

Implementing Chef for Configuration Management



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Objectives



Understanding Chef

- Progress owns chef.io project
 - chef workstation
 - chef infra server
 - chef client
- Can be run in local mode
- Ruby Based
 - Recipes hold state configuration in .rb files



```
$ sudo apt update  
$ sudo apt install chef  
$ chef-client -v 2>/dev/null
```

Installing Chef

Ubuntu 20.04 ships with chef in the standard repositories.



Demo



Working on the Ubuntu System:

- Install Chef
- Check version





Desired state files in Chef are written as
ruby recipes



```
$ mkdir -p ~/cookbooks/repo/recipes  
  
$ vim ~/cookbooks/repo/recipes/default.rb  
  
git "#{ENV['HOME']}/comptia-automation/" do  
  repository 'https://github.com/theurbanpenguin/comptia-automation.git'  
  revision 'main'  
  action :sync  
end  
  
$ chef-client -z -o repo 2>/dev/null
```

Chef Recipes

Ruby adds a little complexity compared with YAML, however, we can create a recipe to clone the course git repo.



Demo



Our First Recipe

- Clone Git Repo



```
$ mkdir -p ~/cookbooks/hello/recipes  
$ vim ~/cookbooks/hello/recipes/default.rb  
file "#{ENV['HOME']}/hello.txt" do  
  content 'HELLO WORLD'  
end  
  
$ chef-client -z -o hello 2>/dev/null  
  
$ cat ~/hello.txt
```

Working with Files

Starting with a basic file, we can extend this by adding in permissions and multiline content.



Demo



Working with File Resources:

- Create file
- Set mode
- Update content



```
$ mkdir -p ~/cookbooks/install/recipes  
  
$ vim ~/cookbooks/install/recipes/default.rb  
  
package 'tree' do  
  action :install  
end  
  
$ sudo chef-client -z -o install 2>/dev/null  
  
$ tree cookbooks
```

Working with Packages

When working with resources that need privileges, we run the chef client with `sudo` elevation. We can refer to a list of packages.



Demo



Working with Package Resources:

- Install single package
- Install package lists



Summary



Understanding Chef from Progress

- Client / Server model
- Ruby based
- Recipes written in Ruby
- Powerful with complexity



Implementing Terraform to Deploy your Virtual Machines

