

CONTAINERIZE THE APP

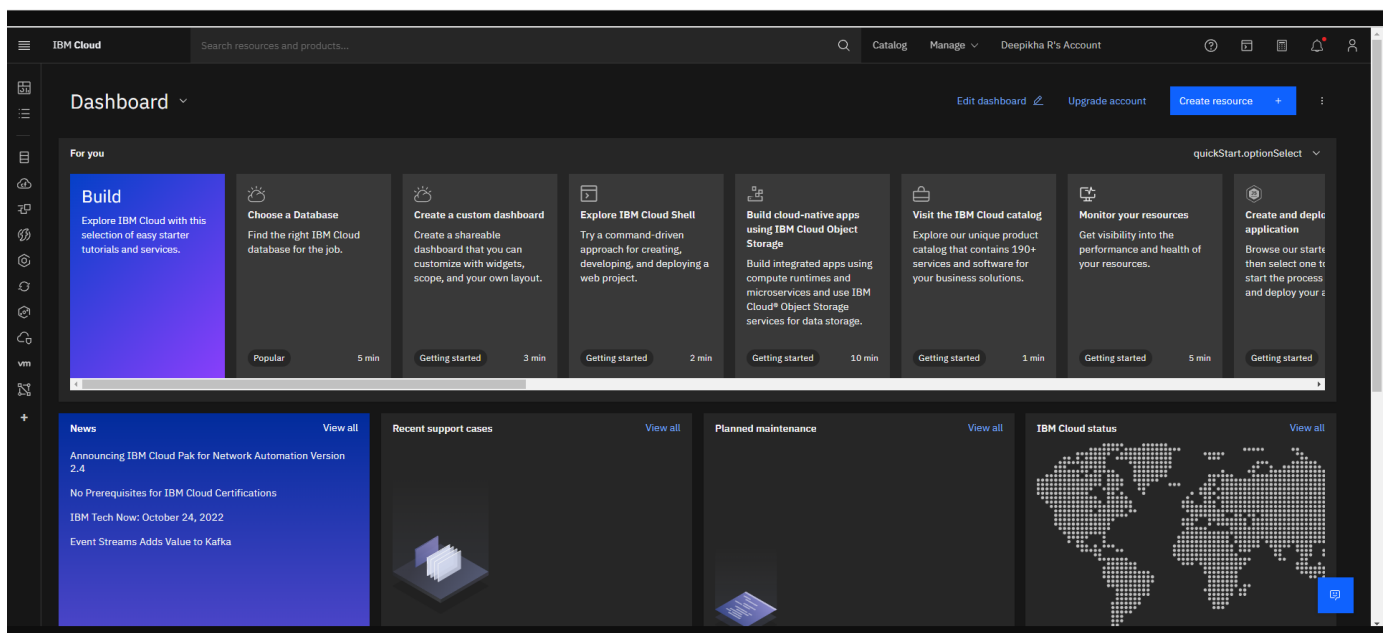
| | |
|--------------|--------------------------|
| Date | 19 November 2022 |
| Team ID | PNT2022TMID32723 |
| Project Name | Plasma Donor application |

STEP 1:

Sign in to IBM Cloud Dashboard and Open Kubernetes Service

STEP 2:

Create the cluster. The Region and cluster type are needed to create the cluster.



STEP 3:

After creating the cluster click on the work node to note the public IP.

The screenshot displays the IBM Cloud console interface for a Kubernetes cluster named 'mycluster-free'. The cluster is in a 'Normal' state and is scheduled to expire in 30 days. The interface includes a sidebar with navigation options: Overview, Worker nodes, Worker pools, and DevOps (marked as 'New'). The main content area shows a summary of the cluster's status and details.

Cluster Overview:

- Node status:** 1 of 1 nodes, Normal.
- Add-on status:** 0 of 0 add-ons, Normal.
- Master status:** Normal.
- Ingress status:** Healthy.

Details:

- Cluster ID:** cdsrqcif0j@abplac0e0
- Version:** 1.24.8_1544
- Infrastructure:** Classic
- Zones:** Milan 01
- Created:** 11/20/2022, 11:07 AM
- Resource group:** Default
- Image security enforcement:** Enable

Node health:

- 1 total nodes**
- Health Status:** Critical 0%, Warning 0%, Normal 100%, Pending 0%.

Networking:

- Service endpoint URL:** [Link]

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cloud.ibm.com/kubernetes/clusters/cdsrqcf00a8plac0e0/nodes

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Clusters /mycluster-freeNormalExpires in 30 daysAdd tagsHelpKubernetes dashboardActions...

OverviewWorker nodesWorker poolsDevOpsNew

Pool: Filter...Search

| Name | Status | Worker pool | Zone | Private IP | Public IP | Version |
|----------|--------|-------------|----------|---------------|-----------------|-------------|
| 00000015 | Normal | default | Milan 01 | 10.144.215.89 | 159.122.175.135 | 1.24.7_1543 |

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STEP 4:

Next, create a Docker file in Flask app and type the following code within it.

```
FROM python:2.7
LABEL maintainer="Kunal Malhotra, kunal.malhotra1@ibm.com"
RUN apt-get update
RUN mkdir /app
WORKDIR /app
COPY . /app
RUN pip install -r requirements.txt
EXPOSE 5000
ENTRYPOINT [ "python" ]
CMD [ "app.py" ]
```

STEP 5:

Open the terminal and write this command to build an image from our Docker file, “ docker build -t <image_name>:<tag>.”

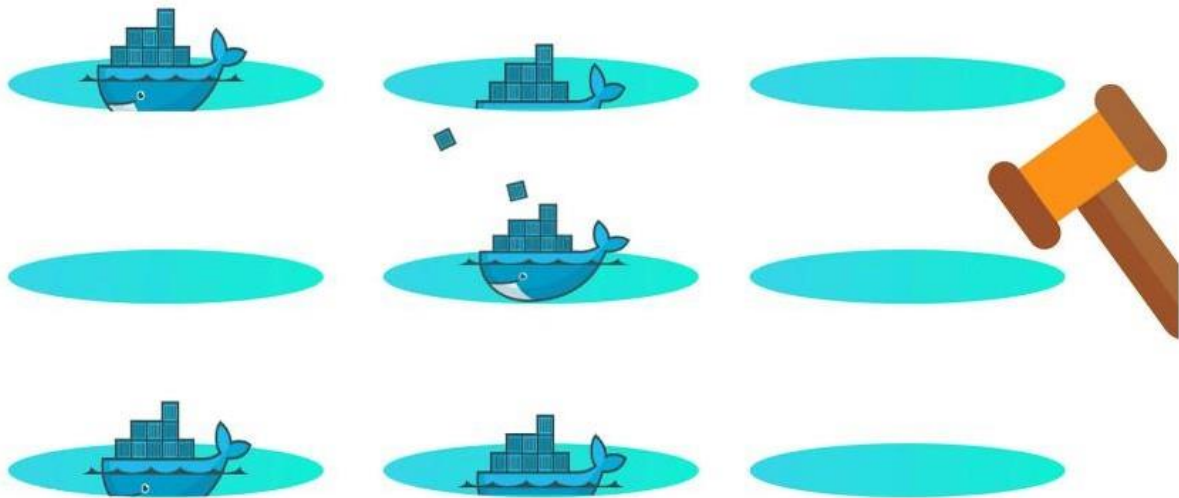
```

kunal@kali:~$ docker build -t app:latest .
Sending build context to Docker daemon 348.2kB
Step 1/8 : FROM python:2.7
--> 6c76e39e7cfe
Step 2/8 : LABEL maintainer="Kunal Malhotra, kunal.malhotra@ibm.com"
--> Using cache
--> db57d4159bc
Step 3/8 : RUN apt-get update
--> Using cache
--> 6262a134e40e
Step 4/8 : COPY ./app
--> f077377099f
Step 5/8 : WORKDIR /app
Removing intermediate container f9010e99d2fe
--> 06cda72b3e
Step 6/8 : RUN pip install -r requirements.txt
--> Running in 8153040b00b7
Collecting click==6.7 (from -r requirements.txt (line 1))
  Downloading https://files.pythonhosted.org/packages/34/c1/886f39713db6995c5366c362b2f908f18269f8d792eff1abfd700775a77/click-6.7-py3-none-any.whl (71kB)
Collecting Flask==1.0.2 (from -r requirements.txt (line 2))
  Downloading https://files.pythonhosted.org/packages/7f/67/08578774ed4536d324b14dadb4696386634607af824ed997202ca8ed94b/Flask-1.0.2-py2.py3-none-any.whl (91kB)
Collecting itsdangerous==0.24 (from -r requirements.txt (line 3))
  Downloading https://files.pythonhosted.org/packages/dc/b4/080cda0945c00f6d68d8975131ab3f29b22729cfe1dab221165194b264/itsdangerous-0.24.tar.gz (46kB)
Collecting Jinja2==2.10 (from -r requirements.txt (line 4))
  Downloading https://files.pythonhosted.org/packages/7f/ff/ae64bacdfc95f27d016a7bed8e8686763ba4d277a78ca76f32659228a731/3l/jinja2-2.10-py2.py3-none-any.whl (126kB)
Collecting MarkupSafe==1.0 (from -r requirements.txt (line 5))
  Downloading https://files.pythonhosted.org/packages/4d/de/32d741ab316a8fb7680822dd37001ef7a48255de0699db4bfcbdf4172b/MarkupSafe-1.0.tar.gz
Collecting Werkzeug==0.14.1 (from -r requirements.txt (line 6))
  Downloading https://files.pythonhosted.org/packages/20/c4/12c3e56473e52375aa29c4764e70d1b8f3efab682bef8d0aa04fe335243/Werkzeug-0.14.1-py2.py3-none-any.whl (322kB)
Building wheels for collected packages: itsdangerous, MarkupSafe
  Running setup.py bdist_wheel for itsdangerous: started
  Running setup.py bdist_wheel for itsdangerous: finished with status 'done'
  Stored in directory: /root/.cache/pip/wheels/2c/4a/61/5599631c1551768c6290b08c82c72d7317910374ca682ff1e5
  Running setup.py bdist_wheel for MarkupSafe: started
  Running setup.py bdist_wheel for MarkupSafe: finished with status 'done'
  Stored in directory: /root/.cache/pip/wheels/33/56/20/cbe19a5c612fffe1c50632146b16596f9e64676768661efe46
Successfully built itsdangerous MarkupSafe
Installing collected packages: click, itsdangerous, MarkupSafe, Jinja2, Werkzeug, Flask
Successfully installed Flask-1.0.2 Jinja2-2.10 MarkupSafe-1.0 Werkzeug-0.14.1 click-6.7 itsdangerous-0.24
Removing intermediate container 8153040b00b7
--> 66d263eb97bc
Step 7/8 : ENTRYPOINT [ "python" ]
--> Running in bd1c83815e1
Removing intermediate container bd1c83815e1
--> 73cef38ac1c
Step 8/8 : CMD [ "app.py" ]
--> Running in a784d430dd6f
Removing intermediate container a784d430dd6f
--> db0a83763a5
Successfully built db0a83763a5

```

STEP 6:

After building image successfully, Type “docker run -d -p 5000:5000 app.



STEP 7:

Docker Image Created Successfully.

