

ASSIGNMENT – 4

Assignment Date	20 October 2022
Student Name	NITHISH KUMAR R
Student Roll Number	311019104055
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)

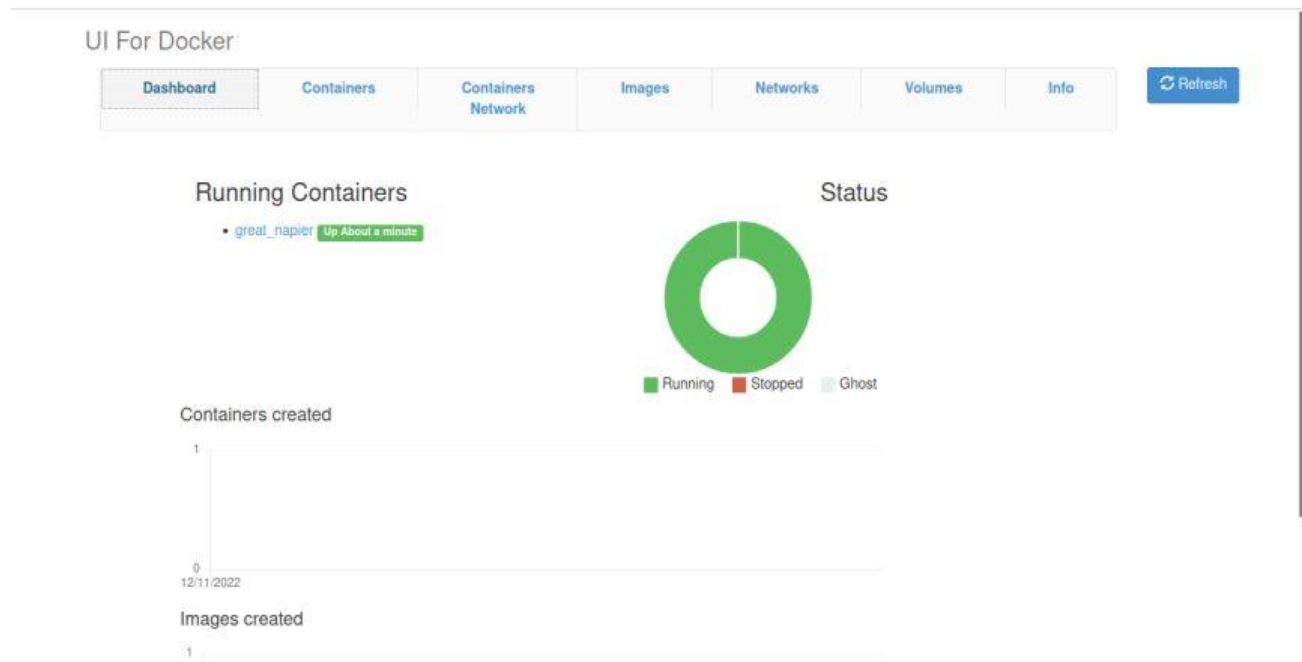
CPU
0.34%

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

Sign in

Containers

Images

Volumes

Dev Environments

Extensions

Add Extensions

Images on disk

Last refresh: 11 minutes ago987.16 MB total size0 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

	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> <div></div> <div></div>

Showing 1 items

RAM 0.88GBCPU 0.75%Not connected to Hubv4.13.1

Containers

Images

Volumes

Dev Environments

Extensions

Add Extensions

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

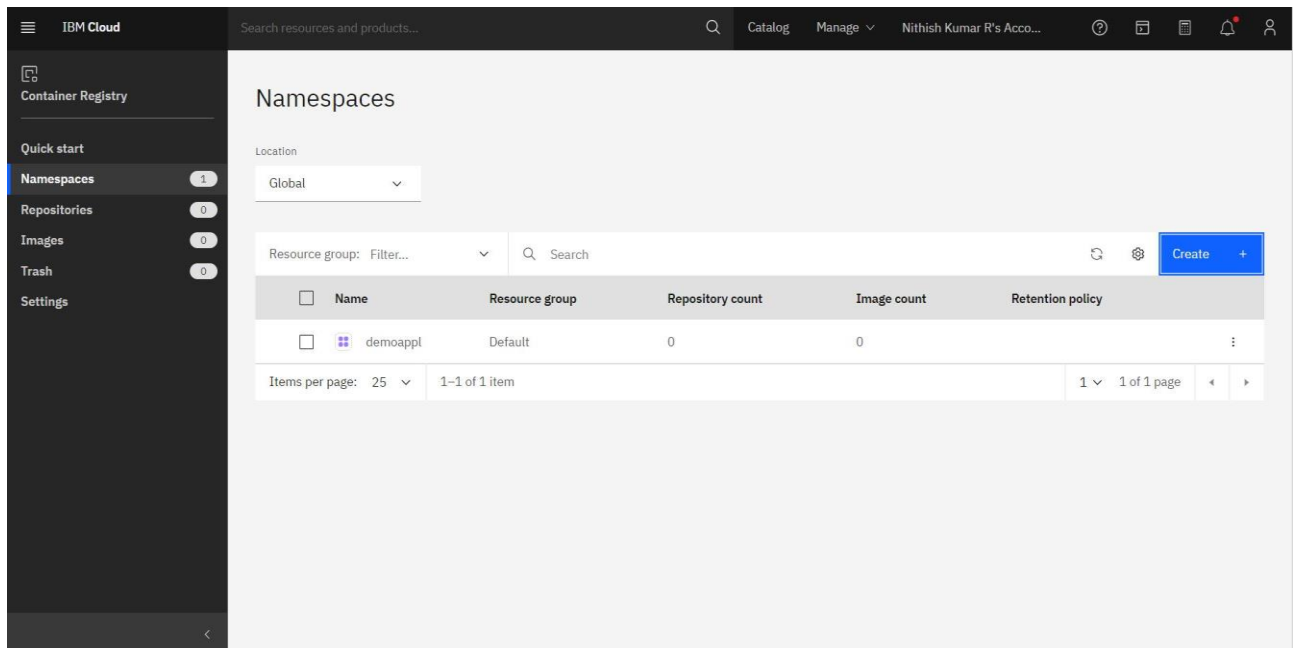
Search

	NAME	IMAGE	STATUS	PORT(S)	STARTED	ACTIONS
<input type="checkbox"/>	dreamy_khayyam ad8a3f785bd3	job-portal-main:latest	Running	8080:8080	30 seconds ag	<div></div> <div></div> <div></div>

Showing 1 items

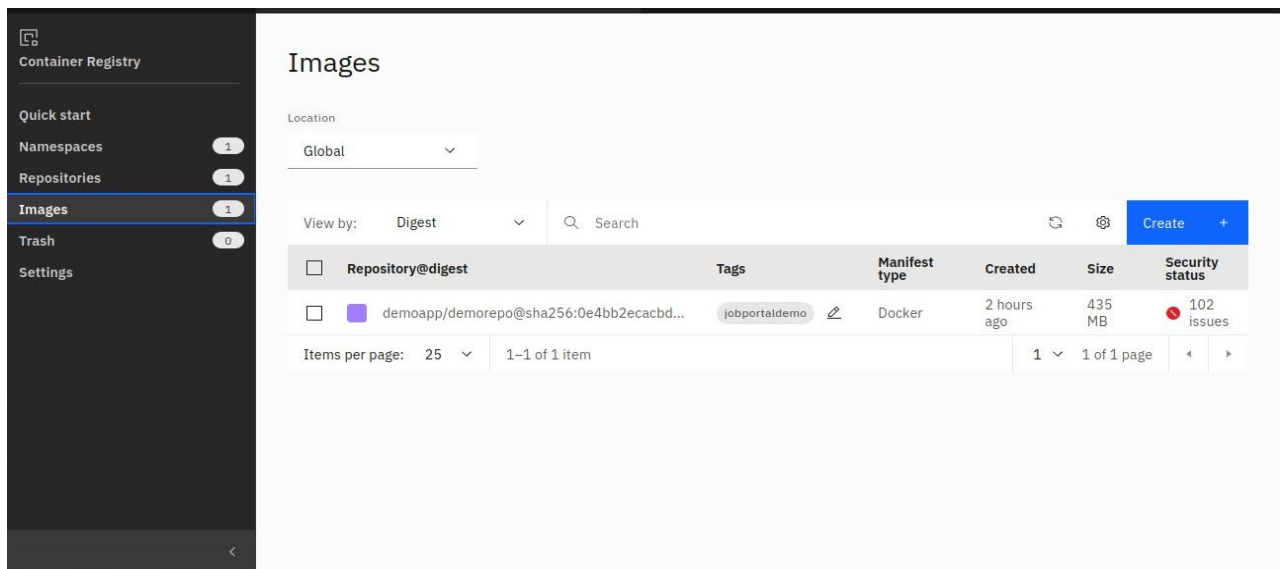
RAM 0.86GBCPU 0.75%Not connected to Hubv4.13.1

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



The screenshot shows the IBM Cloud Container Registry interface. The left sidebar contains a 'Quick start' menu with 'Namespaces' selected, showing a count of 1. The main area is titled 'Namespaces' and shows a table with one namespace named 'demoappl' in the 'Default' resource group. The table has columns for Name, Resource group, Repository count, Image count, and Retention policy. A 'Create' button is visible in the top right corner of the main area.

Name	Resource group	Repository count	Image count	Retention policy
demoappl	Default	0	0	



The screenshot shows the IBM Cloud Container Registry interface with the 'Images' tab selected in the sidebar. The main area is titled 'Images' and shows a table with one image named 'demoapp/demorepo@sha256:0e4bb2ecacbd...' under the 'demoappl' repository. The table has columns for Repository@digest, Tags, Manifest type, Created, Size, and Security status. A 'Create' button is visible in the top right corner of the main area.

Repository@digest	Tags	Manifest type	Created	Size	Security status
demoapp/demorepo@sha256:0e4bb2ecacbd...	jobportaldemo	Docker	2 hours ago	435 MB	102 issues

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

11 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 is scheduled to expire in 29 days. The overview page displays the following details:

- Node status:** 1 of 1 nodes are Normal.
- Add-on status:** 0 of 0 add-ons are Normal.
- Master status:** Normal.
- Ingress status:** Healthy.

The **Details** section provides the following information:



- Cluster ID:** cdp1ec1f9nak0icjqa3g
- Version:** 1.24.7_1542
- Infrastructure:** Classic
- Zones:** Milan 01
- Created:** 11/15/2022, 2:09 PM
- Resource group:** Default
- Image security enforcement:** Disable

The **Node health** section is visible at the bottom, with a link to 'Worker node details'.

kubernetes

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 /


mycluster-free


 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 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  

←


→

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

🔒

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kubernetes

default

🔍

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	0.005
22:58	0.002
22:59	0.001
23:00	0.001
23:01	0.001
23:02	0.001

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
<div>●</div> jobapp-deployment	Show all	-	1 / 1	51 min