DEPLOYMENT OF AN APP IN IBM CLOUD

Team ID	PNT2022TMID18119
Project Name	Inventory management system for retailer

CONTAINERIZE THE APP

IBM CLOUD CLI
1) Login to IBM cloud CLI

2) Create a namespace in the IBM Container registry
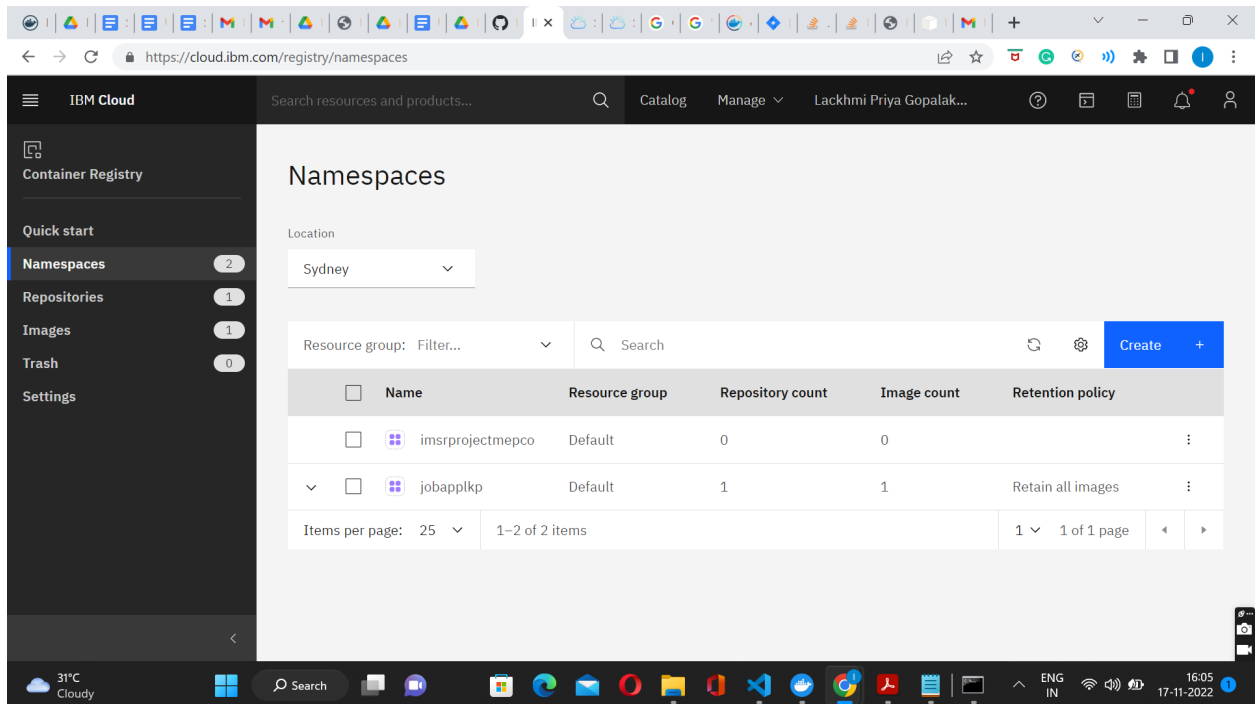
4) Log your local Docker daemon into the IBM Cloud Container Registry.

UPLOAD AN IMAGE TO CONTAINER REGISTRY

5) Pushing the project into IBM Container Registry.

```
Command Prompt                                                                                    —    □    ×

C:\Users\lackh\OneDrive\Desktop\imsr_project>ibmcloud cr region-set ap-south
The region is set to 'ap-south', the registry is 'au.icr.io'.

OK

C:\Users\lackh\OneDrive\Desktop\imsr_project>ibmcloud cr login
Logging 'docker' in to 'au.icr.io'...
Logged in to 'au.icr.io'.

OK

C:\Users\lackh\OneDrive\Desktop\imsr_project>docker tag imsr_project au.icr.io/imsrprojectmepco/imsrprojectrepo:imsrprojectmepco

C:\Users\lackh\OneDrive\Desktop\imsr_project>docker tag imsr_project au.icr.io/imsrprojectmepco/lackhmipriya:imsrprojectmepco

C:\Users\lackh\OneDrive\Desktop\imsr_project>/
'/' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\lackh\OneDrive\Desktop\imsr_project>docker tag imsr_project au.icr.io/imsrprojectmepco/imsrprojectdeploy:imsrproject

C:\Users\lackh\OneDrive\Desktop\imsr_project>docker push au.icr.io/imsrprojectmepco/imsrprojectdeploy:imsrproject
The push refers to repository [au.icr.io/imsrprojectmepco/imsrprojectdeploy]
5335456bda1a: Pushed
e36bab1a302c: Pushed
2a25a8cb3b69: Pushed
ed49f1b33024: Pushed
30009f4bc2f9: Pushed
c4c2f1c63c2f: Pushed
4be7fe848f91: Pushed
6a3d7465dae1: Pushed
2143381c9922: Pushed
12228ba7a3b1: Pushed
9b55156abf26: Pushed
293d5db30c9f: Pushed
03127cdb479b: Pushed
9c742cd6c7a5: Pushed
imsrproject: digest: sha256:7fd7fe8bc6bc4f972bd860145a9729513b64b5b63569ff026c2eae69bea3bf4f size: 3261

C:\Users\lackh\OneDrive\Desktop\imsr_project>
```

5. Verify that your image is in your private registry

```
C:\Users\lackh\OneDrive\Desktop\imsr_project>ibmcloud cr image-list
Listing images...

Repository                                    Tag            Digest        Namespace          Created       Size     Security status
au.icr.io/imsrprojectmepco/imsrprojectdeploy  imsrproject    7fd7fe8bc6bc  imsrprojectmepco   1 hour ago    443 MB   -
au.icr.io/jobapplkp/testrepo                  jobportaltest  ae8079f651d8  jobapplkp          2 weeks ago   449 MB   -

OK
```
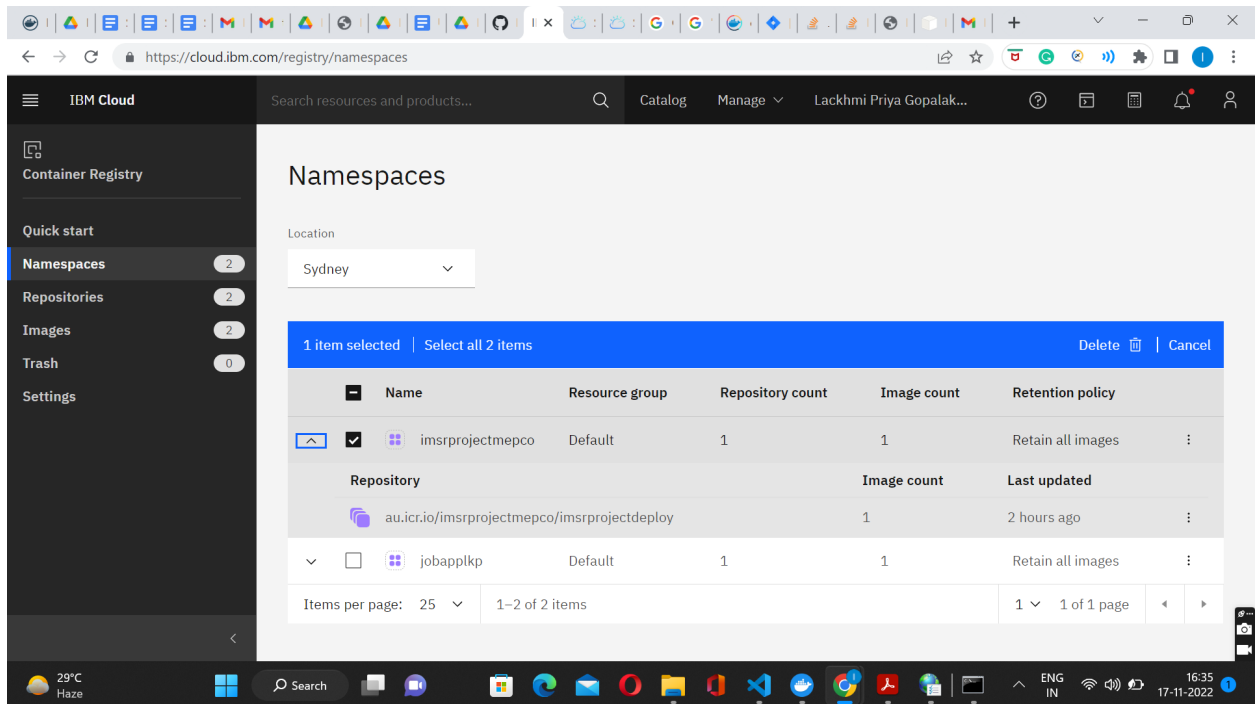
DEPLOY IN KUBERNETES CLUSTER

```
9b55156abf26: Pushed
293d5db30c9f: Pushed
03127cdb479b: Pushed
9c742d6c7a5: Pushed
imsrproject: digest: sha256:7fd7fe8bc6bc4f972bd860145a9729513b64b5b63569ff026c2eae69bea3bf4f size: 3261

C:\Users\lackh\OneDrive\Desktop\imsr_project>ibmcloud cr image-list
Listing images...

Repository                                      Tag            Digest        Namespace         Created       Size      Security status
au.icr.io/imsrprojectmepco/imsrprojectdeploy    imsrproject    7fd7fe8bc6bc  imsrprojectmepco  1 hour ago    443 MB    -
au.icr.io/jobapplkp/testrepo                     jobportaltest  ae8079f651d8  jobapplkp         2 weeks ago   449 MB    -

OK

C:\Users\lackh\OneDrive\Desktop\imsr_project>curl.exe -LO "https://dl.k8s.io/release/v1.25.0/bin/windows/amd64/kubectl.exe"
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   138  100   138    0     0    216      0 --:--:-- --:--:-- --:--:--   217
100 43.6M  100 43.6M    0     0   5145k      0  0:00:08  0:00:08 --:--:-- 5973k

C:\Users\lackh\OneDrive\Desktop\imsr_project>curl.exe -LO "https://dl.k8s.io/v1.25.0/bin/windows/amd64/kubectl.exe.sha256"
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   138  100   138    0     0    204      0 --:--:-- --:--:-- --:--:--   206
100    64  100    64    0     0     49      0  0:00:01  0:00:01 --:--:--   148

C:\Users\lackh\OneDrive\Desktop\imsr_project>CertUtil -hashfile kubectl.exe SHA256
SHA256 hash of kubectl.exe:
6f6e8d5f40341ec58d40cfd2eecb483b709cef2362ef1862122ea545f2ea2593
CertUtil: -hashfile command completed successfully.

C:\Users\lackh\OneDrive\Desktop\imsr_project>type kubectl.exe.sha256
6f6e8d5f40341ec58d40cfd2eecb483b709cef2362ef1862122ea545f2ea2593
C:\Users\lackh\OneDrive\Desktop\imsr_project>$($(CertUtil -hashfile .\kubectl.exe SHA256)[1] -replace " ", "") -eq $(type .\kubectl.exe.sha256)
'$' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\lackh\OneDrive\Desktop\imsr_project>
```
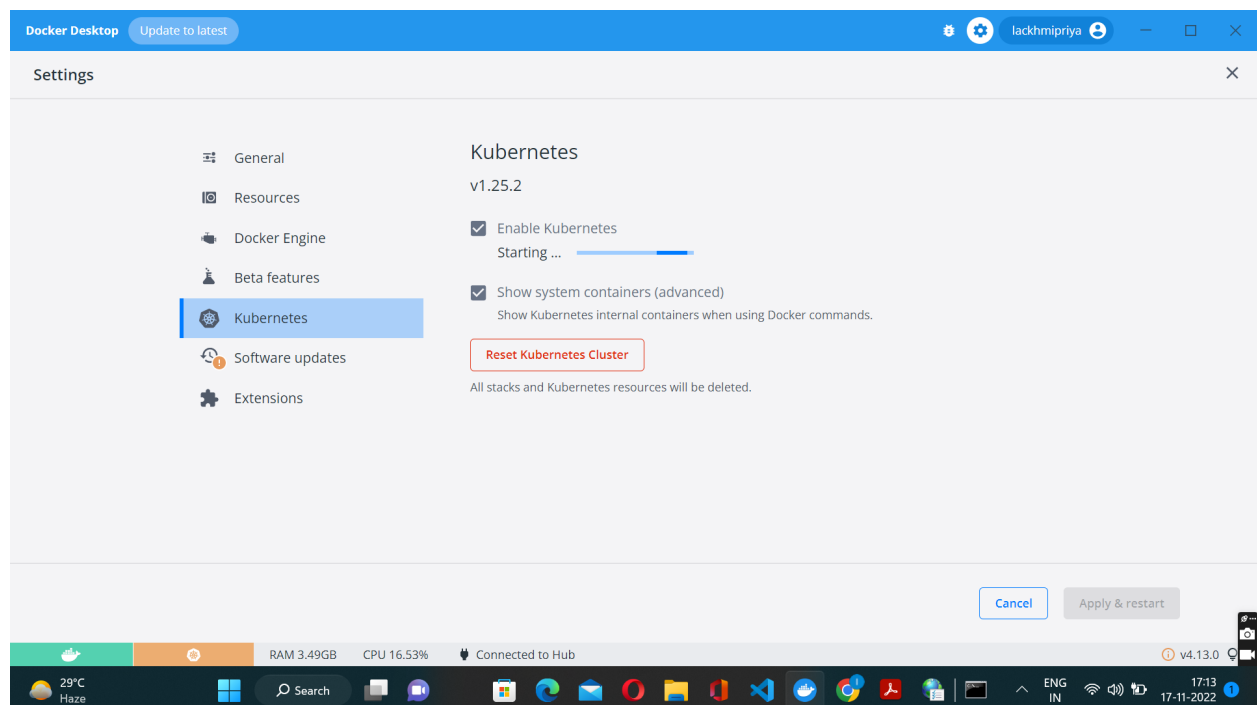
Connect via CLI

Browser window (top):

mycluster-free | Install and Set | Setting up the | Setting up API | Setting up the | (152) how to u | (152) How to c

https://cloud.ibm.com/kubernetes/clusters/cdr245cf064lmte1s260/overview

IBM Cloud

Search resources and products...

Catalog   Manage ⌄   Lackhmi Priya Gopalak...

Clusters /
⬡ mycluster-free

Overview
Worker nodes
Worker pools
DevOps New

Connect via CLI   ✕

Cluster status: ✓ Normal

If this is your first time connecting to an IBM Cloud cluster, see the full setup directions.

1. Log in to your IBM Cloud account. Include the --sso option if using a federated ID.

```
ibmcloud login -a cloud.ibm.com -r eu-de -g Default
```

2. Set the Kubernetes context to your cluster for this terminal session. For more information about this command, see the docs.

```
ibmcloud ks cluster config --cluster cdr245cf064lmte1s260
```

3. Verify that you can connect to your cluster.

```
kubectl config current-context
```

Actions... ⌄

ngress status
Healthy ⓘ
✓

Docs ↗

Zones
Milan 01

Created   Resource group   Image security enforcement

25°C Cloudy   ENG IN   18:43 17-11-2022

Command Prompt window (bottom):

Command Prompt

```
C:\Users\lackh\OneDrive\Desktop\imsr_project>kubectl get pods
No resources found in default namespace.

C:\Users\lackh\OneDrive\Desktop\imsr_project>ibmcloud login -a cloud.ibm.com -r eu-de -g Default
API endpoint: https://cloud.ibm.com

Email> lackhmipriyagopal@gmail.com

Password>
Authenticating...
OK

Targeted account Lackhmi Priya Gopalakrishnan's Account (c8c352587f834445a5fd10e6e00e1efa)

Targeted resource group Default

Targeted region eu-de


API endpoint:       https://cloud.ibm.com
Region:             eu-de
User:               lackhmipriyagopal@gmail.com
Account:            Lackhmi Priya Gopalakrishnan's Account (c8c352587f834445a5fd10e6e00e1efa)
Resource group:     Default
CF API endpoint:
Org:
Space:

New version 2.12.1 is available.
Change logs: https://github.com/IBM-Cloud/ibm-cloud-cli-release/releases/tag/v2.12.1
TIP: use 'ibmcloud config --check-version=false' to disable update check.

Do you want to update? [y/N] > N

C:\Users\lackh\OneDrive\Desktop\imsr_project>ibmcloud ks cluster config --cluster cdr245cf064lmte1s260
OK
The configuration for cdr245cf064lmte1s260 was downloaded successfully.

Added context for cdr245cf064lmte1s260 to the current kubeconfig file.
You can now execute 'kubectl' commands against your cluster. For example, run 'kubectl get nodes'.
```

25°C Cloudy   ENG IN   18:45 17-11-2022

```
Email> lackhmipriyagopal@gmail.com

Password>
Authenticating...
OK

Targeted account Lackhmi Priya Gopalakrishnan's Account (c8c352587f834445a5fd10e6e00e1efa)

Targeted resource group Default

Targeted region eu-de


API endpoint:      https://cloud.ibm.com
Region:            eu-de
User:              lackhmipriyagopal@gmail.com
Account:           Lackhmi Priya Gopalakrishnan's Account (c8c352587f834445a5fd10e6e00e1efa)
Resource group:    Default
CF API endpoint:
Org:
Space:

New version 2.12.1 is available.
Change logs: https://github.com/IBM-Cloud/ibm-cloud-cli-release/releases/tag/v2.12.1
TIP: use 'ibmcloud config --check-version=false' to disable update check.

Do you want to update? [y/N] > N

C:\Users\lackh\OneDrive\Desktop\imsr_project>ibmcloud ks cluster config --cluster cdr245cf0641mte1s260
OK
The configuration for cdr245cf0641mte1s260 was downloaded successfully.

Added context for cdr245cf0641mte1s260 to the current kubeconfig file.
You can now execute 'kubectl' commands against your cluster. For example, run 'kubectl get nodes'.
If you are accessing the cluster for the first time, 'kubectl' commands might fail for a few seconds while RBAC synchronizes.


C:\Users\lackh\OneDrive\Desktop\imsr_project>kubectl config current-context
mycluster-free/cdr245cf0641mte1s260

C:\Users\lackh\OneDrive\Desktop\imsr_project>
```