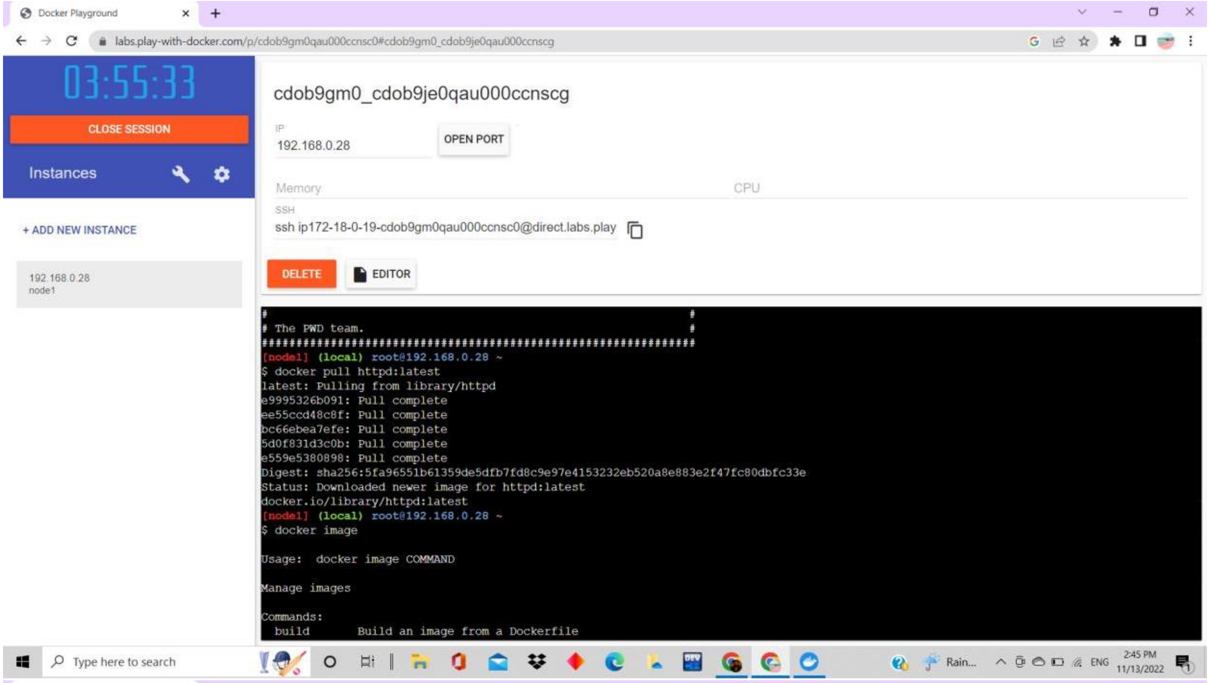
Assignment -4

Assignment Date	13 November 2022
Student Name	KRISHNA SRINIVAS P
Student Roll Number	953619104024
Maximum Marks	2 Marks

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



labs.play-with-docker.com/p/cdob9gm0qau000ccnsc0#cdob9gm0_cdob9je0qau000ccnscg

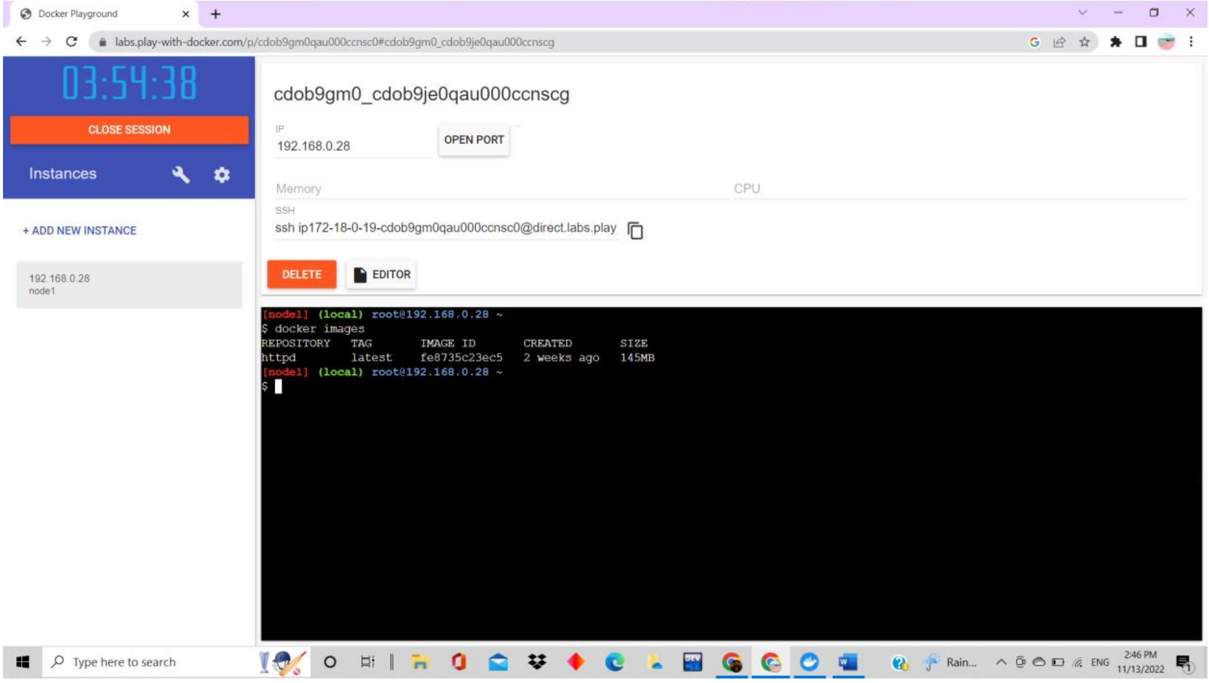
03:55:33

cdob9gm0_cdob9je0qau000ccnscg

IP: 192.168.0.28

SSH: ssh ip172-18-0-19-cdob9gm0qau000ccnsc0@direct.labs.play

```
#                                                              #
# The PWD team.                                                #
################################################################
[node1] (local) root@192.168.0.28 ~
$ docker pull httpd:latest
latest: Pulling from library/httpd
e9995326b091: Pull complete
ee55ccd48c8f: Pull complete
bc66ebea7efe: Pull complete
5d0f831d3c0b: Pull complete
e559e5380898: Pull complete
Digest: sha256:5fa96551b61359de5dfb7fd8c9e97e4153232eb520a8e883e2f47fc80dbfc33e
Status: Downloaded newer image for httpd:latest
docker.io/library/httpd:latest
[node1] (local) root@192.168.0.28 ~
$ docker image

Usage:  docker image COMMAND

Manage images

Commands:
  build       Build an image from a Dockerfile
```



labs.play-with-docker.com/p/cdob9gm0qau000ccnsc0#cdob9gm0_cdob9je0qau000ccnscg

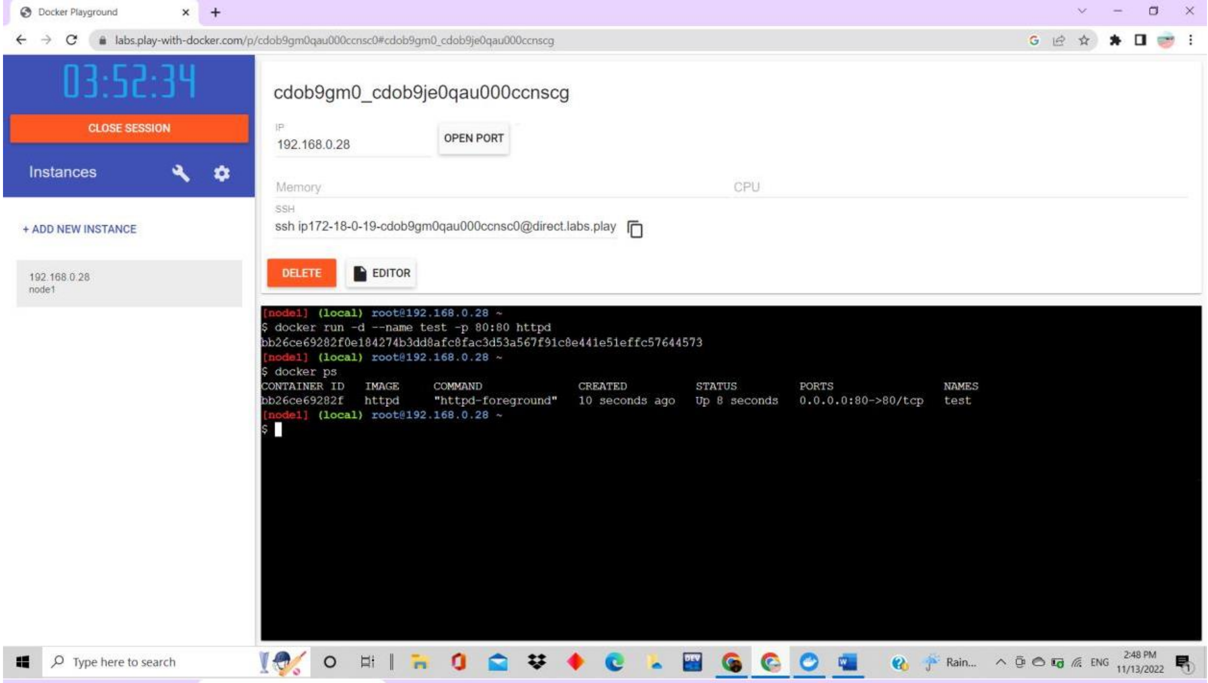
03:54:38

cdob9gm0_cdob9je0qau000ccnscg

IP: 192.168.0.28

SSH: ssh ip172-18-0-19-cdob9gm0qau000ccnsc0@direct.labs.play

```
[node1] (local) root@192.168.0.28 ~
$ docker images
REPOSITORY   TAG       IMAGE ID       CREATED        SIZE
httpd        latest    fe8735c23ec5   2 weeks ago    145MB
[node1] (local) root@192.168.0.28 ~
$ █
```

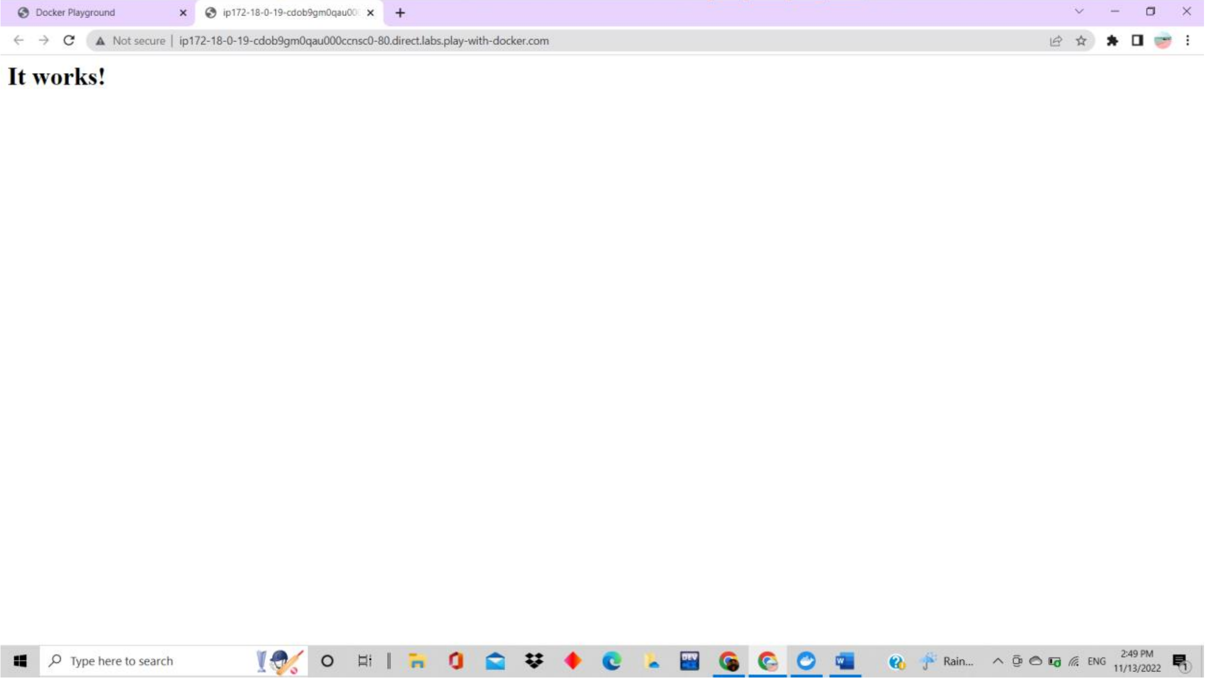


cdob9gm0_cdob9je0qau000ccnscg

IP 192.168.0.28

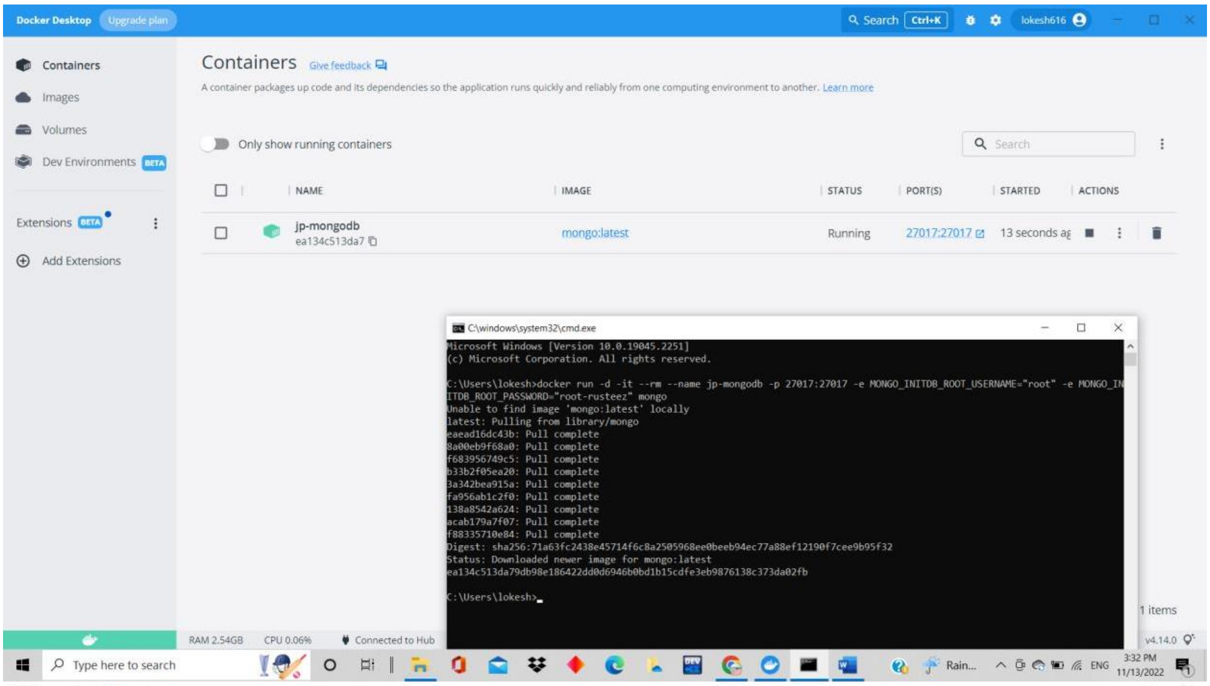
SSH ssh ip172-18-0-19-cdob9gm0qau000ccnsc0@direct.labs.play

```
[node1] (local) root@192.168.0.28 ~
$ docker run -d --name test -p 80:80 httpd
bb26ce69282f0e184274b3dd8afc8fac3d53a567f91c8e441e51effc57644573
[node1] (local) root@192.168.0.28 ~
$ docker ps
CONTAINER ID   IMAGE     COMMAND              CREATED          STATUS         PORTS                NAMES
bb26ce69282f   httpd     "httpd-foreground"   10 seconds ago   Up 8 seconds   0.0.0.0:80->80/tcp   test
[node1] (local) root@192.168.0.28 ~
$ 
```


Docker Playground
ip172-18-0-19-cdob9gm0qau00
Not secure
ip172-18-0-19-cdob9gm0qau000ccnsc0-80.direct.labs.play-with-docker.com
Type here to search
Rain...
ENG
2:49 PM
11/13/2022

It works!

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



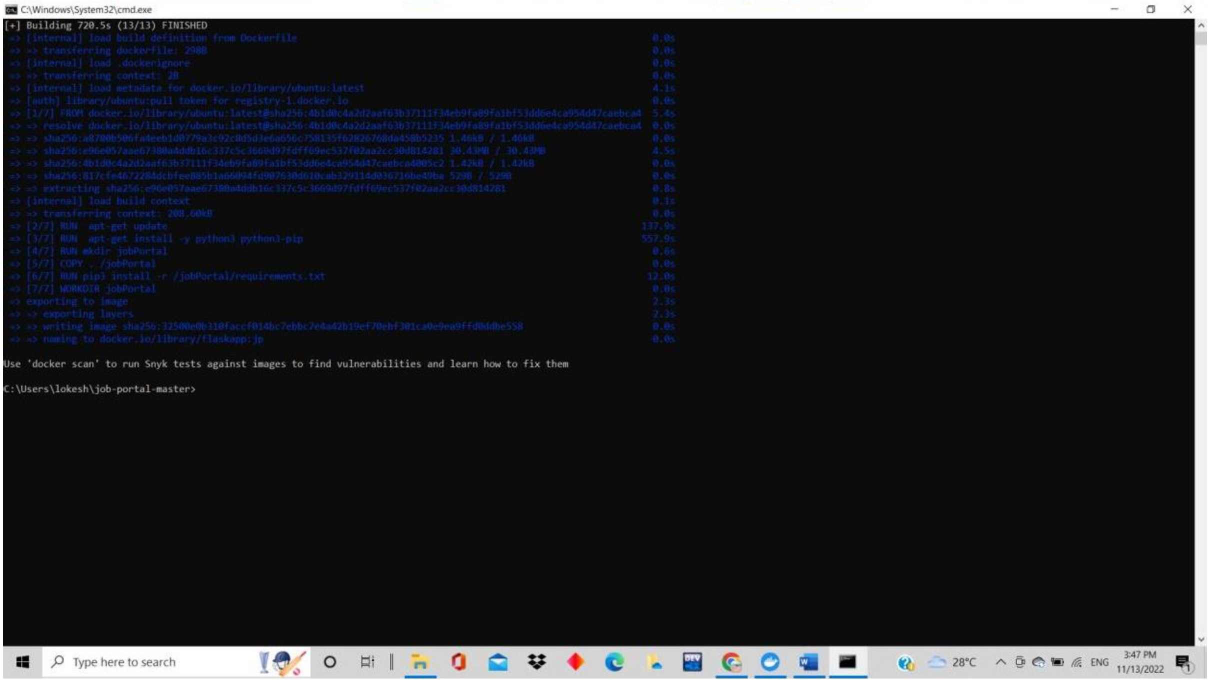
Containers

A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. Learn more

NAME	IMAGE	STATUS	PORT(S)	STARTED	ACTIONS
jp-mongodb ea134c513da7	mongo:latest	Running	27017:27017	13 seconds ag	

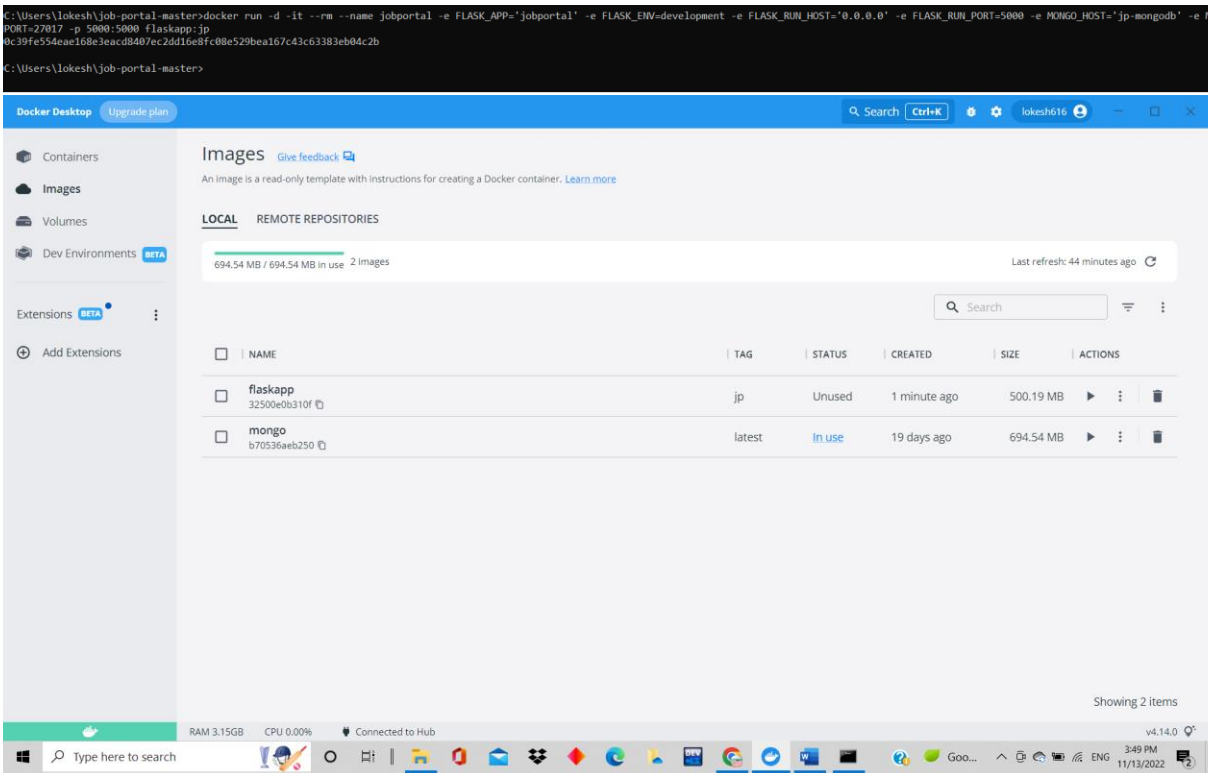
C:\windows\system32\cmd.exe

```
Microsoft Windows [Version 10.0.19045.2251]
(c) Microsoft Corporation. All rights reserved.

C:\Users\lokesh>docker run -d -it --rm --name jp-mongodb -p 27017:27017 -e MONGO_INITDB_ROOT_USERNAME="root" -e MONGO_IN
ITDB_ROOT_PASSWORD="root-rusteez" mongo
Unable to find image 'mongo:latest' locally
latest: Pulling from library/mongo
eaead16dc43b: Pull complete
8a00eb9f68a0: Pull complete
f683956749c5: Pull complete
b33b2f05ea20: Pull complete
3a342bea915a: Pull complete
fa956ab1c2f0: Pull complete
138a8542a624: Pull complete
acab179a7f07: Pull complete
f88335710e84: Pull complete
Digest: sha256:71a63fc2438e45714f6c8a2505968ee0beeb94ec77a88ef12190f7cee9b95f32
Status: Downloaded newer image for mongo:latest
ea134c513da79db98e186422dd0d6946b0bd1b15cdfe3eb9876138c373da02fb

C:\Users\lokesh>
```



C:\Windows\System32\cmd.exe

```
[+] Building 720.5s (13/13) FINISHED
 => [internal] load build definition from Dockerfile                                                   0.0s
 => => transferring dockerfile: 298B                                                                   0.0s
 => [internal] load .dockerignore                                                                      0.0s
 => => transferring context: 2B                                                                        0.0s
 => [internal] load metadata for docker.io/library/ubuntu:latest                                       4.1s
 => [auth] library/ubuntu:pull token for registry-1.docker.io                                          0.0s
 => [1/7] FROM docker.io/library/ubuntu:latest@sha256:4b1d0c4a2d2aaf63b37111f34eb9fa89fa1bf53dd6e4ca954d47caebca4  5.4s
 => => resolve docker.io/library/ubuntu:latest@sha256:4b1d0c4a2d2aaf63b37111f34eb9fa89fa1bf53dd6e4ca954d47caebca4  0.0s
 => => sha256:a8700b506fa4eeb1d0779a3c92c8d5d3e6a656c758135f62826768da458b5235 1.46kB / 1.46kB          0.0s
 => => sha256:e96e057aae67380a4ddb16c337c5c3669d97fdff69ec537f02aa2cc30d814281 30.43MB / 30.43MB        4.5s
 => => sha256:4b1d0c4a2d2aaf63b37111f34eb9fa89fa1bf53dd6e4ca954d47caebca4005c2 1.42kB / 1.42kB          0.0s
 => => sha256:817cfe4672284dcbfee885b1a66094fd907630d610cab329114d036716be49ba 529B / 529B              0.0s
 => => extracting sha256:e96e057aae67380a4ddb16c337c5c3669d97fdff69ec537f02aa2cc30d814281               0.8s
 => [internal] load build context                                                                      0.1s
 => => transferring context: 208.60kB                                                                  0.0s
 => [2/7] RUN  apt-get update                                                                        137.9s
 => [3/7] RUN  apt-get install -y python3 python3-pip                                                557.9s
 => [4/7] RUN mkdir jobPortal                                                                          0.6s
 => [5/7] COPY . /jobPortal                                                                            0.0s
 => [6/7] RUN pip3 install -r /jobPortal/requirements.txt                                             12.0s
 => [7/7] WORKDIR jobPortal                                                                            0.0s
 => exporting to image                                                                                 2.3s
 => => exporting layers                                                                                2.3s
 => => writing image sha256:32500e0b310faccf014bc7ebbc7e4a42b19ef70ebf301ca0e9ea9ffd0ddbe558           0.0s
 => => naming to docker.io/library/flaskapp:jp                                                         0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

C:\Users\lokesh\job-portal-master>
```



```
C:\Users\lokesh\job-portal-master>docker run -d -it --rm --name jobportal -e FLASK_APP='jobportal' -e FLASK_ENV=development -e FLASK_RUN_HOST='0.0.0.0' -e FLASK_RUN_PORT=5000 -e MONGO_HOST='jp-mongodb' -e M
PORT=27017 -p 5000:5000 flaskapp:jp
0c39fe554eae168e3eacd8407ec2dd16e8fc08e529bea167c43c63383eb04c2b

C:\Users\lokesh\job-portal-master>
```

Images Give feedback

An image is a read-only template with instructions for creating a Docker container. Learn more

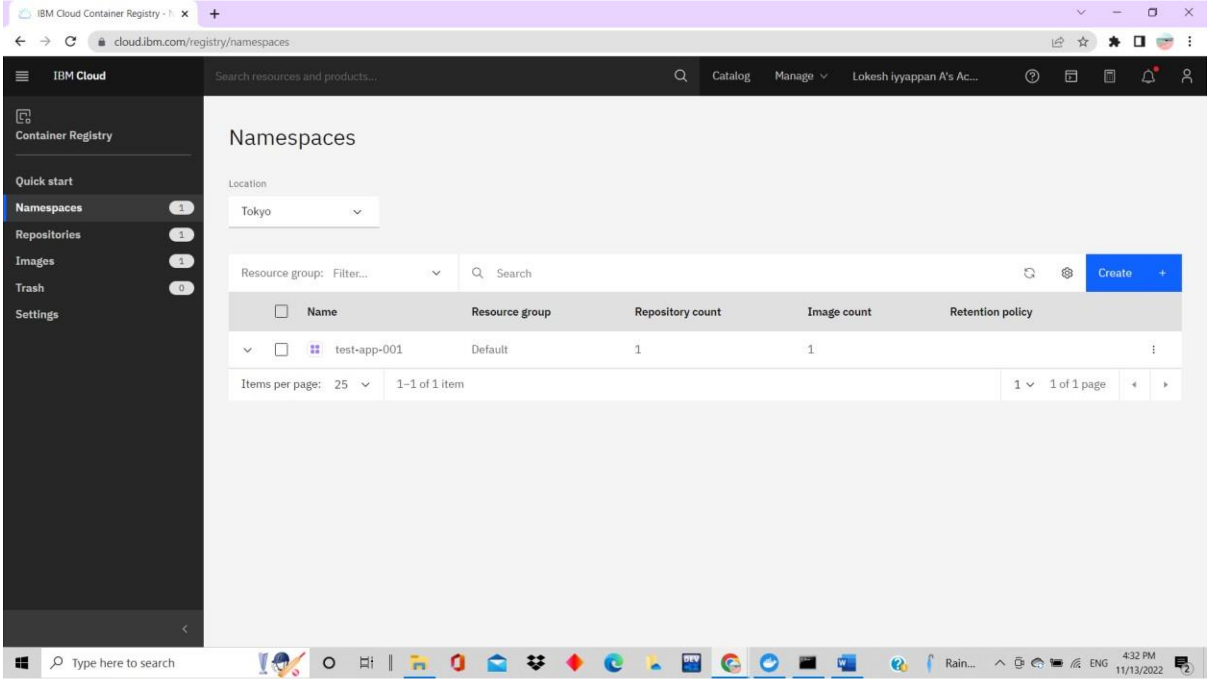
694.54 MB / 694.54 MB in use 2 images

Last refresh: 44 minutes ago

NAME	TAG	STATUS	CREATED	SIZE	ACTIONS
flaskapp 32500e0b310f	jp	Unused	1 minute ago	500.19 MB	
mongo b70536aeb250	latest	In use	19 days ago	694.54 MB	

Showing 2 items

3. Create a IBM container registry and deploy helloworld app or jobportalapp.



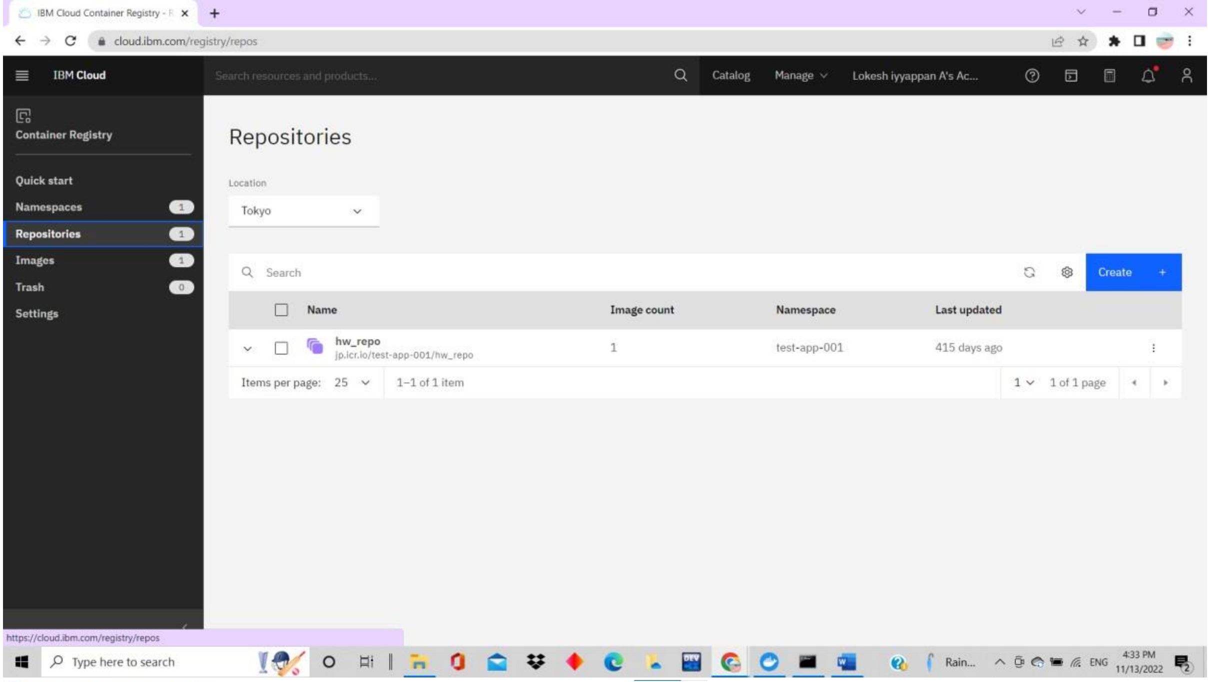
IBM Cloud Container Registry
cloud.ibm.com/registry/namespaces
IBM Cloud
Search resources and products...
Catalog
Manage
Lokesh iyyappan A's Ac...
Container Registry
Quick start
Namespaces 1
Repositories 1
Images 1
Trash 0
Settings

Namespaces

Location: Tokyo

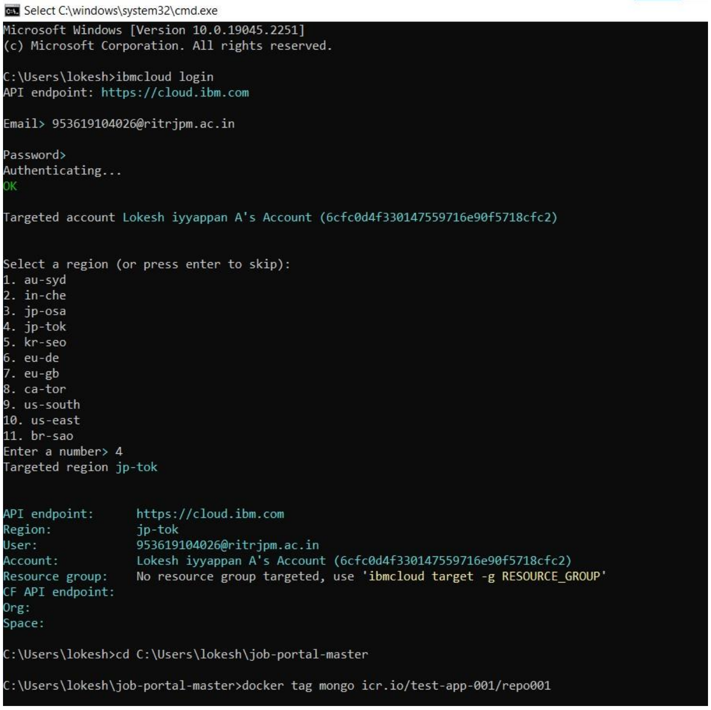
Name	Resource group	Repository count	Image count	Retention policy
test-app-001	Default	1	1	

Items per page: 25 1–1 of 1 item 1 1 of 1 page

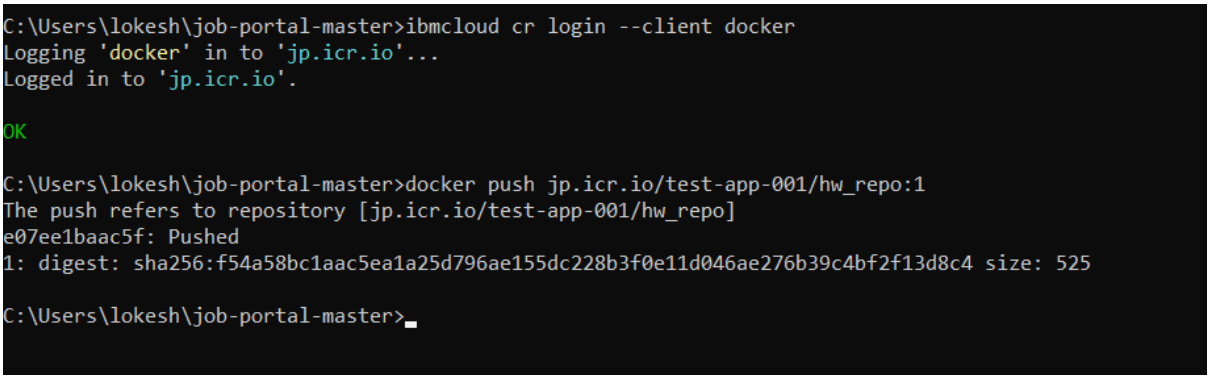


Repositories

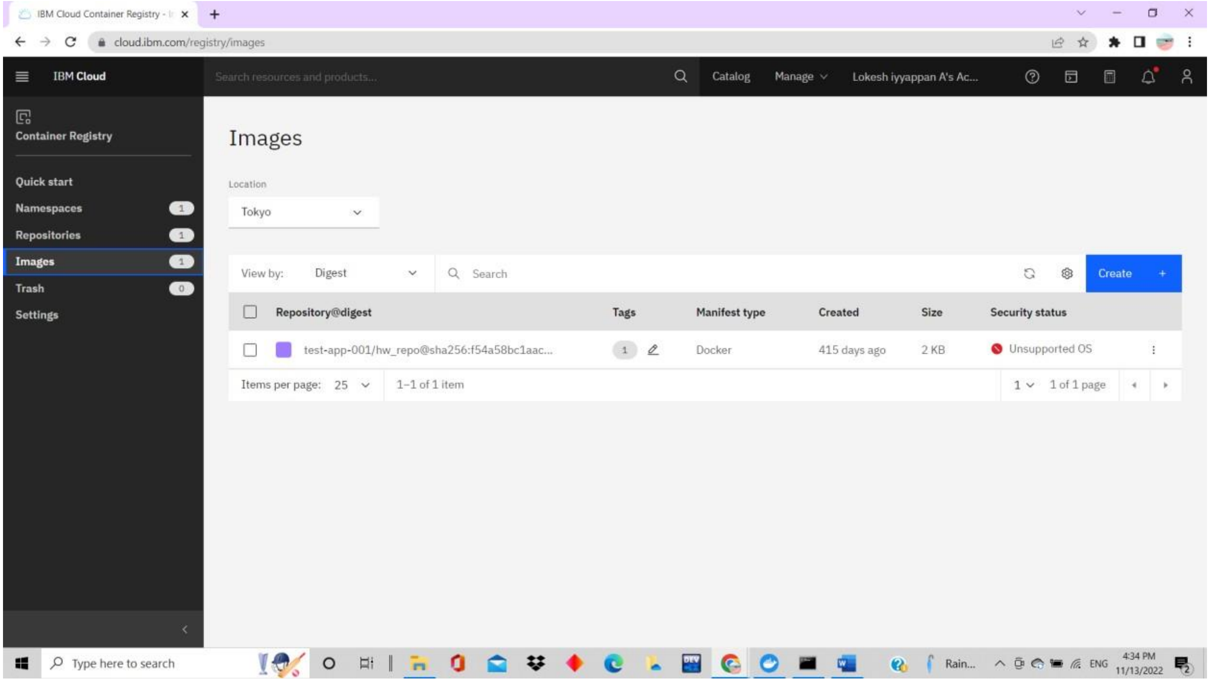
Name	Image count	Namespace	Last updated
hw_repo jp.icr.io/test-app-001/hw_repo	1	test-app-001	415 days ago



```
Microsoft Windows [Version 10.0.19045.2251]
(c) Microsoft Corporation. All rights reserved.

C:\Users\lokesh>ibmcloud login
API endpoint: https://cloud.ibm.com

Email> 953619104026@ritrjpm.ac.in

Password>
Authenticating...
OK

Targeted account Lokesh iyyappan A's Account (6cfc0d4f330147559716e90f5718cfc2)


Select a region (or press enter to skip):
1. au-syd
2. in-che
3. jp-osa
4. jp-tok
5. kr-seo
6. eu-de
7. eu-gb
8. ca-tor
9. us-south
10. us-east
11. br-sao
Enter a number> 4
Targeted region jp-tok


API endpoint:      https://cloud.ibm.com
Region:            jp-tok
User:              953619104026@ritrjpm.ac.in
Account:           Lokesh iyyappan A's Account (6cfc0d4f330147559716e90f5718cfc2)
Resource group:    No resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
CF API endpoint:
Org:
Space:

C:\Users\lokesh>cd C:\Users\lokesh\job-portal-master

C:\Users\lokesh\job-portal-master>docker tag mongo icr.io/test-app-001/repo001
```



```
C:\Users\lokesh\job-portal-master>ibmcloud cr login --client docker
Logging 'docker' in to 'jp.icr.io'...
Logged in to 'jp.icr.io'.

OK

C:\Users\lokesh\job-portal-master>docker push jp.icr.io/test-app-001/hw_repo:1
The push refers to repository [jp.icr.io/test-app-001/hw_repo]
e07ee1baac5f: Pushed
1: digest: sha256:f54a58bc1aac5ea1a25d796ae155dc228b3f0e11d046ae276b39c4bf2f13d8c4 size: 525

C:\Users\lokesh\job-portal-master>_
```



Images

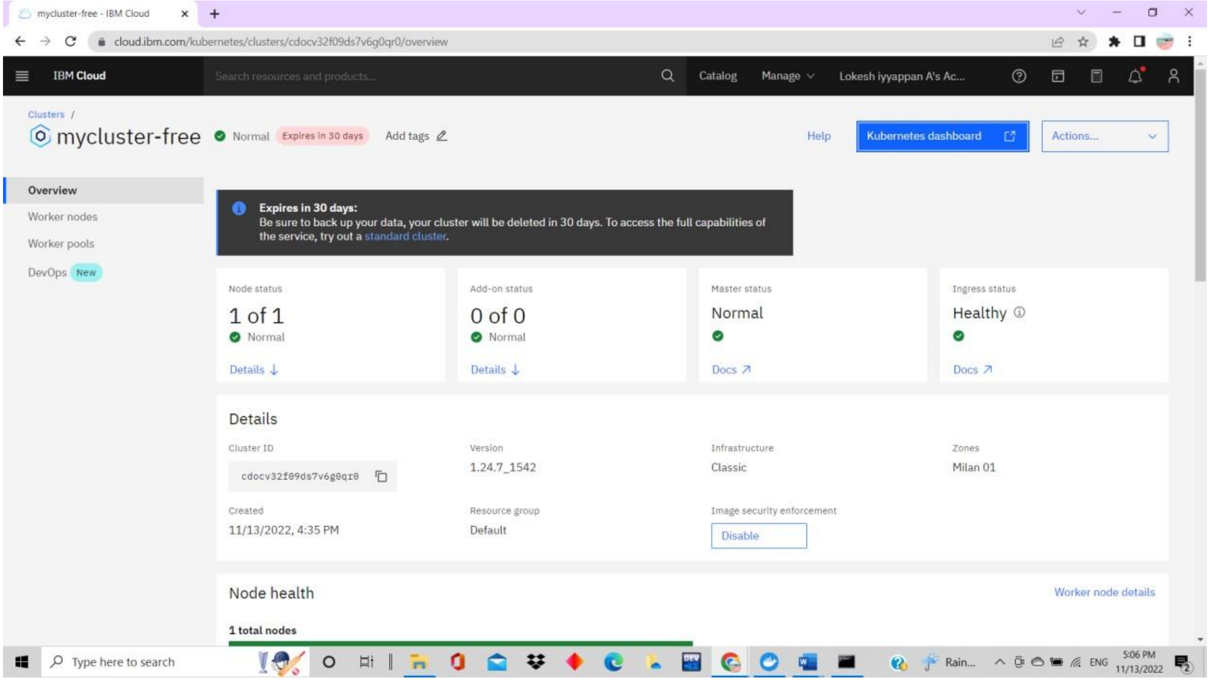
Location: Tokyo

View by: Digest | Search | Create +

☐	Repository@digest	Tags	Manifest type	Created	Size	Security status
☐	test-app-001/hw_repo@sha256:f54a58bc1aac...	1	Docker	415 days ago	2 KB	Unsupported OS

Items per page: 25 | 1–1 of 1 item | 1 | 1 of 1 page

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



mycluster-free — Normal — Expires in 30 days — Add tags

Expires in 30 days: Be sure to back up your data, your cluster will be deleted in 30 days. To access the full capabilities of the service, try out a standard cluster.

Node status: 1 of 1 — Normal — Details

Add-on status: 0 of 0 — Normal — Details

Master status: Normal — Docs

Ingress status: Healthy — Docs

Details

Cluster ID: cdocv32f09ds7v6g0qr0

Version: 1.24.7_1542

Infrastructure: Classic

Zones: Milan 01

Created: 11/13/2022, 4:35 PM

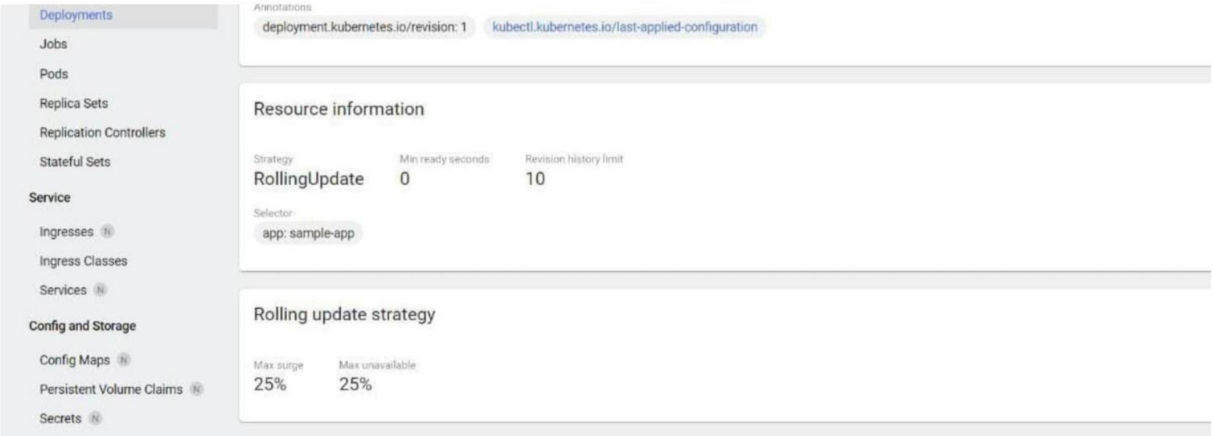
Resource group: Default

Image security enforcement: Disable

Node health — Worker node details

1 total nodes

t.



Annotations

deployment.kubernetes.io/revision: 1 kubectl.kubernetes.io/last-applied-configuration

Resource information

Strategy: RollingUpdate

Min ready seconds: 0

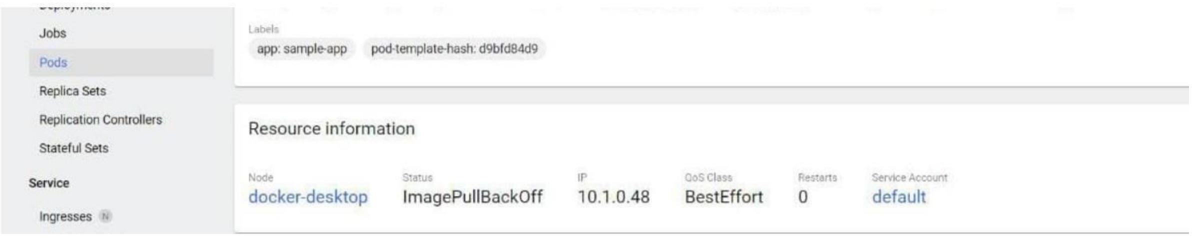
Revision history limit: 10

Selector: app: sample-app

Rolling update strategy

Max surge: 25%

Max unavailable: 25%



Labels

app: sample-app pod-template-hash: d9bfd84d9

Resource information

Node: docker-desktop

Status: ImagePullBackOff

IP: 10.1.0.48

QoS Class: BestEffort

Restarts: 0

Service Account: default