The Chef Survival Guide

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An Opinionated Approach to Test Driven Chef Development

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1 Introduction

Prior to writing this I had done much experimentation and took a great Chef course offered by Opscode, the creators of Chef. However, when I actually sat down to start working on a real chef infrastructure, I was still asking: "Where do I start?" Sure, I could build sample cookbooks, and sure, I could use some of the tools introduced, but after scouring the internet, I failed to find a consistent end-to-end process that unifies all the tools in one package. Thus I tempered my excitement to start hacking and instead started to build out a methodical, opinionated "framework" that joins all the tools related to Chef in one repository.

This is the guide book that I wish had existed when I got started with Chef. I didn't need a big book; I just needed something to tell me what to do, in what order to get the best results.

If you follow this guide you will end up building something similar to the Chef Broiler Plate[1] repository that I developed while learning about Chef. Be sure to check it out to get the latest updates about this project.

This book is a continuous work in progress. If, as you read, you have questions, or wish there was more information, please let me know and I'll add it in.

The Spirit

The approach I took while developing the Chef Broiler Plate was to do things in a methodical, test driven approach. There are lots of quick ways to start building out cookbooks, but the best way will be to define your requirements with tests, ensure your code is top quality, and develop in iterations.

The Menu

In line with the cooking metaphor that Chef likes to use, here is the menu of topics that will be covered. They will take you on a journey from the beginning through the development of the framework:

- Basic requirements and project setup
- Build system
- Continuous integration
- Local virtual machine Setup
- Test driven development

[1] https://github.com/jrobertfox/chef-broiler-plate

- Code quality
- Workflow management
- Dependency management
- Infrastructure verification

2 Basic Requirements

There are some bare minimum requirements that you will need to have in place to follow along with this guidebook. They are the following:

- Installing Virtual Box
- Setting up the Knife CLI Tool
- Creating a Free Chef Server Account
- Installing your Security Keys

Some Assumptions

This guide assumes that you already have a configured development environment, and in general a unix based one. At a minimum you will need an up-to-date version of Ruby installed on your system, as well as Git. This could vary greatly depending on your system. Check out the Ruby website[1] for specifics.

Installing Virtual Box

Simply head over to the Virtual Box Website[2] and download the version that is compatible with your system. Then Install it. Virtual box will be used along with the tool "Vagrant" to manage the virtual machines that Chef creates and provisions.

Setting up the Knife CLI Tool

We will use the "Knife" command line utility to perform some common tasks while developing cookbooks. The two ways to install the tool are as follows:

The Omnibus Installer

This is a simple way to install on many different systems. Head over to the Opscode website[3] and follow the installation instructions.

Ruby Gem

This is the way I chose to install Chef/Knife. This can be performed with the following command:

[1] http://www.ruby-lang.org/en/

[2] https://www.virtualbox.org/wiki/Downloads

[3] http://www.opscode.com/chef/install/

```
gem install chef
```

Creating a Chef Server Account

While you are on the Opscode site, sign up for a free Chef Server Account[4]. While it is possible to perform the activities in this book completely locally using "Chef Solo", it is ultimately better to use Chef Server, even on a small scale as it offers lots of advantages once you start to scale your infrastructure.

Use Chef Solo for Distributed Projects

The one use case where I'd recommend Chef Solo would be open source or distributed projects. Because all the infrastructure is self contained and requires no accessing of a central chef server, contributors can simply clone the repository, install the "development environment" locally using Vagrant, and then be up and running contributing to the project.

Installing your Security Keys

The final step in preparing to build out our framework will be to download and install your security keys. For this guide will will download them to a universally available location on your system. Make a new directory in your home directory:

```
mkdir ~/.chef
```

There are two security keys you will need to download, the one for you as a user (for example `user.pem`), and the one for your organization (for example `org-validator.pem`). Download them into the folder you just created.

Where are we?

At this point, you have

- Ensured your environment has the minimum requirements
- Installed the Knife Client
- Created an Opscode account and installed your security keys

[4] https://community.opscode.com/users/new