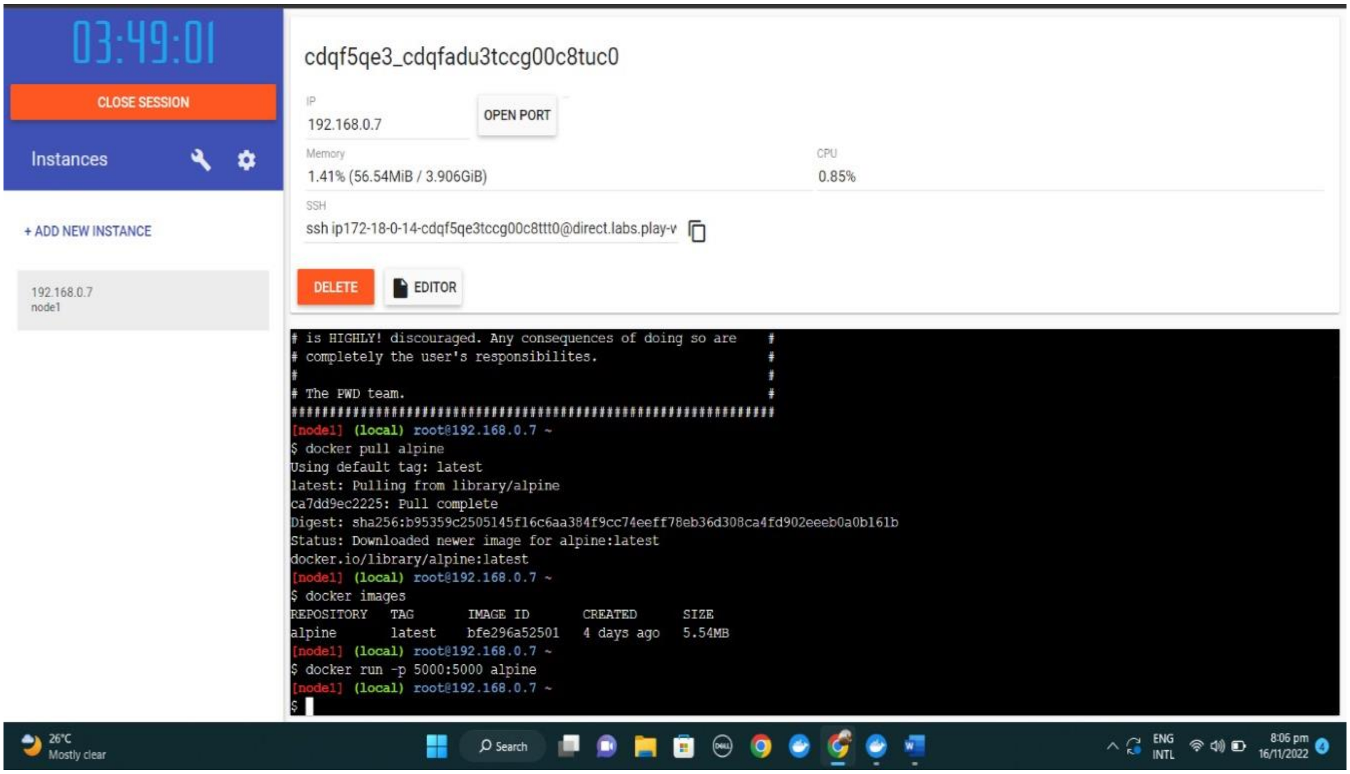
Assignment 4

Date	12 November 2022
Team ID	PNT2022TMID47421
Project Name	Smart fashion Recommender application
Maximum marks	2 marks

1.PULL AN IMAGE FROM DOCKER HUB AND RUN IT IN DOCKER PLAYGROUND



cdqf5qe3_cdqfadu3tccg00c8tuc0

IP: 192.168.0.7

Memory: 1.41% (56.54MiB / 3.906GiB)

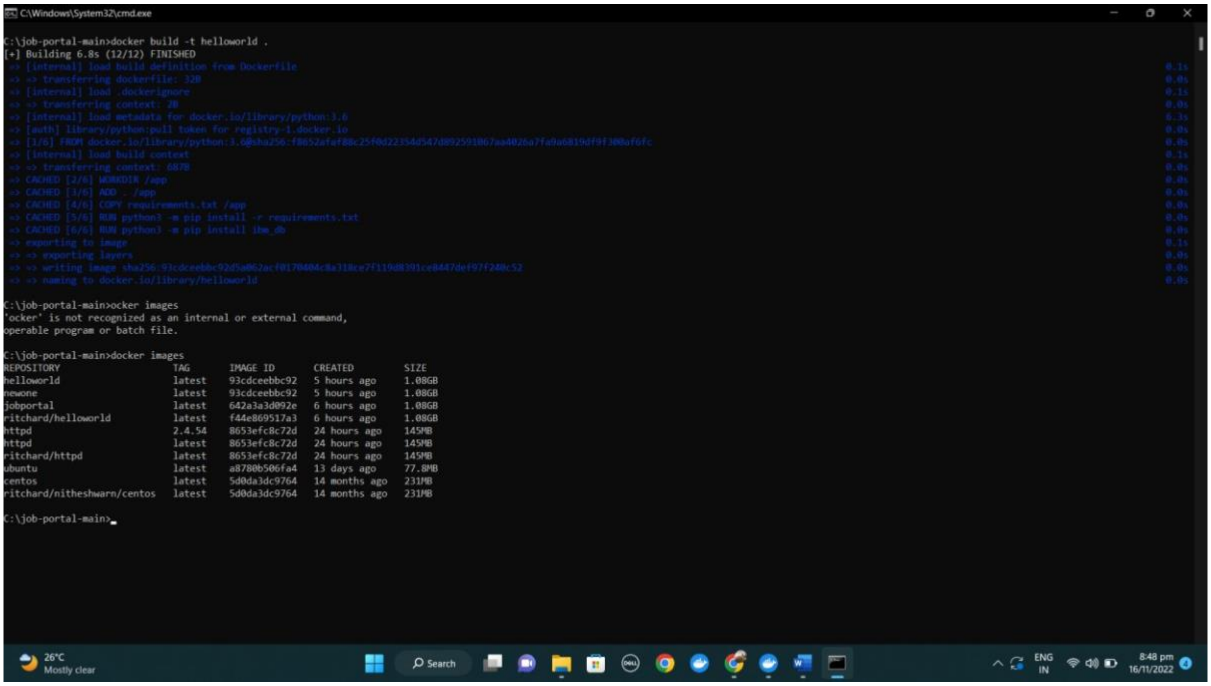
CPU: 0.85%

SSH: ssh ip172-18-0-14-cdqf5qe3tccg00c8ttt0@direct.labs.play-v

```
# is HIGHLY! discouraged. Any consequences of doing so are    #
# completely the user's responsibilites.                      #
#                                                             #
# The PWD team.                                               #
###############################################################
[node1] (local) root@192.168.0.7 ~
$ docker pull alpine
Using default tag: latest
latest: Pulling from library/alpine
ca7dd9ec2225: Pull complete
Digest: sha256:b95359c2505145f16c6aa384f9cc74eeff78eb36d308ca4fd902eeeb0a0b161b
Status: Downloaded newer image for alpine:latest
docker.io/library/alpine:latest
[node1] (local) root@192.168.0.7 ~
$ docker images
REPOSITORY   TAG       IMAGE ID       CREATED      SIZE
alpine       latest    bfe296a52501   4 days ago   5.54MB
[node1] (local) root@192.168.0.7 ~
$ docker run -p 5000:5000 alpine
[node1] (local) root@192.168.0.7 ~
$
```

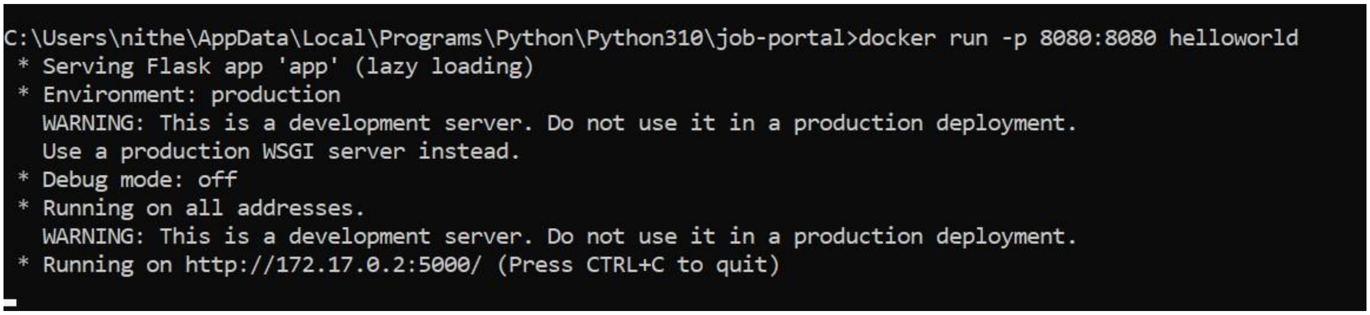
2.CREATE A DOCKER FILE FOR THE JOBPORTAL APPLICATION AND DEPLOY IT IN DOCKER DESKTOP APPLICATION

Building the image hello world:



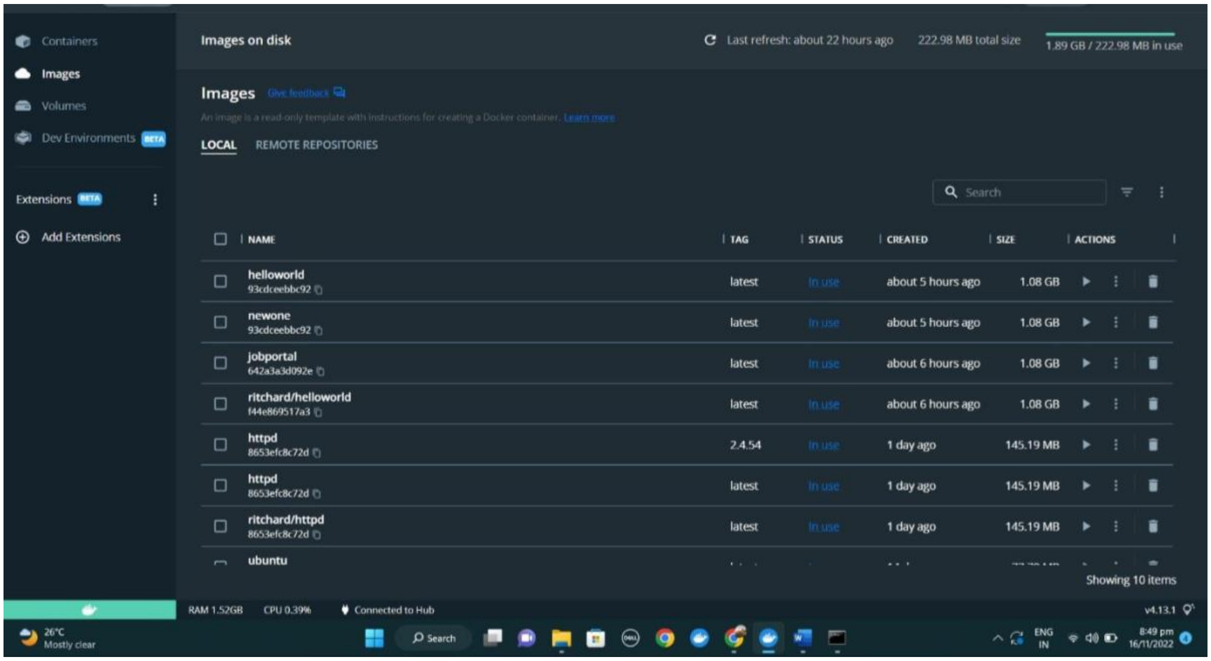
```
C:\job-portal-main>docker build -t helloworld .
[+] Building 6.8s (12/12) FINISHED
 => [internal] load build definition from Dockerfile                                                  0.1s
 => => transferring dockerfile: 32B                                                                   0.0s
 => [internal] load .dockerignore                                                                     0.1s
 => => transferring context: 2B                                                                       0.0s
 => [internal] load metadata for docker.io/library/python:3.6                                         6.3s
 => [auth] library/python:pull token for registry-1.docker.io                                         0.0s
 => [1/6] FROM docker.io/library/python:3.6@sha256:f8652afaf88c25f0d22354d547d892591867aa4026a7fa9a6819df9f300af6fc  0.0s
 => [internal] load build context                                                                     0.1s
 => => transferring context: 687B                                                                     0.0s
 => CACHED [2/6] WORKDIR /app                                                                         0.0s
 => CACHED [3/6] ADD . /app                                                                           0.0s
 => CACHED [4/6] COPY requirements.txt /app                                                           0.0s
 => CACHED [5/6] RUN python3 -m pip install -r requirements.txt                                       0.0s
 => CACHED [6/6] RUN python3 -m pip install ibm_db                                                    0.0s
 => exporting to image                                                                                0.1s
 => => exporting layers                                                                               0.0s
 => => writing image sha256:93cdceebbc92d5a062acf0170404c8a318ce7f119d8391ce8447def97f240c52          0.0s
 => => naming to docker.io/library/helloworld                                                         0.0s

C:\job-portal-main>ocker images
'ocker' is not recognized as an internal or external command,
operable program or batch file.

C:\job-portal-main>docker images
REPOSITORY                    TAG       IMAGE ID       CREATED         SIZE
helloworld                    latest    93cdceebbc92   5 hours ago     1.08GB
newone                        latest    93cdceebbc92   5 hours ago     1.08GB
jobportal                     latest    642a3a3d092e   6 hours ago     1.08GB
ritchard/helloworld           latest    f44e869517a3   6 hours ago     1.08GB
httpd                         2.4.54    8653efc8c72d   24 hours ago    145MB
httpd                         latest    8653efc8c72d   24 hours ago    145MB
ritchard/httpd                latest    8653efc8c72d   24 hours ago    145MB
ubuntu                        latest    a8780b506fa4   13 days ago     77.8MB
centos                        latest    5d0da3dc9764   14 months ago   231MB
ritchard/nitheshwarn/centos   latest    5d0da3dc9764   14 months ago   231MB

C:\job-portal-main>
```

Run:



```
C:\Users\nithe\AppData\Local\Programs\Python\Python310\job-portal>docker run -p 8080:8080 helloworld
 * Serving Flask app 'app' (lazy loading)
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deployment.
   Use a production WSGI server instead.
 * Debug mode: off
 * Running on all addresses.
   WARNING: This is a development server. Do not use it in a production deployment.
 * Running on http://172.17.0.2:5000/ (Press CTRL+C to quit)
```

Docker desktop:



Images on disk — Last refresh: about 22 hours ago — 222.98 MB total size — 1.89 GB / 222.98 MB in use

Images

An image is a read-only template with instructions for creating a Docker container. Learn more

LOCAL   REMOTE REPOSITORIES

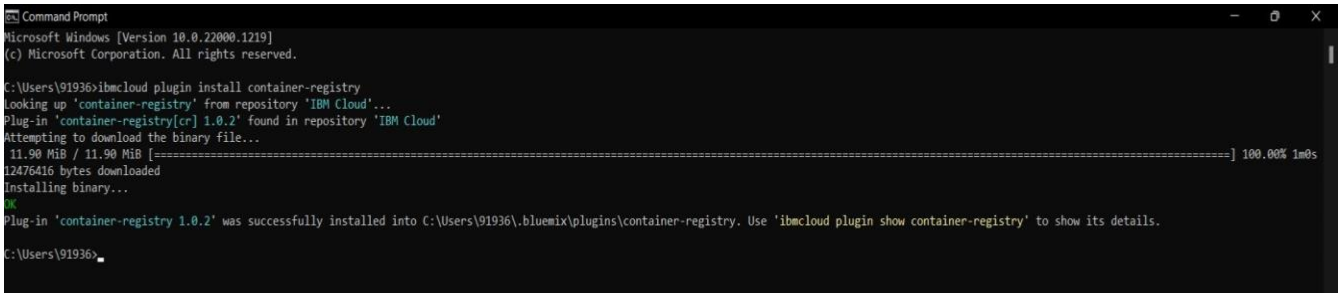
NAME	TAG	STATUS	CREATED	SIZE
helloworld 93cdceebbc92	latest	In use	about 5 hours ago	1.08 GB
newone 93cdceebbc92	latest	In use	about 5 hours ago	1.08 GB
jobportal 642a3a3d092e	latest	In use	about 6 hours ago	1.08 GB
ritchard/helloworld f44e869517a3	latest	In use	about 6 hours ago	1.08 GB
httpd 8653efc8c72d	2.4.54	In use	1 day ago	145.19 MB
httpd 8653efc8c72d	latest	In use	1 day ago	145.19 MB
ritchard/httpd 8653efc8c72d	latest	In use	1 day ago	145.19 MB
ubuntu				

Showing 10 items

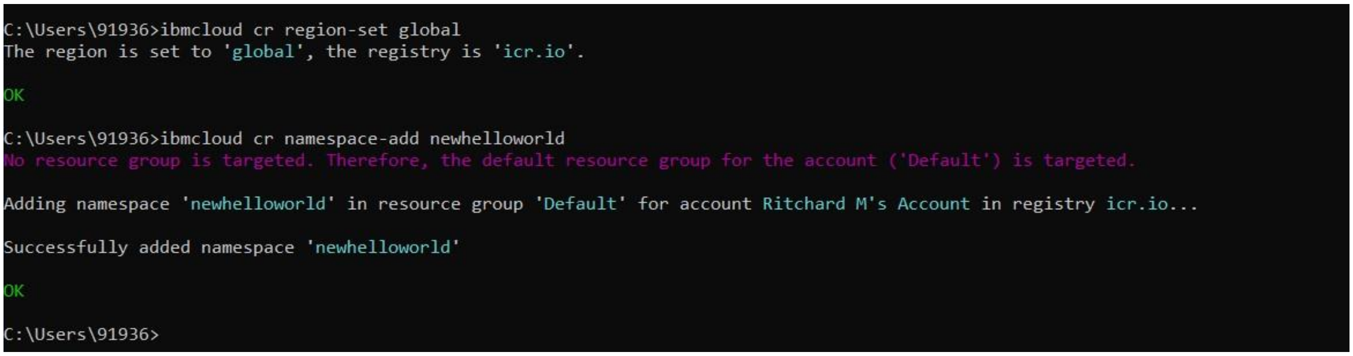
RAM 1.52GB   CPU 0.39%   Connected to Hub   v4.13.1

3.CREATE A IBM CONTAINER REGISTRY AND DEPLOY HELLO WORLD APP

Install container registry and create namespace

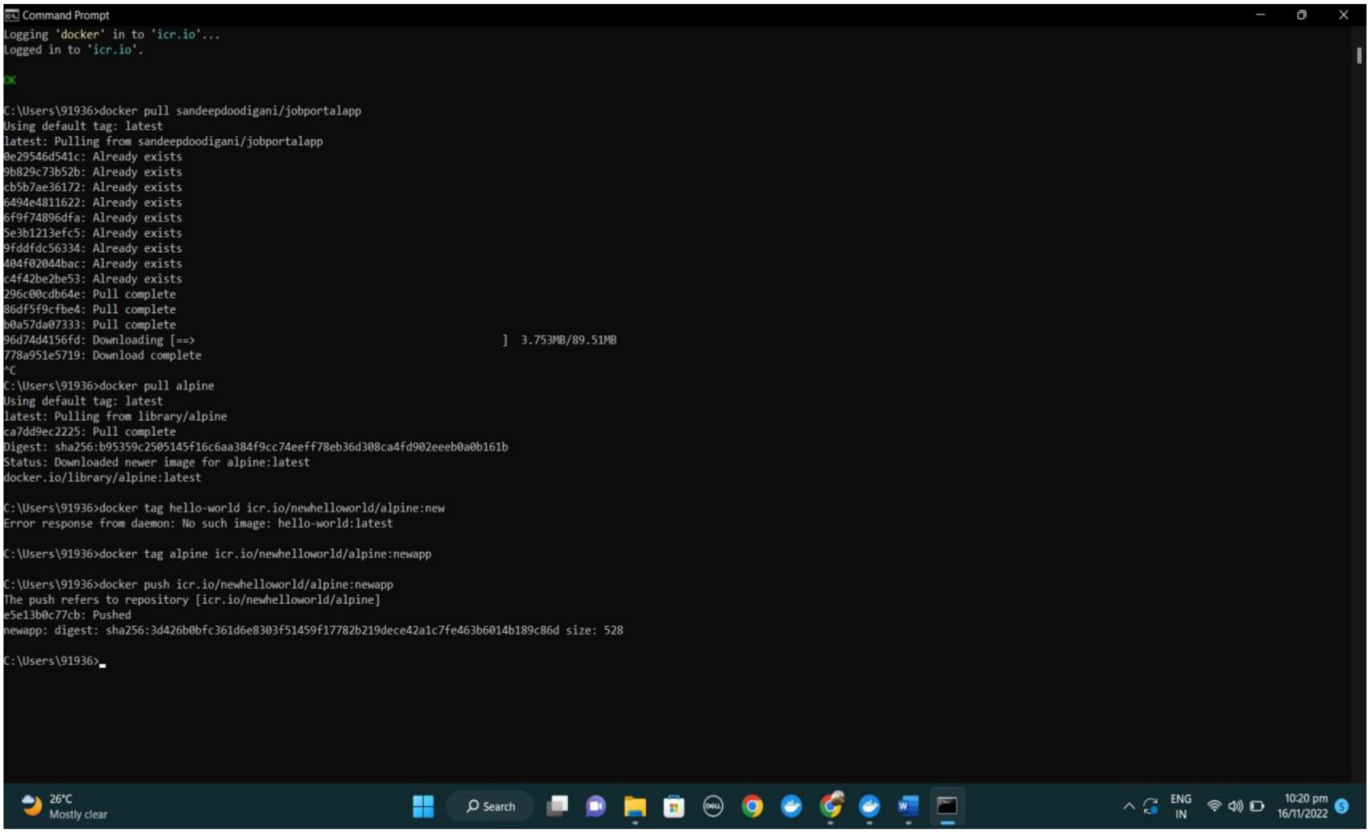


```
Microsoft Windows [Version 10.0.22000.1219]
(c) Microsoft Corporation. All rights reserved.

C:\Users\91936>ibmcloud plugin install container-registry
Looking up 'container-registry' from repository 'IBM Cloud'...
Plug-in 'container-registry[cr] 1.0.2' found in repository 'IBM Cloud'
Attempting to download the binary file...
 11.90 MiB / 11.90 MiB [=========================================================================================================================] 100.00% 1m0s
12476416 bytes downloaded
Installing binary...
OK
Plug-in 'container-registry 1.0.2' was successfully installed into C:\Users\91936\.bluemix\plugins\container-registry. Use 'ibmcloud plugin show container-registry' to show its details.

C:\Users\91936>
```



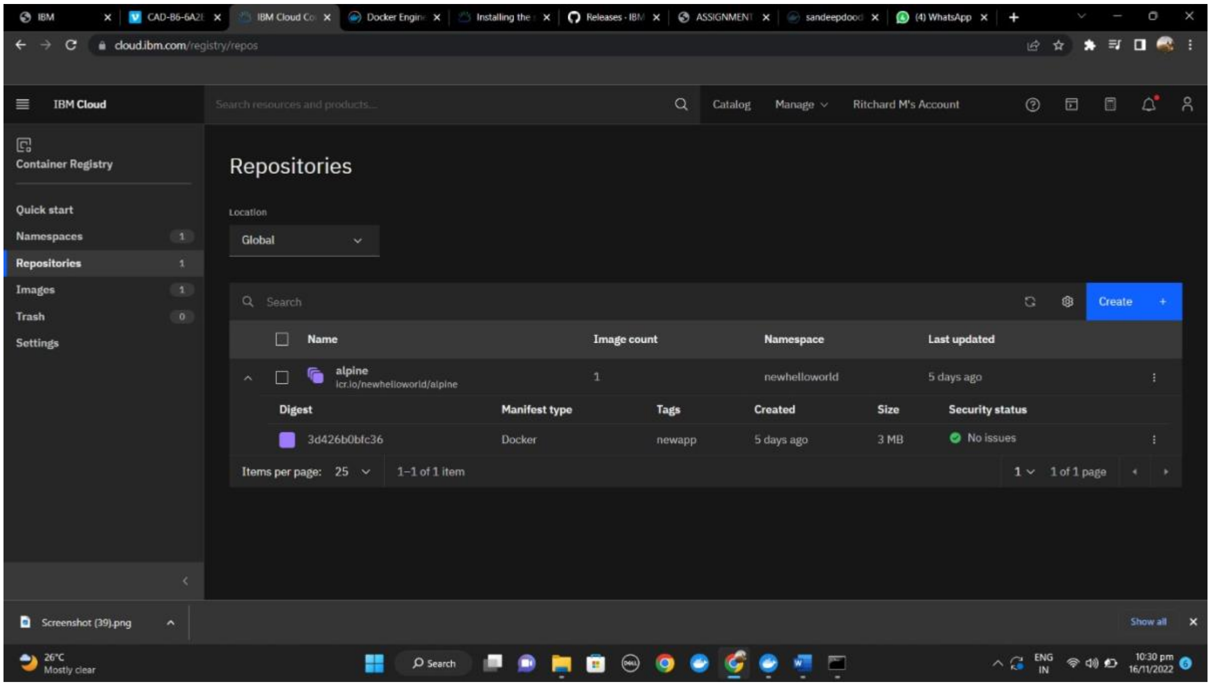
```
C:\Users\91936>ibmcloud cr region-set global
The region is set to 'global', the registry is 'icr.io'.

OK

C:\Users\91936>ibmcloud cr namespace-add newhelloworld
No resource group is targeted. Therefore, the default resource group for the account ('Default') is targeted.

Adding namespace 'newhelloworld' in resource group 'Default' for account Ritchard M's Account in registry icr.io...

Successfully added namespace 'newhelloworld'

OK

C:\Users\91936>
```

Push and Pull image



```
Logging 'docker' in to 'icr.io'...
Logged in to 'icr.io'.

OK

C:\Users\91936>docker pull sandeepdoodigani/jobportalapp
Using default tag: latest
latest: Pulling from sandeepdoodigani/jobportalapp
0e29546d541c: Already exists
9b829c73b52b: Already exists
cb5b7ae36172: Already exists
6494e4811622: Already exists
6f9f74896dfa: Already exists
5e3b1213efc5: Already exists
9fddfdc56334: Already exists
404f02044bac: Already exists
c4f42be2be53: Already exists
296c00cdb64e: Pull complete
86df5f9cfbe4: Pull complete
b0a57da07333: Pull complete
96d74d4156fd: Downloading [==>                                                ]  3.753MB/89.51MB
778a951e5719: Download complete
^C
C:\Users\91936>docker pull alpine
Using default tag: latest
latest: Pulling from library/alpine
ca7dd9ec2225: Pull complete
Digest: sha256:b95359c2505145f16c6aa384f9cc74eeff78eb36d308ca4fd902eeeb0a0b161b
Status: Downloaded newer image for alpine:latest
docker.io/library/alpine:latest

C:\Users\91936>docker tag hello-world icr.io/newhelloworld/alpine:new
Error response from daemon: No such image: hello-world:latest

C:\Users\91936>docker tag alpine icr.io/newhelloworld/alpine:newapp

C:\Users\91936>docker push icr.io/newhelloworld/alpine:newapp
The push refers to repository [icr.io/newhelloworld/alpine]
e5e13b0c77cb: Pushed
newapp: digest: sha256:3d426b0bfc361d6e8303f51459f17782b219dece42a1c7fe463b6014b189c86d size: 528

C:\Users\91936>_
```

IBM container registry



Repositories

Location

Global

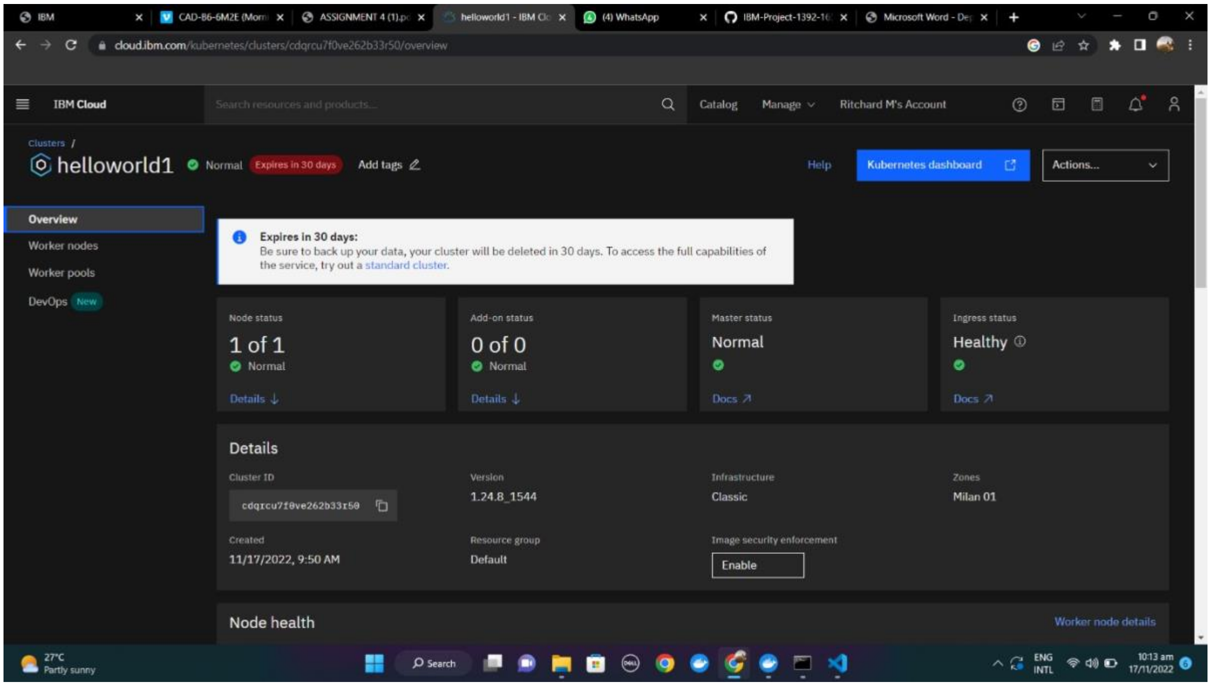
Name	Image count	Namespace	Last updated
alpine icr.io/newhelloworld/alpine	1	newhelloworld	5 days ago

Digest	Manifest type	Tags	Created	Size	Security status
3d426b0bfc36	Docker	newapp	5 days ago	3 MB	✓ No issues

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

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

Cluster creation



helloworld1 Normal Expires in 30 days Add tags

Expires in 30 days:
Be sure to back up your data, your cluster will be deleted in 30 days. To access the full capabilities of the service, try out a standard cluster.

Node status
1 of 1
Normal

Add-on status
0 of 0
Normal

Master status
Normal

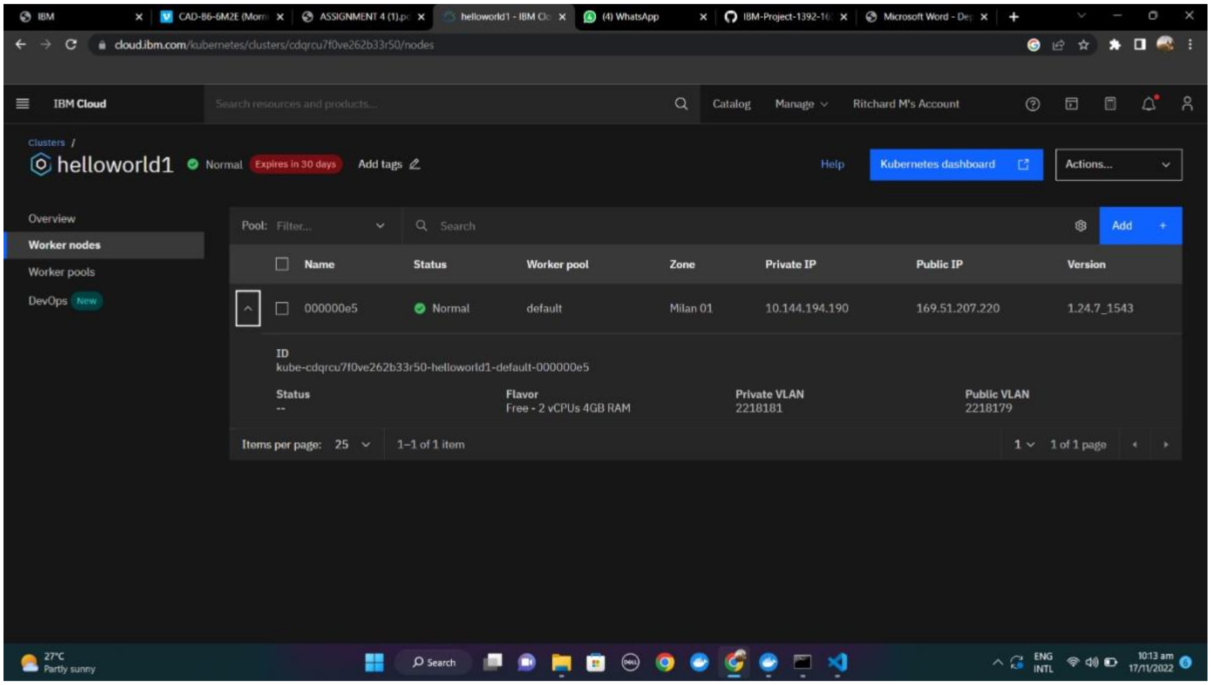
Ingress status
Healthy

Details

Cluster ID	Version	Infrastructure	Zones
cdqrcu7f0ve262b33r50	1.24.8_1544	Classic	Milan 01

Created	Resource group	Image security enforcement
11/17/2022, 9:50 AM	Default	Enable

Node health



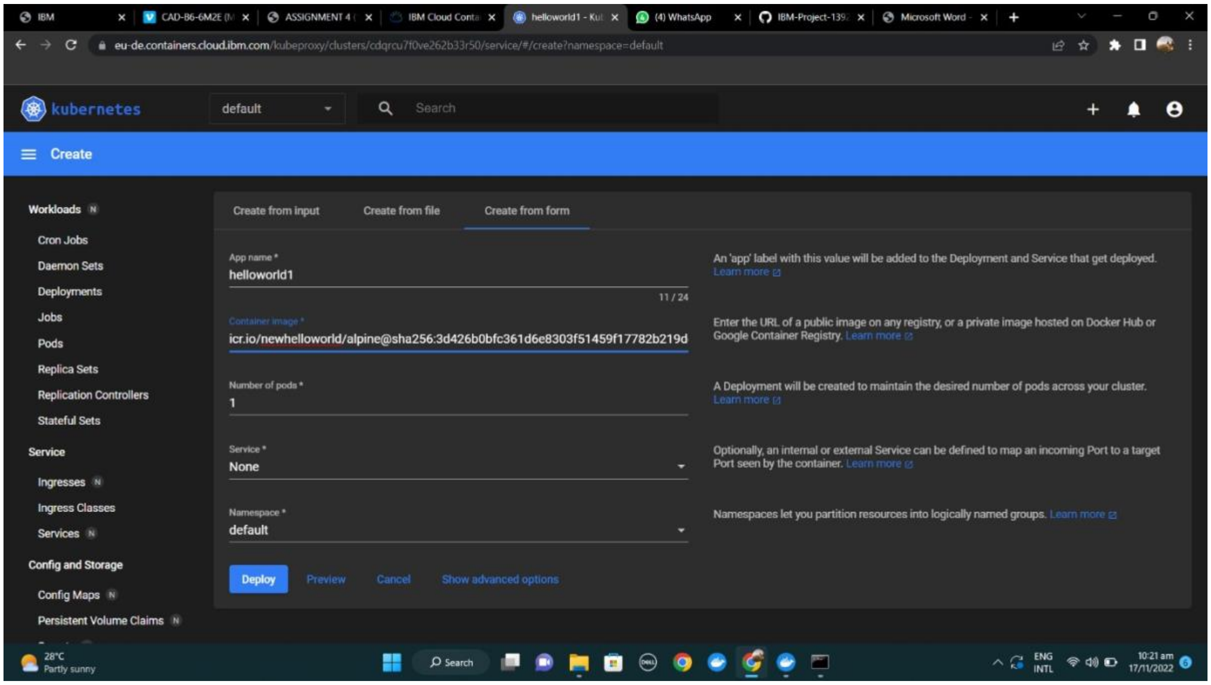
helloworld1 Normal Expires in 30 days Add tags

Name	Status	Worker pool	Zone	Private IP	Public IP	Version
000000e5	Normal	default	Milan 01	10.144.194.190	169.51.207.220	1.24.7_1543

ID
kube-cdqrcu7f0ve262b33r50-helloworld1-default-000000e5

Status	Flavor	Private VLAN	Public VLAN
--	Free - 2 vCPUs 4GB RAM	2218181	2218179

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



App name *
helloworld1
11 / 24

An 'app' label with this value will be added to the Deployment and Service that get deployed. Learn more

Container image *
icr.io/newhelloworld/alpine@sha256:3d426b0bfc361d6e8303f51459f17782b219d

Enter the URL of a public image on any registry, or a private image hosted on Docker Hub or Google Container Registry. Learn more

Number of pods *
1

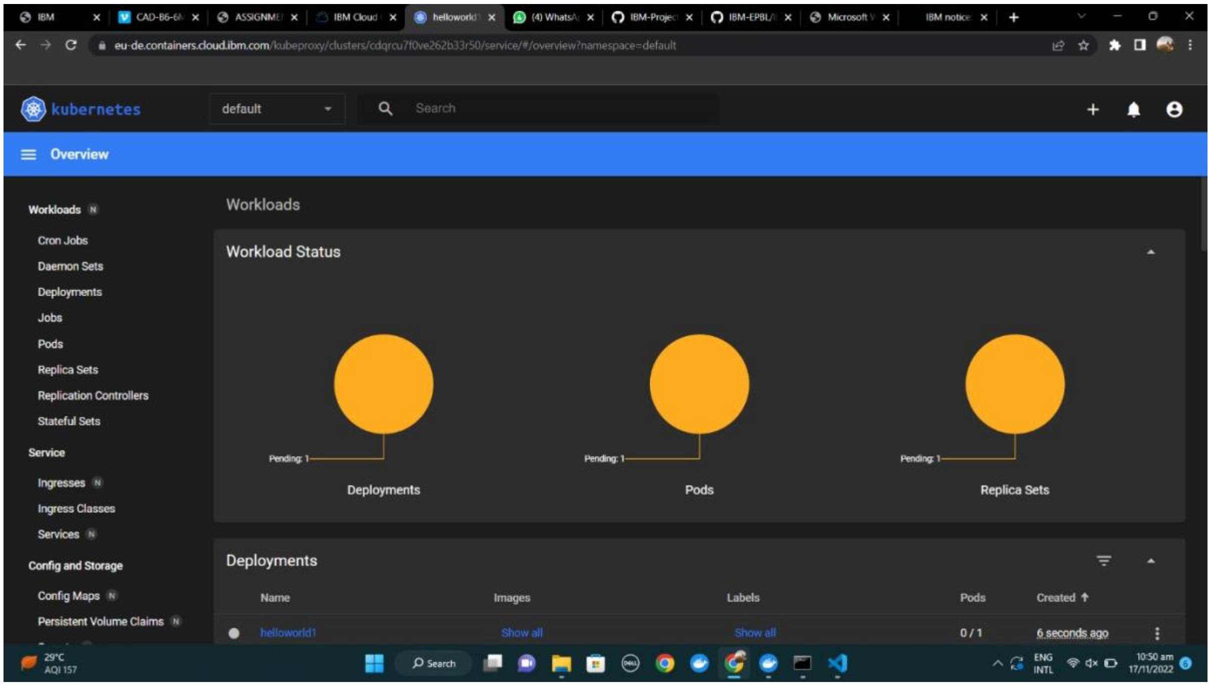
A Deployment will be created to maintain the desired number of pods across your cluster. Learn more

Service *
None

Optionally, an internal or external Service can be defined to map an incoming Port to a target Port seen by the container. Learn more

Namespace *
default

Namespaces let you partition resources into logically named groups. Learn more



Deployments

	Name	Images	Labels	Pods	Created ↑
●	helloworld1	Show all	Show all	0 / 1	6 seconds ago