

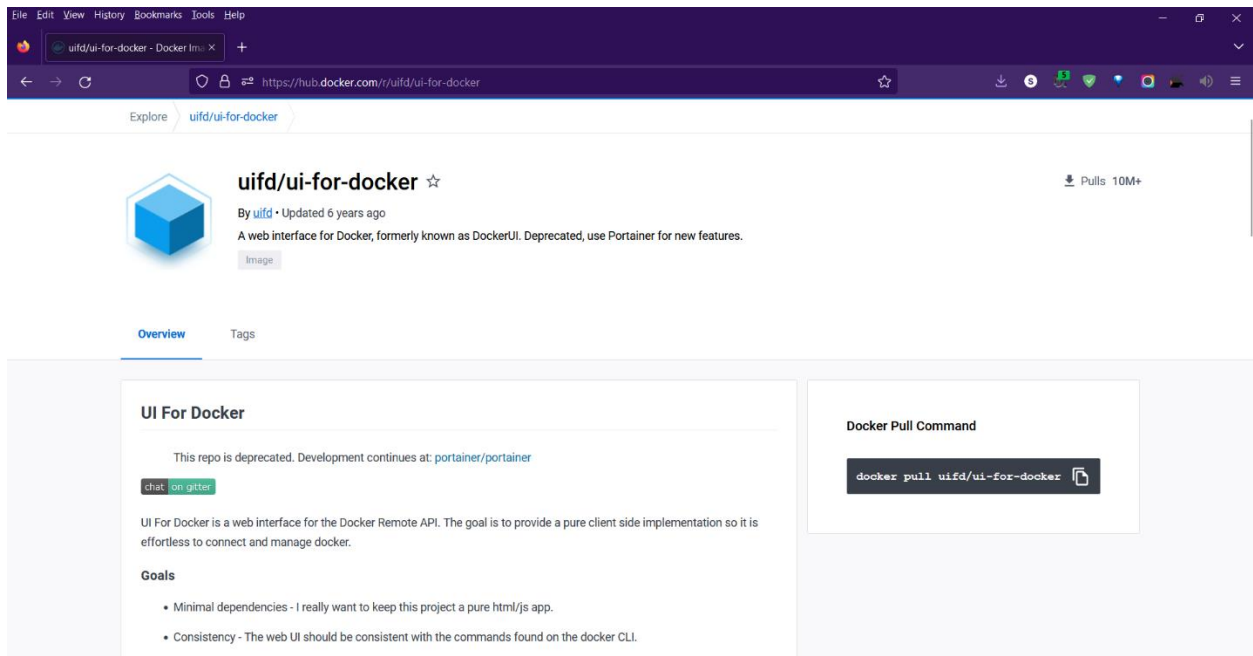
ASSIGNMENT - 4

Assignment Date	05-11-2022
Student Name	Nivetha K
Student Roll Number	95071915031
Maximum Marks	2 Marks

QUESTION:

1. Pull an Image from docker hub and run it in docker playground.
2. Create a docker file for the job portal application and deploy it in Docker desktop application.
3. Create an IBM container registry and deploy hello world app or job portal app.
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 node port.

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



The screenshot shows a web browser window displaying the Docker Hub page for the repository 'uifd/ui-for-docker'. The browser's address bar shows the URL 'https://hub.docker.com/r/uifd/ui-for-docker'. The page features a blue cube icon for the repository, the name 'uifd/ui-for-docker' with a star icon, and the text 'By uifd • Updated 6 years ago'. Below this, it states 'A web interface for Docker, formerly known as DockerUI. Deprecated, use Portainer for new features.' and shows 'Pulls 10M+'. The 'Overview' tab is selected, displaying a message that the repository is deprecated and development continues at 'portainer/portainer'. It also includes a GitHub repository link, a description of the project as a web interface for the Docker Remote API, and a list of goals: 'Minimal dependencies' and 'Consistency'. On the right, a 'Docker Pull Command' box shows the command 'docker pull uifd/ui-for-docker'.

03:25:20

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.18
node1

cdjko0u3_cdjko5m3tccg00d5usgg

IP

192.168.0.18

OPEN PORT

9000

Memory

1.73% (69.02MiB / 3.906GiB)

CPU

0.25%

SSH

ssh ip172-18-0-15-cdjko0u3tccg00d5usgg@direct.labs.play-with-d

DELETE

EDITOR

```
[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:fe371f45a69549269b24073a5ab1244dd4e0b834cbadf244870572150b1cb749
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
2827b45db7578c444b4a467322f83f94b76a3297cc1113b168cfd4996ab29524
[node1] (local) root@192.168.0.18 ~
$ docker ps
CONTAINER ID   IMAGE                COMMAND                  CREATED        STATUS        PORTS                    NAMES
2827b45db757   uifd/ui-for-docker   "/ui-for-docker"        13 minutes ago Up 13 minutes   0.0.0.0:9000->9000/tcp   recursing_lewin
[node1] (local) root@192.168.0.18 ~
$ docker images
REPOSITORY          TAG         IMAGE ID      CREATED        SIZE
uifd/ui-for-docker   latest      965940f98fa5  6 years ago    8.1MB
[node1] (local) root@192.168.0.18 ~
```

UI For Docker

Dashboard

Containers

Containers Network

Images

Networks

Volumes

Info

Refresh

Running Containers

recursing_lewin Up 8 minutes

Status

Running

Stopped

Ghost

Containers created

1

0

6/11/2022

Images created

1

0

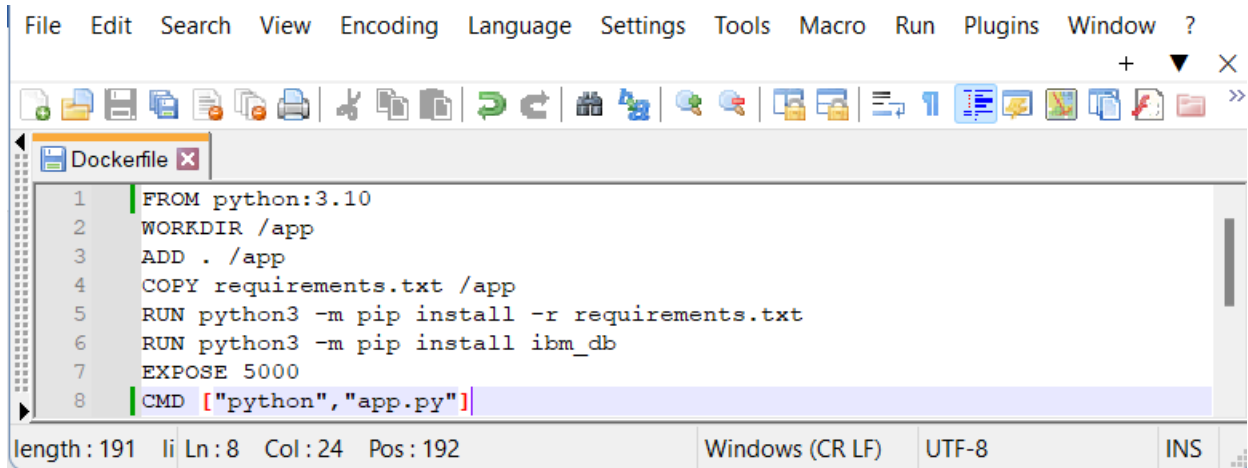
8/9/2016

Docker API Version: 1.41 UI Version: v0.11.0

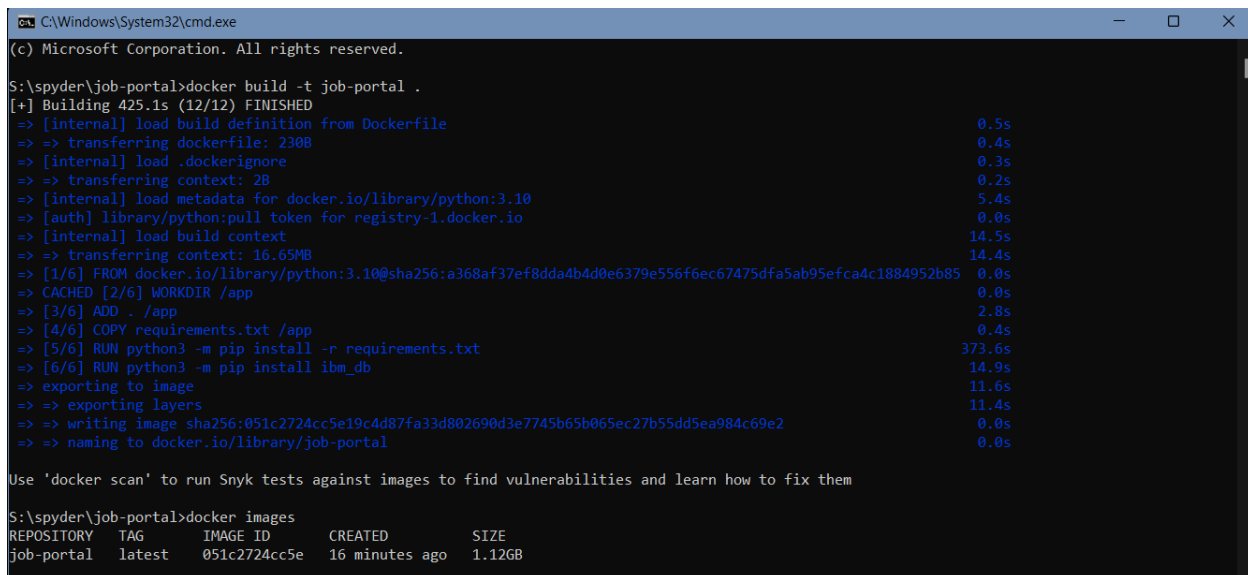
UI For Docker

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

Docker file:



```
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
length : 191 | Ln : 8 Col : 24 Pos : 192 Windows (CR LF) UTF-8 INS
1 FROM python:3.10
2 WORKDIR /app
3 ADD . /app
4 COPY requirements.txt /app
5 RUN python3 -m pip install -r requirements.txt
6 RUN python3 -m pip install ibm_db
7 EXPOSE 5000
8 CMD ["python", "app.py"]
```

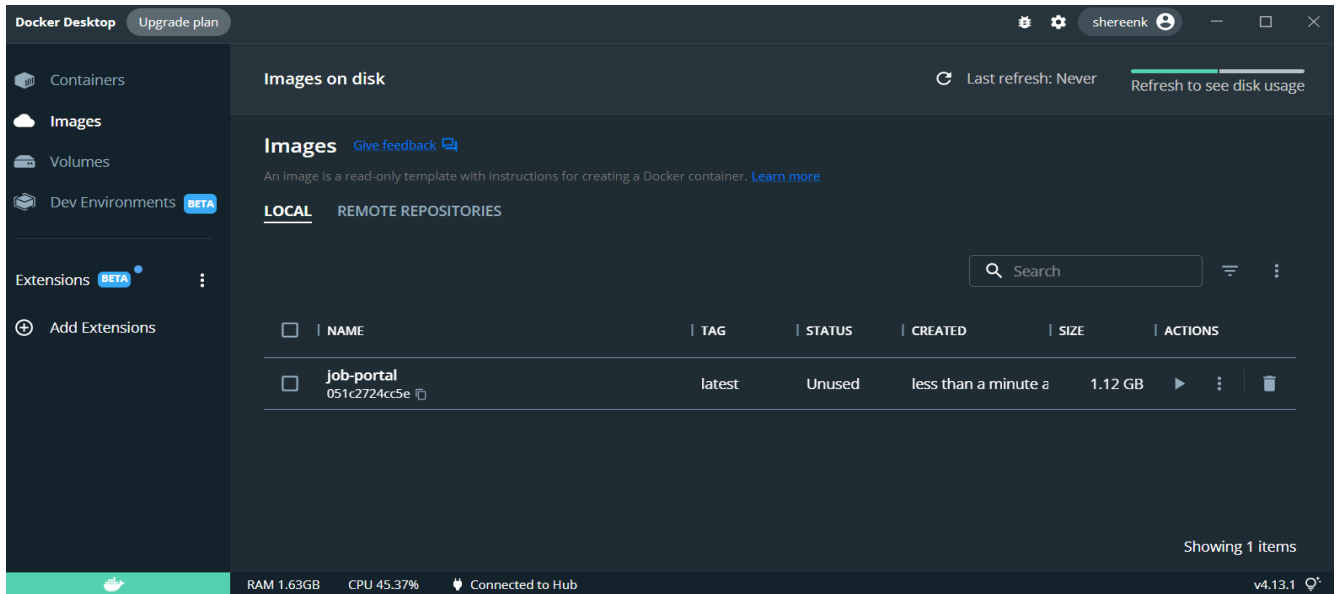


```
C:\Windows\System32\cmd.exe
(c) Microsoft Corporation. All rights reserved.

S:\spyder\job-portal>docker build -t job-portal .
[+] Building 425.1s (12/12) FINISHED
=> [internal] load build definition from Dockerfile 0.5s
=> => transferring dockerfile: 230B 0.4s
=> [internal] load .dockerignore 0.3s
=> => transferring context: 2B 0.2s
=> [internal] load metadata for docker.io/library/python:3.10 5.4s
=> [auth] library/python:pull token for registry-1.docker.io 0.0s
=> [internal] load build context 14.5s
=> => transferring context: 16.65MB 14.4s
=> [1/6] FROM docker.io/library/python:3.10@sha256:a368af37ef8dda4b4d0e6379e556f6ec67475dfa5ab95efca4c1884952b85 0.0s
=> CACHED [2/6] WORKDIR /app 0.0s
=> [3/6] ADD . /app 2.8s
=> [4/6] COPY requirements.txt /app 0.4s
=> [5/6] RUN python3 -m pip install -r requirements.txt 373.6s
=> [6/6] RUN python3 -m pip install ibm_db 14.9s
=> exporting to image 11.6s
=> => exporting layers 11.4s
=> => writing image sha256:051c2724cc5e19c4d87fa33d802690d3e7745b65b065ec27b55dd5ea984c69e2 0.0s
=> => naming to docker.io/library/job-portal 0.0s

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

S:\spyder\job-portal>docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
job-portal latest 051c2724cc5e 16 minutes ago 1.12GB
```



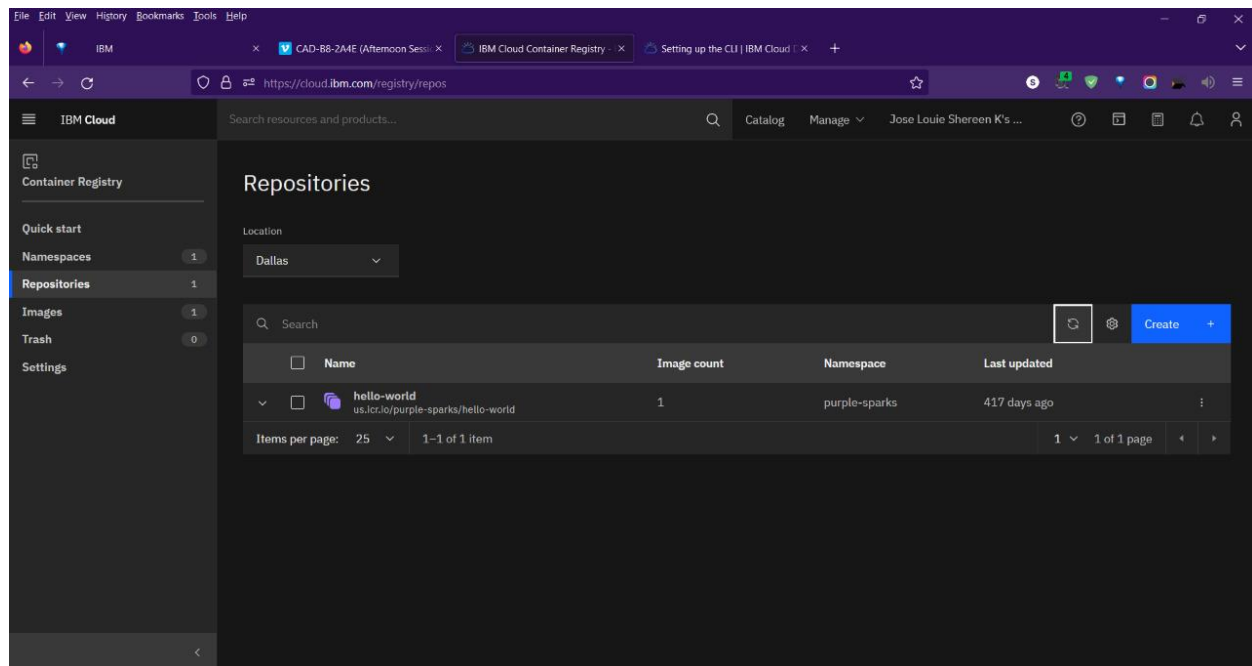
3. Create an IBM container registry and deploy hello world app or job portal app.

```
C:\Users\Dell>ibmcloud cr image-list
Listing images...

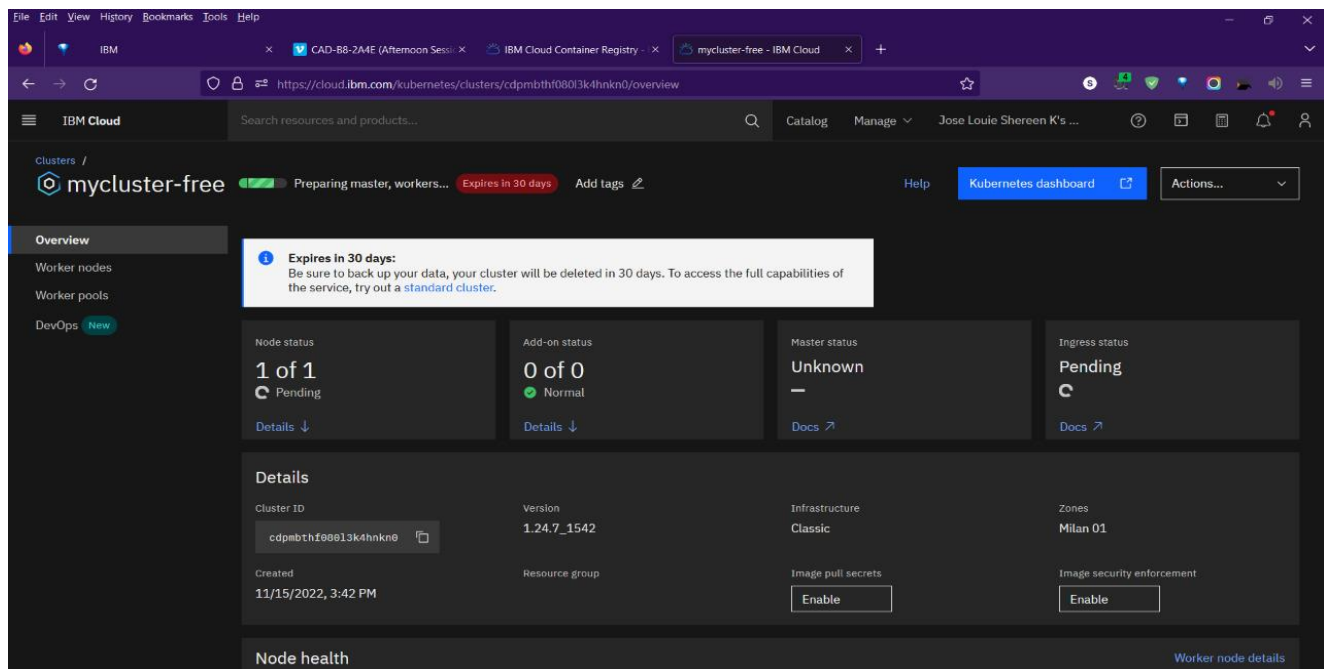
Repository          Tag    Digest          Namespace    Created    Size    Security status
us.icr.io/purple-sparks/hello-world  latest  f54a58bc1aac    purple-sparks  1 year ago  2.5 kB  -

OK

C:\Users\Dell>docker pull us.icr.io/purple-sparks/hello-world
Using default tag: latest
latest: Pulling from purple-sparks/hello-world
Digest: sha256:f54a58bc1aac5ea1a25d796ae155dc228b3f0e11d046ae276b39c4bf2f13d8c4
Status: Image is up to date for us.icr.io/purple-sparks/hello-world:latest
us.icr.io/purple-sparks/hello-world:latest
```



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 node port.



File Edit View History Bookmarks Tools Help

IBM CAD-B8-24ME (Afternoon Sess... IBM Cloud Container Registry - x mycluster-free - IBM Cloud x +

https://cloud.ibm.com/kubernetes/clusters/cdpmbthf080l3k4hnkn0/overview

IBM Cloud Search resources and products... Catalog Manage Jose Louie Shereen K's ...

Details ↓ Details ↓ Docs ↗ Docs ↗

Details

Cluster ID	Version	Infrastructure	Zones
cdpmbthf080l3k4hnkn0	1.24.7_1542	Classic	Milan 01
Created	Resource group	Image security enforcement	
11/15/2022, 3:42 PM	Default	<button>Enable</button>	

Node health

1 total nodes

Worker node details

Critical 0% Warning 0% Normal 100% Pending 0%

Networking

Service endpoint URL

☒ Public enabled Copy link

☐ Private disabled Copy link

File Edit View History Bookmarks Tools Help

IBM IBM Cloud Container Registry - x mycluster-free - IBM Cloud x mycluster-free - Kubernetes Dashboard x +

https://eu-de.containers.cloud.ibm.com/kubeproxy/clusters/cdpmbthf080l3k4hnkn0/service/#/discovery?namespace=default

kubernetes default Search +

Service

Workloads

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

Service

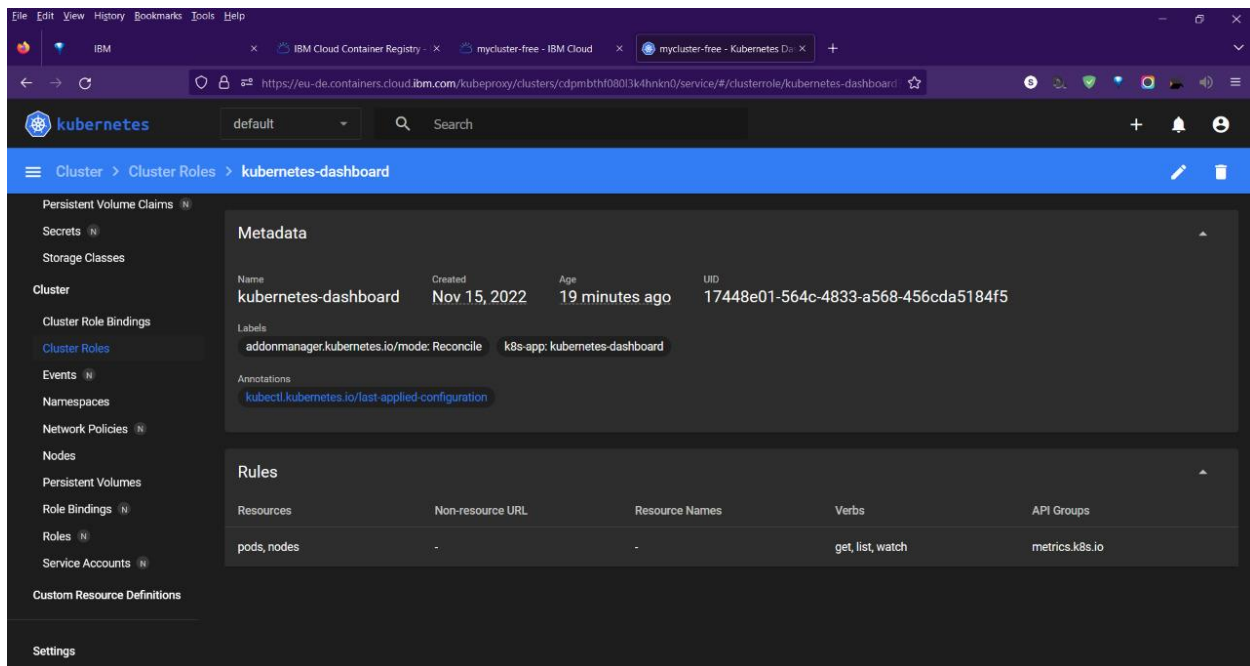
- Ingresses
- Ingress Classes
- Services

Config and Storage

- Config Maps
- Persistent Volume Claims

Services

Name	Labels	Type	Cluster IP	Internal Endpoints	External Endpoints	Created ↑
kubernetes	<a>Show all	ClusterIP	172.21.0.1	kubernetes:443 TCP kubernetes:0 TCP	-	22 minutes ago



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Aboutus

Mission

SMARTBRIDGE is an edTech organization with a vision to bridge the gap between academia & industry. Our outcome-based experiential learning programs on emerging technologies (Internet of Things, Machine Learning, Data Science, Artificial Intelligence, Robotics) are building skilled entry-level engineers, for the corporate world.

Vission

Our main objective is to bridge the existing gaps between prevailing industry standards and what the academics offer to the graduates while passing out of university. SmartBridge offers suitable skill deployment and training to the young talent before on boarding their first job. Our skill development programs are designed considering the present expectations in the industry.

Objective

Well directed career guidance programs for educational institutions
Appropriate certification courses that suit the industry need
Train the trainers; expanded awareness about the current industry standards
Liaise with corporates to offer niche internships
Establish technology development centers in colleges
Specialised incubation centers in collaboration with corporates

JobPortal

Lorem ipsum dolor sit amet consectetur adipiscing elit. Voluptatum quis, reiciendis id magni magnam, accusamus nobis in, temporibus molestias ab placeat rerum aperiam illum perspiciatis ducimus non! Fugiat, odit ducimus.

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