

## ASSIGNMENT 4

**NAME:** FARHANA SABREEN M

**REGISTER NUMBER:** 311519104016

**PROJECT TOPIC:** CUSTOMER CARE REGISTRY

**COLLEGE NAME:** MEENAKSHI SUNDARARAJAN ENGINEERING COLLEGE

**TEAM NUMBER:** PNT2022TMID27825

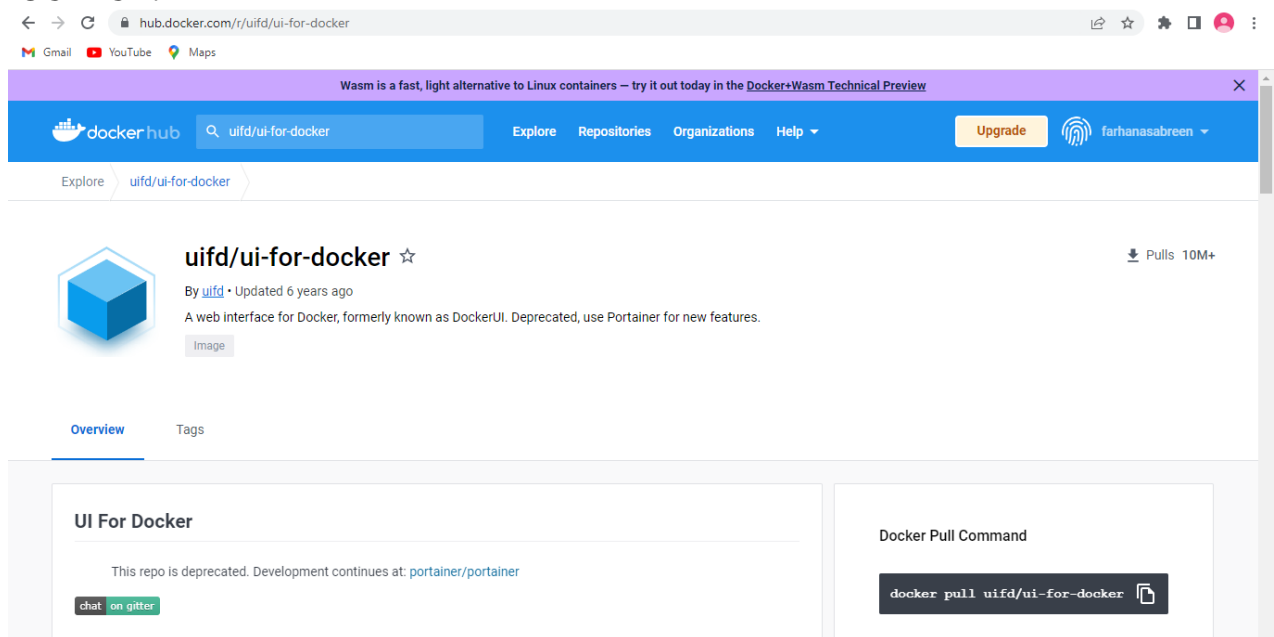
### 1) PULL AN IMAGE FROM DOCKER HUB AND RUN IT IN DOCKER BACKGROUND

#### COMMANDS:

```
docker pull uifd/ui-for-docker
```

```
docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock  
uifd/ui-for-docker
```

#### OUTPUT:



uifd/ui-for-docker - Docker Image x Docker Playground x UI For Docker x +

hub.docker.com/r/uifd/ui-for-docker

## UI For Docker

This repo is deprecated. Development continues at: [portainer/portainer](#)

[chat](#) [on gitter](#)

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.

### Goals

- Minimal dependencies - I really want to keep this project a pure html/js app.
- Consistency - The web UI should be consistent with the commands found on the docker CLI.

### Quickstart

- Run: `docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock uifd/ui-for-docker`
- Open your browser to `http://<dockerd host ip>:9000`

Bind mounting the Unix socket into the UI For Docker container is much more secure than exposing your docker daemon over TCP. The `--privileged` flag is required for hosts using SELinux. You should still secure your UI For Docker instance behind some type of auth. Directions for using Nginx auth are [here](#).

### Specify socket to connect to Docker daemon

By default UI For Docker connects to the Docker daemon with `/var/run/docker.sock`. For this to work you need to bind mount the unix socket into the container with `-v /var/run/docker.sock:/var/run/docker.sock`.

### Docker Pull Command

```
docker pull uifd/ui-for-docker
```

Type here to search

31°C Cloudy 12:28 04-11-2022

uifd/ui-for-docker - Docker Image x Docker Playground x UI For Docker x +

labs.play-with-docker.com/p/cdibb6f91rrg00ckd7q0#cdibb6f9\_cdibbae0qau000ej30kg

03:49:26

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.28  
node1

192.168.0.27  
node2

cdibb6f9\_cdibbae0qau000ej30kg

IP

192.168.0.27

OPEN PORT

9000

Memory

1.72% (68.75MiB / 3.906GiB)

CPU

0.79%

SSH

ssh ip172-18-0-20-cdibb6f91rrg00ckd7q0@direct.labs.play-i

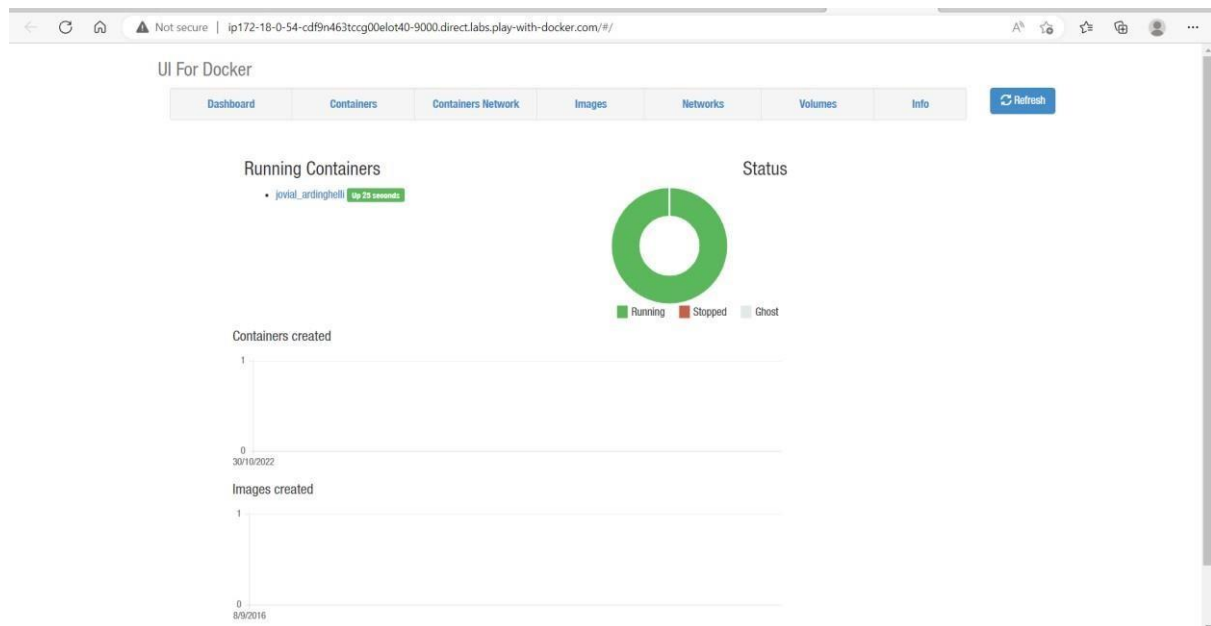
DELETE

EDITOR

```
# This is a sandbox environment. Using personal credentials #
# is HIGHLY! discouraged. Any consequences of doing so are #
# completely the user's responsibilities. #
# #
# The PWD team. #
#####
[node2] (local) root@192.168.0.27 ~
$ 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
[node2] (local) root@192.168.0.27 ~
$ docker run -d -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock uifd/ui-for-docker
926ee0c0017213a10987122c7f5dd8f656212488e17f8ce4bc9c16f9137185ff
[node2] (local) root@192.168.0.27 ~
$
```

Type here to search

31°C Cloudy 12:28 04-11-2022



## 2)CREATE A DOCKER FILE FOR THE JOB PORTAL APPLICATION AND DEPLOY IT IN DOCKER DESKTOP APPLICATION.

### COMMANDS:

docker build -t jp1 .

docker run -p 5000:5000 jp1

### OUTPUT:

```
[+] Building 301.5s (11/11) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 32B
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load metadata for docker.io/library/python:3.10
=> [internal] load build context
=> => transferring context: 11.22kB
=> [3/6] FROM docker.io/library/python:3.10@sha256:a388af37ef8bda4dd466379e550f6ac7475bf5a895efcad41086952085
=> LACHED [2/6] WORKDIR /app
=> [3/6] ADD . /app
=> [4/6] COPY requirements.txt /app
=> [5/6] RUN python -m pip install -r requirements.txt
=> [6/6] RUN python -m pip install the_db
=> exporting to image
=> => writing image sha256:1d670a07c0d67979eada08435ebcd79a4a43e3a9519cc0532413654f60f8e473
=> => naming to docker.io/library/jp1
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
```

```
* Running on http://127.0.0.1:5000
* Running on http://172.17.0.2:5000
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 917-176-492
172.17.0.1 - - [30/Oct/2022 16:07:26] "GET / HTTP/1.1" 404 -
172.17.0.1 - - [30/Oct/2022 16:07:31] "GET /register HTTP/1.1" 200 -
172.17.0.1 - - [30/Oct/2022 16:10:30] "GET /register HTTP/1.1" 200 -
```

←

→

↻

ⓘ localhost:5000/home

Gmail  YouTube  Maps

NAME

EMAIL

PHONE NUMBER

← ↻ ⌂ ⓘ localhost:5000

Hello

IBM Db2 on Cloud

Load DataLoad HistoryTablesViewsIndexesAliasesMQTSSequencesApplication objects

MMZ64024.REGISTER

Back

Export to CSV

NAME	EMAIL	Phone Number
Sabreen	sabreen@gmail.com	9002233441
Sayonika	sayonika@gmail.com	9992133941
farhana	farhana@gmail.com	1234567890

Docker Desktop

Upgrade plan

Containers

Images

Volumes

Dev Environments BETA

Extensions BETA

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](#)

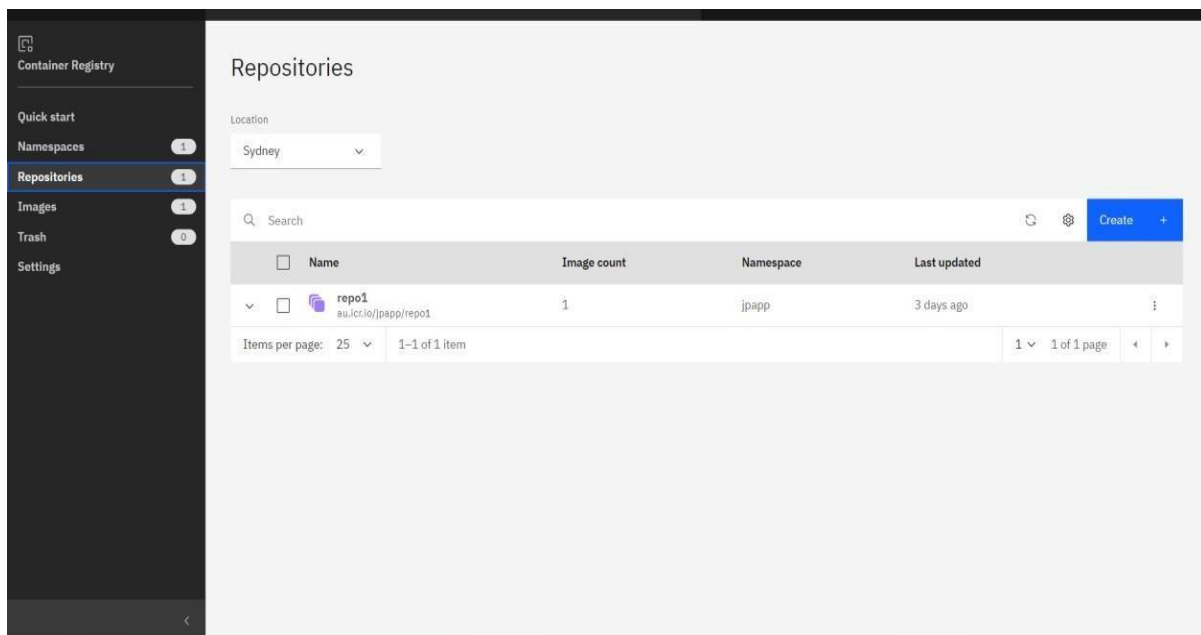
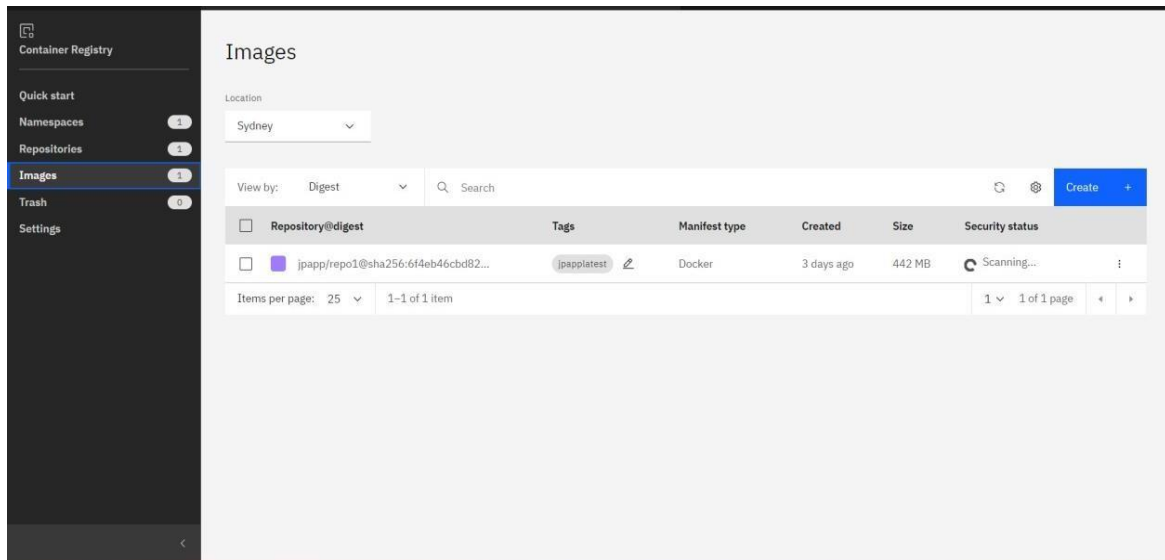
Showing 6 items

Search

	NAME ↑	IMAGE	STATUS	PORT(S)	STARTED	ACTIONS
<input type="checkbox"/>	<div>funny_mayer</div> <div>9b298c33697a</div>	portal1:latest	Exited	5000		<div>▶ ⋮ 🗑</div>
<input type="checkbox"/>	<div>dazzling_albattani</div> <div>015af080718a</div>	portal1:latest	Exited	4000		<div>▶ ⋮ 🗑</div>
<input type="checkbox"/>	<div>dazzling_chatelet</div> <div>2729f894c7ec</div>	port:latest	Exited	8080		<div>▶ ⋮ 🗑</div>
<input type="checkbox"/>	<div>unruffled_mccarthy</div> <div>4e37cbb544d4</div>	app:latest	Exited	8080		<div>▶ ⋮ 🗑</div>
<input type="checkbox"/>	<div>vibrant_nobel</div> <div>fc787277abf9</div>	jp:latest	Exited	5000		<div>▶ ⋮ 🗑</div>
<input type="checkbox"/>	<div>happy_ramanujan</div> <div>ba74a85959f2</div>	jp1:latest	Running	5000	10 minutes ag	<div>■ ⋮ 🗑</div>

RAM 5.64GB CPU 0.81% Not connected to Hub v4.12.0

### 3)CREATE AN IBM CONTAINER REGISTRY AND DEPLOY HELLOWORLD APP OR JOBPORTAL APP



```
Using default tag: latest
The push refers to repository [au.icr.io/jpapp/repo1]
848973eaa72c: Layer already exists
875c3fdf2253: Layer already exists
76025884cfd0: Layer already exists
f2939f19badd: Layer already exists
aec753ddd83a: Layer already exists
f5d161bba139: Layer already exists
1569e0d95ce6: Layer already exists
39e08da15d0c: Layer already exists
3b183c62e2d7: Layer already exists
382fd36bfd35: Layer already exists
f1dec9917830: Layer already exists
f38adf39e1dd: Layer already exists
4ed121b04368: Layer already exists
f9d07d703dd5: Layer already exists
latest: digest: sha256:6f4eb46cbd82b126771051a7915c8f41324c611a97857a6a82a9f450c25ec7f0 size: 3259
```

Containers

Images

Volumes

Dev Environments BETA

Extensions BETA

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](#)

Showing 13 items

NAME

IMAGE

STATUS

PORT(S)

STARTED

ACTIONS

funny_mayer 9b298c33697a	portal1:latest	Exited	5000		
sharp_spence ff454e314255	au.icr.io/jpapp/rep01:jpapplate	Exited	5000		
pedantic_solomon 6e9c9c70c717	au.icr.io/jpapp/rep01:jpapplate	Exited	5000		
great_lumiere 0d6544118333	au.icr.io/jpapp/rep01:jpapplate	Exited	5000		
cranky_moser dc277b7385b	au.icr.io/jpapp/rep01:jpapplate	Exited	5000		
interesting_swartz d87861853aa3	au.icr.io/jpapp/rep01:jpapplate	Created (128)	5000		
focused_blackburn 42fbc104432a	au.icr.io/jpapp/rep01:jpapplate	Exited	5000		
confident_tharp f918bc0d3aa9	au.icr.io/jpapp/rep01:jpapplate	Running	5000	9 seconds ago	

RAM 2.72GB

CPU 0.76%

Connected to Hub

v4.12.0

← → ↺ ⓘ localhost:5000/home

Gmail
 YouTube
 Maps

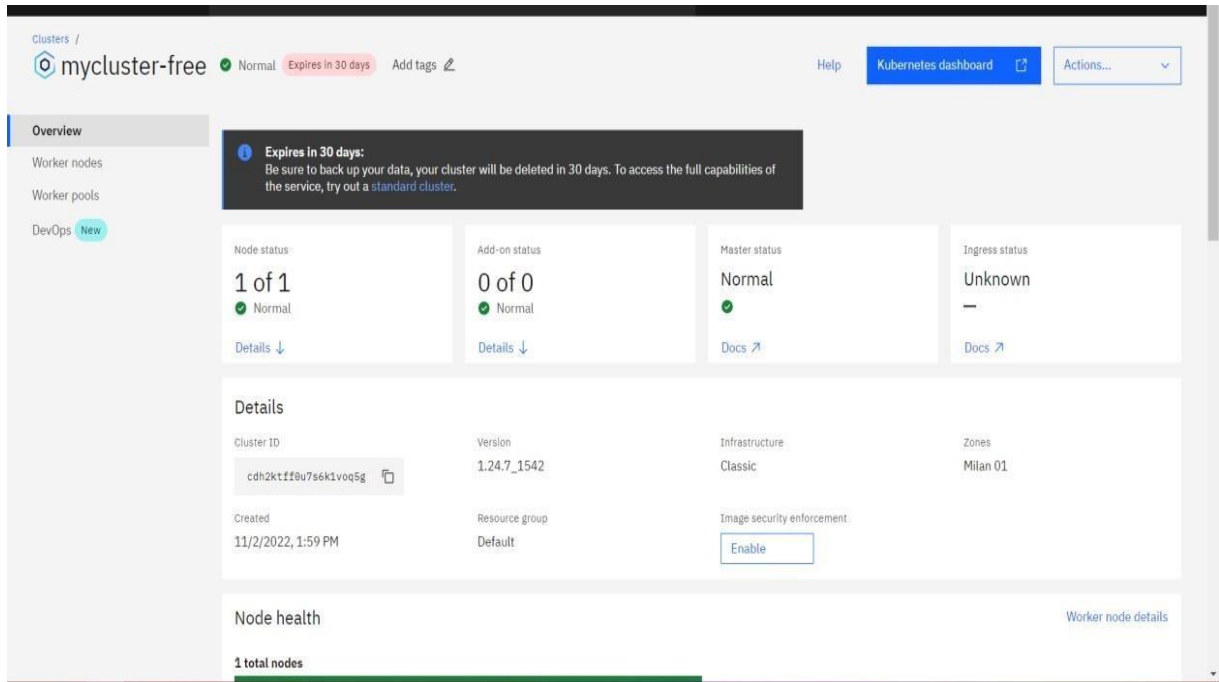
NAME

EMAIL

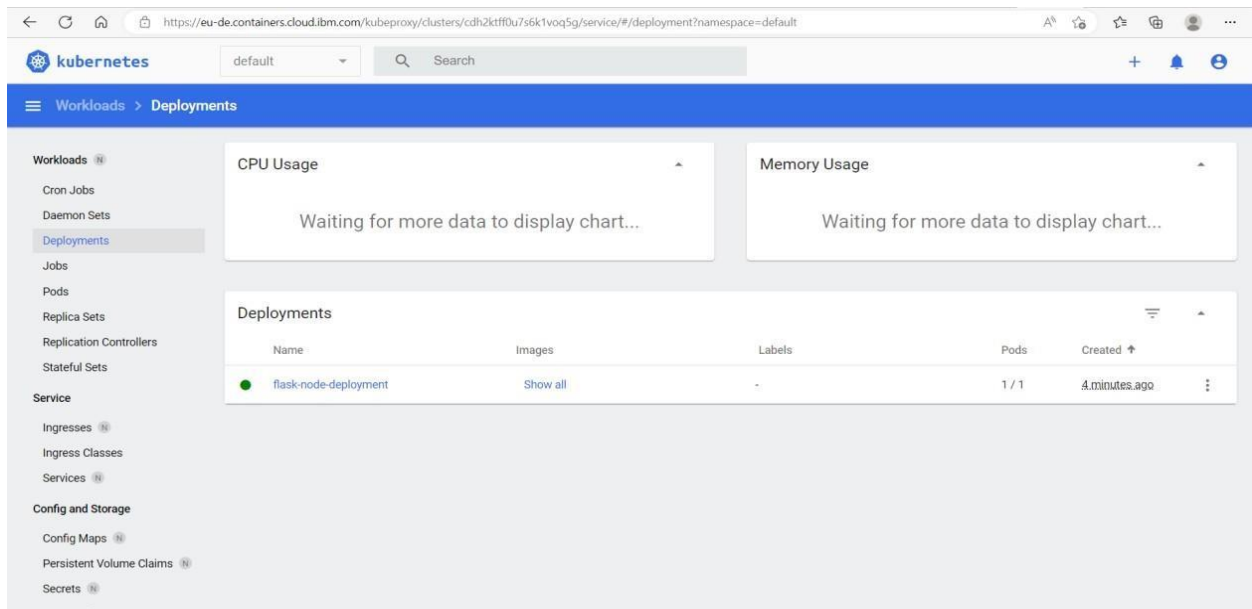
PHONE NUMBER

#### 4) CREATE A KUBERNETES CLUSTER IN IBM CLOUD AND DEPLOY HELLO WORLD IMAGE OR JOB PORTAL IMAGE AND ALSO EXPOSE THE SAME APP TO RUN IN A NODEPORT.

##### KUBERNETES CLUSTER CREATION:



##### DEPLOYMENT OF JOB PORTAL APP IN CLUSTER



← ↻ 🔍 <https://eu-de.containers.cloud.ibm.com/kubeproxy/clusters/cdh2kttf0u7s6k1voq5g/service/#/pod?namespace=default> 🔍 Search + 🔔 👤

**kubernetes** default

Workloads > Pods

**Workloads**

- Cron Jobs
- Daemon Sets
- Deployments
- Jobs
- Pods**
- Replica Sets
- Replication Controllers
- Stateful Sets

**Service**

- Ingresses
- Ingress Classes
- Services

**Config and Storage**

- Config Maps
- Persistent Volume Claims
- Secrets
- Storage Classes

**CPU Usage**

Waiting for more data to display chart...

**Memory Usage**

Waiting for more data to display chart...

**Pods**

Name	Images	Labels	Node	Status	Restarts	CPU Usage (cores)	Memory Usage (bytes)	Created
flask-node-deployment-6dc44fd548-mzkb2	Show all	Show all	10.144.212.24	Running	0	3.00m	55.80Mi	4 minutes ago

← ↻ 🔍 <https://eu-de.containers.cloud.ibm.com/kubeproxy/clusters/cdh2kttf0u7s6k1voq5g/service/#/pod?namespace=default> 🔍 Search + 🔔 👤

**kubernetes** default

Workloads > Pods

**Workloads**

- Cron Jobs
- Daemon Sets
- Deployments
- Jobs
- Pods**
- Replica Sets
- Replication Controllers
- Stateful Sets

**Service**

- Ingresses
- Ingress Classes
- Services

**Config and Storage**

- Config Maps
- Persistent Volume Claims
- Secrets
- Storage Classes

**CPU Usage**

Waiting for more data to display chart...

**Memory Usage**

Waiting for more data to display chart...

**Pods**

Name	Images	Labels	Node	Status	Restarts	CPU Usage (cores)	Memory Usage (bytes)	Created
flask-node-deployment-6dc44fd548-mzkb2	au1cr.io/jpapp/repo1 Show less	app: jobapp pod-template-hash: 6dc44fd548 Show less	10.144.212.24	Running	0	3.00m	55.80Mi	6 minutes ago

← ↻ 🔍 <https://eu-de.containers.cloud.ibm.com/kubeproxy/clusters/cdh2kttf0u7s6k1voq5g/service/#/replicaset?namespace=default> 🔍 Search + 🔔 👤

**kubernetes** default

Workloads > Replica Sets

**Workloads**

- Cron Jobs
- Daemon Sets
- Deployments
- Jobs
- Pods
- Replica Sets**
- Replication Controllers
- Stateful Sets

**Service**

- Ingresses
- Ingress Classes
- Services

**Config and Storage**

- Config Maps
- Persistent Volume Claims
- Secrets
- Storage Classes

**CPU Usage**

Waiting for more data to display chart...

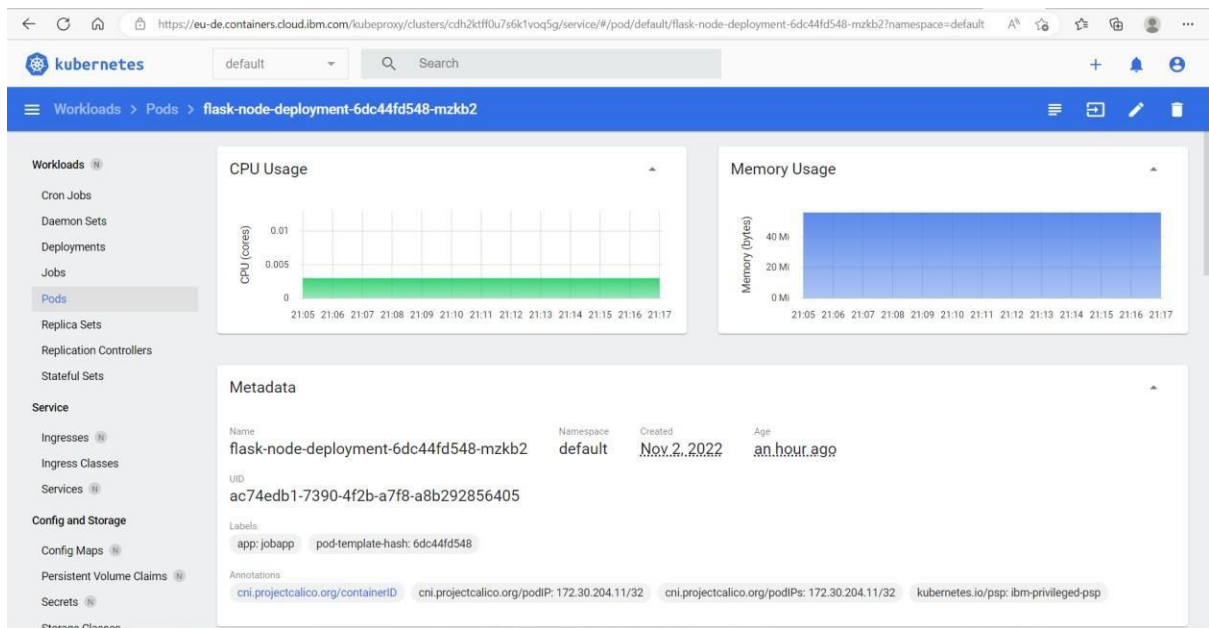
**Memory Usage**

Waiting for more data to display chart...

**Replica Sets**

Name	Images	Labels	Pods	Created
flask-node-deployment-6dc44fd548	Show all	Show all	1 / 1	5 minutes ago





```
Name: flask-node-deployment
Namespace: default
Labels: <none>
Annotations: <none>
Selector: app=flasknode
Type: ClusterIP
IP Family Policy: SingleStack
IP Families: IPv4
IP: 172.21.233.153
IPs: 172.21.233.153
Port: <unset> 5000/TCP
TargetPort: 5000/TCP
Endpoints: <none>
Session Affinity: None
Events: <none>
```

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
flask-node-deployment	ClusterIP	172.21.233.153	<none>	5000/TCP	68m
kubernetes	ClusterIP	172.21.0.1	<none>	443/TCP	6h58m

```
Name: flask-node-deployment
Namespace: default
Labels: <none>
Annotations: <none>
Selector: app=jobapp
Type: ClusterIP
IP Family Policy: SingleStack
IP Families: IPv4
IP: 172.21.30.184
IPs: 172.21.30.184
Port: <unset> 80/TCP
TargetPort: 8008/TCP
Endpoints: 172.30.204.11:8008
Session Affinity: None
Events: <none>
```

# EXPOSE APP TO NODEPORT:

```
Name: flask
Namespace: default
Labels: <none>
Annotations: <none>
Selector: app=jobapp
Type: NodePort
IP Family Policy: SingleStack
IP Families: IPv4
IP: 172.21.15.156
IPs: 172.21.15.156
Port: <unset> 80/TCP
TargetPort: 8008/TCP
NodePort: <unset> 32153/TCP
Endpoints: 172.30.204.11:8008
Session Affinity: None
External Traffic Policy: Cluster
Events: <none>
```

Containers

Images

Volumes

Dev Environments BETA

Extensions BETA

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](#)

Showing 45 items

NAME

IMAGE

STATUS

PORT(S)

STARTED

ACTIONS

<code>k8s_POD_portal_default_84a78d0a-eb49-4a02-8533-312f4fe4ffca</code>	<code>k8s.gcr.io/pause:3.8</code>	Running	-	5 hours ago	
<code>jobapp-695da01804c5</code>	<code>au.icr.io/jpapp/repot1-jpaplatest</code>	Running	-	5 hours ago	
<code>k8s_POD_jp-pod_default_1bbb42cf-fa25-4bfe-8497-6ec649be0711</code>	<code>k8s.gcr.io/pause:3.8</code>	Running	-	5 hours ago	
<code>k8s_jp-pod_jp-pod_default_1bbb42cf-fa25-4bfe-844eabb3e989ee</code>	<code>au.icr.io/jpapp/repot1-jpaplatest</code>	Running	-	5 hours ago	
<code>k8s_storage-provisioner_storage-provisioner_kub-5113de3496a2</code>	<code>docker/desktop-storage-provisionerv2.0</code>	Running	-	4 hours ago	
<code>k8s_kube-scheduler_kube-scheduler-docker-desk-c9516595856d</code>	<code>k8s.gcr.io/kube-scheduler:v1.25.0</code>	Exited (1)	-		
<code>k8s_POD_flask-node-deployment-67ffc9fb5-mntj-0a56ba6ae04e</code>	<code>k8s.gcr.io/pause:3.8</code>	Running	-	3 hours ago	
<code>k8s_POD_kubernetes-dashboard-66c8877759-nq9-b3a531c06c0f</code>	<code>k8s.gcr.io/pause:3.8</code>	Running	-	3 hours ago	
<code>k8s_POD_dashboard-metrics-scraper-64bcc67c9c-b8e854425167</code>	<code>k8s.gcr.io/pause:3.8</code>	Running	-	3 hours ago	
<code>k8s_dashboard-metrics-scraper_dashboard-metri-</code>					

RAM 5.89GB CPU 45.83% Connected to Hub v4.12.0