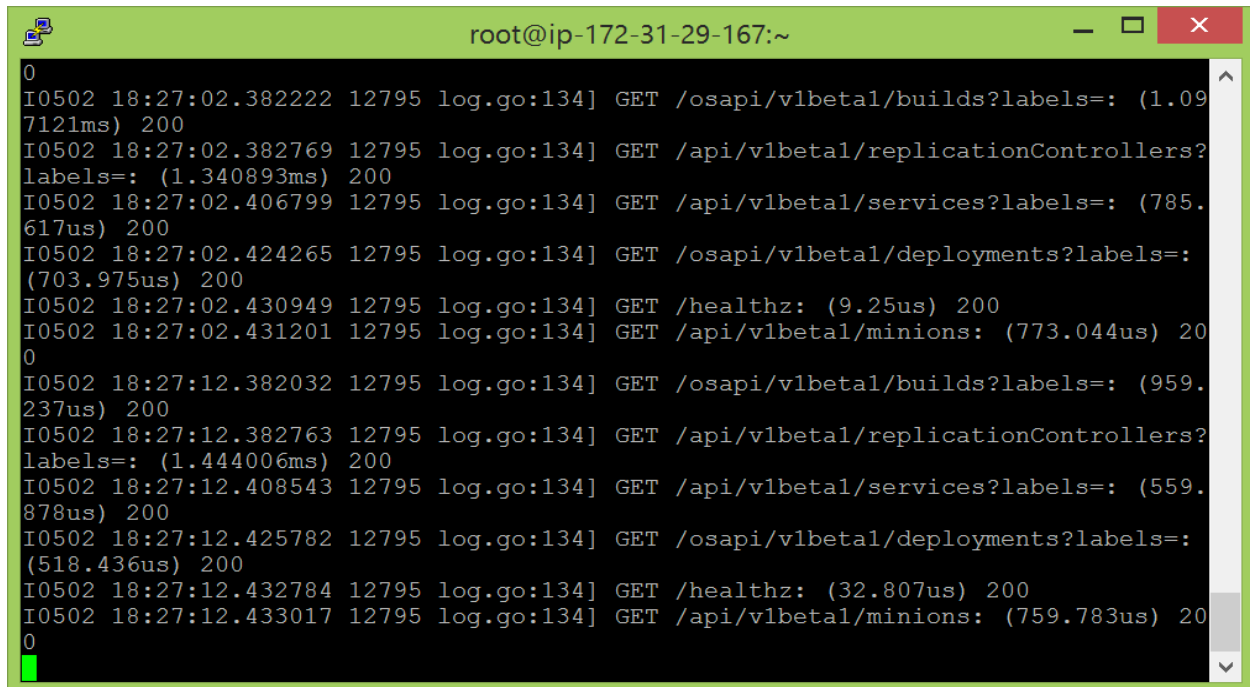


Lab#3: Openshift

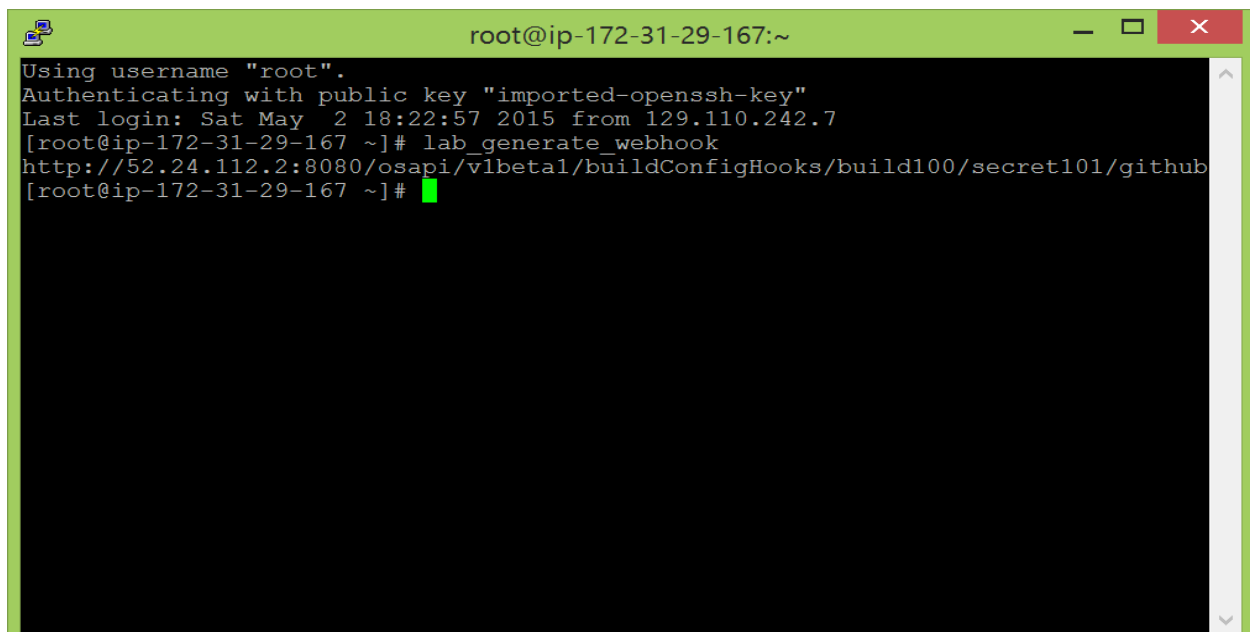
- Launch an instance from the publicly available image in the amazon ec2.
- Launch putty with the public ip and the key.
- First start the openshift service:
openshift start --listenAddr="0.0.0.0:8080" in one terminal.



A terminal window titled 'root@ip-172-31-29-167:~' showing a series of GET requests to the OpenShift API. The requests are for /osapi/v1beta1/builds, /api/v1beta1/replicationControllers, /api/v1beta1/services, /osapi/v1beta1/deployments, /healthz, and /api/v1beta1/minions. Each request is followed by a response status (200) and a response time in milliseconds or microseconds. The terminal output is as follows:

```
0
I0502 18:27:02.382222 12795 log.go:134] GET /osapi/v1beta1/builds?labels=: (1.097121ms) 200
I0502 18:27:02.382769 12795 log.go:134] GET /api/v1beta1/replicationControllers?labels=: (1.340893ms) 200
I0502 18:27:02.406799 12795 log.go:134] GET /api/v1beta1/services?labels=: (785.617us) 200
I0502 18:27:02.424265 12795 log.go:134] GET /osapi/v1beta1/deployments?labels=: (703.975us) 200
I0502 18:27:02.430949 12795 log.go:134] GET /healthz: (9.25us) 200
I0502 18:27:02.431201 12795 log.go:134] GET /api/v1beta1/minions: (773.044us) 200
0
I0502 18:27:12.382032 12795 log.go:134] GET /osapi/v1beta1/builds?labels=: (959.237us) 200
I0502 18:27:12.382763 12795 log.go:134] GET /api/v1beta1/replicationControllers?labels=: (1.444006ms) 200
I0502 18:27:12.408543 12795 log.go:134] GET /api/v1beta1/services?labels=: (559.878us) 200
I0502 18:27:12.425782 12795 log.go:134] GET /osapi/v1beta1/deployments?labels=: (518.436us) 200
I0502 18:27:12.432784 12795 log.go:134] GET /healthz: (32.807us) 200
I0502 18:27:12.433017 12795 log.go:134] GET /api/v1beta1/minions: (759.783us) 200
0
```

- Open a duplicate session and generate a webhook:
lab_generate_webhook



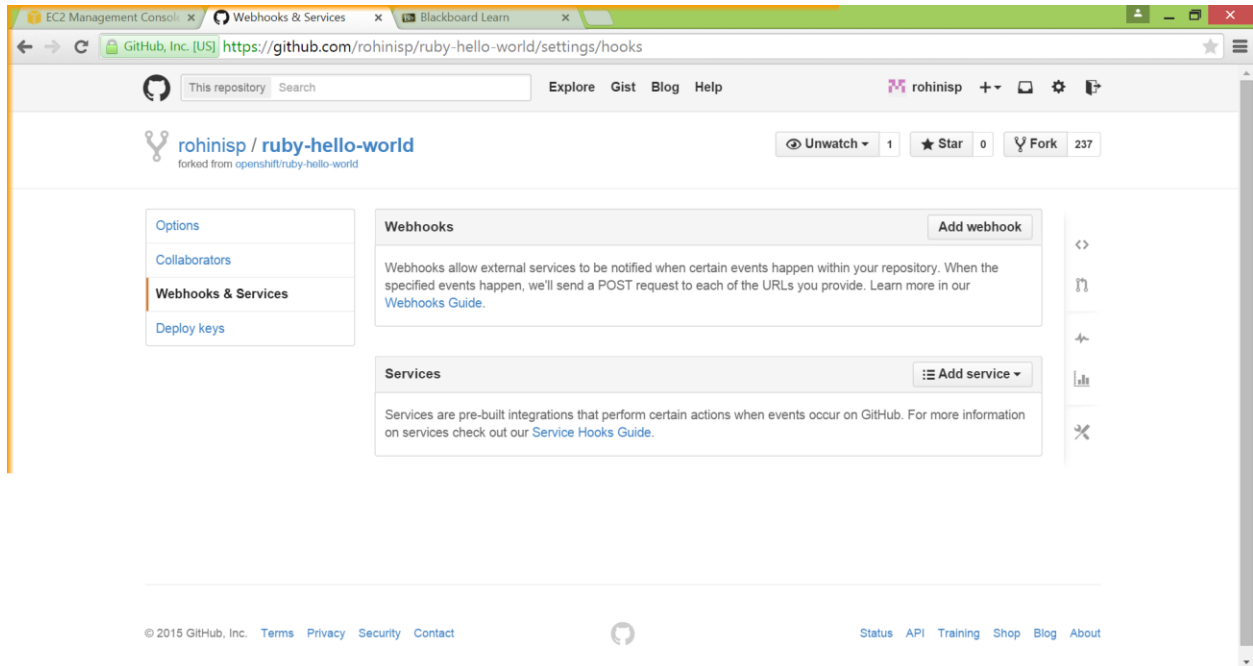
A terminal window titled 'root@ip-172-31-29-167:~' showing the output of the 'lab_generate_webhook' command. The output includes the username 'root', the public key 'imported-openssh-key', the last login time 'Sat May 2 18:22:57 2015 from 129.110.242.7', and the generated webhook URL 'http://52.24.112.2:8080/osapi/v1beta1/buildConfigHooks/build100/secret101/github'. The terminal output is as follows:

```
Using username "root".
Authenticating with public key "imported-openssh-key"
Last login: Sat May 2 18:22:57 2015 from 129.110.242.7
[root@ip-172-31-29-167 ~]# lab_generate_webhook
http://52.24.112.2:8080/osapi/v1beta1/buildConfigHooks/build100/secret101/github
[root@ip-172-31-29-167 ~]#
```

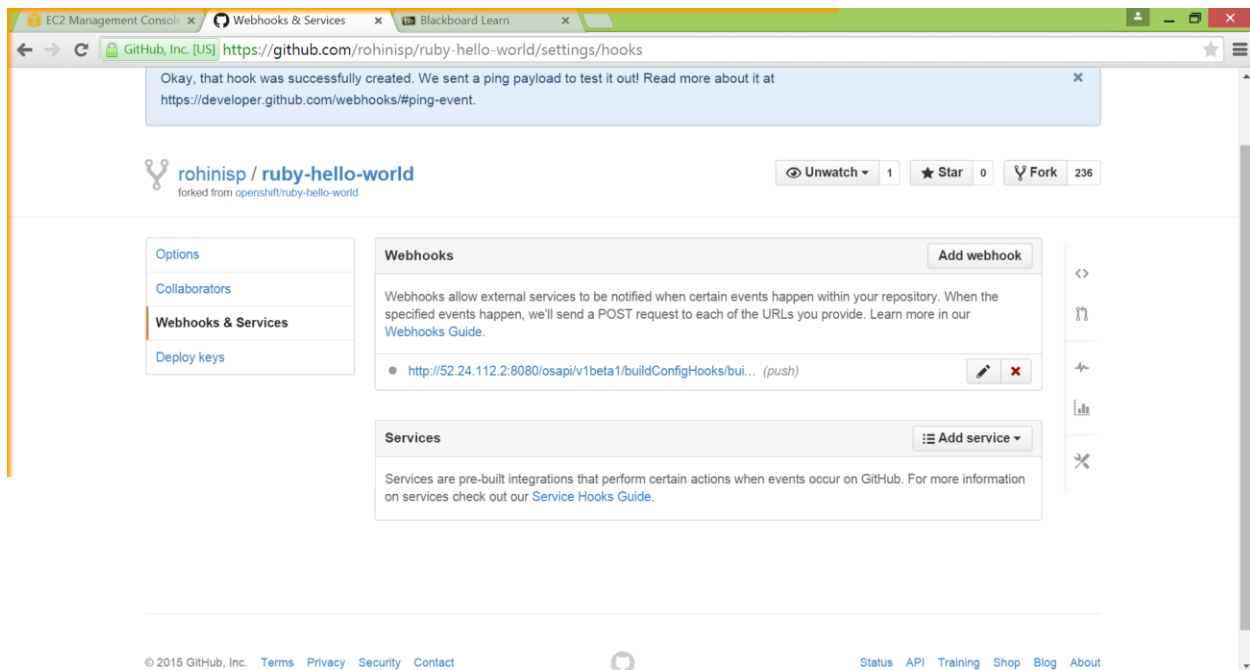
- Now, open the link given in the lab exercise:
<https://github.com/openshift/ruby-hello-world> in a web browser.

Fork the application to your own github account[create an account if you do not have one].

Then go into settings, webhooks and add the payload url. This url is from the generate url command from our terminal. Copy it here and generate webhook.



<http://52.24.112.2:8080/osapi/v1beta1/buildConfigHooks/build100/secret101/github>



- Openshift is useful to automatically build docker and run the services from the previous labs.
- Run the config which contains the kubernetes service and controllers using:
`openshift kube apply -c registry_config/registry_config.json`

```
root@ip-172-31-29-167:~/simple-ruby-app
Using username "root".
Authenticating with public key "imported-openssh-key"
Last login: Sat May  2 18:22:57 2015 from 129.110.242.7
[root@ip-172-31-29-167 ~]# lab_generate_webhook
http://52.24.112.2:8080/osapi/v1beta1/buildConfigHooks/build100/secret101/github
[root@ip-172-31-29-167 ~]# cd /root/simple-ruby-app
[root@ip-172-31-29-167 simple-ruby-app]# openshift kube apply -c registry_config/registry_config.json
[root@ip-172-31-29-167 simple-ruby-app]#
```

The first terminal still shows the following logs:

```
root@ip-172-31-29-167:~
I0502 18:32:52.476128 12795 roundrobin.go:104] LoadBalancerRR: Setting endpoints
for registryservice to [172.17.0.2:5000]
I0502 18:32:52.477863 12795 log.go:134] GET /osapi/v1beta1/deployments?labels=:
(523.06us) 200
I0502 18:32:52.523941 12795 log.go:134] GET /healthz: (8.1us) 200
I0502 18:32:52.524115 12795 log.go:134] GET /api/v1beta1/minions: (285.66us) 200
I0502 18:33:02.389831 12795 log.go:134] GET /osapi/v1beta1/builds?labels=: (647.
944us) 200
I0502 18:33:02.395970 12795 log.go:134] GET /api/v1beta1/replicationControllers?
labels=: (1.357245ms) 200
I0502 18:33:02.397553 12795 replication_controller.go:194] periodic sync of regi
stryController
I0502 18:33:02.412192 12795 log.go:134] GET /api/v1beta1/pods?labels=name%3Dregi
stryPod: (14.437048ms) 200
I0502 18:33:02.476963 12795 log.go:134] GET /api/v1beta1/services?labels=: (1.21
5125ms) 200
I0502 18:33:02.489573 12795 log.go:134] GET /api/v1beta1/pods?labels=name%3Dregi
stryPod: (11.262772ms) 200
I0502 18:33:02.490030 12795 log.go:134] GET /osapi/v1beta1/deployments?labels=:
(11.406795ms) 200
I0502 18:33:02.525427 12795 log.go:134] GET /healthz: (10.087us) 200
I0502 18:33:02.525635 12795 log.go:134] GET /api/v1beta1/minions: (708.345us) 20
0
0
```

- To check the list of pods:
openshift kube list pods

```
root@ip-172-31-29-167:~/simple-ruby-app
Using username "root".
Authenticating with public key "imported-openssh-key"
Last login: Sat May  2 18:22:57 2015 from 129.110.242.7
[root@ip-172-31-29-167 ~]# lab_generate_webhook
http://52.24.112.2:8080/osapi/v1beta1/buildConfigHooks/build100/secret101/github
[root@ip-172-31-29-167 ~]# cd /root/simple-ruby-app
[root@ip-172-31-29-167 simple-ruby-app]# openshift kube apply -c registry_config
/registry_config.json
[root@ip-172-31-29-167 simple-ruby-app]# openshift kube list pods
ID                               Image(s)                               Host                               Labels
-----
a28468cb-f0f9-11e4-8bb5-06207f13a4bf registry                               127.0.0.1/                         n
ame=registryPod,replicationController=registryController Waiting
```

```
root@ip-172-31-29-167:~/simple-ruby-app
Authenticating with public key "imported-openssh-key"
Last login: Sat May  2 18:22:57 2015 from 129.110.242.7
[root@ip-172-31-29-167 ~]# lab_generate_webhook
http://52.24.112.2:8080/osapi/v1beta1/buildConfigHooks/build100/secret101/github
[root@ip-172-31-29-167 ~]# cd /root/simple-ruby-app
[root@ip-172-31-29-167 simple-ruby-app]# openshift kube apply -c registry_config
/registry_config.json
[root@ip-172-31-29-167 simple-ruby-app]# openshift kube list pods
ID                                     Image(s)                               Host                                     L
abels                                Status
-----
a28468cb-f0f9-11e4-8bb5-06207f13a4bf registry                               127.0.0.1/                               n
ame=registryPod,replicationController=registryController Waiting

[root@ip-172-31-29-167 simple-ruby-app]# openshift kube list pods
ID                                     Image(s)                               Host                                     L
abels                                Status
-----
a28468cb-f0f9-11e4-8bb5-06207f13a4bf registry                               127.0.0.1/                               n
ame=registryPod,replicationController=registryController Running

[root@ip-172-31-29-167 simple-ruby-app]#
```

- When the registry is running we move ahead and open the build config file and change the path present in the sourceURI field. The new path should be the path of the application which has been forked to your account:
vi buildcfg/buildcfg.json

```
root@ip-172-31-29-167:~/simple-ruby-app
{"id": "build100",
 "desiredInput":
 {
   "type": "docker",
   "sourceURI": "git://github.com/rohinisp/ruby-hello-world.git",
   "imageTag": "openshift/origin-ruby-sample",
 },
 "secret": "secret101"
}
~
~
~
~
~
~
~
~
~
~
"buildcfg/buildcfg.json" 12L, 241C
```

- To create and implement the build config file:

```
openshift kube create buildConfigs -c buildcfg/buildcfg.json
```

```
root@ip-172-31-29-167:~/simple-ruby-app
```

Labels	Status
a28468cb-f0f9-11e4-8bb5-06207f13a4bf registry ame=registryPod,replicationController=registryController	127.0.0.1/ Waiting

```
[root@ip-172-31-29-167 simple-ruby-app]# openshift kube list pods
```

ID	Image(s)	Host	Status
a28468cb-f0f9-11e4-8bb5-06207f13a4bf registry ame=registryPod,replicationController=registryController	127.0.0.1/ Running		

```
[root@ip-172-31-29-167 simple-ruby-app]# vi buildcfg/buildcfg.json
[root@ip-172-31-29-167 simple-ruby-app]# vi buildcfg/buildcfg.json
[root@ip-172-31-29-167 simple-ruby-app]# openshift kube create buildConfigs -c buildcfg/buildcfg.json
```

ID	Type	SourceURI
build100	docker	git://github.com/rohinisp/ruby-hello-world.git

```
[root@ip-172-31-29-167 simple-ruby-app]#
```

- To list all the buildconfigs that have been created:
openshift kube list buildConfigs

```
root@ip-172-31-29-167:~/simple-ruby-app
```

```
[root@ip-172-31-29-167 simple-ruby-app]# openshift kube list pods
```

ID	Image(s)	Host	Status
a28468cb-f0f9-11e4-8bb5-06207f13a4bf registry ame=registryPod,replicationController=registryController	127.0.0.1/ Running		

```
[root@ip-172-31-29-167 simple-ruby-app]# vi buildcfg/buildcfg.json
[root@ip-172-31-29-167 simple-ruby-app]# vi buildcfg/buildcfg.json
[root@ip-172-31-29-167 simple-ruby-app]# openshift kube create buildConfigs -c buildcfg/buildcfg.json
```

ID	Type	SourceURI
build100	docker	git://github.com/rohinisp/ruby-hello-world.git

```
[root@ip-172-31-29-167 simple-ruby-app]# openshift kube list buildConfigs
```

ID	Type	SourceURI
build100	docker	git://github.com/rohinisp/ruby-hello-world.git

```
[root@ip-172-31-29-167 simple-ruby-app]#
```

```
root@ip-172-31-29-167:~
I0502 18:47:34.099771 12795 log.go:134] GET /osapi/v1beta1/builds?labels=: (574.76us) 200
I0502 18:47:36.125829 12795 log.go:134] GET /osapi/v1beta1/builds?labels=: (548.334us) 200
I0502 18:47:38.152874 12795 log.go:134] GET /osapi/v1beta1/builds?labels=: (574.203us) 200
I0502 18:47:40.179014 12795 log.go:134] GET /osapi/v1beta1/builds?labels=: (548.44us) 200
I0502 18:47:42.205250 12795 log.go:134] GET /osapi/v1beta1/builds?labels=: (552.44us) 200
I0502 18:47:42.381814 12795 log.go:134] GET /osapi/v1beta1/builds?labels=: (889.037us) 200
I0502 18:47:42.383277 12795 log.go:134] GET /api/v1beta1/replicationControllers?labels=: (2.187823ms) 200
I0502 18:47:42.385050 12795 replication_controller.go:194] periodic sync of registryController
I0502 18:47:42.387529 12795 log.go:134] GET /api/v1beta1/pods?labels=name%3DregistryPod: (2.296443ms) 200
I0502 18:47:42.673264 12795 log.go:134] GET /osapi/v1beta1/deployments?labels=: (589.067us) 200
I0502 18:47:42.756472 12795 log.go:134] GET /healthz: (13.492us) 200
I0502 18:47:42.756941 12795 log.go:134] GET /api/v1beta1/minions: (1.301894ms) 200
```

```
root@ip-172-31-29-167:~/simple-ruby-app
Every 2.0s: openshift kube list builds Sat May 2 18:47:54 2015
ID              Status              Pod ID
-----

```

It doesn't show anything as there haven't been any created yet. These are created when any modifications have been made. So, I came out of the watch list and made some changes to the app.rb file in github account and committed the changes. Then, we can see in the following screenshots:

```
root@ip-172-31-29-167:~/simple-ruby-app

-----
build100          docker          git://github.com/rohinisp/ruby-hello-wor
ld.git

[root@ip-172-31-29-167 simple-ruby-app]# watch openshift kube list builds
[root@ip-172-31-29-167 simple-ruby-app]# watch openshift kube list builds
[root@ip-172-31-29-167 simple-ruby-app]# openshift kube list pods
ID                                     Image(s)                                Host                                L
abels                                Status
-----                                -
-----                                -
a28468cb-f0f9-11e4-8bb5-06207f13a4bf  registry                                127.0.0.1/                          n
ame=registryPod,replicationController=registryController  Running

[root@ip-172-31-29-167 simple-ruby-app]# docker ps
CONTAINER ID        IMAGE                                COMMAND                                CREATED
STATUS            PORTS                                NAMES
b3ba0edea767       registry:latest                    docker-registry                        18 minutes ago
Up 18 minutes      k8s--registry_-_container.c7610d8a
--a28468cb_-_f0f9_-_11e4_-_8bb5_-_06207f13a4bf.etc
5e03c95a3c29       kubernetes/pause:latest            /pause                                20 minutes ago
Up 20 minutes      k8s--net.3f7582c0--a28468cb_-_f0f9
_-_11e4_-_8bb5_-_06207f13a4bf.etc
[root@ip-172-31-29-167 simple-ruby-app]#
```

```
root@ip-172-31-29-167:~/simple-ruby-app

Every 2.0s: openshift kube list builds          Sat May  2 19:06:51 2015 ^

ID                                     Status                                Pod ID
-----                                -
592d630c-f0fe-11e4-aaeb-06207f13a4bf  running                                build-docker-592d630c
-f0fe-11e4-aaeb-06207f13a4bf
```



```
root@ip-172-31-29-167:~/simple-ruby-app
Every 2.0s: openshift kube list builds                               Sat May  2 19:17:31 2015 ^
ID                               Status                               Pod ID
-----
592d630c-f0fe-11e4-aaeb-06207f13a4bf failed                               build-docker-592d630c
-f0fe-11e4-aaeb-06207f13a4bf
c0313eb0-f0ff-11e4-aaeb-06207f13a4bf complete                               build-docker-c0313eb0
-f0ff-11e4-aaeb-06207f13a4bf
```

- When the status changes to complete we are supposed to find an image related to our build. I could only find that there is a new container which is created but then there is no image being created.
- `curl -XGET http://\${DOCKER_REGISTRY}/v1/search`

```
root@ip-172-31-29-167:~
[root@ip-172-31-29-167 ~]# docker images
REPOSITORY          TAG          IMAGE ID          CREATED
VIRTUAL SIZE
<none>              <none>       6a5f92f6fb3a     4 minutes ago
o 451.7 MB
<none>              <none>       f4ab9b450c0c     16 minutes ago
go 451.7 MB
registry            latest       24a4dddc4f76     20 hours ago
413.9 MB
openshift/ruby-20-centos7 latest       71afb79aa538     44 hours ago
451.6 MB
openshift/ruby-20-centos7 v0.4        c7dbf0592258     8 weeks ago
444.4 MB
nhripps/sti-builder  lab         063dc92c0c7f     7 months ago
1.156 GB
nhripps/docker-builder lab         23ce8598b6e8     7 months ago
865.2 MB
dockerfile/ruby      latest       b364d01ba309     7 months ago
448.1 MB
<none>              <none>       e42d15ec8417     8 months ago
442.6 MB
kubernetes/pause     latest       6c4579af347b     9 months ago
239.8 kB
[root@ip-172-31-29-167 ~]#
```

`echo ${DOCKER_REGISTRY}`

"172.31.29.167:5000

```
root@ip-172-31-29-167:~  
413.9 MB  
openshift/ruby-20-centos7 latest 71afb79aa538 44 hours ago  
451.6 MB  
openshift/ruby-20-centos7 v0.4 c7dbf0592258 8 weeks ago  
444.4 MB  
nhripps/sti-builder lab 063dc92c0c7f 7 months ago  
1.156 GB  
nhripps/docker-builder lab 23ce8598b6e8 7 months ago  
865.2 MB  
dockerfile/ruby latest b364d01ba309 7 months ago  
448.1 MB  
<none> <none> e42d15ec8417 8 months ago  
442.6 MB  
kubernetes/pause latest 6c4579af347b 9 months ago  
239.8 kB  
[root@ip-172-31-29-167 ~]# curl -XGET http://${DOCKER_REGISTRY}/v1/search  
{ "num_results": 0, "query": "", "results": [] }  
[root@ip-172-31-29-167 ~]# echo $DOCKER_REGISTRY  
172.31.29.167:5000  
[root@ip-172-31-29-167 ~]# echo $DOCKER_REGISTRY  
172.31.29.167:5000  
[root@ip-172-31-29-167 ~]# 172.31.29.167:5000  
-bash: 172.31.29.167:5000: command not found  
[root@ip-172-31-29-167 ~]#
```

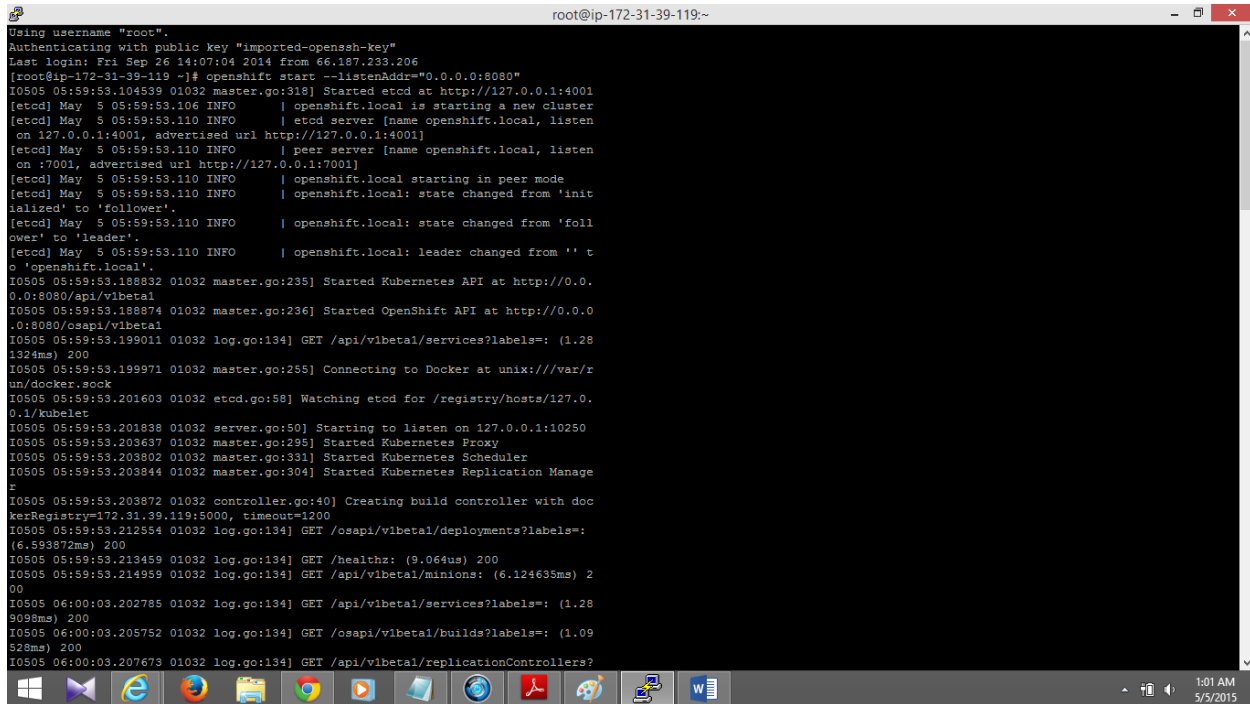
```
root@ip-172-31-29-167:~/simple-ruby-app  
{"apiVersion": "v1beta1",  
 "desiredState": {  
   "replicas": 1,  
   "replicaSelector": {"name": "frontend"},  
   "podTemplate": {  
     "desiredState": {  
       "manifest": {  
         "version": "v1beta1",  
         "id": "frontendController",  
         "containers": [{  
           "name": "ruby-helloworld",  
           "image": "172.31.29.167:5000/openshift/origin-ruby-sample",  
           "env": [  
             {  
               "name": "ADMIN_USERNAME",  
               "value": "${ADMIN_USERNAME}"  
             },  
             {  
               "name": "ADMIN_PASSWORD",  
               "value": "${ADMIN_PASSWORD}"  
             },  
             {  
               "name": "DB_PASSWORD",
```

The image is not getting created after trying all the ways which were discussed. I tried creating a new instance. Terminated and restarted again but nothing worked. According to a discussion in the forum, I even tried creating a new application in my github account, it didn't work either.

So, tried in my team mates laptop and accounts, it worked without any big glitches. The screenshots are attached below:

Module 1: Set Up Source Code in GitHub

1. Launch OpenShift



```
root@ip-172-31-39-119:~
Using username "root".
Authenticating with public key "imported-openssh-key"
Last login: Fri Sep 26 14:07:04 2014 from 66.187.233.206
[root@ip-172-31-39-119 ~]# openshift start --listenAddr="0.0.0.0:8080"
I0505 05:59:53.104539 01032 master.go:318] Started etcd at http://127.0.0.1:4001
[etcd] May 5 05:59:53.1106 INFO | openshift.local is starting a new cluster
[etcd] May 5 05:59:53.1110 INFO | etcd server [name openshift.local, listen
on 127.0.0.1:4001, advertised url http://127.0.0.1:4001]
[etcd] May 5 05:59:53.1110 INFO | peer server [name openshift.local, listen
on :7001, advertised url http://127.0.0.1:7001]
[etcd] May 5 05:59:53.1110 INFO | openshift.local starting in peer mode
[etcd] May 5 05:59:53.1110 INFO | openshift.local: state changed from 'init
ialized' to 'follower'.
[etcd] May 5 05:59:53.1110 INFO | openshift.local: state changed from 'foll
ower' to 'leader'.
[etcd] May 5 05:59:53.1110 INFO | openshift.local: leader changed from '' t
o 'openshift.local'.
I0505 05:59:53.188832 01032 master.go:235] Started Kubernetes API at http://0.0.
0.0:8080/api/v1beta1
I0505 05:59:53.188874 01032 master.go:236] Started OpenShift API at http://0.0.0
0:8080/osapi/v1beta1
I0505 05:59:53.199011 01032 log.go:134] GET /api/v1beta1/services?labels=: (1.28
1324ms) 200
I0505 05:59:53.199971 01032 master.go:255] Connecting to Docker at unix:///var/r
un/docker.sock
I0505 05:59:53.201603 01032 etcd.go:58] Watching etcd for /registry/hosts/127.0.
0.1/kubelet
I0505 05:59:53.201838 01032 server.go:50] Starting to listen on 127.0.0.1:10250
I0505 05:59:53.203637 01032 master.go:295] Started Kubernetes Proxy
I0505 05:59:53.203802 01032 master.go:331] Started Kubernetes Scheduler
I0505 05:59:53.203844 01032 master.go:304] Started Kubernetes Replication Manage
r
I0505 05:59:53.203872 01032 controller.go:40] Creating build controller with doc
kerRegistry=172.31.39.119:5000, timeout=1200
I0505 05:59:53.212554 01032 log.go:134] GET /osapi/v1beta1/deployments?labels=:
(6.593872ms) 200
I0505 05:59:53.213459 01032 log.go:134] GET /healthz: (9.064us) 200
I0505 05:59:53.214959 01032 log.go:134] GET /api/v1beta1/minions: (6.124635ms) 2
00
I0505 06:00:03.202785 01032 log.go:134] GET /api/v1beta1/services?labels=: (1.28
9098ms) 200
I0505 06:00:03.205752 01032 log.go:134] GET /osapi/v1beta1/builds?labels=: (1.09
528ms) 200
I0505 06:00:03.207673 01032 log.go:134] GET /api/v1beta1/replicationControllers?
```

2. Fork the Application Code

The screenshot shows a web browser window with multiple tabs. The active tab is a GitHub repository page for 'phoenix619 / ruby-hello-world'. The repository is a fork of 'openshift/ruby-hello-world'. The page displays the repository's overview, including 72 commits, 4 branches, 0 releases, and 7 contributors. A pull request #31 from 'mnagy/prepare_for_new_mysql_image' is highlighted. The commit history table shows several recent commits by 'mnagy' on March 17, 2015, including updates to the .sti folder, config, db/migrate, views, gitignore, Dockerfile, and Gemfile. The right sidebar contains links to Code, Pull requests, Pulse, Graphs, and Settings, along with the HTTPS clone URL and buttons for cloning and downloading.

3. Set up a Webhook for this Source Code

```
root@ip-172-31-39-119:~  
Using username "root".  
Authenticating with public key "imported-openssh-key"  
Last login: Tue May 5 05:58:43 2015 from 129.110.241.146  
[root@ip-172-31-39-119 ~]# lab_generate_webhook  
http://52.24.128.206:8080/osapi/v1beta1/buildConfigHooks/build100/secret101/gith  
ub  
[root@ip-172-31-39-119 ~]#
```

Okay, that hook was successfully created. We sent a ping payload to test it out! Read more about it at <https://developer.github.com/webhooks/#ping-event>.

phoenix619 / ruby-hello-world
forked from openshift/ruby-hello-world

Options
Collaborators
Webhooks & Services
Deploy keys

Webhooks Add webhook

Webhooks allow external services to be notified when certain events happen within your repository. When the specified events happen, we'll send a POST request to each of the URLs you provide. Learn more in our [Webhooks Guide](#).

- http://52.24.128.206:8080/osapi/v1beta1/buildConfigHooks/... (push)

Services Add service

Services are pre-built integrations that perform certain actions when events occur on GitHub. For more information on services check out our [Service Hooks Guide](#).

Module 2: Getting Under the Hood of OpenShift 3

1. Start a Private Docker Registry

```
root@ip-172-31-39-119:~/simple-ruby-app/registry_config
Using username "root".
Authenticating with public key "imported-openssh-key"
Last login: Tue May 5 08:58:43 2015 from 129.110.241.146
[root@ip-172-31-39-119 ~]# lab_generate_webhook
http://52.24.128.206:8080/osapi/v1beta1/buildConfigHooks/build100/secret101/gith
ub
[root@ip-172-31-39-119 ~]# ^C
[root@ip-172-31-39-119 ~]# cd /root/simple-ruby-app
[root@ip-172-31-39-119 simple-ruby-app]# ls
buildcfg  buildinvoke  cleanup.sh  logs  processed  QUICKSTART.md  README.md  registry_config  run.sh  template
[root@ip-172-31-39-119 simple-ruby-app]# cd registry_config/
[root@ip-172-31-39-119 registry_config]# ls
registry_config.json
[root@ip-172-31-39-119 registry_config]# man registry_config.json
[root@ip-172-31-39-119 registry_config]#
```

```
root@ip-172-31-39-119:~/simple-ruby-app
Using username "root".
Authenticating with public key "imported-openssh-key"
Last login: Tue May 5 05:58:43 2015 from 129.110.241.146
[root@ip-172-31-39-119 ~]# lab_generate_webhook
http://52.24.128.206:8080/osapi/v1beta1/buildConfigHooks/build100/secret101/github
ub
[root@ip-172-31-39-119 ~]# ^C
[root@ip-172-31-39-119 ~]# cd /root/simple-ruby-app
[root@ip-172-31-39-119 simple-ruby-app]# ls
buildcfg  buildisolate  cleanup.sh  logs  processed  QUICKSTART.md  README.md  registry_config  run.sh  template
[root@ip-172-31-39-119 simple-ruby-app]# cd registry_config/
[root@ip-172-31-39-119 registry_config]# ls
registry_config.json
[root@ip-172-31-39-119 registry_config]# nano registry_config.json
[root@ip-172-31-39-119 registry_config]# cd ..
[root@ip-172-31-39-119 simple-ruby-app]# openshift kube apply -c registry_config/registry_config.json
[root@ip-172-31-39-119 simple-ruby-app]# openshift kube list pods
ID                               Image(s)                Host                Labels                Status
-----
7da34644-f2ed-11e4-89f1-06cf344fb63a  registry                127.0.0.1/          name=registryPod,replicationController=registryController  Waiting

[root@ip-172-31-39-119 simple-ruby-app]#
```

2. Define a Build Configuration

```
root@ip-172-31-39-119:~/simple-ruby-app/buildcfg
GNU nano 2.0.9      File: buildcfg.json      Modified

{
  "id": "build100",
  "desiredInput":
  {
    "type": "docker",
    "sourceURI": "git://github.com/phoenix619/ruby-hello-world.git",
    "imageTag": "openshift/origin-ruby-sample",
  },
  "secret": "secret101"
}
```

```
root@ip-172-31-39-119:~/simple-ruby-app
Using username "root".
Authenticating with public key "imported-openssh-key"
Last login: Tue May 5 05:58:43 2015 from 129.110.241.146
[root@ip-172-31-39-119 ~]# lab_generate_webhook
http://52.24.128.206:8080/osapi/v1beta1/buildConfigHooks/build100/secret101/github
ub
[root@ip-172-31-39-119 ~]# ^C
[root@ip-172-31-39-119 ~]# cd /root/simple-ruby-app
[root@ip-172-31-39-119 simple-ruby-app]# ls
buildcfg  buildinvoke  cleanup.sh  logs  processed  QUICKSTART.md  README.md  registry_config  run.sh  template
[root@ip-172-31-39-119 simple-ruby-app]# cd registry_config/
[root@ip-172-31-39-119 registry_config]# ls
registry_config.json
[root@ip-172-31-39-119 registry_config]# nano registry_config.json
[root@ip-172-31-39-119 registry_config]# cd ..
[root@ip-172-31-39-119 simple-ruby-app]# openshift kube apply -c registry_config/registry_config.json
[root@ip-172-31-39-119 simple-ruby-app]# openshift kube list pods
ID                                     Image(s)          Host          Labels          Status
-----
7da34644-f2ed-11e4-89f1-06cf344fb63a  registry          127.0.0.1/    name=registryPod,replicationController=registryController  Waiting

[root@ip-172-31-39-119 simple-ruby-app]# ls
buildcfg  buildinvoke  cleanup.sh  logs  processed  QUICKSTART.md  README.md  registry_config  run.sh  template
[root@ip-172-31-39-119 simple-ruby-app]# cd buildcfg
[root@ip-172-31-39-119 buildcfg]# ls
buildcfg.json
[root@ip-172-31-39-119 buildcfg]# nano buildcfg.json
[root@ip-172-31-39-119 buildcfg]# nano buildcfg.json
[root@ip-172-31-39-119 buildcfg]# nano buildcfg.json
[root@ip-172-31-39-119 buildcfg]# cd ..
[root@ip-172-31-39-119 simple-ruby-app]# openshift kube create buildConfigs -c buildcfg/buildcfg.json
I0505 06:15:19.543440 01472 request.go:289] Waiting for completion of /operations/1
ID                                     Type              SourceURI
-----
build100                             docker            git://github.com/phoenix619/ruby-hello-world.git

[root@ip-172-31-39-119 simple-ruby-app]# openshift kube list buildConfigs
ID                                     Type              SourceURI
-----
build100                             docker            git://github.com/phoenix619/ruby-hello-world.git

[root@ip-172-31-39-119 simple-ruby-app]#
```

3. Trigger a Build of Your Application Image

```
root@ip-172-31-39-119:~/simple-ruby-app
Every 2.0s: openshift kube list builds
Tue May 5 07:06:05 2015
ID                                     Status          Pod ID
-----
ab9a591d-f2f4-11e4-8abe-06cf344fb63a  running         build-docker-ab9a591d-f2f4-11e4-8abe-06cf344fb63a
```

```
root@ip-172-31-39-119:~/simple-ruby-app
Every 2.0s: openshift kube list builds
Tue May 5 07:30:00 2015

ID                               Status      Pod ID
-----
ab9a591d-f2f4-11e4-8abe-06cf344fb63a  complete   build-docker-ab9a591d-f2f4-11e4-8abe-06cf344fb63a
e6000189-f2f6-11e4-a4a0-06cf344fb63a  complete   build-docker-e6000189-f2f6-11e4-a4a0-06cf344fb63a
```

```
root@ip-172-31-39-119:~/simple-ruby-app
[roo@ip-172-31-39-119 ~]$ cd simple-ruby-app
-bash: cd: simple-ruby-app: No such file or directory
[roo@ip-172-31-39-119 ~]$ cd simple-ruby-app/
[roo@ip-172-31-39-119 simple-ruby-app]$ ls
buildcfg      cleanup.sh    processed    README.md    run.sh
buildinvoke   logs         QUICKSTART.md registry_conf template
[roo@ip-172-31-39-119 simple-ruby-app]$ openshift kube list buildConfigs
ID                               Type      SourceURI
-----
build100                         docker    git://github.com/phoenix619/ruby-hello-w
orl.d.git

[roo@ip-172-31-39-119 simple-ruby-app]$ watch openshift kube list builds
[roo@ip-172-31-39-119 simple-ruby-app]$ docker ps
CONTAINER ID        IMAGE                COMMAND                  CREATED             STATUS             PORTS              NAMES
7343e886c504       registry:latest     docker-registry         2 minutes ago       Up 2 minutes      5000/tcp            k8s--registry_-_container.c7610d8a--5d7796
11 - f2f6 - 11e4 - a4a0 - 06cf344fb63a.etcdd--bd971b19
aa227812fb1f       kubernetes/pause:latest /pause                  2 minutes ago       Up 2 minutes      0.0.0.0:22->22     k8s--net.3f7582c0--5d779611_-_f2f6 - 11e4
- a4a0 - 06cf344fb63a.etcdd--7b9853d8

[roo@ip-172-31-39-119 simple-ruby-app]$ docker images
REPOSITORY          TAG                IMAGE ID            CREATED             VIRTUAL SIZE
registry            latest            24a4dddc4f76       3 days ago         413.9 MB
<none>              <none>            465371764e3f       8 weeks ago        400.5 MB
nhripps/sci-builder lab              063dc92c0e7f       7 months ago       1.156 GB
nhripps/docker-builder lab              23ce8598b6e8       7 months ago       865.2 MB
dockerfile/ruby     latest            b364d01ba309       7 months ago       448.1 MB
<none>              <none>            e42d15ec8417       8 months ago       442.6 MB
kubernetes/pause    latest            6c4579af347b       9 months ago       239.8 kB

[roo@ip-172-31-39-119 simple-ruby-app]$ curl -XGET http://$(DOCKER_REGISTRY)/v1/search
{"num results": 0, "query": "", "results": []}
[roo@ip-172-31-39-119 simple-ruby-app]$ watch openshift kube list builds
[roo@ip-172-31-39-119 simple-ruby-app]$ docker ps
CONTAINER ID        IMAGE                COMMAND                  CREATED             STATUS             PORTS              NAMES
7a213d3a968e       kubernetes/pause:latest /pause                  12 minutes ago     Up 12 minutes      0.0.0.0:22->22     k8s--net.261d6ac8--build_-_docker_-_e60001
89 - f2f6 - 11e4 - a4a0 - 06cf344fb63a.etcdd--7bd3b032
7343e886c504       registry:latest     docker-registry         16 minutes ago     Up 15 minutes      5000/tcp            k8s--registry_-_container.c7610d8a--5d7796
11 - f2f6 - 11e4 - a4a0 - 06cf344fb63a.etcdd--bd971b19
aa227812fb1f       kubernetes/pause:latest /pause                  16 minutes ago     Up 16 minutes      0.0.0.0:22->22     k8s--net.3f7582c0--5d779611_-_f2f6 - 11e4
- a4a0 - 06cf344fb63a.etcdd--7b9853d8

[roo@ip-172-31-39-119 simple-ruby-app]$ curl -XGET http://$(DOCKER_REGISTRY)/v1/search
{"num results": 1, "query": "", "results": [{"description": "", "name": "openshift/origin-ruby-sample"}]}
[roo@ip-172-31-39-119 simple-ruby-app]$
```

4. Configure and Launch an Application


```
root@ip-172-31-39-119:~/simple-ruby-app
11 - f2f6 - 11e4 - a4a0 - 06cf344fb63a.etcod--bd971b19
aa227812fb1f - kube:netes/pause:latest /pause 16 minutes ago Up 16 minutes k8s--net.3f7582c0--5d779611 - f2f6 - 11e4 -
- a4a0 - 06cf344fb63a.etcod--7b9853d8
[root@ip-172-31-39-119 simple-ruby-app]# curl -XGET http://$(DOCKER_REGISTRY)/v1/search
{"num_results": 1, "query": "", "results": [{"description": "", "name": "openshift/origin-ruby-sample"}]}
[root@ip-172-31-39-119 simple-ruby-app]# ls
buildcdig buildinvoke cleanup.sh logs processed QUICKSTART.md README.md registry_config run.sh template
[root@ip-172-31-39-119 simple-ruby-app]# clear
[root@ip-172-31-39-119 simple-ruby-app]# nano template/template.json
[root@ip-172-31-39-119 simple-ruby-app]# echo $DOCKER_REGISTRY
172.31.39.119:5000
[root@ip-172-31-39-119 simple-ruby-app]# nano template/template.json
[root@ip-172-31-39-119 simple-ruby-app]# openshift kube process -c template/template.json >
-bash: syntax error near unexpected token 'newline'
[root@ip-172-31-39-119 simple-ruby-app]# openshift kube process -c template/template.json >
-bash: syntax error near unexpected token 'newline'
[root@ip-172-31-39-119 simple-ruby-app]# openshift kube process -c template/template.json > processed/template.processed.json
[root@ip-172-31-39-119 simple-ruby-app]# LS
-bash: LS: command not found
[root@ip-172-31-39-119 simple-ruby-app]# ls
buildcdig buildinvoke cleanup.sh logs processed QUICKSTART.md README.md registry_config run.sh template
[root@ip-172-31-39-119 simple-ruby-app]# nano processed/template.processed.json
[root@ip-172-31-39-119 simple-ruby-app]# openshift kube apply -c processed/template.processed.json
[root@ip-172-31-39-119 simple-ruby-app]#
```

```
[root@ip-172-31-41-165 simple-ruby-app]# curl localhost:5432
Hello World!Wassup!
User is adminFOU
Password is SLO3ckS1
DB password is gs82Yxl2

[root@ip-172-31-41-165 simple-ruby-app]#
```

Module 3: Redeploying with an Updated Image

1. Make Another Code Change

```
root@ip-172-31-41-165:~/simple-ruby-app
Every 2.0s: openshift kube list builds Tue May 5 00:52:07 2015

ID                               Status      Pod ID
-----
e714e77d-f2be-11e4-8265-06e7f5cc348b complete    build-docker-e714e77d-f2be-11e4-8265-06e7f5cc348b
f1612208-f2c0-11e4-8265-06e7f5cc348b new

[root@ip-172-31-41-165 simple-ruby-app]#
[root@ip-172-31-41-165 simple-ruby-app]# docker images
REPOSITORY                                TAG                IMAGE ID           CREATED           VIRTUAL SIZE
172.31.41.165:5000/openshift/origin-ruby-sample latest            220559cb54f2       8 seconds ago    464.1 MB
<none>                                     <none>             d08b0d60fc8f       14 minutes ago   464.1 MB
registry                                   latest            24a4dddc4f76       3 days ago       413.9 MB
openshift/ruby-20-centos                  latest            24203c4a6be0       3 months ago     450.3 MB
nhripps/sti-builder                       lab              063dc92c0c7f       7 months ago     1.156 GB
nhripps/docker-builder                    lab              23ce8589b6e8       7 months ago     865.2 MB
dockerfile/ruby                           latest            b364d01ba309       7 months ago     448.1 MB
<none>                                     <none>            e42d15ec8417       8 months ago     442.6 MB
kubernetes/pause                         latest            6c4579af347b       9 months ago     239.8 kB
[root@ip-172-31-41-165 simple-ruby-app]#
```

2. Trigger the App Redeployment

```
[root@ip-172-31-41-165 simple-ruby-app]# docker kill `docker ps | grep helloworld | awk '{print $1}'`  
d0d4510a2c35  
[root@ip-172-31-41-165 simple-ruby-app]#  
[root@ip-172-31-41-165 simple-ruby-app]#
```

Every 2.0s: docker ps

Tue May 5 00:55:16 2015

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
1df03e50521a	172.31.41.165:5000/openshift/origin-ruby-sample:latest	/bin/sh -c 'ruby /tm	22 seconds ago	Up 21 seconds		k8s--rub
y_helloworld.9fe5b810--54e0a451_f2c1_11e4_8265_06e7f5cc348b.etcod--ba97886d						
7e86361c2ba8	172.31.41.165:5000/openshift/origin-ruby-sample:latest	/bin/sh -c 'ruby /tm	22 seconds ago	Up 21 seconds		k8s--rub
y_helloworld.9fe5b810--3e7b7353_f2c0_11e4_8265_06e7f5cc348b.etcod--7d81f131						
9cced2ec9f15	kubernetes/pause:latest	/pause	26 seconds ago	Up 23 seconds		k8s--net
.48e482cb--54e0a451_f2c1_11e4_8265_06e7f5cc348b.etcod--e7a177a4						
9778fd6c3694	kubernetes/pause:latest	/pause	2 minutes ago	Up 2 minutes		k8s--net
.261d6ac8--build_docker_f1612208_f2c0_11e4_8265_06e7f5cc348b.etcod--34cb1747						
de173a304179	kubernetes/pause:latest	/pause	8 minutes ago	Up 8 minutes		k8s--net
.48e482cb--3e7b7353_f2c0_11e4_8265_06e7f5cc348b.etcod--17d3953e						
4f798952534a	kubernetes/pause:latest	/pause	17 minutes ago	Up 17 minutes		k8s--net
.261d6ac8--build_docker_e714e77d_f2be_11e4_8265_06e7f5cc348b.etcod--3f3417a4						
d774d3ee6f58	registry:latest	docker-registry	5 hours ago	Up 41 minutes		k8s--reg
istry_container.c7610d8a--d06658c5_f296_11e4_ad7b_06e7f5cc348b.etcod--cb755ce6						
40af24d7806e	kubernetes/pause:latest	/pause	5 hours ago	Up 41 minutes		k8s--net
.3f7582c0--d06658c5_f296_11e4_ad7b_06e7f5cc348b.etcod--202b50b1						

```
[root@ip-172-31-41-165 simple-ruby-app]#  
[root@ip-172-31-41-165 simple-ruby-app]# curl localhost:5432  
Hello World!!  
User is adminFOU  
Password is SLO3ckS1  
DB password is gs82Yxl2  
[root@ip-172-31-41-165 simple-ruby-app]#
```

```
[root@ip-172-31-41-165 simple-ruby-app]#  
[root@ip-172-31-41-165 simple-ruby-app]# etcdctl ls /  
/registry  
/events  
[root@ip-172-31-41-165 simple-ruby-app]#  
[root@ip-172-31-41-165 simple-ruby-app]#
```