

Assignment - 4

Docker and Kubernetes

Assignment Date	01 November 2022
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Maximum Marks	2 Marks

1. Pull an image from docker hub and run it in docker Playground

The screenshot shows a web browser with two tabs. The first tab is Docker Hub, displaying the repository page for `uifd/ui-for-docker`. The repository is marked as deprecated, with a note stating: "This repo is deprecated. Development continues at: [portainer/portainer](#)". A "chat on gitter" button is visible. The "Overview" tab is selected, showing a description: "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." A "Tags" section is also visible. The "Image" tab is selected, showing the "latest" tag. A "Pull Command" box displays the command: `docker pull uifd/ui-for-docker`.

The second tab is Docker Playground, showing a terminal window. The terminal output is as follows:

```
cd9an2u3_cd9av060qau0008hbjs0
IP: 192.168.0.13
Memory: 512MB
CPU: 1.0
SSH: ssh ip172-18-0-4-cd9an2u3tccg00fgf6k0@direct.labs.play-with-docker.com
[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 FWD team.
#####
[nsdml] (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
[nsdml] (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
c590d4ii63101ae795bacea0b1dd498ffef549eb5f24dadb9ff7c1931923Fc0d
[nsdml] (local) root@192.168.0.13 ~
```

2. Create a docker file for the job portal application and deploy it in Docker desktop applliation.

The image displays two screenshots of the 'UI For Docker' web application interface, which is accessed via a browser at the URL `ip172-18-0-4-cd9an2u3tccg00fgf6k0-9000.direct.labs.play-with-docker.com/#/`.

Top Screenshot: The interface shows the 'UI For Docker' title and a navigation bar with tabs: Dashboard, Containers, Containers Network, Images, Networks, Volumes, and Info. A 'Refresh' button is present. The main content area features a large 'UI For Docker' heading with the subtitle 'The UI for Docker container engine' and a 'Learn more.' button. Below this, the 'Running Containers' section lists a single container named 'beautiful_goldwasser' with a status of 'Up About a minute'. The 'Status' section displays a green donut chart representing the system's health.

Bottom Screenshot: This screenshot shows the same interface but with additional metrics. The 'Running Containers' section remains the same. The 'Containers created' section shows a line graph with a value of 1 on the y-axis and a date of 21/10/2022 on the x-axis. The 'Images created' section also shows a line graph with a value of 1 on the y-axis and a date of 21/10/2022 on the x-axis. The 'Status' section now includes a legend for the donut chart: 'Running' (green), 'Stopped' (red), and 'Ghost' (grey).

3. Create an IBM Container registry and deploy

```
C:\Windows\System32\cmd.exe
-> [internal] load build definition from Dockerfile
-> => transferring dockerfile: 32B
-> [internal] load .dockerignore
-> => transferring context: 2B
-> [internal] load metadata for docker.io/library/python:3.8
-> [auth] library/python:pull token for registry-1.docker.io
-> [internal] load build context
-> => transferring context: 687B
-> [1/6] FROM docker.io/library/python:3.8@sha256:f8652aef88c25f8d2354d547d892591067aa076a7fa0810df9f308a6f6c
-> resolve docker.io/library/python:3.8@sha256:f8652aef88c25f8d2354d547d892591067aa076a7fa0810df9f308a6f6c
-> sha256:f8652aef88c25f8d2354d547d892591067aa076a7fa0810df9f308a6f6c: 1.86kB / 1.86kB
-> sha256:d007a4997a8e679df5ac31872359c2de510f82214c0448e928393b376d3b0d0d: 2.22kB / 2.22kB
-> sha256:54206038007c5e3ad24c0e21fc889abbcb486a27634c0892886ff71f3f44b104: 9.27kB / 9.27kB
-> sha256:0e2954dd541cdd309281d21a73a9d1db70665c1b95b74f32b009e0b77a6e1e3: 54.92MB / 54.92MB
-> sha256:90829c73b52b92b97d5c07e54fb0f3e921995a296c714b53a32ae67d19231fcd: 5.15MB / 5.15MB
-> sha256:cb5b7ae361722f070eca53f35823ed21baa85d01d5d95cd5a95ab53d740cdd56: 10.87MB / 10.87MB
-> sha256:6a9a4a811622b31c027c0c322ca463937f4085f560a93a6f15c01a0d710795: 54.57MB / 54.57MB
-> sha256:6f9f74809df293fe0727f394fabad5e0b4ed9a481a0f0f0112efc7e4d3c76f7: 196.51MB / 196.51MB
-> sha256:5a3b1213efc56598e78bd002083945c164de2a37205e06a62dada823124dc743: 6.29MB / 6.29MB
-> extracting sha256:0e2954dd541cdd309281d21a73a9d1db70665c1b95b74f32b009e0b77a6e1e3
-> sha256:0fdddfdc56334f2e6efad7e241bf5e7459c40ed105c5470676f41c1244bd90752: 14.21MB / 14.21MB
-> extracting sha256:90829c73b52b92b97d5c07e54fb0f3e921995a296c714b53a32ae67d19231fcd
-> extracting sha256:cb5b7ae361722f070eca53f35823ed21baa85d01d5d95cd5a95ab53d740cdd56
-> sha256:404f02044bac0432ca522cbb9f254b1c91fcea806bfeef8be0b243b2f31bab7: 235B / 235B
-> sha256:c4f42be2be53b00ebffcc040c1d13de538434cc5f5d954a56048ae169a3af: 2.21MB / 2.21MB
-> extracting sha256:6a9a4a811622b31c027c0c322ca463937f4085f560a93a6f15c01a0d710795
-> extracting sha256:6f9f74809df293fe0727f394fabad5e0b4ed9a481a0f0f0112efc7e4d3c76f7
-> extracting sha256:5a3b1213efc56598e78bd002083945c164de2a37205e06a62dada823124dc743
-> extracting sha256:0fdddfdc56334f2e6efad7e241bf5e7459c40ed105c5470676f41c1244bd90752
-> extracting sha256:404f02044bac0432ca522cbb9f254b1c91fcea806bfeef8be0b243b2f31bab7
-> extracting sha256:c4f42be2be53b00ebffcc040c1d13de538434cc5f5d954a56048ae169a3af
-> [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 sha256:1756719486df002fad5dae305c5221513f2ff2d1b49add242b22a28af0379f19
-> 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
C:\Users\VK-PC\Desktop\job-portal-main>
```

Docker Desktop Upgrade plan

Containers Images Volumes Dev Environments BETA Extensions BETA Add Extensions

Images on disk Last refresh: about 1 hour ago 1 Images 0 Bytes total size Refresh to see disk usage Clean up

Images Give feedback

LOCAL REMOTE REPOSITORIES

Search

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

Use 'd' RAM 2.53GB CPU 1.56% Connected to Hub v4.13.0