

Assignment - 4
Docker and Kubernetes

Assignment Date	November 15
Student Name	Manoharan.B
Student Roll Number	820419106030
Maximum Marks	2 Marks

Question-1:

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

[Solution:](#)

03:56:01

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.18
node1

cdqrbue3_cdqrcc60qau0009ed7n0

IP
192.168.0.18

OPEN PORT

Memory

CPU

SSH
ssh ip172-18-0-70-cdqrbue3tccg00ddbma0@direct.labs.play-with-docker.com

DELETE

EDITOR

```
$ docker pull uifd/ui-for-docker
Using default tag: latest
latest: Pulling from uifd/ui-for-docker
841194d080c8: Pull complete
Digest: sha256:fe371fff5a69543269b24073a5ab1244dd4c0b834cbadf244870572150b1cb749
Status: Downloaded newer image for uifd/ui-for-docker:latest
docker.io/uifd/ui-for-docker:latest
(node1) (local) root@192.168.0.18 ~
$ docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock uifd/ui-for-docker
426378555e9fcae99647048fd300e7b5bca5c0716c19d48b4587ee4382994a87
(node1) (local) root@192.168.0.18 ~
$ docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                    NAMES
426378555e9f   uifd/ui-for-docker  "/ui-for-docker"        16 seconds ago Up 15 seconds  0.0.0.0:9000->9000/tcp  practical_cannon
$ docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
uifd/ui-for-docker  latest   965940f98fa5   6 years ago    8.1MB
(node1) (local) root@192.168.0.18 ~
$
```

Assignment - 4.pdf


25°C
Cloudy

Search

IBMProject-14293-1659548346uifd/ui-for-docker - Docker ImagesDocker PlaygroundNew Tab

hub.docker.com/r/uifd/ui-for-docker

Exploreuifd/ui-for-docker



uifd/ui-for-docker

By uifd • Updated 6 years ago

A web interface for Docker, formerly known as DockerUI. Deprecated, use Portainer for new features.

Image

Pulls 10M+

Overview

Tags

UI For Docker

This repo is deprecated. Development continues at: [portainer/portainer](#)

[chat](#) [on gitter](#)

UI For Docker is a web interface for the Docker Remote API. The goal is to provide a pure client side implementation so it is effortless to connect and manage docker.

Goals

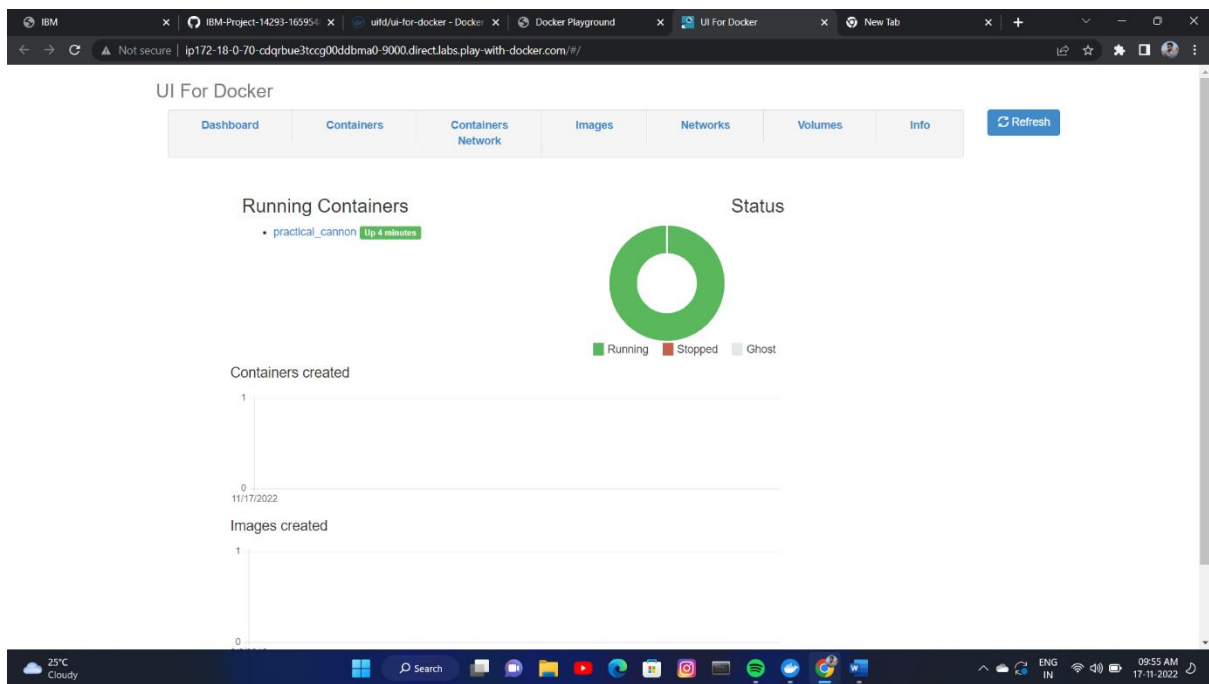
Docker Pull Command

```
docker pull uifd/ui-for-docker
```

How likely are you to recommend Docker Hub to another developer?

Not at all likely012345678910Extremely likely

powered by InMoment



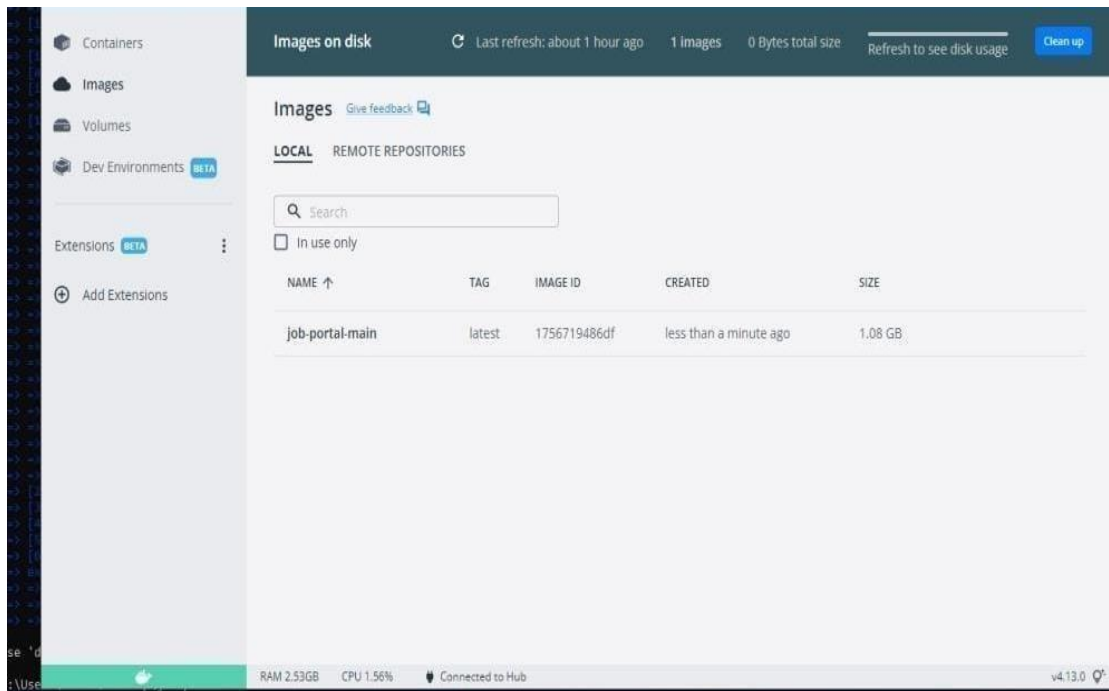
Question-2:

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

```

1 [internal] load build definition from Dockerfile
2 --> transferring dockerfile: 32B
3 [internal] load .dockerignore
4 --> transferring context: 2B
5 [internal] load metadata for docker.io/library/python:3.6
6 [auth] library/python:pull token for registry-1.docker.io
7 [internal] load build context
8 --> transferring context: 687B
9 [1/6] FROM docker.io/library/python:3.6@sha256:f8052aef88c25f0d22354d547d892501067aa4026a7fa9a8819df9f308af0fc
10 --> resolve docker.io/library/python:3.6@sha256:f8052aef88c25f0d22354d547d892501067aa4026a7fa9a8819df9f308af0fc
11 --> sha256:f8052aef88c25f0d22354d547d892501067aa4026a7fa9a8819df9f308af0fc 1.86kB / 1.86kB
12 --> sha256:8097a909788c079dfca31672359c2de310f82214c0448e023303b5f6d2b000 2.22kB / 2.22kB
13 --> sha256:54268638097c5a3ad24c6e21fc889abbc848aa7a34c8893086ff71f3f44b184 9.27kB / 9.27kB
14 --> sha256:9e29568541c0b389281d1a73a9d1db7865c1b95b74f12b009e0b77ade1e3 54.92MB / 54.92MB
15 --> sha256:c0b38c73b52b07d5c07a547b0f3e21995a296c714b53a32a6e7d19231fcd 5.15MB / 5.15MB
16 --> sha256:c0b38c73b52b07d5c07a547b0f3e21995a296c714b53a32a6e7d19231fcd 5.15MB / 5.15MB
17 --> sha256:6494e4811622b31c827ccac322ca463937f0805f569a93e6f15c81aade718793 94.57MB / 94.57MB
18 --> sha256:6494e4811622b31c827ccac322ca463937f0805f569a93e6f15c81aade718793 94.57MB / 94.57MB
19 --> sha256:6f9f74896df93fe8172f594fab85e0b4e8a0481a8fefd0112efc7e4d3c78f7 196.51MB / 196.51MB
20 --> sha256:5e3b1213efc56598e78b0e02903945c164de2a7285e06a61dada823134dc743 6.20MB / 6.20MB
21 --> extracting sha256:0e295406041c0b389281d1a73a9d1db7865c1b95b74f12b009e0b77ade1e3
22 --> sha256:9f09dc50334f2e0f0d241b5e0745940ed105c5478676f41c104b000752 14.21MB / 14.21MB
23 --> extracting sha256:90829c73b52b07d5c07a547b0f3e21995a296c714b53a32a6e7d19231fcd
24 --> extracting sha256:c0b38c73b52b07d5c07a547b0f3e21995a296c714b53a32a6e7d19231fcd
25 --> sha256:404f83044bac8432ca522cbb9f254b1c91fcea0806bfeef0e0eb243b7f31bab7 2.35B / 2.35B
26 --> sha256:c4f42be2be53b900ebff040c1df13de538434cc5f5d954a56848a6169a3a3f 2.21MB / 2.21MB
27 --> extracting sha256:6494e4811622b31c827ccac322ca463937f0805f569a93e6f15c81aade718793
28 --> extracting sha256:6f9f74896df93fe8172f594fab85e0b4e8a0481a8fefd0112efc7e4d3c78f7
29 --> extracting sha256:5e3b1213efc56598e78b0e02903945c164de2a7285e06a61dada823134dc743
30 --> extracting sha256:9f09dc50334f2e0f0d241b5e0745940ed105c5478676f41c104b000752
31 --> extracting sha256:404f83044bac8432ca522cbb9f254b1c91fcea0806bfeef0e0eb243b7f31bab7
32 --> extracting sha256:c4f42be2be53b900ebff040c1df13de538434cc5f5d954a56848a6169a3a3f
33 [2/6] WORKDIR /app
34 [3/6] ADD . /app
35 [4/6] COPY requirements.txt /app
36 [5/6] RUN python3 -m pip install -r requirements.txt
37 [6/6] RUN python3 -m pip install ibm_db
38 exporting to image
39 --> exporting layers
40 --> writing image sha256:1756719486df007fad5dae305c5221513f2ff2d1b49a0d242b22a28af8379f19
41 --> naming to docker.io/library/job-portal-main
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```



QUESTION-3:

3.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

DEPLOY
DELETE

INPUT
JOBS
ENVIRONMENT PROPERTIES

Rolling De...

ADD JOB

Rolling Deploy
REMOVE

Deploy configuration

Deployer type
Cloud Foundry

IBM Cloud region
US South - https://api.ng.bluemix.net

Organization
bluemix_devops@ibm.com

Space
demo

Application name
simple-website-ae7f5ff6

```

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

```

Hello, IBM Cloud World!

QUESTION-4:

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 nishanthc-add
 <your_nishanthc>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/cloudatabases-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.y
```

```
ml
```

```
deployment.a
```

```
pps/icdpostgr
```

```
es-app
```

```
created
```

```
service/cloud
```

```
postgres-
```

```
service
```

```
created
```

```
kubectl get pods -o wideibmcloud ks workers <your_cluster_name>
```

Hello World!

Thanks for creating an [IBM Cloud Databases for PostgreSQL](#) database.

Add a word to the database

The word is defined as

Database output

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