Namespaces in K8s

In Kubernetes, namespaces provides a mechanism for isolating groups of resources within a single cluster. Names of resources need to be unique within a namespace, but not across namespaces.

All clusters have a default namespace. This is used when no other namespace is specified.

1. To list existing namespaces with kubectl.

kubectl get namespaces

When using kubectl, you may need to specify a namespace by using the **--namespace** flag.

2. To specify a namespace

kubectl get pods --namespace my-control

3. To list the pods from all namespaces

kubectl get pods --all-namespaces

4. How to create a namespace

Kubectl create namespace camcam-namespace

And of course to verify you can type in the command on either step 1 or step 3

Working with K8s namespaces

Namespaces are a central component of any Kubernetes infrastructure. This lab will give you the opportunity to work with namespaces in a functioning cluster. You will be able to practice the process of creating, using, and navigating Kubernetes namespaces.

Challenge/Lab

In this challenge/lab we will create 3 new namespace called: DevOps, Mobile-Gateway, NOC and SOC. Locate a pod with the name Quark and save the name of the pod's namespace to a file.

1. Create the name spaces for all the ones listed above

Figure 1-1

```
cloud_user@k8s-control:~$ kubectl create namespace devops
namespace/devops created
cloud_user@k8s-control:~$ kubectl create mobile-gateway
Error: must specify one of -f and -k

error: unknown command "mobile-gateway"
See 'kubectl create -h' for help and examples
cloud_user@k8s-control:~$ kubectl create namespace mobile-gateway
namespace/mobile-gateway created
cloud_user@k8s-control:~$ kubectl create namespace noc
namespace/noc created
cloud_user@k8s-control:~$ kubectl create namespace soc
namespace/soc created
cloud_user@k8s-control:~$
```

2. Once that is finished, we will then save namespaces to a file

kubectl get namespace > /home/cloud_user/namespaces.txt

3. Once that command is completed, we will want to verify if those namespaces are in the text file

Figure 1-2

```
cloud_user@k8s-control:~$ cat namespaces.txt
NAME              STATUS   AGE
calico-apiserver  Active   17h
calico-system     Active   17h
camcam-namespace  Active   29m
default           Active   44h
devops            Active   3m21s
kube-node-lease   Active   44h
kube-public       Active   44h
kube-system       Active   44h
mobile-gateway    Active   2m58s
noc               Active   2m50s
soc               Active   2m47s
tigera-operator   Active   39h
cloud_user@k8s-control:~$
```