Module 5: Managing State with Deployments

DEMO-4

DEMO Steps:

Using Config Maps

1. Create a Kubernetes YAML file of kind **ConfigMap** and define a key-value pair in the **data** field

```
apiVersion: v1
kind: ConfigMap
metadata:
  name: user-cred
  namespace: default
data:
  user: edureka
```

2. Now, use the create or apply command to create the config map

   Syntax: kubectl apply -f conf-map.yaml

```
edureka@kmaster:~/kube-demo$ kubectl apply -f conf-map.yaml
configmap/user-cred created
```

3. To use the data inside the ConfigMap as an environment variable define it inside the deployment/pod spec:

```
apiVersion: apps/v1beta2
kind: Deployment
metadata:
  name: nginx-dep
spec:
  replicas: 1
  selector:
    matchLabels:
      app: nginx
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
      - name: nginx
        image: nginx
        ports:
        - containerPort: 80
        env:
        - name: CONF-USER
          valueFrom:
            configMapKeyRef:
              name: user-cred
              key: user
```

4. Now create the deployment/pod using the create/apply command:

   Syntax: kubectl apply -f nginx-dep.yaml

```
edureka@kmaster:~/kube-demo$ kubectl apply -f nginx-dep.yaml
deployment.apps/nginx-dep created
```

5. List the pods and check into the deployed pod using exec command:

   Syntax: kubectl get pods
   kubectl exec -it podName bash

```
edureka@kmaster:~/kube-demo$ kubectl get pods
NAME                         READY     STATUS    RESTARTS   AGE
nginx-dep-6bf74cbfcc-jxtbt   1/1       Running   0          36s
edureka@kmaster:~/kube-demo$ kubectl exec -it nginx-dep-6bf74cbfcc-jxtbt bash
```

6. Now to verify, use the env command to list down all the environment variables inside the container and check if the one defined in ConfigMap is there or not

```
root@nginx-dep-6bf74cbfcc-jxtbt:/# echo $CONF-USER
-USER
root@nginx-dep-6bf74cbfcc-jxtbt:/# env
HOSTNAME=nginx-dep-6bf74cbfcc-jxtbt
NJS_VERSION=1.15.3.0.2.3-1~stretch
NGINX_VERSION=1.15.3-1~stretch
KUBERNETES_PORT_443_TCP_PROTO=tcp
KUBERNETES_PORT_443_TCP_ADDR=10.96.0.1
KUBERNETES_PORT=tcp://10.96.0.1:443
PWD=/
HOME=/root
KUBERNETES_SERVICE_PORT_HTTPS=443
KUBERNETES_PORT_443_TCP_PORT=443
CONF-USER=edureka
KUBERNETES_PORT_443_TCP=tcp://10.96.0.1:443
TERM=xterm
SHLVL=1
KUBERNETES_SERVICE_PORT=443
PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin
KUBERNETES_SERVICE_HOST=10.96.0.1
_=/usr/bin/env
```