 Applying Recipes and Cookbooks

# this command list is provided to accompany the demos in the Chef Fundamentals Udemy course

# commands that involve editing files assume nano as the text editor

# run these commands from your vagrant or cloud CentOS 7 instance

cd ~

pwd

ls cookbooks

tree cookbooks/apache

sudo chef-client -z --runlist "apache::server"

sudo chef-client -z "workstation::setup"

sudo chef-client -z --runlist "workstation::setup"

sudo chef-client -z -r "recipe[apache::server]"

sudo chef-client -z -r "recipe[apache::server],recipe[workstation::setup]"

## Include recipe

Info: <https://docs.chef.io/recipes.html#include-recipes>

# 5-3 The include\_recipe Method

# this command list is provided to accompany the demos in the Chef Fundamentals Udemy course

# commands that involve editing files assume nano as the text editor

# run these commands from your vagrant or cloud CentOS 7 instance

cd ~

tree cookbooks/workstation

nano cookbooks/workstation/recipes/default.rb

cat cookbooks/workstation/recipes/default.rb

# ~/cookbooks/workstation/recipes/default.rb

include\_recipe 'workstation::setup'

sudo chef-client -z -r "recipe[workstation::default]"

sudo chef-client -z -r "recipe[workstation]"

nano cookbooks/apache/recipes/default.rb

sudo chef-client -z -r "recipe[apache]"

sudo chef-client -zr "recipe[apache],recipe[workstation]"

cd cookbooks/apache

git status

git add .

git commit -m "default.rb includes server.rb"

git status

# Ohai/Node object

Info: <https://docs.chef.io/ohai.html>



The node object: <https://docs.chef.io/nodes.html#node-objects>

# 6-3 Node Attributes

# this command list is provided to accompany the demos in the Chef Fundamentals Udemy course

# commands that involve editing files assume nano as the text editor

# run these commands from your vagrant or cloud CentOS 7 instance

cd ~

cat /etc/motd

ohai

ohai ipaddress

ohai hostname

ohai memory

ohai memory/total

ohai cpu/0/mhz

nano cookbooks/workstation/recipes/setup.rb

sudo chef-client -zr "recipe[workstation]"

cat /etc/motd

# ~/cookbooks/workstation/recipes/setup.rb

package 'nano'

# or package 'vim-enhanced'

package 'ntp'

package 'git' do

action :install

end

file '/etc/motd' do

content "This server is the property of Chef

HOSTNAME: #{node['hostname']}

IPADDRESS: #{node['ipaddress']}

CPU: #{node['cpu']['0']['mhz']}

MEMORY: #{node['memory']['total']}

"

action :create

end

Templates

Info: <https://docs.chef.io/templates.html>



Create template motd:

chef generate template --help cookbooks/workstation/ motd

In the recipe setup.rb we will replace file resource by template:

Code of the template file

centos@centos01:~>cat cookbooks/workstation/templates/motd.erb

This server is the property of <%= @name %>

HOST: <%= node['hostname'] %>

IP: <%= node['ipaddress'] %>

CPU: <%= node['cpu']['0']['mhz'] %> Mhz

MEMORY: <%= node['memory']['total'] %>

template '/etc/motd' do

source 'motd.erb'

action :create

end

sss