

DOCKER AND KUBERNETES

Assignment Date	27 October 2022
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Maximum Marks	2 Marks

1. **Pull an image from docker hub and run it in docker Playground and**
2. **Create a docker file for the job portal application and deploy it in Docker desktop application**

The image is a composite screenshot showing two parts of a Docker workflow. The top part is a screenshot of the Docker Hub repository page for `uifd/ui-for-docker`. The page indicates that the repository is deprecated and development has moved to `portainer/portainer`. It shows the repository was updated 6 years ago and has over 10 million pulls. The bottom part is a screenshot of a Docker Playground instance. On the left, there's a sidebar with a timer at 03:42:30, a 'CLOSE SESSION' button, and an 'Instances' section showing one instance named 'node1' with IP 192.168.0.13. The main area shows the instance details for 'cd9an2u3_cd9av060qau0008hbjs0' with IP 192.168.0.13. Below this, there's a terminal window showing the following commands and output:

```
# This is a sandbox environment. Using personal credentials #
# is HIGHLY discouraged. Any consequences of doing so are #
# completely the user's responsibilities. #
# #
# The FWD 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
841194d080c8: 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
c590dd163101ae795bdc0eb1dd98f6f6e549cb5f24dab9ff7c1931923fc0d
(node1) (local) root@192.168.0.13 ~
$
```

3. Create an IBM container registry and deploy helloworld or job portal app.

UI For Docker

Dashboard	Containers	Containers Network	Images	Networks	Volumes	Info
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Refresh

UI For Docker

The UI for Docker container engine

Learn more.

Running Containers

- beautiful_goldwasser Up About a minute

Status



UI For Docker

Dashboard	Containers	Containers Network	Images	Networks	Volumes	Info
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Refresh

Running Containers

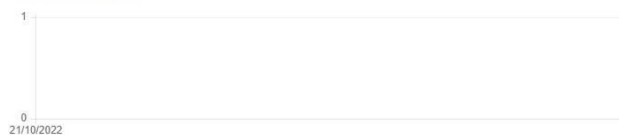
- beautiful_goldwasser Up About a minute

Status



Running Stopped Ghost

Containers created



Images created



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

The image shows a Windows command prompt window with the following output:

```
C:\Windows\System32\cmd.exe
-> [internal] load build definition from Dockerfile
-> transferring dockerfile: 32B
-> [internal] load .dockerignore
-> transferring context: 28
-> [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:f8652afaf88c25f0d22354d547d092591067aa4026a7fa9a6819df9f300af6fc
-> resolve docker.io/library/python:3.6@sha256:f8652afaf88c25f0d22354d547d092591067aa4026a7fa9a6819df9f300af6fc
-> sha256:f8652afaf88c25f0d22354d547d092591067aa4026a7fa9a6819df9f300af6fc 1.80kB / 1.80kB
-> sha256:d097a4907a8ec079df5ac31872359c2de510f82214c0448e926393b376d3b60d 2.22kB / 2.22kB
-> sha256:54260638d07c5e3ad24ce21fc889abb8486a27634c0892086ff71f3f44b104 9.27kB / 9.27kB
-> sha256:0e29546d541c0b309281d21a73a9d1d578665c109574f32b099e0774e1e3 54.92MB / 54.92MB
-> sha256:0029c72b52b92b07d5cc07c54f0a3e921995a296c714853a32ae67d10211fcd 5.15MB / 5.15MB
-> sha256:cb567ae361722f070cca53f35823ed21baa85d61d5d95cd5a95ab530740cdd56 10.87MB / 10.87MB
-> sha256:0494e4811622b31c027ccac322ca463937fd805f560a93eef15c01aade718793 54.57MB / 54.57MB
-> sha256:0f9f74896dfa93fe0172f504fab85e0b4e8a041a0fef0112efc7e4d3c78f7 196.51MB / 196.51MB
-> sha256:5e3b1213efc56598e78bd02983945c164de2a37205e06a62dada823124dc743 6.20MB / 6.20MB
-> extracting sha256:0e29546d541c0b309281d21a73a9d1d578665c109574f32b099e0774e1e3
-> sha256:9fd9d5c56334f2e6efad7e241bf5e7459c40ed105c5478670f41c1244bd96752 14.21MB / 14.21MB
-> extracting sha256:90829c73b52b92b97d5c07a54fbef3e921995a296c714853a32ae67d10211fcd 2.38
-> extracting sha256:d05b7ae361722f070cca53f35823ed21baa85d61d5d95cd5a95ab530740cdd56 4.88
-> sha256:404f02044bac0432ca522cbb07254b1c91fcea6806bfeef0be0b243b2f31ba07 235B / 235B
-> sha256:c4f42be2be53b900ebff040c1df13de538434ccc5f5d954a56848a6109a3a3f 2.21MB / 2.21MB
-> extracting sha256:0494e4811622b31c027ccac322ca463937fd805f560a93eef15c01aade718793
-> sha256:0f9f74896dfa93fe0172f504fab85e0b4e8a041a0fef0112efc7e4d3c78f7
-> extracting sha256:5e3b1213efc56598e78bd02983945c164de2a37205e06a62dada823124dc743 8.22
-> extracting sha256:9fd9d5c56334f2e6efad7e241bf5e7459c40ed105c5478670f41c1244bd96752 11.38
-> extracting sha256:404f02044bac0432ca522cbb07254b1c91fcea6806bfeef0be0b243b2f31ba07 0.85
-> extracting sha256:c4f42be2be53b900ebff040c1df13de538434ccc5f5d954a56848a6109a3a3f 2.25
[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 ibm_db
-> exporting to image
-> exporting layers
-> writing image sha256:1756719486df002fad5dae205c5221513f2ff2d1b40a8d242b22a28af0379f19
-> naming to docker.io/library/job-portal-main
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
```

The Docker Desktop interface shows the following information:

- Containers: 0
- Images: 1 (job-portal-main)
- Volumes: 0
- Dev Environments: 0
- Extensions: 0
- RAM: 2.53GB
- CPU: 1.56%
- Connected to Hub
- v4.13.0

NAME	TAG	IMAGE ID	CREATED	SIZE
job-portal-main	latest	1756719486df	less than a minute ago	1.08 GB