

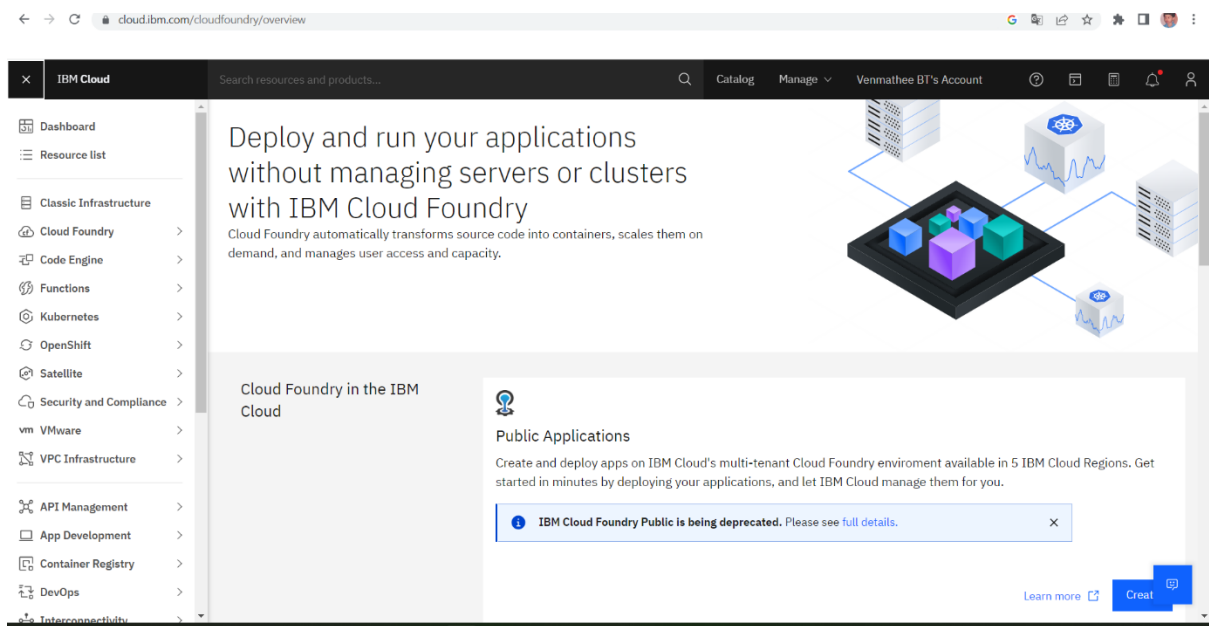
DEPLOYMENT OF APP IN IBM CLOUD

CONTAINERIZE THE APP- DOCKER IMAGE CREATION

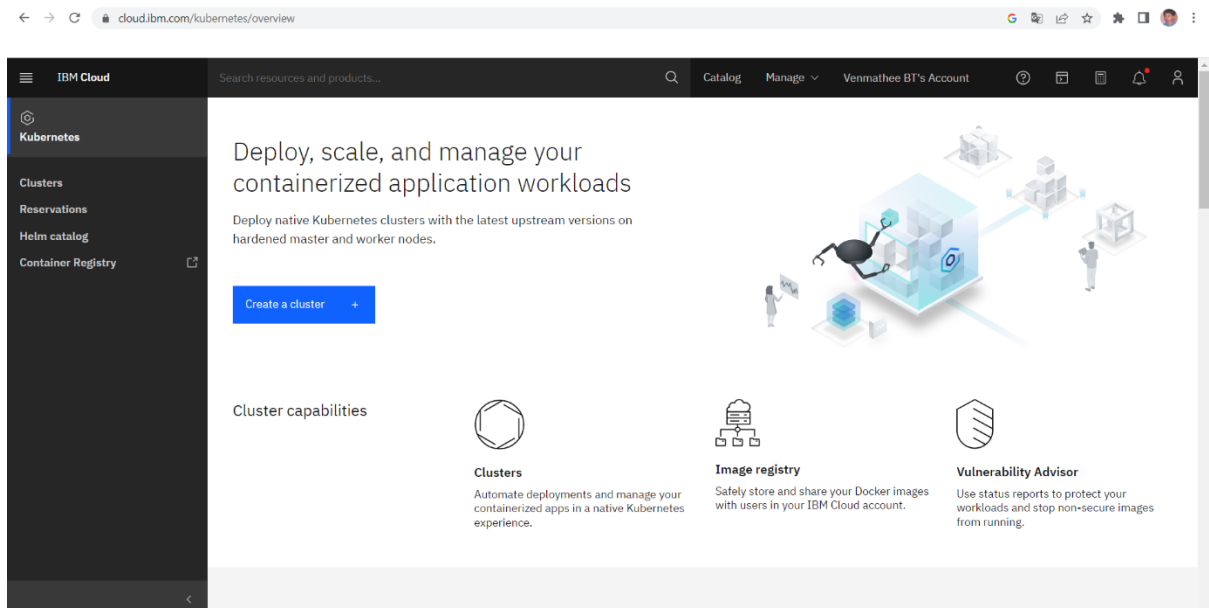
TEAM ID	PNT2022TMID23085
PROJECT NAME	PLASMA DONOR APPLICATION

Create a Kubernetes cluster

- Sign in to your [IBM Cloud Dashboard](#).
- Open **IBM Kubernetes Service**.



Click Create Cluster



cloud.ibm.com/kubernetes/catalog/create

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Kubernetes cluster

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Create About

Plan details
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Pricing plan
Standard

Infrastructure
Choose which network and compute environment to run your cluster on. [Learn more about the differences.](#)

Classic
Run your cluster with native subnet and VLAN networking on our classic infrastructure.

VPC
Create a fully customizable, software-defined virtual network with superior isolation using IBM Cloud VPC.

Summary United States

Kubernetes cluster

- Worker nodes** US\$2.65/hr
b3c.4x16 - 4 vCPUs 16GB RAM
Virtual - shared
Ubuntu 18
- Multizone load balancer** US\$0.02/hr
Multizone clusters require a cross-zone load balancer.

Total estimated cost US\$1,919.52/mo

*Additional charges for networking and bandwidth might apply.
Actual monthly total will vary with tiered pricing.
Estimate does not include costs for integrations.*

Upgrade to create

Add to estimate

- Click on the **Worker Nodes** tab to note the cluster's Public IP.

cloud.ibm.com/kubernetes/clusters/cdmfv7if085nhdamd2cg/nodes

IBM Cloud Search resources and products...

Clusters /

mycluster-free

Preparing master, workers... Expires in 30 days Add tags

Overview

Worker nodes

Worker pools

DevOps New

Pool: Filter... Search

Name	Status	Worker pool	Zone	Private IP	Public IP	Version
0000002a	Provision pending	default	Milan 01			--> 1.24.7_1543

ID
kube-cdmfv7if085nhdamd2cg-myclusterfr-default-0000002a

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

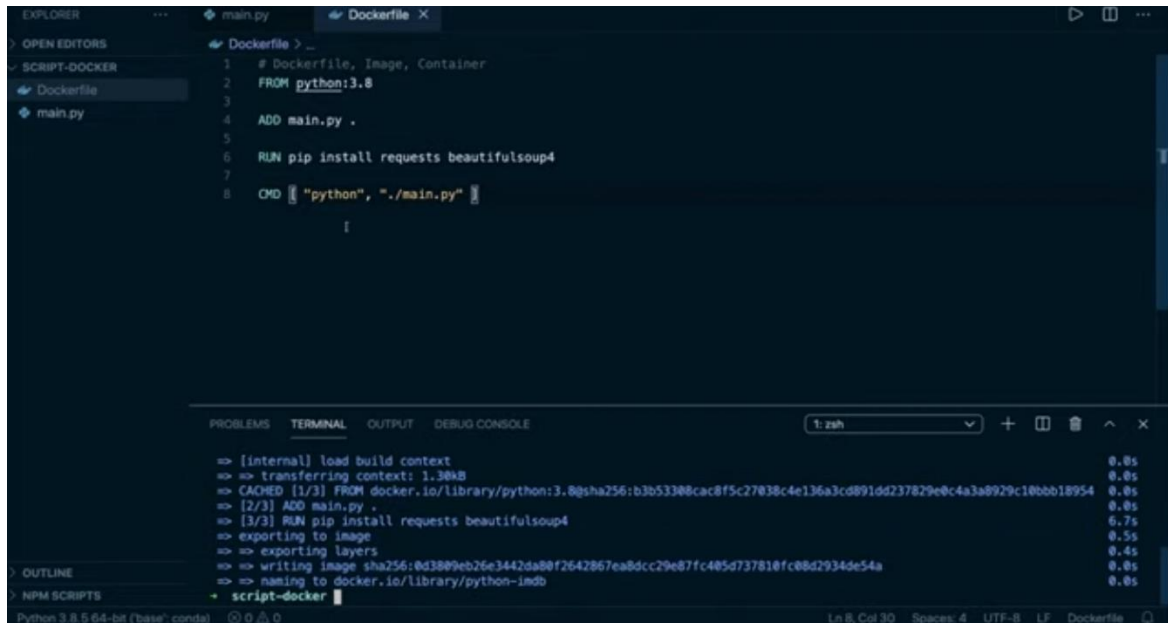
Items per page: 25 1-1 of 1 item 1 1 of 1 page

Help

- Log in to your cluster
- Deploy your app
- Expose your app
- Add storage to your app
- Connect integrations
- Install add-ons
- Troubleshoot

10-11-2022 19:12

Containerize your Flask application



The screenshot shows a VS Code editor with a file explorer on the left containing 'main.py' and 'Dockerfile'. The 'Dockerfile' is open in the editor, showing the following content:

```
1 # Dockerfile, Image, Container
2 FROM python:3.8
3
4 ADD main.py .
5
6 RUN pip install requests beautifulsoup4
7
8 CMD ["python", "./main.py"]
```

The terminal at the bottom shows the build process for the Docker image:

```
==> [internal] load build context
==> transferring context: 1.38kB
==> CACHED [1/3] FROM docker.io/library/python:3.8@sha256:b3b53308cac8f5c27038c4e136a3cd891dd237829e0c4a3a8929c10bbb18954
==> [2/3] ADD main.py .
==> [3/3] RUN pip install requests beautifulsoup4
==> exporting to image
==> exporting layers
==> writing image sha256:ed3809eb26e3442da80f2642867ea8dccc29e87fc485d737810fc88d2934de54a
==> naming to docker.io/library/python-lmbd
==> script-docker
```

```
Step 1/8 : FROM python:3.8
--> 6c76e39e7cfe
Step 2/8 : LABEL maintainer="Kunal Mishra, kunal.mishra@ibm.com"
--> Using cache
--> d857d41531c
Step 3/8 : RUN apt-get update
--> Using cache
--> 6262a134e40e
Step 4/8 : COPY ./app
--> f07f737099f
Step 5/8 : WORKDIR /app
moving intermediate container f9010e99a2fe
--> 08c6ef28e3d
Step 6/8 : RUN pip install -r requirements.txt
--> Running in 815304000b7
collecting click==6.7 (from -r requirements.txt (line 1))
  Downloading https://files.pythonhosted.org/packages/34/c1/8806f99713ad993c5366c36b2f908f18269f8d79a0f1abfd700775a77/click-6.7-py2.py3-none-any.whl (71kB)
collecting Flask==1.0.2 (from -r requirements.txt (line 2))
  Downloading https://files.pythonhosted.org/packages/7f/e7/08578774ed4536d3242b14d0cb4e96386634607af824ee997202c00db4b/Flask-1.0.2-py2.py3-none-any.whl (93kB)
collecting itsdangerous==0.24 (from -r requirements.txt (line 3))
  Downloading https://files.pythonhosted.org/packages/dc/b4/a60bcabc945c00f6a008d8975131ab3f25b22f2bcfd0b221165194b294/itsdangerous-0.24.tar.gz (40kB)
collecting Jinja2==2.10 (from -r requirements.txt (line 4))
  Downloading https://files.pythonhosted.org/packages/7f/f6/ae64b0cdfc95f27a016a7bed8e8686763b0fd277a78ca76f32659220a731/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/86/2d741db316d8fd7680822d37001ef7a448255de9699ab4bfcbdf4172b/MarkupSafe-1.0.tar.gz
collecting Werkzeug==0.14.1 (from -r requirements.txt (line 6))
  Downloading https://files.pythonhosted.org/packages/20/c4/12e3e56473e52575aa29ca764a70d1b8f3ef06682b0f8d00aa94fe335243/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/61/559631c1554768c6290b08c02c72d7317910374ca082ff1e5
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/ebef9a5c612ffef1c5a632140b16996f9e64676768661e4e46
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
moving intermediate container 815304000b7
--> 6d82306079e
Step 7/8 : ENTRYPOINT ["python"]
--> Running in bdc1c83815e1
moving intermediate container bdc1c83815e1
--> 73cef38ac1c
Step 8/8 : CMD ["app.py"]
--> Running in a784d430dd8f
moving intermediate container a784d430dd8f
--> d866b83763a5
```