

**Assignment -4**  
IBM Cloud - Docker - Kubernetes

Assignment Date	21 October 2022
Student Name	S.Lyall
Student Roll Number	737819ITR043
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 / flask application and deploy it in Docker desktop application.
3. Create a IBM container registry and push docker image of flask application or job portal app.
4. Create a Kubernetes cluster in IBM cloud and deploy flask application image or job portal image and also expose the same app to run in no deport.

← → ↻ ⚠ Not secure | ip172-18-0-31-cdj2t2v91rrg00c7p3k0-5000.direct.labs.play-with-docker.com < ☆ ✓ ⚙ □ 🔍 ⋮



The screenshot shows the Docker Desktop application window. At the top, the title bar reads "ip/cdj2t2t5v91rrg00c7p3k0#cdjt2t5v91rrg00c7p3kg". The main content area displays details for a container named "cdjt2t5v91rrg00c7p3kg". It includes a status bar with "IP: 192.168.0.18", a button for "OPEN PORT" with a "5000" badge, and resource usage: "Memory: 27.56% (1.077GiB / 3.906GiB)" and "CPU: 0.44%". Below this, the "SSH" section shows the command "ssh ip172-18-0-31-cdj2t5v91rrg00c7p3kg@direct.labs.play-with-docker.com" with a copy icon. At the bottom, there are "DELETE" and "EDITOR" buttons. A terminal window is open at the bottom, showing the following commands and output:

```
$ docker ps
fa9c7528c685: Pull complete
53ad0f27f9cd1: Pull complete
d6b9e8317f533: Pull complete
d0892d56ded5: Pull complete
c71afc637d59: Pull complete
864a10b3c704: Pull complete
4334b2fe8293: Pull complete
6e8491d82807: Pull complete
b4dd4d89745: Pull complete
994a52ee131b: Pull complete
76cf2dc6649f: Pull complete
Digest: sha256:00ea7f8b9bd9ce541aaa359f1bbb853404e40293960cec48c617e76d785bf1
Status: Downloaded newer image for reeganrajasekar/assignment:latest
docker.io/reeganrajasekar/assignment:latest
[noel] (local) root@192.168.0.18 ~
$ docker run -d -p 5800:5800 reeganrajasekar/assignment
a857d526ffafa7c74a8deeb337640120d1cad56b192ff1c1aeb82f1165cbac3d
[noel] (local) root@192.168.0.18 ~
$
```



Container Registry

Quick start

Namespaces

Repositories

Images

Trash

Settings

Namespaces

Location

Tokyo

Resource group: Filter...

Search

Create

	Name	Resource group	Repository count	Image count	Retention policy
	assignment_4	Default	1	1	Retain all images
	Repository		Image count	Last updated	
	jp.icr.io/assignment_4/assignment_4		1	1 day ago	

Items per page: 25
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The screenshot shows the Kubernetes Dashboard interface. The top navigation bar includes 'Workloads' and 'Pods'. The left sidebar lists various resource types: Workloads, Cron Jobs, Daemon Sets, Deployments, Jobs, Pods (selected), Replica Sets, Replication Controllers, and Stateful Sets. Under the 'Service' section, there are Ingresses, Ingress Classes, and Services. Under the 'Config and Storage' section, there are Config Maps and Secret.

The main content area displays two charts for the 'Pods' view:

- CPU Usage:** A bar chart showing CPU usage for 15 pods. The y-axis is labeled 'CPU (cores)' and ranges from 0 to 1.5. The x-axis lists pod names from 14.50 to 15.02. All bars are green and show a usage of approximately 1.0 core.
- Memory Usage:** A bar chart showing memory usage for the same 15 pods. The y-axis is labeled 'Memory (bytes)' and ranges from 0 Mi to 19.44 Mi. The x-axis lists pod names from 14.50 to 15.02. All bars are blue and show a usage of approximately 19.44 Mi.

Below the charts, a table lists the pods:

Name	Images	Labels	Node	Status	Restarts	CPU Usage (cores)	Memory Usage (bytes)	Created
assignment4-55cd499756-5mnmzm	Show all	Show all	10.144.194.84	Running	0	1.00m	19.44Mi	17 minutes ago
assignment4-55cd499756-6mi2n	Show all	Show all	10.144.194.84	Running	0	1.00m	19.29Mi	17 minutes ago
assignment4-55cd499756-hi58f	Show all	Show all	10.144.194.84	Running	0	1.00m	19.44Mi	17 minutes ago



Container Registry

Quick start

- Namespaces** 1
- Repositories 1
- Images 1
- Trash 0
- Settings

## Namespaces

Location

Tokyo

Resource group: Filter... Search Create +

<input type="checkbox"/>	Name	Resource group	Repository count	Image count	Retention policy	
<input type="checkbox"/>	assignment_4	Default	1	1	Retain all images	
<b>Repository</b>			<b>Image count</b>		<b>Last updated</b>	
	jp.icr.io/assignment_4/assignment_4		1		1 day ago	

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