ASSIGNMENT
4

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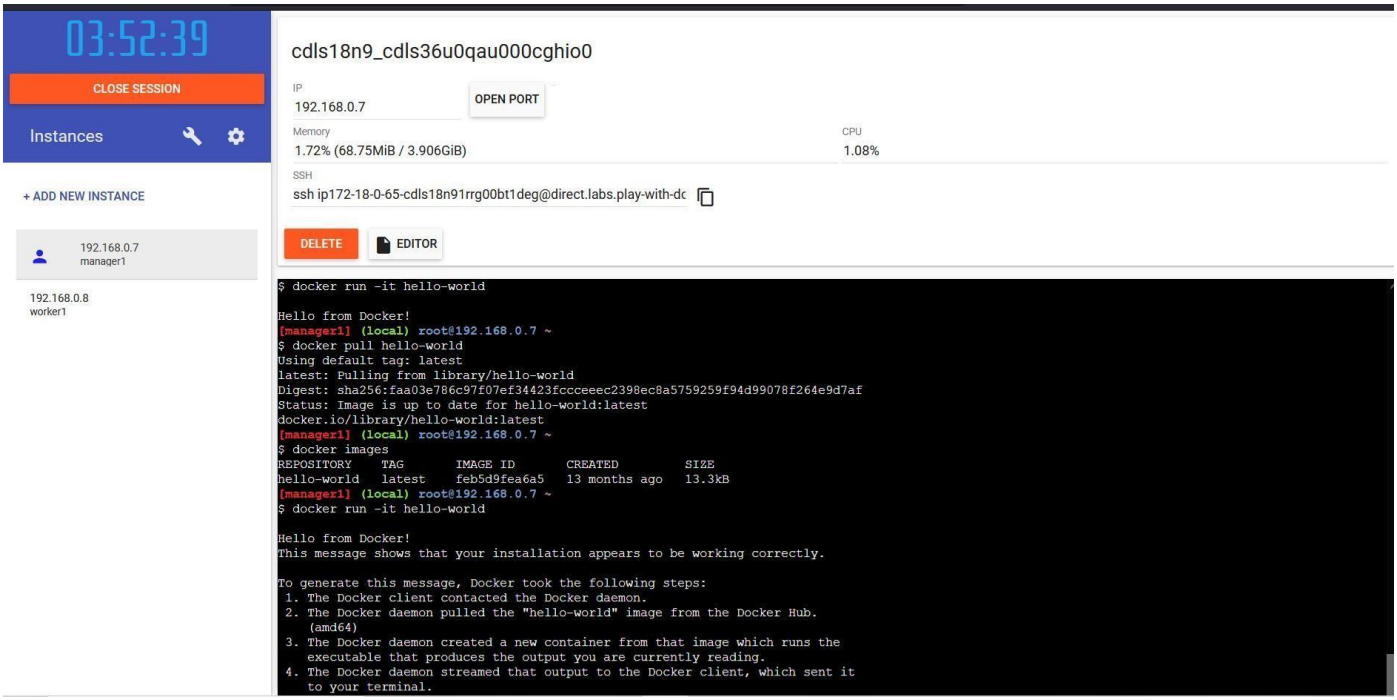
1. Pull an Image from docker hub and run it in docker playground.



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

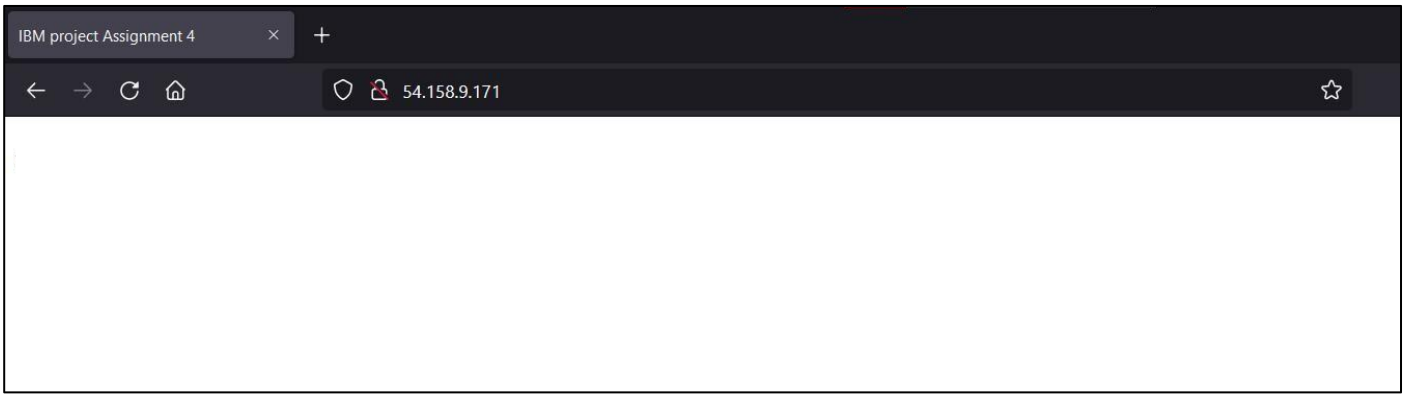
FROM ubuntu

RUN apt-get update

RUN apt-get apache2 -y

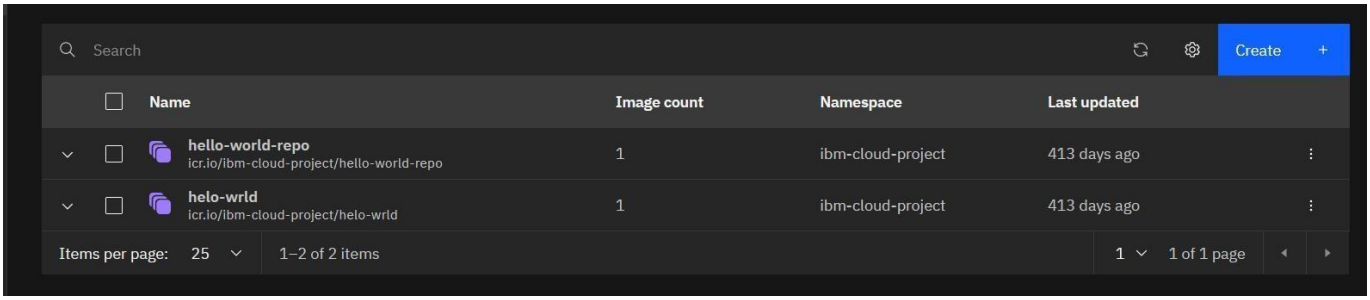
```
ubuntu@ip-172-31-28-246:~$ docker build . -t apache2
Sending build context to Docker daemon  15.87kB
Step 1/5 : FROM  ubuntu
 ---> a8780b506fa4
Step 2/5 : RUN  apt-get update
 ---> Using cache
 ---> 981b376d63ad
Step 3/5 : RUN  apt install apache2 -y
 ---> Using cache
 ---> e6dc16c6e4bc
Step 4/5 : ADD  ./index.html   /var/www/html
 ---> 7c2be22cde03
Step 5/5 : CMD apachectl  -D  FOREGROUND
 ---> Running in ad83f7238a24
Removing intermediate container ad83f7238a24
 ---> f874c46d2056
Successfully built f874c46d2056
Successfully tagged apache2:latest
```

```
ubuntu@ip-172-31-28-246:~$ docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED         STATUS         PORTS                                   NAMES
4c5680e607f2   apache2   "/bin/sh -c 'apachec…"   2 minutes ago   Up 2 minutes   0.0.0.0:80->80/tcp, :::80->80/tcp   thirsty_dubinsky
ubuntu@ip-172-31-28-246:~$
```

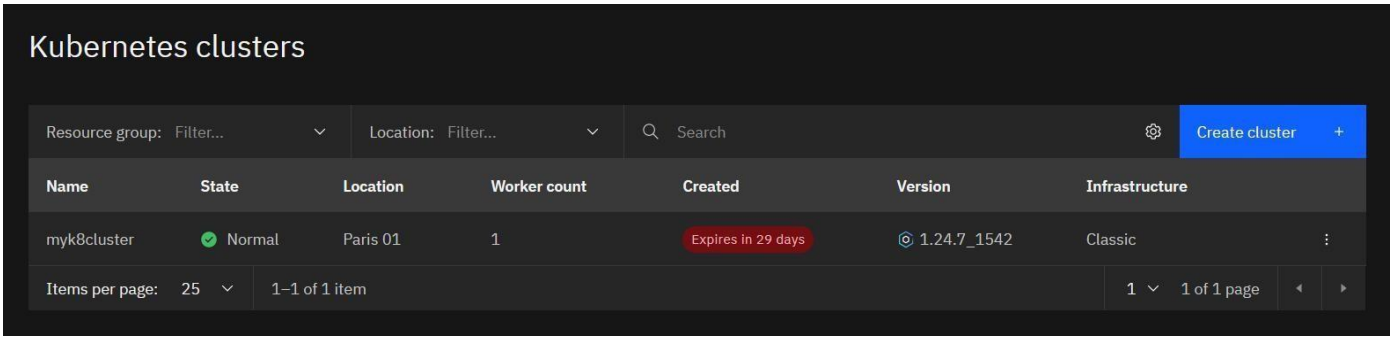


3. Create a IBM container registry and deploy hello world app or job portal app

```
┌──(siva㉿kali)-[~]
└─$ docker tag hello-world icr.io/ibm-cloud-project/helo-wrld:v1

┌──(siva㉿kali)-[~]
└─$ docker images
REPOSITORY                                   TAG       IMAGE ID       CREATED         SIZE
hello-world                                  latest    feb5d9fea6a5   13 months ago   13.3kB
icr.io/ibm-cloud-project/hello-world-repo    latest    feb5d9fea6a5   13 months ago   13.3kB
icr.io/ibm-cloud-project/helo-wrld           v1        feb5d9fea6a5   13 months ago   13.3kB

┌──(siva㉿kali)-[~]
└─$ ibmcloud cr login
Logging 'docker' in to 'icr.io' ...
Logged in to 'icr.io'.

OK

┌──(siva㉿kali)-[~]
└─$ docker push icr.io/ibm-cloud-project/helo-wrld:v1
The push refers to repository [icr.io/ibm-cloud-project/helo-wrld]
e07ee1baac5f: Mounted from ibm-cloud-project/hello-world-repo
v1: digest: sha256:f54a58bc1aac5ea1a25d796ae155dc228b3f0e11d046ae276b39c4bf2f13d8c4 size: 525
```

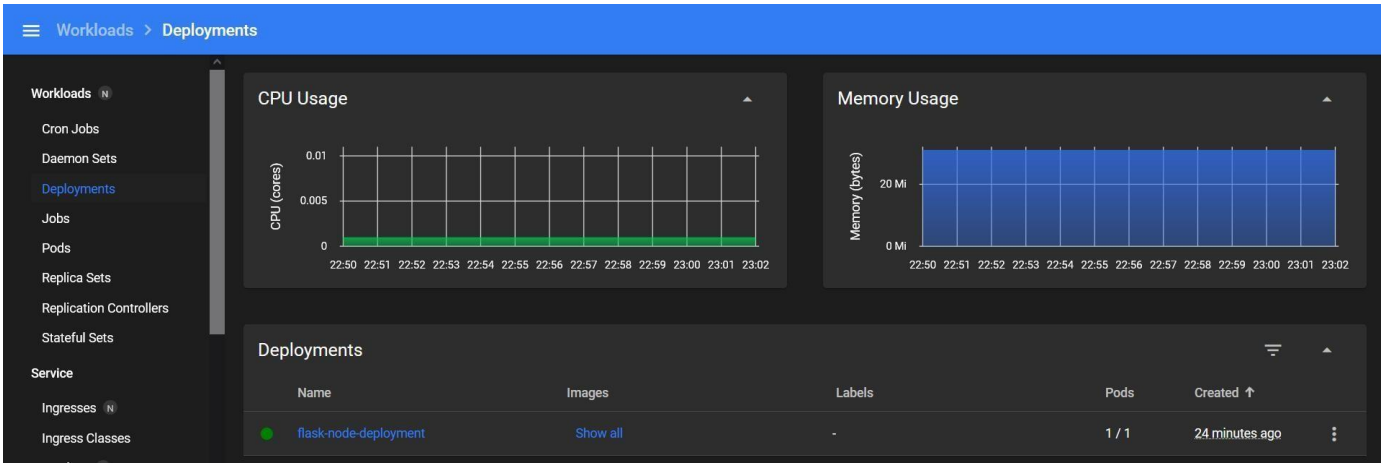
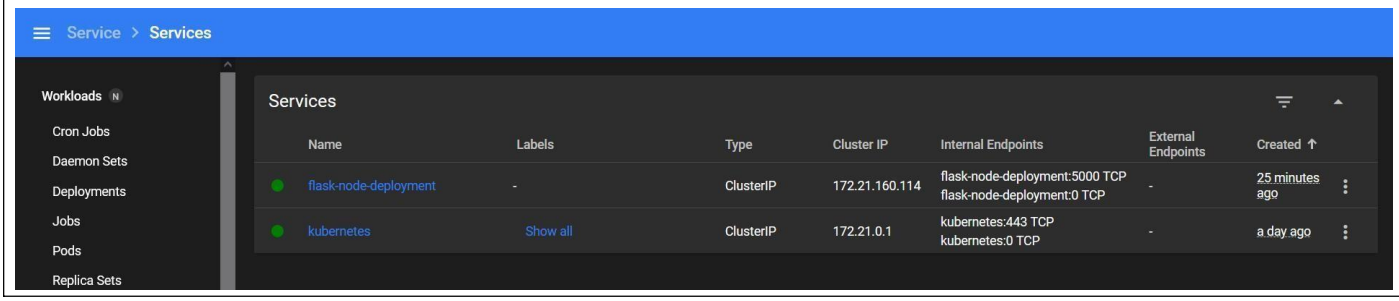


4. Create a Kubernetes cluster in IBM cloud and deploy helloworld image or jobportal image and also expose thesame app to run in nodeport




```
ubuntu@ip-172-31-28-246:~$ kubectl config current-context
myk8cluster/cdls28cf0rjkfc1fiuag
ubuntu@ip-172-31-28-246:~$
```

```
ubuntu@ip-172-31-28-246:~/assignment4/jobportal$ kubectl create -f deployment.yaml
deployment.apps/flask-node-deployment created
ubuntu@ip-172-31-28-246:~/assignment4/jobportal$ kubectl create -f service.yaml
service/flask-node-deployment created
```

```
ubuntu@ip-172-31-28-246:~/assignment4/jobportal$ kubectl get pods
NAME                                    READY   STATUS    RESTARTS   AGE
flask-node-deployment-668f76c67-zwzv5   1/1     Running   0          14m
ubuntu@ip-172-31-28-246:~/assignment4/jobportal$
```

```
ubuntu@ip-172-31-28-246:~/assignment4/jobportal$ kubectl get service
NAME                   TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)    AGE
flask-node-deployment  ClusterIP   172.21.160.114   <none>        5000/TCP   21m
kubernetes             ClusterIP   172.21.0.1       <none>        443/TCP    26h
ubuntu@ip-172-31-28-246:~/assignment4/jobportal$
```