

# Assignment - 4

*Docker and Kubernetes*

**Team ID : PNT2022TMID50292**

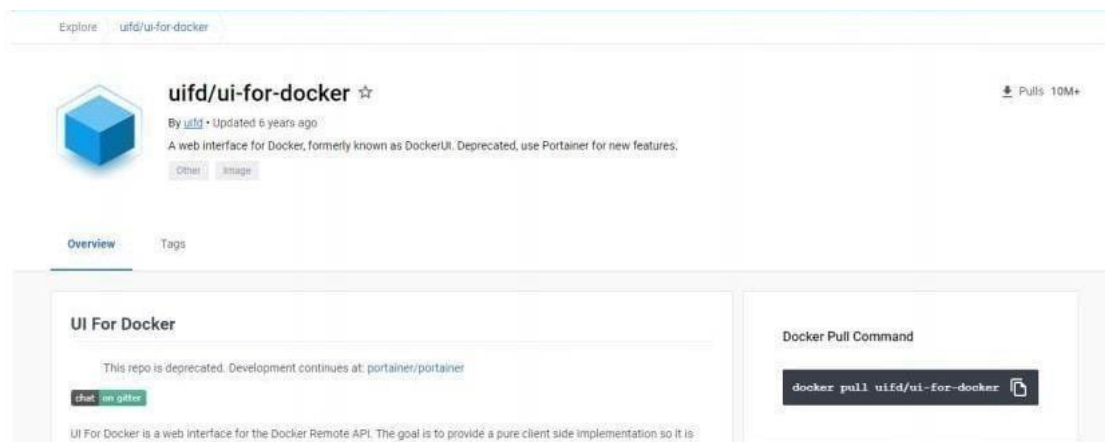
**Project Name : Smart Fashion Recommender Application**

1. PULL AN IMAGE FROM DOCKER HUB AND RUN IT IN DOCKER PLAYGROUND:

```
docker run --rm -p 8787:8787 rocker/verse docker
pull rocker/verse
docker login --username=amishyaj --email=amirenjai@gmail.com
WARNING: login credentials saved in
/home/amishyaj/.docker/config.json Login 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 amishyaj
/verse_gapminder:firsttry docker
push amishyaj /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
```



Explore uifd/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.

Other Image

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

**Docker Pull Command**

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

03:42:30

CLOSE SESSION

Instances

• ADD NEW INSTANCE

192.168.0.13  
node1

cd9an2u3\_cd9av060qau0008hbjs0

IP: 192.168.0.13

OPEN PORT

Memory CPU

SSH: ssh ip172-18-0-4-cd9an2u3tccg00fgf6k0@direct.labs.play-w

DELETE EDITOR

```
# This is a sandbox environment. Using personal credentials
# is HIGHLY discouraged. Any consequences of doing so are
# completely the user's responsibilities.
#
# The PWD team.
#####
[node1] (local) root@192.168.0.13 ~
$ docker pull uifd/ui-for-docker
Using default tag: latest
latest: Pulling from uifd/ui-for-docker
41194d080c8: Pull complete
Digest: sha256:fe371ff5a69549269b24073a5ab1244dd4c0b834cbadf244870572150b1cb749
Status: Downloaded newer image for uifd/ui-for-docker:latest
docker.io/uifd/ui-for-docker:latest
[node1] (local) root@192.168.0.13 ~
$ docker run -d -p 9000:9000 --privileged --v /var/run/docker.sock:/var/run/docker.sock uifd/ui-for-docker
c590dd163101ae795bdcea0eb1ddd98f6fe549cb5f24dacb9ff7c1931923fc0d
[node1] (local) root@192.168.0.13 ~
#
```

Not secure | ip172-18-0-4-cd9an2u3tccg00fgf6k0-9000.direct.labs.play-with-docker.com/

UI For Docker

Dashboard

Containers

Containers Network

Images

Networks

Volumes

Info

Refresh

UI For Docker

The UI for Docker container engine

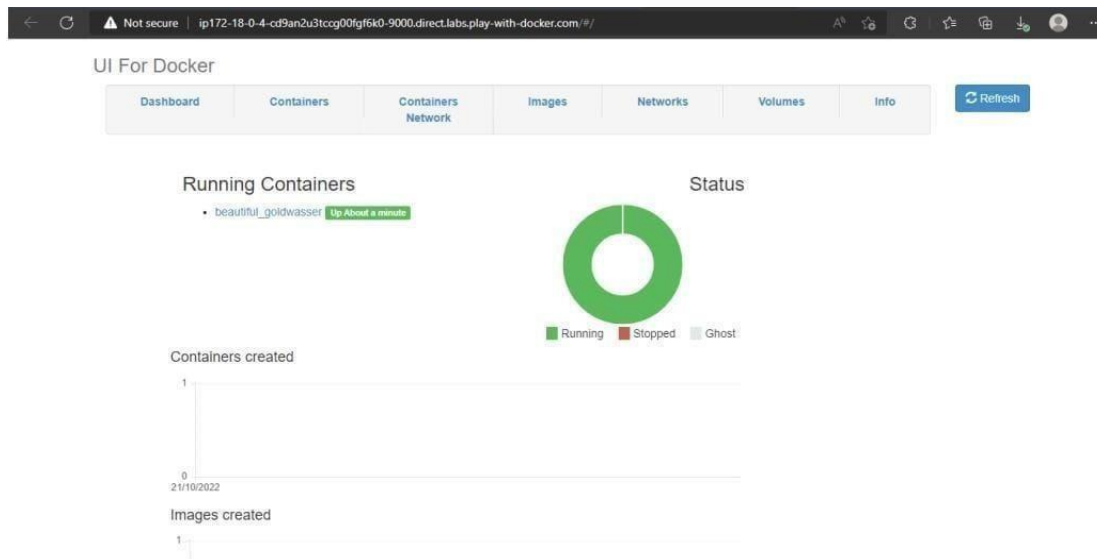
Learn more.

Running Containers

• beautiful\_goldwasser 

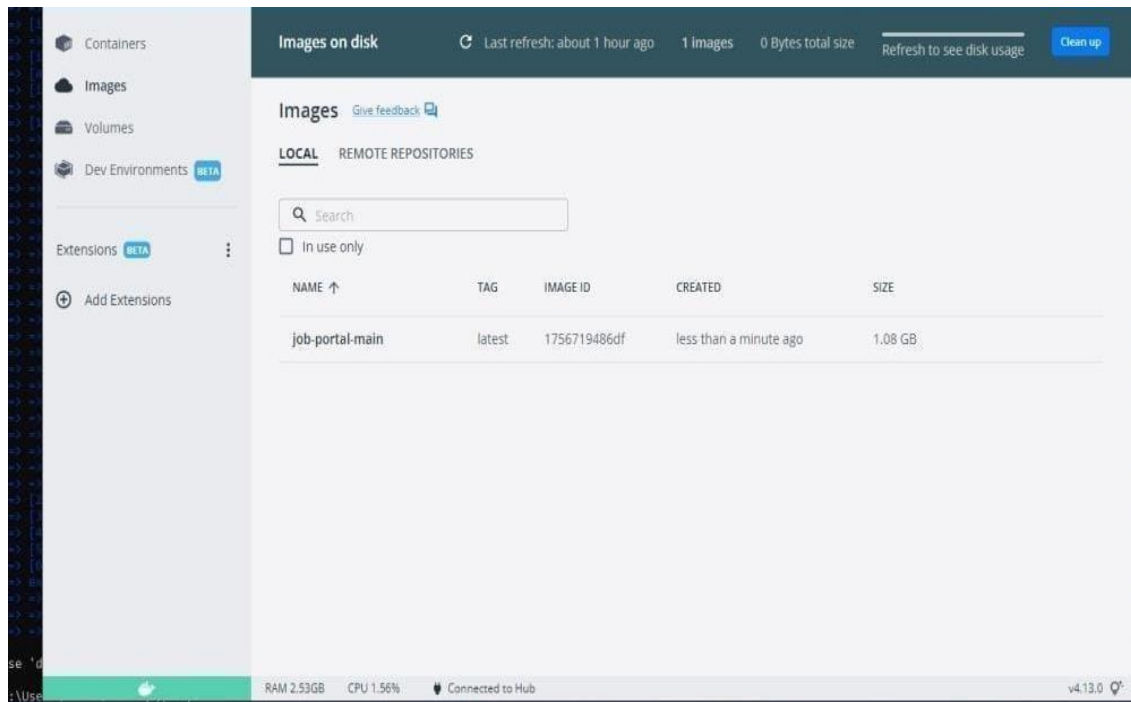
Up About a minute

Status



2. CREATE A DOCKER FILE FOR THE JOBPOTAL APPLICATION AND DEPLOY IT IN DOCKER DESKTOP APPLICATION:

```
[internal] load build definition from Dockerfile
=> transferring dockerfile: 32B
[internal] load .dockerignore
=> transferring context: 2B
[internal] load metadata for docker.io/library/python:3.6
[auth] library/python:pull token for registry-1.docker.io
[internal] load build context
=> transferring context: 687B
[1/6] FROM docker.io/library/python:3.6@sha256:f8652a4f88c25f0d22354d547d892591067aa4026a7fa9a810d40f308af6fc
=> resolve docker.io/library/python:3.6@sha256:f8652a4f88c25f0d22354d547d892591067aa4026a7fa9a810d40f308af6fc
=> sha256:f8652a4f88c25f0d22354d547d892591067aa4026a7fa9a810d40f308af6fc 1.86kB / 1.86kB
=> sha256:8907e40b7a0c079dfc0c318722962a0e1998214c0448e92a303b576d20800 2.22kB / 2.22kB
=> sha256:5428630d07c5a3ad24e6e21f889abbc848a27434c8892080ff71f3f44b184 9.27kB / 9.27kB
=> sha256:9e29546d541cd9d389281d21a73e9d1b7865c1b95b74f32b009e0677a6e1c3 54.92MB / 54.92MB
=> sha256:9b829c73b52b02b07d5c07a54fb0f3e921995a296c714b53a32ae67d19231fcd 5.15MB / 5.15MB
=> sha256:cb5b7ae361722f070eac3f35823ed21baa85d61d5d95cd5a95ab5d746cdd56 40.87MB / 40.87MB
=> sha256:6494e4811822b31c027ccac322ca463937fd885f968a93e6f15c81aade718793 54.57MB / 54.57MB
=> sha256:679f74896d7a931e0172f594fab85e0b4e8a9401a8ffed9112efc7e4d3c7077 196.51MB / 196.51MB
=> sha256:5e3b1213efc6550ee7800601983045c15a092a77265e06a2ada8231240c743 6.29MB / 6.29MB
=> extracting sha256:0ca954d6541cd9d389281d21a73e9d1b7865c1b95b74f32b009e0677a6e1c3
=> sha256:9f5d4fd5k336f2e9efad7e2410f5e7459c48ed195c5478670f41c1244b096752 14.21MB / 14.21MB
=> extracting sha256:cb5b7ae361722f070eac3f35823ed21baa85d61d5d95cd5a95ab5d746cdd56
=> extracting sha256:403f02044bac0432ca522cb09f254b1c91fca6800bfeef0be0b243b2f31bab7 235B / 235B
=> sha256:c4f42be2be53b900ebffc040c1df13de538434ccc5f5d954a5684a86169a3a3f 2.21MB / 2.21MB
=> extracting sha256:0494e4811822b31c027ccac322ca463937fd885f968a93e6f15c81aade718793
=> extracting sha256:679f74896d7a931e0172f594fab85e0b4e8a9401a8ffed9112efc7e4d3c7077
=> extracting sha256:5e3b1213efc6550ee7800601983045c15a092a77265e06a2ada8231240c743
=> extracting sha256:9f5d4fd5k336f2e9efad7e2410f5e7459c48ed195c5478670f41c1244b096752
=> extracting sha256:404f02044bac0432ca522cb09f254b1c91fca6800bfeef0be0b243b2f31bab7
=> extracting sha256:c4f42be2be53b900ebffc040c1df13de538434ccc5f5d954a5684a86169a3a3f
[2/6] WORKDIR /app
[3/6] ADD . /app
[4/6] COPY requirements.txt /app
[5/6] RUN python3 -m pip install -r requirements.txt
[6/6] RUN python3 -m pip install job_db
=> exporting layers
=> exporting layers
=> writing image sha256:1756719486df002fad5dae305c5221033f2ff2d1b49a8d242b22a28af0379f19
=> naming to docker.io/library/job-portal-main
se 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
```



### 3. CREATE A IBM CONTAINER REGISTRY AND DEPLOY HELLOWORLD APP OR JOBPORTALAPP:

```
<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!

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:

```

ibmcloud target -g <resource_group_name>ibmcloud cr nishanthc-add
<your_ amishyaj >ibmcloud resource service-instance-create example-postgresql databases-
forpostgresql standard us- southibmcloud ks cluster-service-bind mycluster default
examplepostgresqlgit clone -b node git@github.com:IBM-Cloud/clouddatabases-helloworld-
kubernetesexamples.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.app

s/icdpostgres-

app created

service/cloudpo

stgres-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 hello is defined as a greeting
The word hello bob is defined as a greeting
The word hello bob is defined as a greeting
```