Setting up a CI server for Ruby on Rails using Jenkins on EC2 Ubuntu

BALASAHEB BAGUL
ZACHARY SERSLAND
IRENE HAQUE

Platform

- Ruby on Rails
  - Ruby – 1.9.2
  - Rails – 3.0.7
  - Rake – 0.9.1
- Jenkins – 1.411
- Amazon EC2 - ami-d4c939bd
  - Bitnami RubyStack – 2.1-1 Dev
  - Ubuntu – 10.04
- Ref: http://bitnami.org/stack/rubystack

Setup I – Configure the WebServer

- Create Amazon AWS account
- EC2 -> Launch instance

  (If you have a preference on which Data Center location to choose, do it before launching)
  - community AMIs
  - 3 tier eligble
  - search ruby
  - Select ami-d4c939bd979382823631/bitnami-rubystack-2.1-1-dev-linux-ubuntu-10.04-ebs
  - Leave the default settings
  - Continue
  - Create a new Key Pair(enter name - eecs394)
  - download and save the *.pem file in folder “home>username>.shh”
  - Continue and Launch
- Status of Launch -> Running

Setup I – Configure the WebServer

- Initially all the ports are closed due to the Default Security Group settings
  - So now we need to open ports to use SSH and the webserver Web, etc.
  - Add the following port numbers:

Port Number	Function
22	SSH
80	HTTP
8080	HTTP*
3000	Ruby on Rails

- Copy the public DNS and paste it in the browser to check if bitnami is running.
- ssh to the VM using the same public DNS with the bitnami username and the key

```
> ssh -i .ssh/eecs394.pem bitnami@ec2-184-72-190-134.compute-1.amazonaws.com
```

Setup II – Install Jenkins

- Install java (required for Jenkins) –
  - `sudo apt-get install openjdk-6-jre-headless`
- Install Jenkins –
  - `wget -q -O - http://pkg.jenkins-ci.org/debian/jenkins-ci.org.key | sudo apt-key add -`
  - `sudo echo "deb http://pkg.jenkins-ci.org/debian binary/" > /etc/apt/sources.list.d/jenkins.list`
  - `sudo aptitude update`
  - `sudo aptitude install jenkins`
- Add Jenkins user to "/etc/sudoers" file
- Ref: https://wiki.jenkins-ci.org/display/JENKINS/Installing+Jenkins+on+Ubuntu

Setup III – Git Configuration

- Manage Jenkins
  - Manage plugins – (Install Git)
- Set permissions to access Git from Jenkins
  - `$ su bitnami`
  - `$ sudo su bitnami`
  - `$ cd /srv/jenkins/jobs/project/workspace`
  - `$ git config user.email "some@email.com"`
  - `$ git config user.name "jenkins"`
- Ref: https://wiki.jenkins-ci.org/display/JENKINS/Git+Plugin

Setup IV – Configure Jenkins

- New Job
  - Add Job Name
    - Build a free-style software project
  - Source code Management
    - Add Git URL
  - Build
    - Execute Shell

```
#enter application root
  cd /var/lib/jenkins/jobs/MPD_Blue/workspace/trunk
  sudo bundle install
  sudo rake
```

Setup V – Configure Build Trigger

- Create a “GitHub” account with Jenkins.
- Configure Remote Build Trigger
- Configure a Post-Receive URL at GitHub
- Ref: http://www.foraker.com/hudson-github-hooks/

Example Run

Failure: test/image_test.rb

```
Started
F
Finished in 0.461988 seconds.

  1) Failure:
test_should_only_upload_an_image
  _with_a_unique_name(ImageTest)
  [test/unit/image_test.rb:6]:
Uploaded images with duplicate
  names

1 tests, 1 assertions, 1
  failures, 0 errors, 0 skips

Test run options: --seed 57989
Errors running test:units!
Finished: FAILURE
```

Success: /app/models/image.rb

```
Started
.
Finished in 0.507651 seconds.

1 tests, 1 assertions, 0 failures,
  0 errors, 0 skips

Test run options: --seed 11943
Finished: SUCCESS
```

Other Notes

- Install Rake
  - `sudo gem install --remote rake`
- Double check the Jenkins folders' write permissions
- To share the WebServer access with team members, provide the amazon permission's key file (*.pem)
- Oh yeah, remember to stop the server when not in use, as Amazon might start charging you!

Resources

- http://bitnami.org/stack/rubystack
- https://wiki.jenkins-ci.org/display/JENKINS/Installing+Jenkins+on+Ubuntu
- https://wiki.jenkins-ci.org/display/JENKINS/Git+Plugin
- http://www.foraker.com/hudson-github-hooks/