Demonstration on Namespaces

How to create a namespace in the cluster and create pods under it.

Step 1 –

View all the Namespaces

To start connect to the master ec2 instance via SSH as the root user.

You can give the command shown below to view all the namespaces in the cluster.

kubectl get namespaces

This list out all the namespaces in the cluster, initially there will be some namespaces already created by Kubernetes itself.

Step 2–

Creating a Custom Namespace

To create a custom namespace,

we will create a YAML file and deploy it.

The content of the YAML file is shown below.

YAML file name -namespace.yaml

In this YAML file,

cat > namespace.yaml << EOF

apiVersion: v1

kind: Namespace

metadata:

name: demonamespace

EOF

Namespace is being created specified by the kind section and the name of the custom namespace is ‘demo namespace’ as specified by the name section.

To create the Namespace using the above shown YAML file you need to give the below command –

kubectl apply -f namespace.yaml

Command Syntax –

kubectl apply -f <yaml-file-name>

To Verify that the new custom namespace got created you can give the give the command to view all the namespaces as shown below –

kubectl get namespaces

Step 3–

Deploying a Pod under the custom namespace created

You can create Kubernetes resources under the namespace created in the previous step.

The below command creates a Pod under the custom namespace created in the previous step.

kubectl run ns-pod --image=nginx --port=80 -n demonamespace

Command Syntax –

kubectl run <pod-name> --image=<img-name> --port=<port-no> -n <namespace-where-pod-is-to-be-deployed>

To view the Pods created in the custom namespace given the below command

kubectl get pods --namespace demonamespace

Command Syntax –

kubectl get pods –namespace <namespace-name>

Step 4–

Deleting custom Namespace and resource created under it

To delete Pods/resources under a custom namespace the below command can be given –

kubectl delete pods <pod-name> -n <namespace-name>

To delete custom namespace the below command can be given –

kubectl delete namespace <namespace-name>