Presenting Chef Solo

Tell me again: Why didn't you automate that?

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whoami

- Head of Technology @ Relay Network

- Consumer <=> Billers

- I Love Open Source

  (and don't begrudge commercial software)

What's my Goal?

Should I...

- Teach you how to write a recipe?

- Teach you how to run chef?

- Contrast with CFEngine, Puppet, etc.?

For the love of Pete: Automate!

Why: Repeatability

- AKA: Configuration Management
- Not just for 'Software'
- "But I'm only going to do this once" (what a crok...)

Why: A Record

- Forces you to plan, to write down what you expect to happen.

- Can now start to measure and document the unexpected

- Lets you see where you can introduce checkpoints and recovery plans

- You can see exactly what you did...months from now

Why: Good Habit

- You brush your teeth every day,

  it's a good habit.
- All of this gets easier if you just do it.
- Practice is worth more than I can tell you.

How did I Get Here?

- 'Traditional' Software Developer

- Joined Highly Skilled Team: had to set up environment w/no docs

- Demo Day + Hosting Provider Issues

- Joined Relay This Year: 1, 2, 1, 2

Enough!

What is Chef?

- A tool for Devops
- A Framework

WTF is Devops?

- Blurring of Development and Operations

- Operations == Traditional IT

- Great Sys Admins already knew this

- Simply the idea that the dichotomy wasted resources, time, lead to inefficencies

- Brought on by the move to virtualization, to the cloud.

Tool: Chef Solo

- Cookbooks, Recipes, Resources, Nodes, Roles, Providers, Templates

- Confession: I am partway through my journey with Chef.

What For?

- Developer Workstations

- Staging and Testing Environments

- I now get a scary feeling when I work on systems that I haven't used these kinds of tools to set up - I know I can't reproduce their state (crap!)

- Production Systems

Getting Started

- You won't do it 'right' the first time.

- Who the F*&%!K cares?

- I'm not doing it 'right' (things have changed since I started, plus I'm still learning)

- Do it anyway, you'll learn, use what you learn to improve as you go.

- Practice, above all, Practice

How I Got Started (mostly)

- gem install chef

- git clone git://github.com/opscode/chef-repo.git

- cd chef-repo

- rm -rf cookbooks

- git clone git://github.com/opscode/cookbooks.git

How I Got Started (mostly)

- mkdir site-cookbooks

- cp -r cookbooks/postgresql/ \
         site-cookbooks/my-recipe

- modify the recipe

How You Should Get Started

- Listen to this, but keep some perspective...

- Read The Current Introduction

- Learn Knife

- Don't follow my example too closely

Running Chef Solo

- Create a node config: config/app-server.json

- rsync or scp -r the whole chef-repo to a node

- ssh to the node and run:

  - chef-solo -c config/solo.rb \

    -j config/app-server.json

Node Configuration

```
{ "snapclean": {
    "users": [ { "name": "kyle" },
                { "name": "snapclean" },
                ... },
   "recipes": [
     "snapclean-base",
     "snapclean-nginx",
     "snapclean-unicorn"
   ]
}
```

Recipes

- Gotcha!
  - Names: not just a string
  - Declarative: what runs and when
- Using Standard Recipes
  - Overriding Defaults
- Creating Your Own

Resources

- Files

- Templates (ERB)

- Directories

- Scripts (bash, ruby)

- Packages (apt-get)

recipes/default.rb

- show some examples and best practices here

- Talk about ohai(?)

- How configuration presents it self (node global)

- Running Scripts

- Installing Packages

- Directories, Tempaltes

templates/default/foo.config

- Show an example and discuss best practices

- Passing Parameters

- Accessing Node Configuration

What I do...

- vi /etc/ssh/sshd_config

- ...did it work?

- scp root@host:/etc/ssh/sshd_config \

  site-cookbooks/prod-sshd/templates/default/

- vi site-cookbooks/prod-sshd/recipies/default.rb
  (add file/template declaration)

- Incremental enhancements as I need more
  configuration points

Managing

- Your Cookbooks and Recipes

- Develop Shared Libraries

- Keep an eye on when to make something configurable vs making things too flexible to maintain.

- Use the guards: :if and :not_if

Automate Please

- Get Started

- Share your Experiences

- Continually Improve

Good Luck!

Luck Favors the Paranoid, I mean Prepared (practice).

Thank You!

References

- http://wiki.opscode.com/display/chef/Home