Lab 7: ConfigMaps

1. Create a ConfigMap with the key values MAX_CONNECTIONS=500 and THEME=dark.

```shell
Shell
apiVersion: v1
kind: ConfigMap
metadata:
  name: web-config
data:
  MAX_CONNECTIONS: "500"
  THEME: "dark"
```

```shell
Shell
k apply -f configmap.yaml
```

Or

```shell
Shell
kubectl create configmap web-config --from-literal=MAX_CONNECTIONS=500
--from-literal=THEME=dark
```

2. Create a pod **env-demo-pod** and inject the configmap via Environment Variables. Check the ENV value.

```shell
Shell
apiVersion: v1
kind: Pod
metadata:
  name: env-demo-pod
spec:
  containers:
  - name: busybox-container
    image: busybox
    command: ["sh", "-c", "env && sleep 3600"]
```

```
    env:
      - name: MAX_CONN
        valueFrom:
          configMapKeyRef:
            name: web-config
            key: MAX_CONNECTIONS
```

```
k apply -f env-demo-pod.yaml
```

```
kubectl logs env-demo-pod | grep MAX_CONN
MAX_CONN=500

OR

kubectl exec -it env-demo-pod - - printenv | grep MAX_CONN
```

3. Change the configmap by updating the MAX_CONNECTIONS from 500 to 100.

```
apiVersion: v1
kind: ConfigMap
metadata:
  name: web-config
data:
  MAX_CONNECTIONS: "100"
  THEME: "dark"
```

```
k apply -f configmap.yaml
```

4. Check that the ENV value for MAX_CONNECTIONS is changed.

ℹ️ You should recreate the pod.

```Shell
k delete po env-demo-pod
```

```Shell
k apply -f env-demo-pod.yaml
```

```Shell
kubectl logs env-demo-pod | grep MAX_CONN
MAX_CONN=100
```

5. Create a pod as **volume-demo-pod** and mount ConfigMap as a Volume (File).

```Shell
apiVersion: v1
kind: Pod
metadata:
  name: volume-demo-pod
spec:
  volumes:
    - name: config-vol
      configMap:
        name: web-config
  containers:
  - name: busybox-container
    image: busybox
    command: ["sh", "-c", "ls /etc/config && sleep 3600"]
    volumeMounts:
      - name: config-vol
        mountPath: /etc/config
        readOnly: true
```

```Shell
k apply -f volume-demo-pod.yaml
```

6. Check the value of MAX_CONNECTIONS.

Shell

```
kubectl exec volume-demo-pod -- cat /etc/config/MAX_CONNECTIONS
100
```

7. Change the configmap by updating the MAX_CONNECTIONS from 100 to 300.

None

```
apiVersion: v1
kind: ConfigMap
metadata:
  name: web-config
data:
  MAX_CONNECTIONS: "300"
  THEME: "dark"
```

Shell

```
k apply -f configmap.yaml
```

8. Check the value of MAX_CONNECTIONS again. It takes about 10–60 seconds for Kubelet to sync the change.

Shell

```
kubectl exec volume-demo-pod -- cat /etc/config/MAX_CONNECTIONS
300
```