Overview of Chef

CHEF

Lesson Objectives

After completing the lesson, you will be able to

- Describe how Chef thinks about Infrastructure Automation

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Typical Sys Admin Journey

From a vanilla image…

```
ssh into machine
$ yum install httpd
$ yum install wget
$ yum install unzip
$ wget https://somewhere/master.zip
$ unzip master.zip
$ cd myapp
$ sudo mv html /var/www/
$ sudo su root
$ python myappinstall.py
$ apachectl graceful
```

Log into machine

Typical Sys Admin Journey

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Install a few packages

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Pull in some content

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Manipulate directories & content

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Re/start services

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```

All commands are manual

All have different syntaxes

They're platform specific (RHEL, Debian, Windows, …)

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Typical Sys Admin Journey

Write some scripts (setup.sh, fixit.sh, etc.)

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Version control

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Version control

- setup.sh.BAK
- fixit.sh.OLD

Typical Sys Admin Journey

Write some scripts (setup.sh, fixit.sh, etc.)

Store notes in ~/server.txt

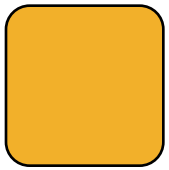
Move notes to the wiki

Version control

- setup.sh.BAK
- fixit.sh.OLD

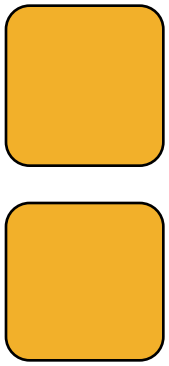
Golden images and snapshots

Systems grow organically



Application

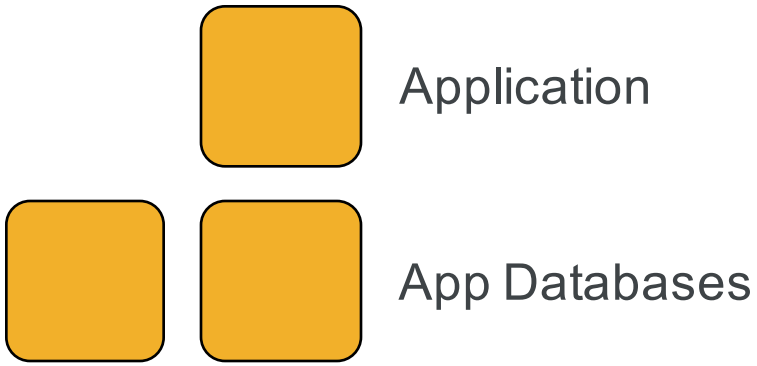
Systems grow organically



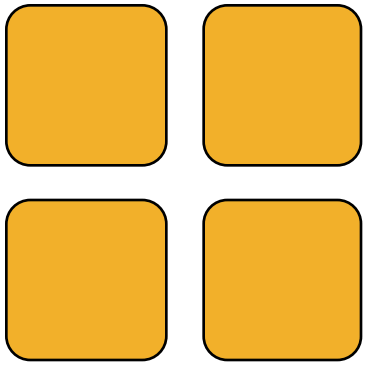
Application

Application Database

Systems grow organically



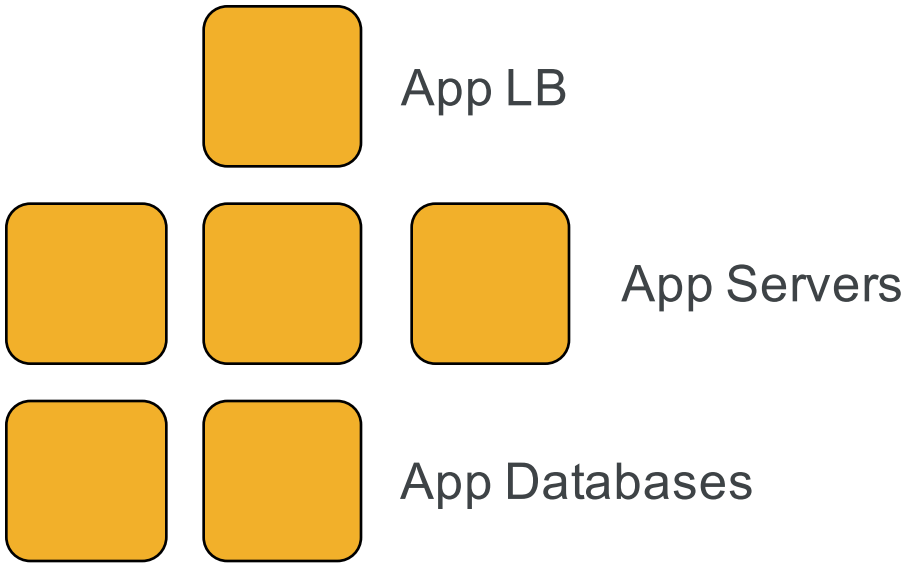
Systems grow organically



App Servers

App Databases

Systems grow organically



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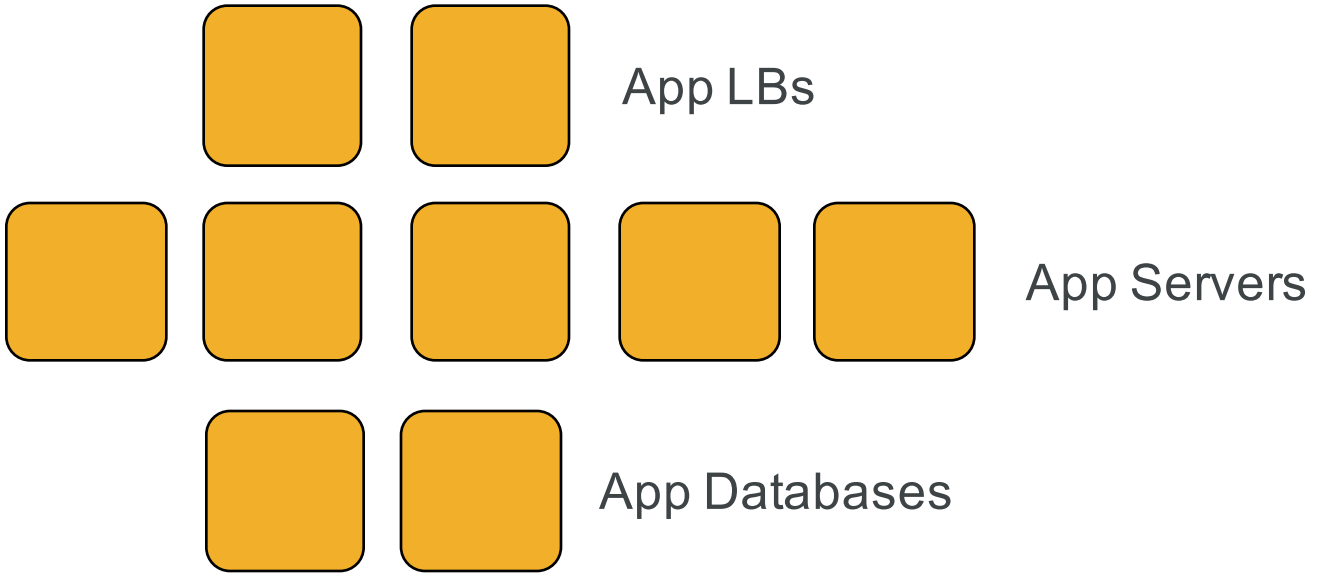
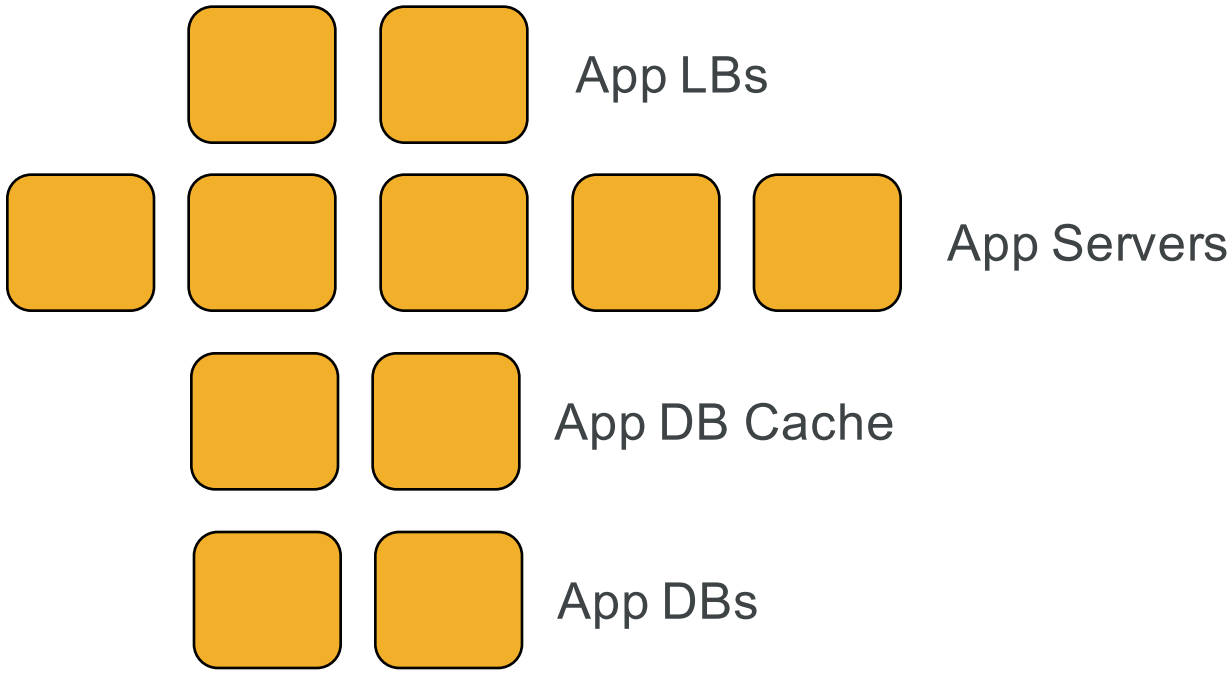
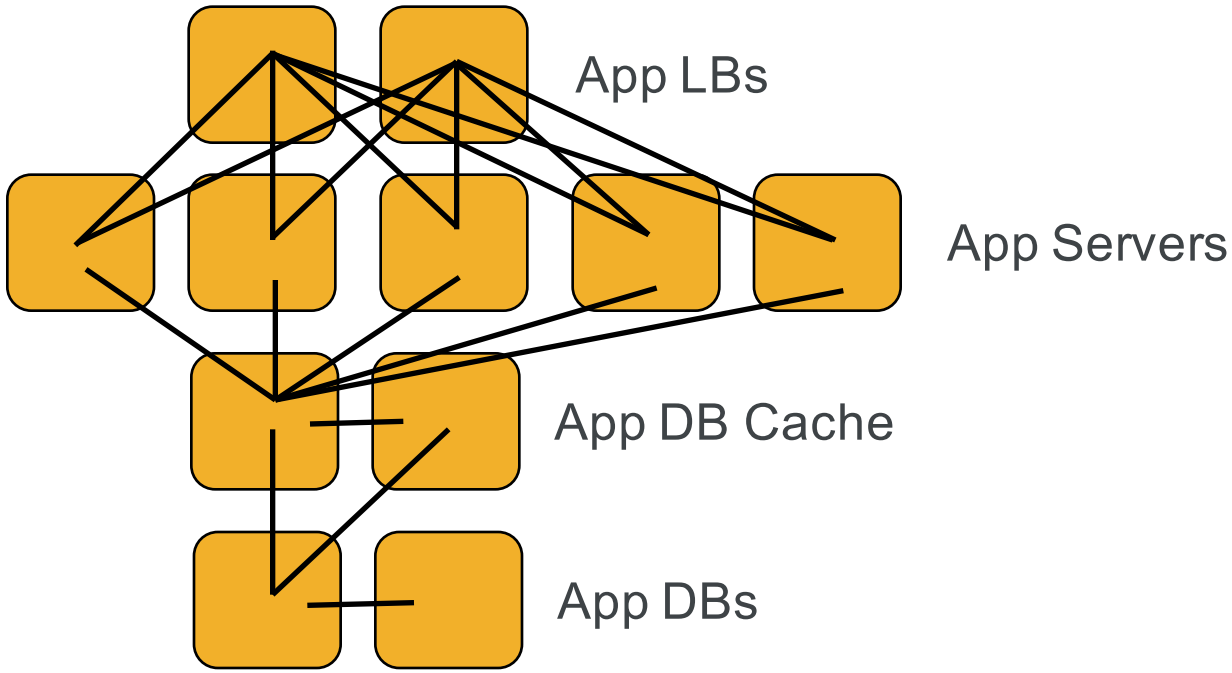


Systems grow organically



Systems grow organically



Chef Solves This Problem

The Infrastructure Code

Chef provides consistent DSL that is platform agnostic to manage any configuration component

- packages
- files
- users
- …

Complex implementation code abstracted out

Treat Infrastructure like any code base

Infrastructure configuration files are stored in version control, e.g. GitHub

Infrastructure becomes as testable & repeatable as the application code you're delivering

Items of Manipulation (Resources)

- Networking
- Files
- Directories
- Symlinks
- Mounts
- Registry Keys
- Powershell Scripts
- Users
- Groups
- Packages
- Services
- Filesystems

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We'll start by looking at what a resource is...

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