

# Assignment -4

## Docker and Kubernetes

### Pull Image from docker hub and run in docker Playground

03:57:06

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.13  
node1

ce0er1e3\_ce0er3m3tccg009im0u0

IP  
192.168.0.13  
OPEN PORT

Memory  
31.26% (1.221GiB / 3.906GiB)

CPU  
0.13%

SSH  
ssh ip172-18-0-6-ce0er1e3tccg009im0tg@direct.labs.play-w

DELETE EDITOR

```
#####
# WARNING!!!!                                     #
# This is a sandbox environment. Using personal credentials #
# is HIGHLY! discouraged. Any consequences of doing so are #
# completely the user's responsibilities.                 #
#                                                         #
# The FWD team.                                          #
#####
[node1] (local) root@192.168.0.13 ~
$ docker pull ashmn07/ibm:latest
latest: Pulling from ashmn07/ibm
a8ca11554fce: Pull complete
e4e46864aba2: Pull complete
c85a0be79bfb: Pull complete
195ea6a58ca8: Pull complete
157f16ed0a0c: Pull complete
884b144bec28: Pull complete
dc4ed63cc6ae: Pull complete
aa6a7fdf543b: Pull complete
42aabb4354c6: Pull complete
70e5b60c404c: Pull complete
ee64ad27da4f: Pull complete
f01df256ed79: Pull complete
b5b5a9ce9217: Pull complete
84fd5ffdie53: Pull complete
Digest: sha256:02d75ed6e0e3b6378c422b41cac6f0ed930e79946ac58b5d24e2c326781970f7
Status: Downloaded newer image for ashmn07/ibm:latest
docker.io/ashmn07/ibm:latest
[node1] (local) root@192.168.0.13 ~
$
```

# Running Docker in Docker Hub

```
Project Development Phase > Sprint 4 > Dockerfile > ...
You, 22 hours ago | 1 author (You)
1 FROM python:3.9
2 WORKDIR /app
3 COPY requirements.txt ./
4 RUN pip install --upgrade pip setuptools
5 RUN python -m pip install -r requirements.txt
6 COPY . .
7 EXPOSE 5000
8 CMD ["python", "./app.py"]
```

```
D:\projects\IBM\IBM-Project-29277-1660123060-main\Project Development Phase\Sprint 4 main
docker run -d -p 5000:5000 ashmn07/ibm
fff3b3373362f2d2439c9f318f0159b493b06c7355da42d0be5e2020cc1d9b05
D:\projects\IBM\IBM-Project-29277-1660123060-main\Project Development Phase\Sprint 4 main
```

Containers

Images

Volumes

Dev Environments

Extensions

Add Extensions

Containers

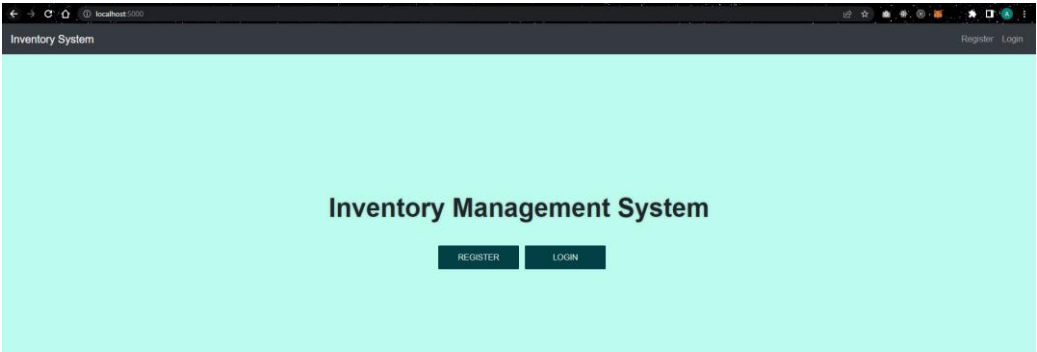
A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another.

Only show running containers

Search

	NAME	IMAGE	STATUS	PORT(S)	STARTED	ACTIONS
	loving_kepler 957bc90b6f8b	ashmn07/ibm:latest	Exited (137)	5000:5000		
	zealous_shirley fff3b3373362	ashmn07/ibm:latest	Running	5000:5000	1 minute ago	

Showing 2 items



# Ibm container Registry

```
ibmcloud plugin install cloud-object-storage
Looking up 'cloud-object-storage' from repository 'IBM Cloud'...
Plug-in 'cloud-object-storage 1.6.0' found in repository 'IBM Cloud'
Attempting to download the binary file...
 16.58 MiB / 16.58 MiB [=====] 100.00% 1s
17383936 bytes downloaded
Installing binary...
OK
Plug-in 'cloud-object-storage 1.6.0' was successfully installed into C:\Users\HP\.bluemix\plugins\cloud-object-storage. Use 'ibmcloud plugin install cloud-object-storage' to show its details.
```

```
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% 0s
12476416 bytes downloaded
Installing binary...
OK
Plug-in 'container-registry 1.0.2' was successfully installed into C:\Users\HP\.bluemix\plugins\container-registry. Use 'ibmcloud plugin install container-registry' to show its details.
```

```
ibmcloud plugin install container-service
Looking up 'container-service' from repository 'IBM Cloud'...
Plug-in 'container-service[kubernetes-service/ks] 1.0.459' found in repository 'IBM Cloud'
Attempting to download the binary file...
 26.86 MiB / 26.86 MiB [=====]
28168192 bytes downloaded
Installing binary...
OK
Plug-in 'container-service 1.0.459' was successfully installed into C:\Users\HP\.bluemix\plugins\container-service. Use 'ibmcloud plugin install container-service' to show its details.
```

```
ibmcloud plugin install cloud-functions
Looking up 'cloud-functions' from repository 'IBM Cloud'...
Plug-in 'cloud-functions[wsk/functions/fn] 1.0.61' found in repository 'IBM Cloud'
Attempting to download the binary file...
 13.39 MiB / 13.39 MiB [=====]
14042112 bytes downloaded
Installing binary...
OK
Plug-in 'cloud-functions 1.0.61' was successfully installed into C:\Users\HP\.bluemix\plugins\cloud-functions. Use 'ibmcloud plugin install cloud-functions' to show its details.
```

```
ibmcloud plugin install schematics
Looking up 'schematics' from repository 'IBM Cloud'...
Plug-in 'schematics[sch] 1.12.4' found in repository 'IBM Cloud'
Attempting to download the binary file...
 20.71 MiB / 20.71 MiB [=====]
21714944 bytes downloaded
Installing binary...
OK
Plug-in 'schematics 1.12.4' was successfully installed into C:\Users\HP\.bluemix\plugins\schematics. Use 'ibmcloud plugin install schematics' to show its details.
```

```
ibmcloud login
API endpoint: https://cloud.ibm.com

Email> 2019103510@student.annauniv.edu

Password>
Authenticating...
OK

Targeted account Ashwin Menon's Account (ec3f5949115b403aac122427e60b5b19)
```

```

❯ docker pull ashmn07/ibm:latest
latest: Pulling from ashmn07/ibm
Digest: sha256:02d75ed6e0e3b6378c422b41cac6f0ed930e79946ac58b5d24e2c326781970f7
Status: Image is up to date for ashmn07/ibm:latest
docker.io/ashmn07/ibm:latest

```

```

❯ docker tag ashmn07/ibm:latest icr.io/ibm_ns/ibm_inv:1
❯ docker push icr.io/ibm_ns/ibm_inv:1
The push refers to repository [icr.io/ibm_ns/ibm_inv]
7a7d3e10e350: Pushed
2cbfc0d9efd8: Pushed
7b1e93651036: Pushed
b9850c37b9f1: Pushed
b520bfc1a3f1: Pushed
bdcd94073ef2: Pushed
c44cf16349ba: Pushed
22323d4bd802: Pushed
e6e9854ca999: Pushed
397a239a053b: Pushed
89c3244a87b2: Pushed
80231db1194c: Pushed
f1c1f2298584: Pushed
ccba29d69370: Pushed
1: digest: sha256:02d75ed6e0e3b6378c422b41cac6f0ed930e79946ac58b5d24e2c326781970f7 size: 3265
❯ ibmcloud cr image-list
Listing images...

Repository          Tag    Digest                                Namespace    Created      Size    Security status
icr.io/ibm_ns/ibm_inv 1      02d75ed6e0e3                        ibm_ns       2 hours ago  448 MB  -

```

Container Registry

Quick start

Namespaces 1

Repositories 1

Images 1

Trash 0

Settings

Namespaces

Location

Global

Resource group: Filter...

Q Search

Create

<input type="checkbox"/>	Name	Resource group	Repository count	Image count	Retention policy
<input checked="" type="checkbox"/>	ibm_ns	Default	1	1	Retain all images

Items per page: 25

1-1 of 1 item

1 1 of 1 page

Container Registry

Quick start

Namespaces 1

Repositories 1

Images 1

Trash 0

Settings

Images

Location

Global

View by: Digest

Q Search

<input type="checkbox"/>	Repository@digest	Tags	Manifest type	Created	Size
<input checked="" type="checkbox"/>	ibm_ns/ibm_inv@sha256:02d75ed6e0e3...	1	Docker	7 hours ago	448 MB

Items per page: 25

1-1 of 1 item

# Kubernetes

Kubernetes

Clusters

Reservations

Helm catalog

Container Registry

### Kubernetes clusters

Resource group: Filter... Location: Filter... Search

Name	State	Location	Worker count	Created	Version	Infrastructure
ibm_invs	Normal	Paris 01	1	Expires in 30 days	1.24.8_1544	Classic

Items per page: 25 1-1 of 1 item

Create cluster

Clusters / ibm\_invs Normal Expires in 30 days Add tags

Help Kubernetes dashboard Actions...

Overview

Worker nodes

Worker pools

DevOps New

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

Details

Add-on status

0 of 0 Normal

Details

Master status

Normal

Docs

Ingress status

Healthy

Docs

Details

Cluster ID  
ce8apphfi9zq5emmk2fg9

Version  
1.24.8\_1544

Infrastructure  
Classic

Zones  
Milan 01

Created  
25/11/2022, 5:24 pm

Resource group  
Default

Image security enforcement  
Enable

Node health

1 total nodes

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

Worker node details

Networking

Service endpoint URL

Public endpoint Copy link

Create

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 Cluster Cluster Role Bindings Cluster Roles Events Namespaces

Create from input Create from file Create from form

App name \*  
brmlnv  
Deployment or service with this name already exists within namespace.

Container image \*  
sshmn07/ibm:latest  
Enter the URL of a public image on any registry, or a private image hosted on Docker Hub or Google Container Registry.

Number of pods \*  
1  
A Deployment will be created to maintain the desired number of pods across your cluster.

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

Port \*  
5000

Target port \*  
5000

Protocol \*  
TCP

Port

Target port

Protocol \*  
TCP

Namespace \*  
default  
Namespaces let you partition resources into logically named groups.

Deploy Preview Cancel Show advanced options

