Assignment - 4 Docker and Kubernetes

Assignment Date	November 3
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Maximum Marks	2 Marks

Question-1:

1. Pull an Image from docker hub and run it in docker playground.

Solution:

docker run --rm -p 8787:8787 rocker/verse docker pull rocker/verse docker login --username=abuthahir --email=ssnehasri178@gmail.com WARNING: login credentials saved in

/home/abuthahir/.docker/config.jsonLogin Succeeded

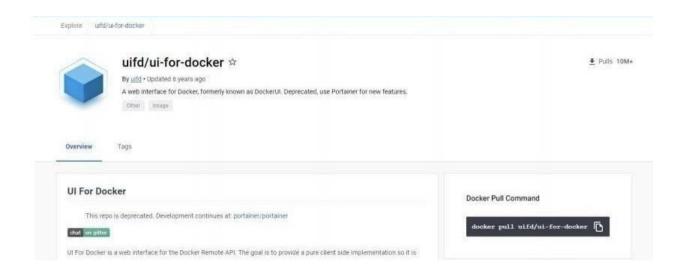
REPOSITORY TAG IMAGE ID CREATED SIZE

verse_gapminder_gsllatest023ab91c62913 minutes ago 1.975 GBverse_gapminderlatestbb38976d03cf13 minutes ago 1.955 GB rocker/verse latest0168d115f2203 days ago1.954 GB docker tag bb38976d03cf abuthahir

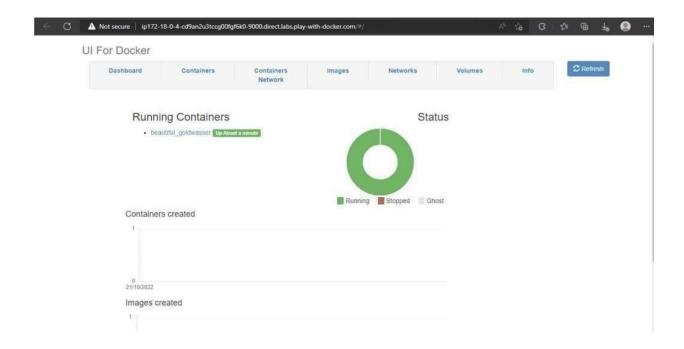
/verse_gapminder:firsttry docker push abuthahir

/verse_gapminder

Saving and loading images docker save verse_gapminder docker save verse_gapminder.tar docker load --input verse_gapminder.tar docker load --input verse_gapminder.tar



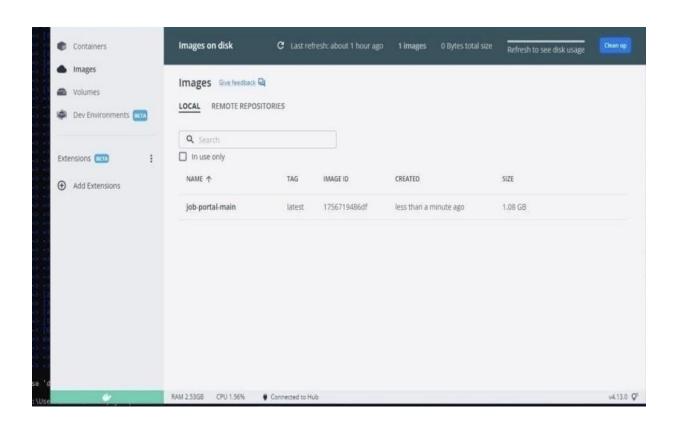




Question-2:

2. Create a docker file for the jobportal application and deploy it in Docker desktop application.

SOLUTION:



\QUESTION-3:

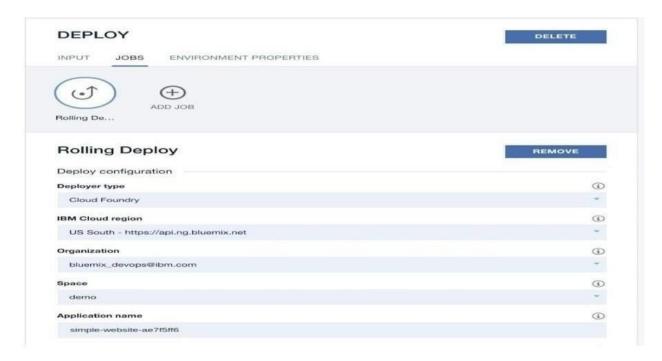
1. Create a IBM container registry and deploy helloworld app or jobportalapp. Solution:

```
<html>
<body>
Hello, IBM Cloud World!
</body>
</html>--- applications:
```

- buildpack: https://github.com/cloudfoundry/staticfile-buildpack.git host: simple-website-\${random}

name: simple-website-\${random} memory: 64M

stack: cflinuxfs2



```
1
      "ServiceId": "com.ibm.cloudoe.orion.client.deploy",
 2
 3
      "Params": {
        "Target": {
 4
           "Url": "https://api.ng.bluemix.net",
 5
           "Org": "bluemix devops@ibm.com",
 6
 7
           "Space": "demo"
 8
9
        "Name": "simple-website-ae7f5ff6",
        "Instrumentation": {}
10
11
      "Path": "manifest.yml",
12
13
       "Type": "Cloud Foundry"
14
```

QUESTION-4:

 Create a Kubernetes cluster in IBM cloud and deploy helloworld image or jobportal image and also expose the same app to run in nodeport.

Solution:

ibmcloud target -g <resource_group_name>ibmcloud cr abuthahir-add <your_abuthahir>ibmcloudresource service-instance-create example-postgresql databases-for-postgresql standard us- southibmcloud ks cluster-service-bind mycluster default example- postgresqlgit clone -b node git@github.com:IBM-Cloud/clouddatabases-helloworld-kubernetes- examples.gitspec:

replicas: 3name: cloudpostgres-nodejs-app

image: "registry.<region>.bluemix.net/<namespace>/icdpg" # Edit me

imagePullPolicy: Alwaysibmcloud cr regionYou are targeting region 'us-south', the registry is 'registry.ng.bluemix.net'.ibmcloud cr build -t registry.ng.bluemix.net/<namespace>/icdpg .ibmcloud cr images

env:

- name: BINDING valueFrom:

secretKeyRef:

name: <postgres-secret-name> # Edit me key: binding

apiVersion: v1 kind: Service metadata: name: cloudpostgres-service labels:

run: clouddb-demo spec: type: NodePort selector: run: clouddb-demo ports: - protocol: TCP port: 8080

nodePort: 30081

kubectl apply -f clouddb-deployment.yml deployment.apps/icdpostgres-app created

service/cloudpostgres-service created

kubectl get pods -o wideibmcloud ks workers <your_cluster_name>

Hello World!

Thanks for creating an IBM Excus Datatuses for PostgreSCL database.

Add a word to the database

The word neto is defined as a greeting Add

Database output

The word bye is defined as a goodbye
The word bye is defined as a farewell
The word hello is defined as a greeting
The word hello is defined as a greeting
The word hello bob is defined as a greeting
The word hello bob is defined as a greeting