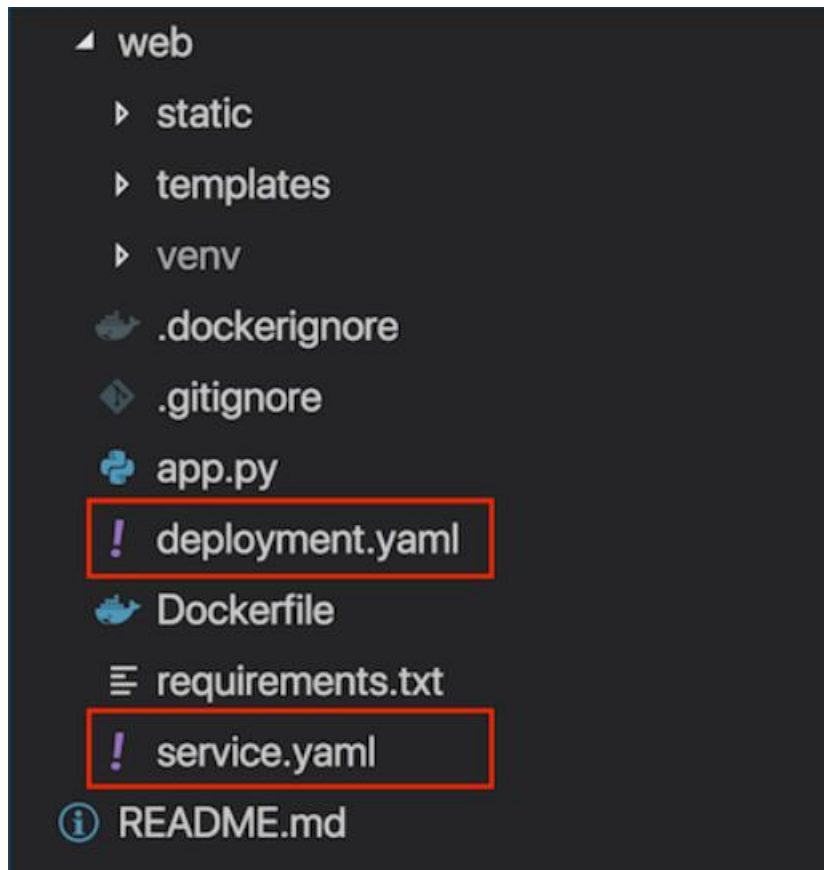


DEPLOY IN KUBERNETES CLUSTER

Date	19 November 2022
Team ID	PNT2022TMID32708
Project Name	Job/Skill Recommender

STEP 1:

Go to project repository, then create the Deployment.yaml and Service.yaml files.



STEP 2:

In Deployment.yaml, Type the following code.

```
apiVersion: extensions/v1beta1
kind: Deployment
metadata:
  name: flask-node-deployment
spec:
  replicas: 1
  selector:
    matchLabels:
      app: flasknode
  template:
    metadata:
      labels:
        app: flasknode
    spec:
      containers:
        - name: flasknode
          image: registry.ng.bluemix.net/flask-node/app
          imagePullPolicy: Always
          ports:
            - containerPort: 5000
```

STEP 3:

In Service.yaml, Type the following code.

```
apiVersion: v1
kind: Service
metadata:
  name: flask-node-deployment
spec:
  ports:
    - port: 5000
      targetPort: 5000
  selector:
    app: flasknode
```

STEP 4:

Follow the below Instructions.

1. Target the IBM Cloud Kubernetes Service region where you want to work.

```
ibmcloud cs region-set us-south
```



Show more ▾

2. Set the context for the cluster in your CLI.

- a. Get the command to set the environment variable and download the Kubernetes configuration files.

```
ibmcloud cs cluster-config cluster_kunal
```



Show more ▾

- b. Set the KUBECONFIG environment variable. Copy the output from the previous command and paste it in your terminal. The command output should look similar to the following.

```
> export KUBECONFIG=/Users/$USER/.bluemix/plugins/container-service/clusters/< cluster_name >/kubecfg.yaml
```

<

Show more ▾

3. Verify that you can connect to your cluster by listing your worker nodes.

```
kubectl get nodes
```



Show more ▾

4. Create the deployment.

```
kubectl create -f deployment.yaml
```



Show more ▾

```
kunali@MacBook-Pro:~$ kubectl create -f deployment.yaml
deployment.extensions/flask-rest-deployment created
```

5. Create the service.

```
kubectl create -f service.yaml
```



```
b. > export KUBECONFIG=/Users/$USER/.bluemix/plugins/container-service/clusters/< cluster_name >/kubecfg.yaml
```

STEP 5:

Look at the Kubernetes dashboard from the IBM Kubernetes Service overview page.

kubernetes

+ CREATE

Overview

Cluster
Namespaces
Nodes
Persistent Volumes
Roles
Storage Classes

Namespace
default
Overview
Workloads
Cron Jobs
Daemon Sets
Deployments
Jobs
Pods
Replica Sets
Replication Controllers
Stateful Sets
Discovery and Load Balancing
Ingresses
Services
Config and Storage
Config Maps

Deployments

Name	Labels	Pods	Age	Images
flask-node-deployment	app: flasknode	1 / 1	5 minutes	registry.ng.bluemix.net/flask-node/app

Pods

Name	Node	Status	Restarts	Age	CPU (cores)	Memory (bytes)
flask-node-deployment-5cd96cf8bc-d6n8x	10.47.79.201	Running	0	5 minutes	0	19.352 Mi

Replica Sets

Name	Labels	Pods	Age	Images
flask-node-deployment-5cd96cf8bc	app: flasknode pod-template-hash: 1785279267	1 / 1	5 minutes	registry.ng.bluemix.net/flask-node/app

Services

Name	Labels	Cluster IP	Internal endpoints	External endpoints	Age
kubernetes	component: apiserver provider: kubernetes	172.21.0.1	kubernetes:443 TCP kubernetes:0 TCP	-	a minute
flask-node-deployment	-	172.21.104.14	flask-node-deployment:5000 TCP flask-node-deployment:0 TCP	-	a minute

STEP 6:

Finally, go to your browser and ping the Public IP of your worker node.