Infrastructure as Code

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stirs pot, makes solution

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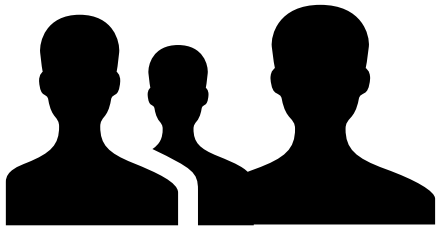
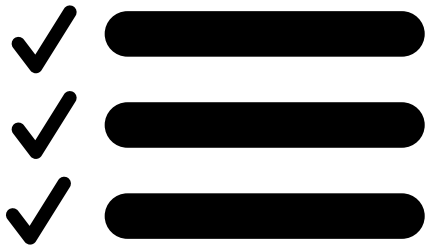
Form Groups



Specific Objectives



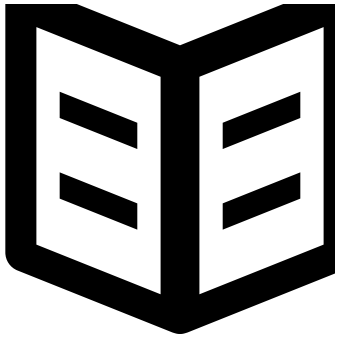
Increasing level of complexity

Observing

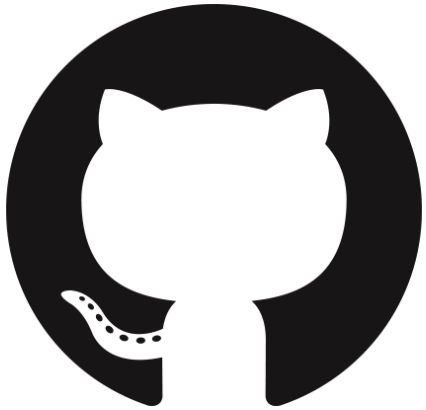
Doing

Teaching

Learn to learn



Setup **GitHub** Account



Install **git**

Install **Virtual Box**

Install **Vagrant**

What does **infrastructure automation** mean to you?

DISCUSS

Clone this repo:
git://github.com/prasanna/sayhello.git

```
$ vagrant up
```

```
$ vagrant ssh
$ cd /vagrant
$ bundle exec ruby sayhello.rb
```

What's on http://localhost:4567?

What does the **Vagrantfile** file do?

DISCUSS

What does the **development.pp** file do?

DISCUSS

Setup **Heroku** Account

Deploy it to **Heroku**

Deploy it to **Heroku**

```
$ gem install heroku
$ heroku create
$ git push heroku master
```

What does the **Procfile** file do?

DISCUSS

Setup **AWS** Account

Create an **EC2** instance
(Ubuntu 64-bit)

ssh into your instance

ssh into your instance

```
$ ssh -i <your>.pem ubuntu@<aws-hostname>
```

Get ‘sayhello’ to say “Hello” on your EC2 instance

Get ‘sayhello’ to say “Hello” on your EC2 instance

(On your EC2 instance)

```
$ sudo apt-get update
$ sudo apt-get install git
$ git clone git://github.com/prasanna/sayhello.git
$ cd sayhello
$ puppet apply manifests/development.pp
$ bundle install
$ bundle exec ruby sayhello.rb
```

(Is port 4567 open on your AWS Security Group?)

Get ‘sayhello’ to say “Hello” on your EC2 instance

Do it automatically with **puppet** instead.

(On your EC2 instance)

```
$ sudo apt-get update
$ sudo apt-get install git
$ git clone git://github.com/prasanna/sayhello.git
$ cd sayhello
$ puppet apply manifests/development.pp
$ bundle install
$ bundle exec ruby sayhello.rb
```

(Is port 4567 open on your AWS Security Group?)

Now shut down that instance
and bring it up again

What happened to your app?

DISCUSS

Do it automatically with **aws cli**.

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(On your Vagrant VM)

```
$ sudo apt-get update
$ sudo apt-get install python-pip
$ sudo pip install awscli

$ export AWS_ACCESS_KEY=
$ export AWS_SECRECT_ACCESS_KEY=
```

Do it automatically with **puppet** instead.

(On your Vagrant VM)

```
$ sudo apt-get update
$ sudo apt-get install python-pip
$ sudo pip install awscli

$ export AWS_ACCESS_KEY=
$ export AWS_SECRECT_ACCESS_KEY=
```

Fork and clone this repo:
https://github.com/SpringSource/spring-petclinic

```
$ mvn package
```

Install **apache** on your ec2 instance using puppet.

Install **tomcat** on your ec2 instance using puppet.

Hook up apache and tomcat
using **puppet**.

Deploy your app with a **shell** script

Install **mysql** on your ec2 instance
using puppet.

Configure your webapp to talk to it
and redeploy.

Repeat for **mongodb**:
https://github.com/SpringSource/spring-data-document-examples

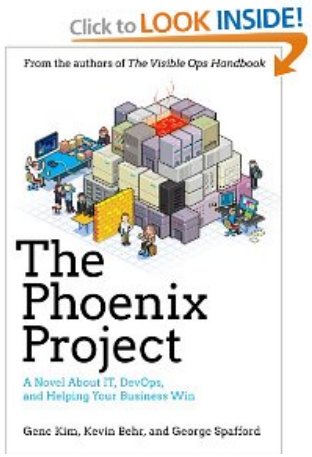
Think about these:

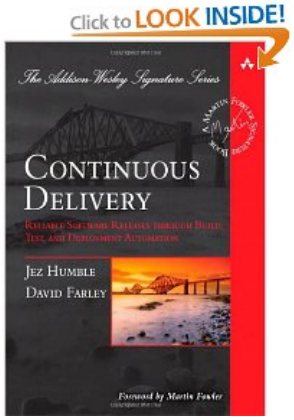

Monitoring


Logging


Security

Welcome to the Land of Automation!





please fill out the evaluations

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Extra Credit

Setup server **health check** page

Setup monitoring with **nagios**

Run an automated **smoke test**

Setup a **puppet server**

Setup **multiple** app servers

Do a **rolling** deployment