OBJECTIVE:

Containerize a Flask application by using Docker and deploy it to the IBM Cloud Kubernetes Service.

Prerequisites

To complete this tutorial, you need the following prerequisites:

An (IBM Cloud account)

IBM Cloud CLI

Docker CLI

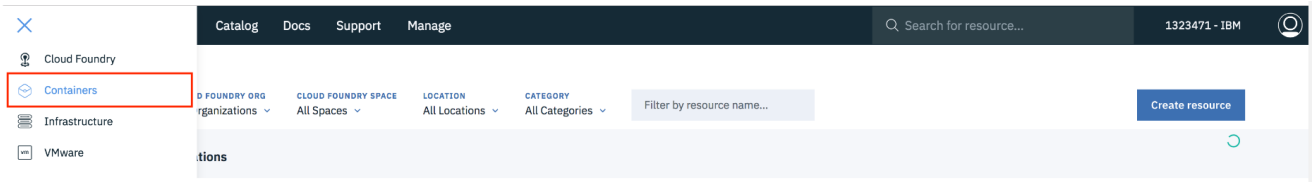
Kubernetes CLI

STEPS

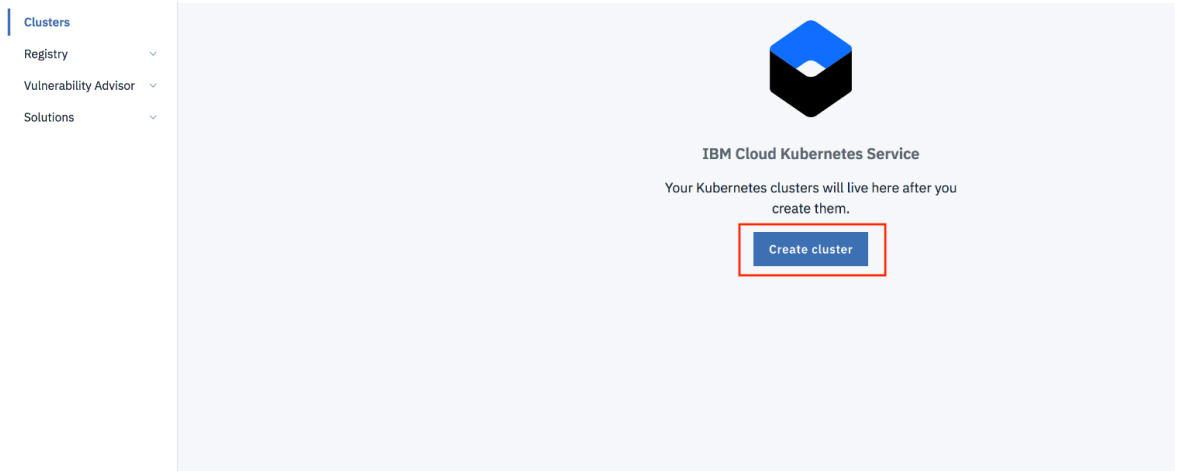
1.Create a Kubernetes cluster

➢ Sign in to IBM Cloud Dashboard by using your IBM Cloud Account username and password

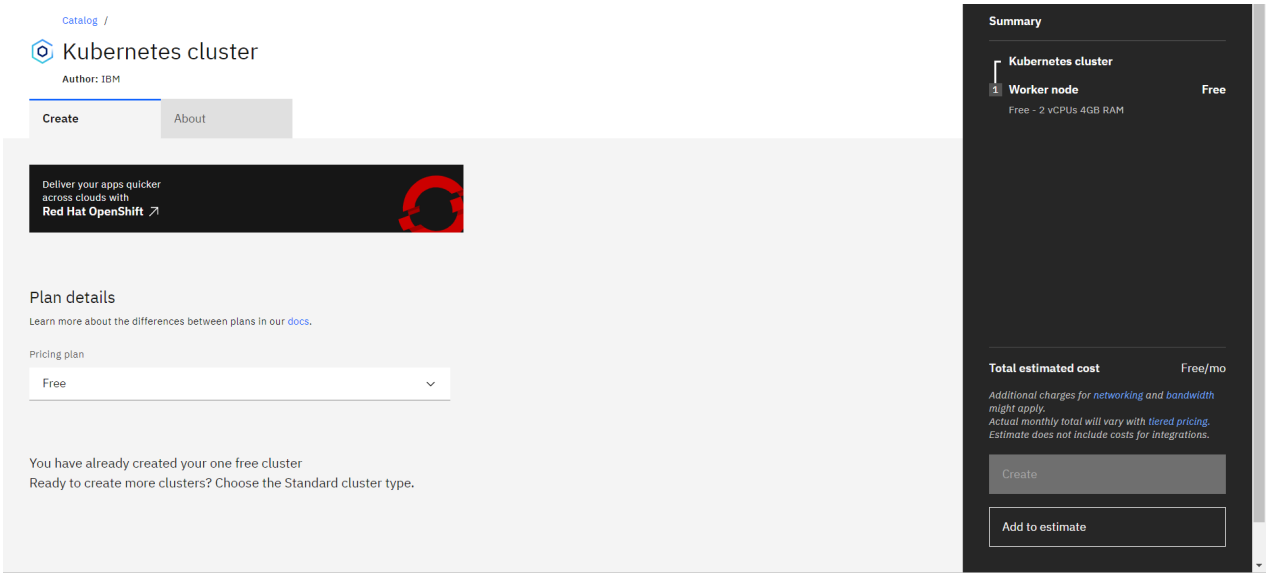
Open IBM Kubernetes Service



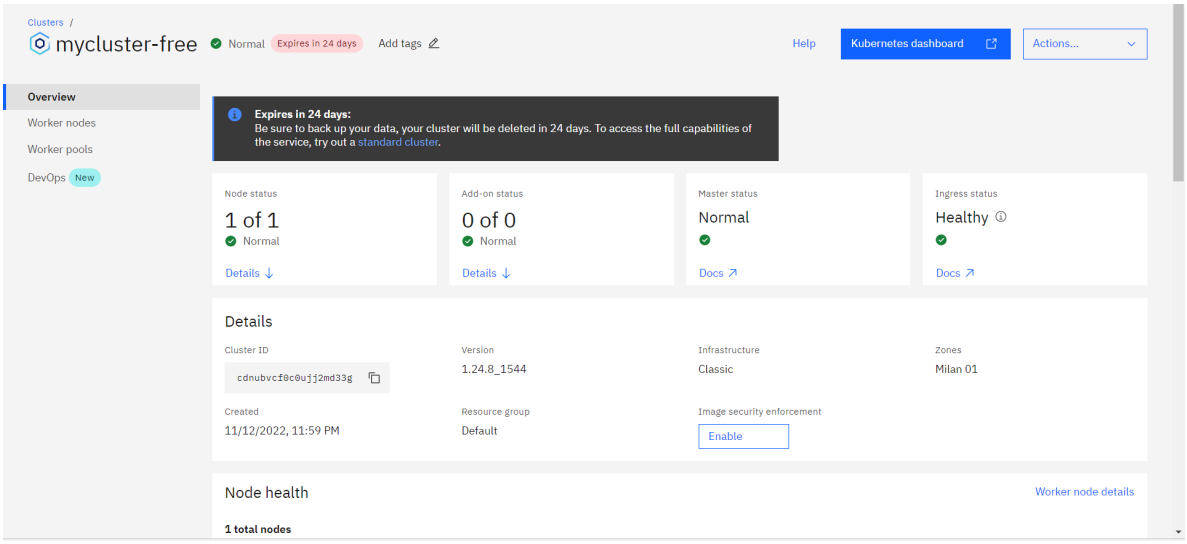
- Click **Create Cluster**.



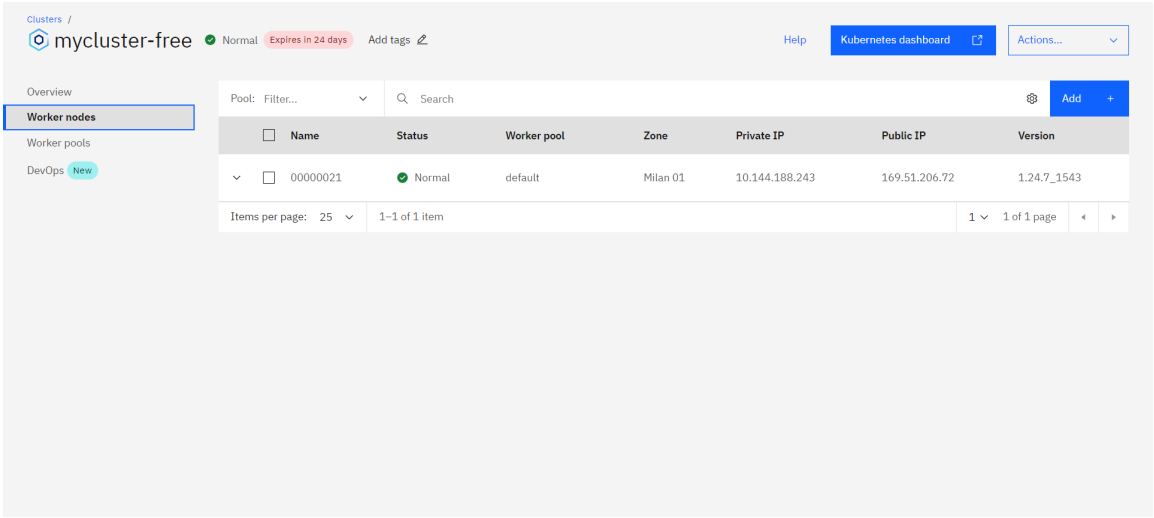
- Select the **Region** where you want to deploy the cluster, type in a **name** for your cluster, then click **Create Cluster**.
- Select the appropriate cluster type depending on your account.
- It takes some time for the cluster to get ready (around 30 minutes).



➢ Once the cluster is ready, click on your cluster's name and you will be redirected to a new page with information about your cluster and worker node.

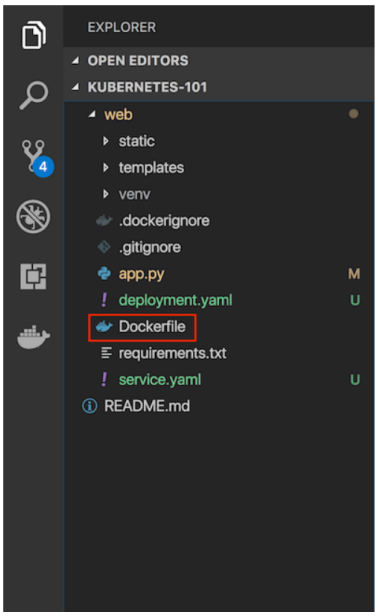


➢ Click on the **Worker Nodes** tab to note the cluster's Public IP.



2.Containerize your Flask application

- In your project directory, create a file named "Dockerfile." *Suggestion: Name your file exactly "Dockerfile," nothing else.*




```
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" ]
```