

Date	09 November 2022
Team ID	PNT2022TMID31668
Project Name	CONTAINMENT ZONE ALERTING APPLICATION

DEPLOY IN KUBERNETES CLUSTER

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

`ibmcloud cs region-set us-south`

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`

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 >/< cluster_configuration_file.yaml>
```

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

```
kubectl get nodes
```

4. Create the deployment.

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

5. Create the service.

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

6. Look at the Kubernetes dashboard from the IBM KubernetesService overview page.

kubernetes

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+ CREATE

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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-5cd96cf6bc-d6n6x	10.47.79.201	Running	0	5 minutes	0	19.352 Mi

Replica Sets

Name	Labels	Pods	Age	Images
flask-node-deployment-5cd96cf6bc	app: flasknode pod-template-hash: 1785279267	1 / 1	5 minutes	registry.ng.bluemix.net/flask-node/app

Discovery and Load Balancing

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

Config and Storage

Config Maps

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

SAMPLE:

```

```
$ kubectl apply -f ./deploys/k8s-deployment/deployment.yaml
deployment.apps/k8s-nginx-deployment created
```

```

RUN THE APPLICATION

```

```
$ kubectl port-forward svc/k8s-nginx-deployment 8080:80
```

```
``` ### VERIFY THE APPLICATION RUNNING IN THE CLUSTER
```

```

```
$ kubectl get pods
```

```
NAME READY STATUS RESTARTS AGE k8s-nginx
deployment-68d8f8f8f4-f4x6x 1/1 Running 0 30s
```

```

```

```
$ curl localhost:8080
```

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>Welcome to nginx!</title>
```

```
<style> body
```

```
{
```

```
width: 35em; margin:
```

```
0 auto;
```

```
font-family: Tahoma, Verdana, Arial
```