Assignment - 4 Docker and Kubernetes

Assignment Date	November 3
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TEAM ID	PNT2022TMID37166
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_gsl latest 023ab91c6291 3 minutes ago 1.975 GB

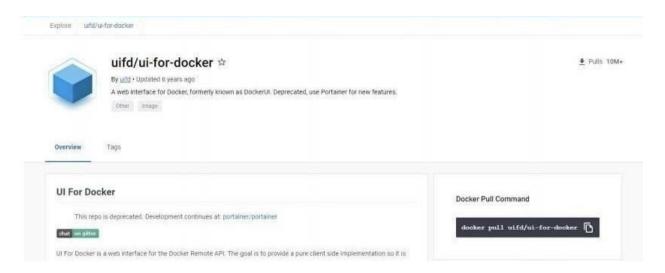
verse_gapminder latest bb38976d03cf 13 minutes ago 1.955 GB rocker/verse latest

0168d115f220 3 days ago 1.954 GB docker tag bb38976d03cf abuthahir

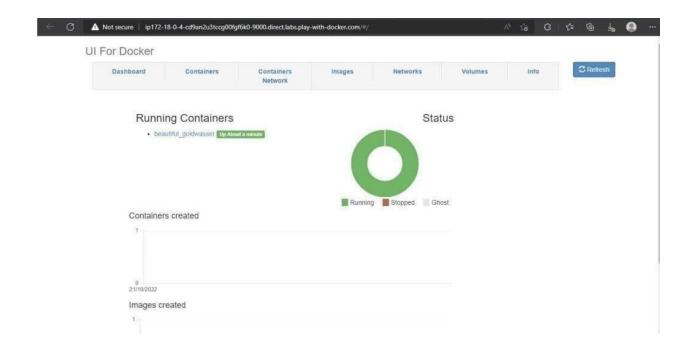
/verse_gapminder:firsttry docker push abuthahir

/verse_gapminder

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



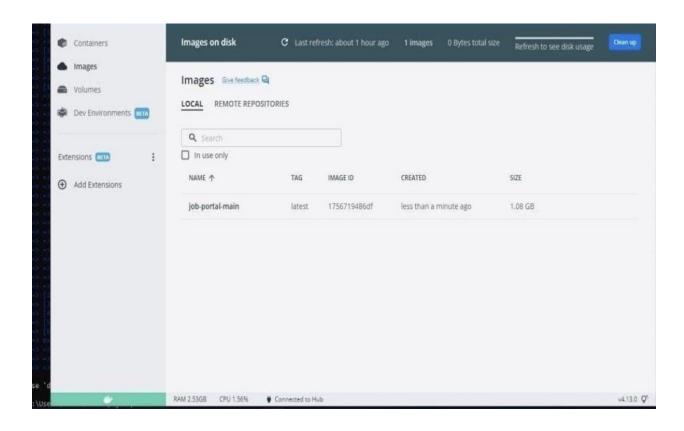




Question-2:

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

SOLUTION:

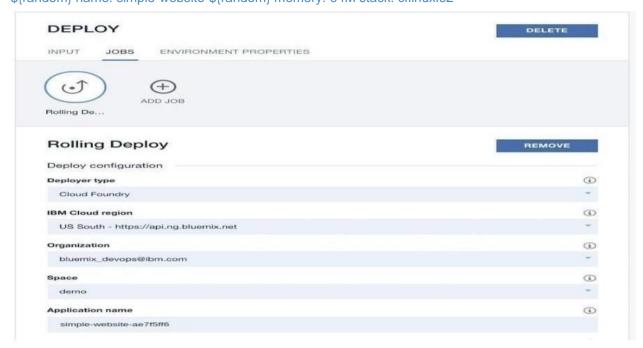


\QUESTION-3:

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

1. 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-forpostgresql 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 Excud Datatuses for PostureSCL database.

Add a word to the database

The word neto is defined as agreeting 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 bob is defined as a greeting. The word hello bob is defined as a greeting. The word hello bob is defined as a greeting.
```