

ASSIGNMENT – 4

Assignment Date	20 October 2022
Student Name	SHYAM SUNDAR S
Student Roll Number	311019104083
Maximum Marks	2 Marks

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

03:54:54

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.18
node1

cdqdehe3_cdqdej3tccg00c8to2g

IP
192.168.0.18

OPEN PORT
9000

Memory
1.61% (64.33MiB / 3.906GiB)

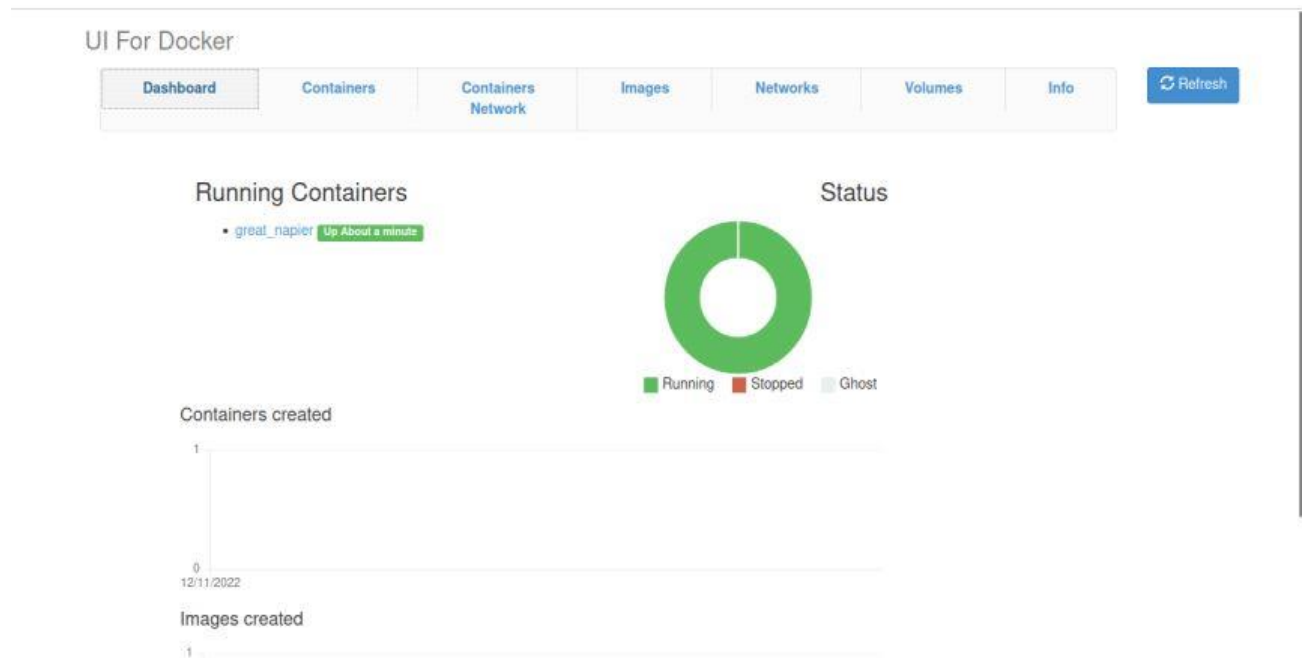
CPU
0.34%

SSH
ssh ip172-18-0-40-cdqdehe3tccg00c8to20@direct.labs.play

DELETE

EDITOR

```
#####
# WARNING!!!!
# 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@192.168.0.18 ~
$ 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@192.168.0.18 ~
$ docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock uifd/ui-for-docker
5b4691d16b562f74c850fc60154d4093618787ea90817687aa3cb374b6a6a120
(node1) (local) root@192.168.0.18 ~
$
```



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

Dockerfile:

FROM python:3.6

WORKDIR /app

ADD . /app

COPY requirements.txt /app

RUN python3 -m pip install -r requirements.txt

RUN python3 -m pip install ibm_db

EXPOSE 5000

CMD ["python", "app.py"]

Docker Desktop

Update to latest

8

⚙

Sign in

⌵

⌵

✕

Containers

Images

Volumes

Dev Environments

Extensions

Add Extensions

Update to latest

RAM 0.88GB

CPU 0.75%

Not connected to Hub

v4.13.1

Images on disk

Last refresh: 11 minutes ago

987.16 MB total size

0 Bytes / 987.16 MB in use

Images

Give feedback

An image is a read-only template with instructions for creating a Docker container. [Learn more](#)

LOCAL

REMOTE REPOSITORIES

Search

⌵

⋮

<input type="checkbox"/>	NAME	TAG	STATUS	CREATED	SIZE	ACTIONS
<input type="checkbox"/>	job-portal-main e6215078c8d9	latest	Unused	less than a minute a	1.08 GB	<div>▶ ⋮ 🗑</div>

Showing 1 items

Containers

Images

Volumes

Dev Environments

Extensions

Add Extensions

Update to latest

RAM 0.86GB

CPU 0.75%

Not connected to Hub

v4.13.1

Containers

Give feedback

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

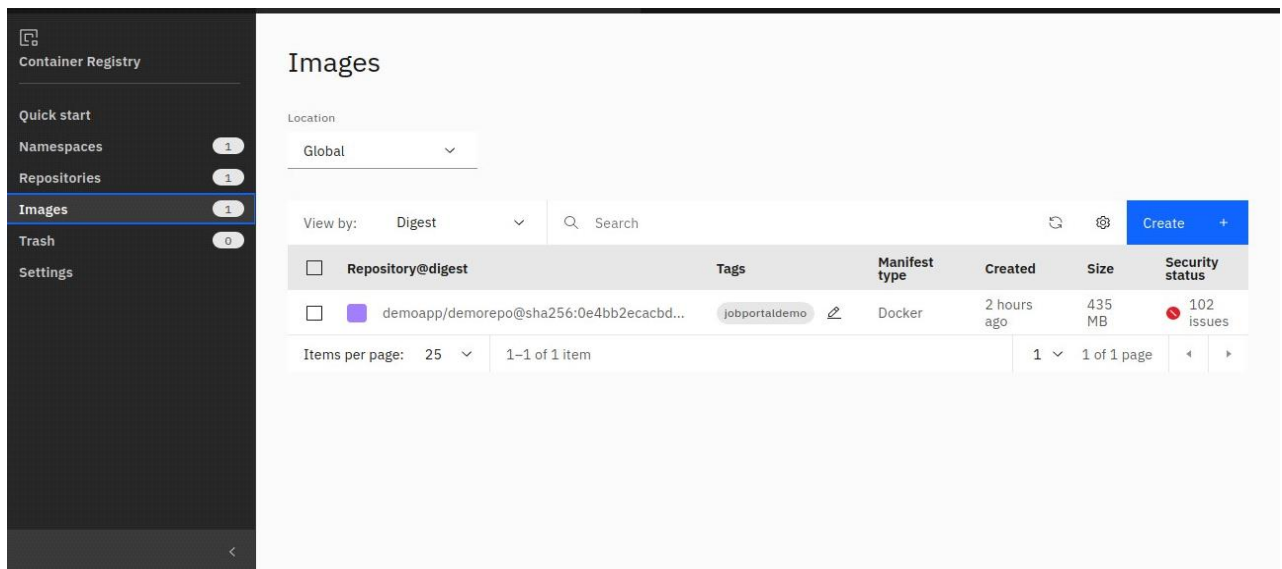
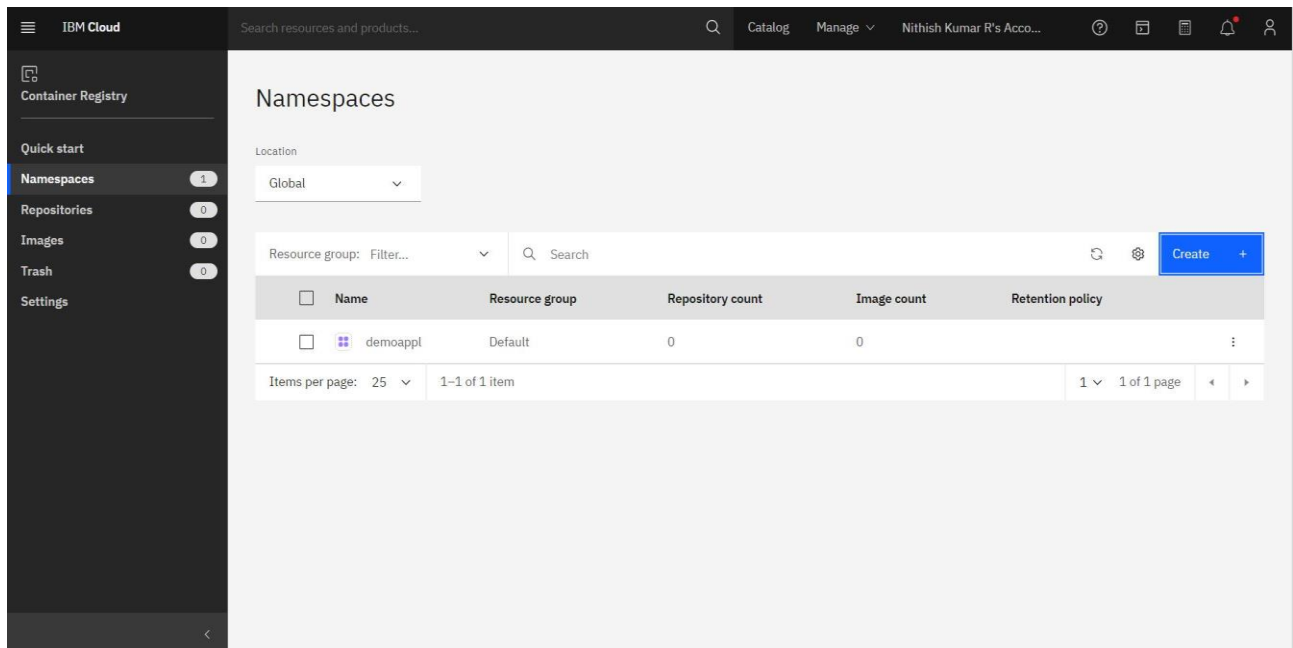
Only show running containers

Search

⋮

Showing 1 items

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



Container Registry

Quick start

Namespaces1

Repositories1

Images1

Trash0

Settings

Repositories

Location

Global

Search

Create +

	Name	Image count	Namespace	Last updated	
<div></div>	<div><div></div><div>demorepo</div><div>icr.io/demoapp/demorepo</div></div>	1	demoapp	2 hours ago	<div></div>

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 nodeport.

The screenshot shows the IBM Cloud console interface for a Kubernetes cluster named 'mycluster-free'. The cluster is in a 'Normal' state and will expire in 29 days. The interface includes a sidebar with navigation options: Overview, Worker nodes, Worker pools, and DevOps (marked as 'New'). The main content area displays the cluster's status and details.

Cluster Overview:

- Cluster name: mycluster-free
- Status: Normal
- Expires in: 29 days
- Actions: Add tags, Help, Kubernetes dashboard, Actions...

Node status: 1 of 1 Normal

Add-on status: 0 of 0 Normal

Master status: Normal

Ingress status: Healthy

Details:

Cluster ID	Version	Infrastructure	Zones
cdp1ec1f9nak0icjqa3g	1.24.7_1542	Classic	Milan 01

Created: 11/15/2022, 2:09 PM

Resource group: Default

Image security enforcement: Disable

Node health: Worker node details

default
Search
+
🔔
👤

Service > Services

Pods

Replica Sets

Replication Controllers

Stateful Sets

Service

Ingresses N

Ingress Classes

Services N

Config and Storage

Config Maps N

Persistent Volume Claims N

Secrets N

Storage Classes

Cluster

Cluster Role Bindings

Services

Name	Labels	Type	Cluster IP	Internal Endpoints	External Endpoints
job-service	-	NodePort	172.21.67.238	job-service:80 TCP job-service:31000 TCP	-
kubernetes	Show all	ClusterIP	172.21.0.1	kubernetes:443 TCP kubernetes:0 TCP	-

Clusters /

Normal
Expires in 30 days
Add tags

Help
Kubernetes dashboard
Actions...

Overview

Worker nodes

Worker pools

DevOps New

Pool: Filter...

Search

⚙️

Add +


<input type="checkbox"/>	Name	Status	Worker pool	Zone	Private IP	Public IP	Version
<input checked="" type="checkbox"/>	0000008c	Normal	default	Milan 01	10.144.188.96	169.51.206.153	1.24.7_1543

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

← → ↺

https://eu-de.containers.cloud.ibm.com/kubeproxy/clusters/cdnr4abf00p61pmg0qog/service/#/deployment?nam

☆

 **kubernetes**

default ▾

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Search

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👤

Workloads > Deployments

Workloads N

Cron Jobs

Daemon Sets

Deployments

Jobs

Pods

Replica Sets

Replication Controllers

Stateful Sets

Service

Ingresses N


Ingress Classes

Services N

Config and Storage


Config Maps N

CPU Usage




Time	CPU Usage (cores)
22:56	0.02
22:57	0.01
22:58	0.005
22:59	0.002
23:00	0.001
23:01	0.0005
23:02	0.0002

Memory Usage



Time	Memory Usage (bytes)
22:56	20 Mi
22:57	20 Mi
22:58	20 Mi
22:59	20 Mi
23:00	20 Mi
23:01	20 Mi
23:02	20 Mi

Deployments

Name	Images	Labels	Pods	Create
 jobapp-deployment	Show all	-	1 / 1	51 min