redhat.

Red Hat OpenShift on Azure Workshop

Level 101

Jason Peng
Senior Solution Architect
2018/03/28

AGENDA

OpenShift on Azure Workshop

OpenShift Architecture Overview

- What's Container
- OpenShift Architecture
- Deep Dive a bit~

Lab1 - TestDrive & oc client

Lab2 - Quickstart

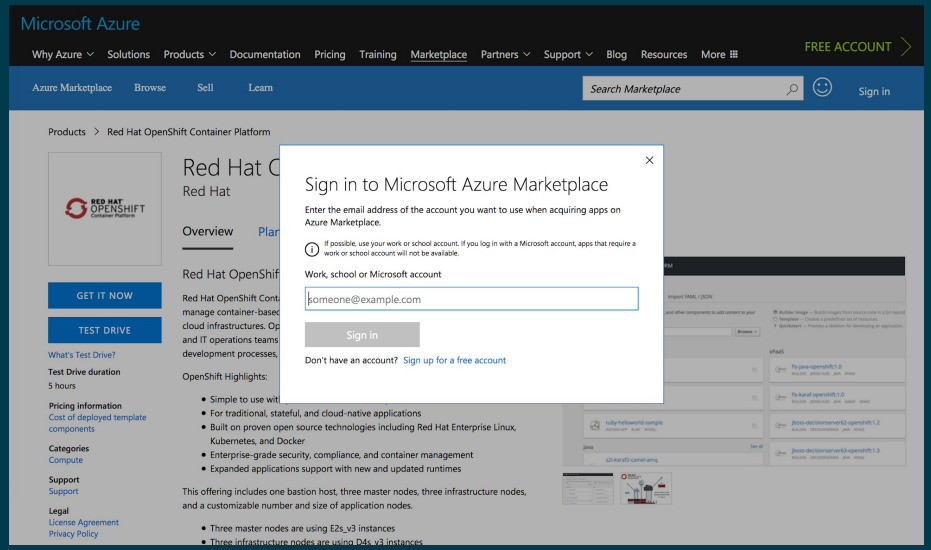
Lab3 - Explore Web Console

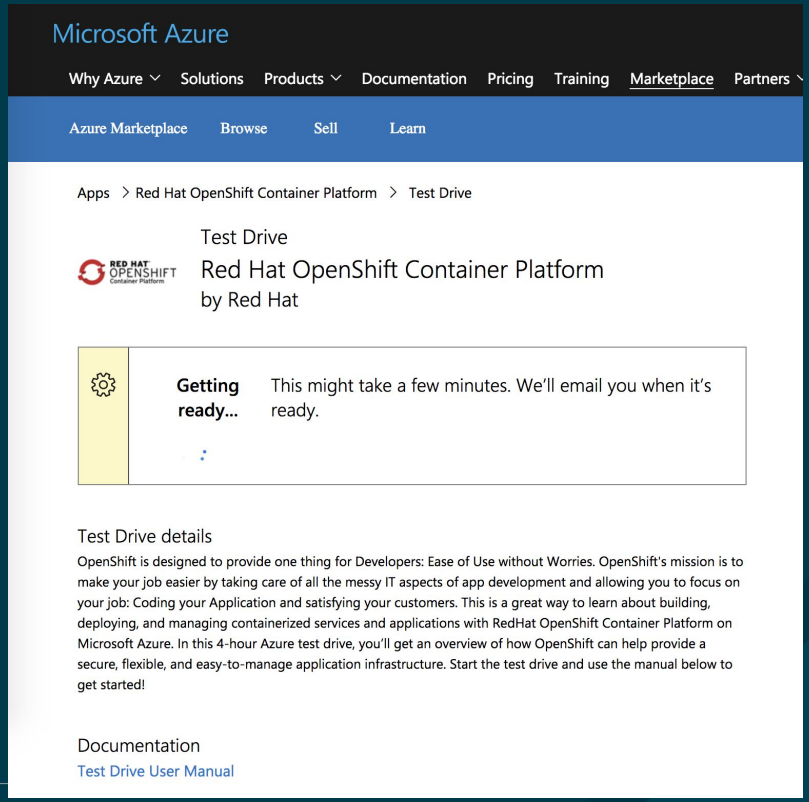
Lab4 - Source-to-Image (S2I)

Lab5 - Add Database

Before we start

Provision OpenShift on [Azure TestDrive]





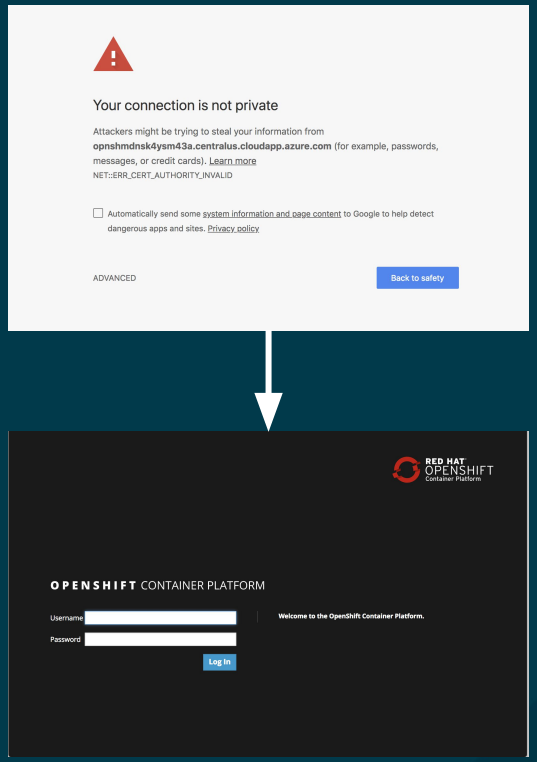
redhat.

OpenShift Architecture Overview

Lab1 - TestDrive & oc client

1. Provision OpenShift on Azure TestDrive
2. Download oc client (OS must be 64bits)
   a. Windows
   b. Mac
   c. Linux
3. Set PATH
   a. export PATH=$PATH:~/OpenShift
4. Command:
   a. oc version
   b. oc login https://{openshift on azure host}:8443
      i. ID/PW: testdrive / password

Reference manual



Lab2 - Quickstart

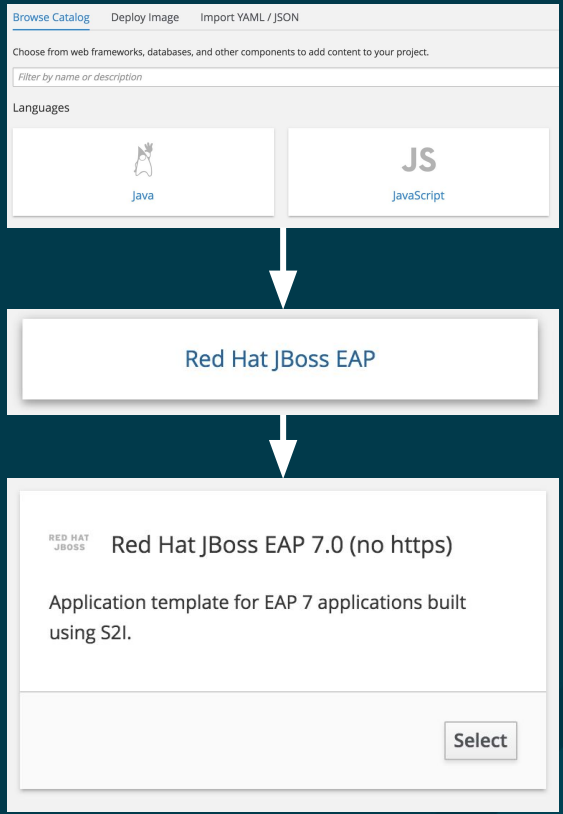
1. Create project
    a. oc new-project usertestdrive-guestbook
2. Switch project
    a. oc get projects
    b. oc projects {Project ID}
3. Deploy Image from DockerHub
    a. oc new-app kubernetes/guestbook
4. Check following resource:
    a. Pod
    b. Service
    c. DeploymentConfig / Deployment
5. Access App
    a. Route

Lab3 - Explore Web Console

1. Checkout following features on web console
    a. Remote access to container
    b. Scale pods
    c. Self-healing
    d. Health Check
        i. Readiness: delay-10
        ii. Liveness: delay-20
    e. Resource Limit
    f. Autoscaler*

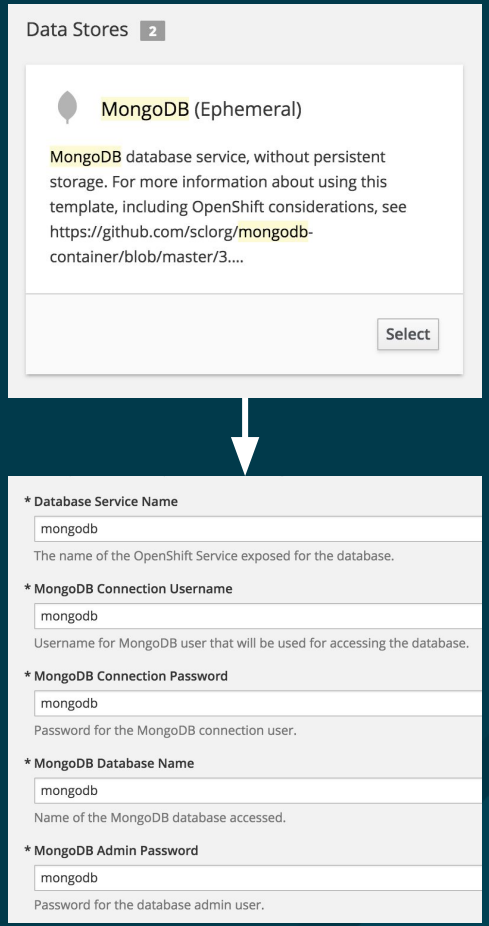
Lab4 - Source-to-Image (S2I)

1. Using EAP7.0 template to deploy S2I Application
   a. Template: Red Hat JBoss EAP 7.0 (no https)
   b. App Name: nationalpark
   c. Source: https://gitlab.com/gshipley/nationalparks.git
      i. Branch: master
      ii. Context dir: /
   d. Hint: ImageStreamTag change to latest
2. Checkout following items
   a. Build & Build Logs
   b. Input & Output Images
3. Challenge:
   a. revise source to personal github repo and modify source. Trigger new build to see how things go.

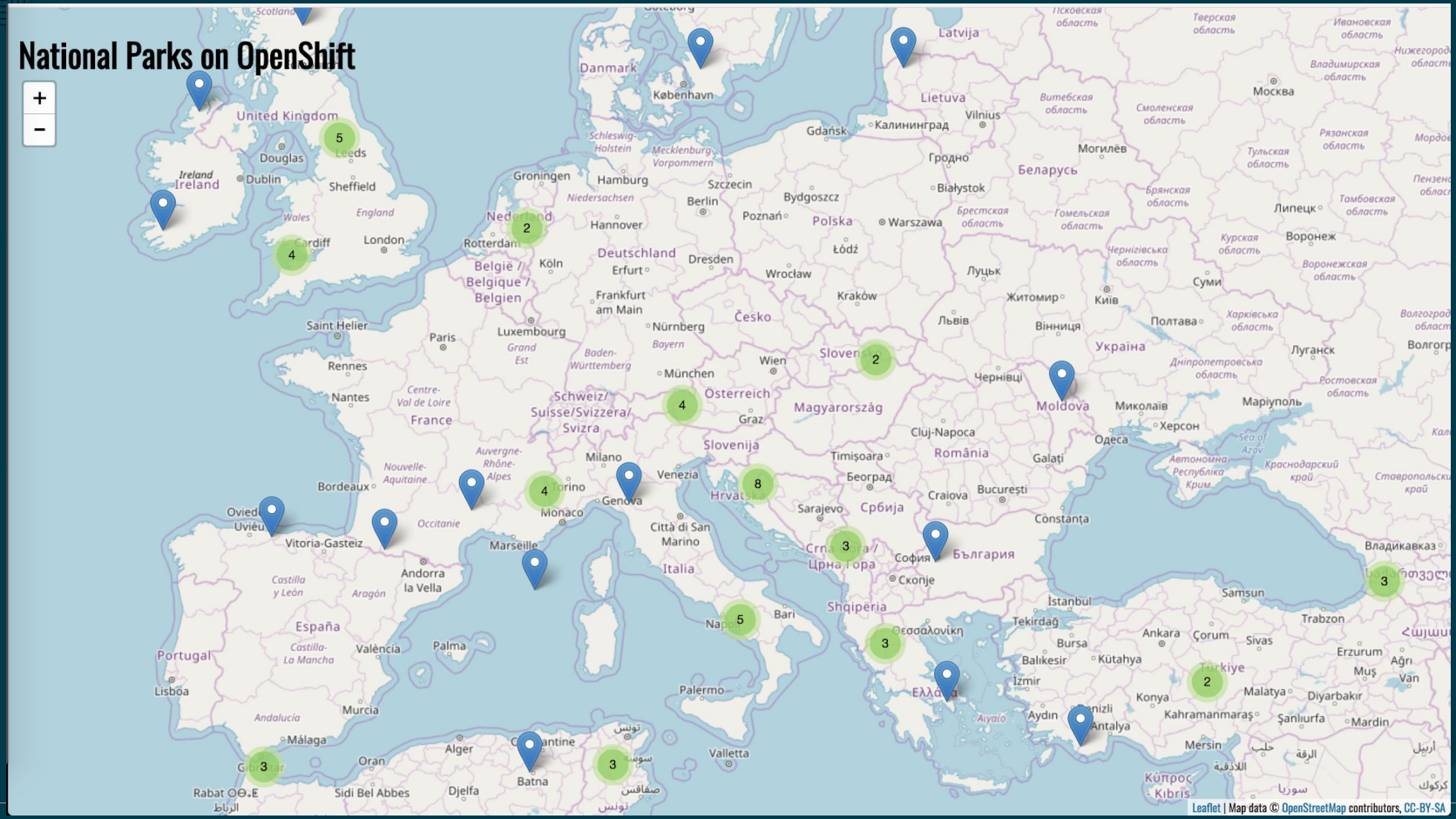


Lab5 - Add Database

1. Add MongoDB from service catalog
   a. Template: MongoDB (Ephemeral)
   b. Environments:
      i. MONGODB_USER: mongodb
      ii. MONGODB_PASSWORD: mongodb
      iii. MONGODB_DATABASE: mongodb
      iv. MONGODB_ADMIN_PASSWORD: mongodb
2. Edit Nationalpark app's DeploymentConfig
   a. Environments:
      i. MONGODB_USER: mongodb
      ii. MONGODB_PASSWORD: mongodb
      iii. MONGODB_DATABASE: mongodb
      iv. MONGODB_ADMIN_PASSWORD: mongodb



National Parks on OpenShift



redhat.

Bonus

1. Checkout
    a. MongoDB
        i. oc exec -ti {Mongo POD} -- bash -c 'mongo -u mongodb -p mongodb mongodb'
        ii. db.parks.count();
        iii. db.parks.find();
    b. JMX Console for Java app.
    c. Using Template deploying complex .NET app

redhat.

THANK YOU

plus.google.com/+RedHat

facebook.com/redhatinc

linkedin.com/company/red-hat

twitter.com/RedHat

youtube.com/user/RedHatVideos