

# TASK 4

## Step 1: Start Minikube

```
minikube start --driver=docker --force
```

## Step 2: Create a Deployment

```
kubectl create deployment webapp --image=nginx --port=80
```

## Step 3: Expose the Deployment as a Service

```
kubectl expose deployment webapp --type=NodePort --port=80 --target-port=80
```

## Step 4: Verify the Running Pods

```
kubectl get pod
```

## Step 5: Verify the Service

```
kubectl get svc
```

## Step 6: Open the Service in a Web Browser

```
minikube service webapp
```

## Step 7: Test the Service Using curl

```
curl http://192.168.49.2:32172
```

## Step 8: Continuously Monitor the Pods

```
watch kubectl get pod
```

## Step 9: Continuously Monitor Pod Logs

```
watch kubectl logs webapp-869b646d9f-5nlp5
```

```
root@Ubuntu: /home/Bala
Restarting existing docker container for "minikube" ...
Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...
Verifying Kubernetes components...
  ■ Using image gcr.io/k8s-minikube/storage-provisioner:v5
  ■ Using image docker.io/kubernetes/dashboard:v2.7.0
  ■ Using image docker.io/kubernetes/metrics-scraper:v1.0.8
Some dashboard features require the metrics-server addon. To enable all features please run:

    minikube addons enable metrics-server

★ Enabled addons: storage-provisioner, dashboard, default-storageclass
🎉 Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
root@Ubuntu:/home/Bala# kubectl create deployment webapp --image=nginx --port=80
error: failed to create deployment: deployments.apps "webapp" already exists
root@Ubuntu:/home/Bala# kubectl expose deployment webapp --type=NodePort --port=80 --target-port=80
Error from server (AlreadyExists): services "webapp" already exists
root@Ubuntu:/home/Bala# kubectl get pod
NAME                                READY   STATUS    RESTARTS   AGE
react-ecommerce-deployment-849768b4c6-6jwqr   1/1     Running   2 (109s ago)    40h
react-ecommerce-deployment-849768b4c6-xzpxp   1/1     Running   2 (109s ago)    40h
webapp-869b646d9f-4qtzn                    1/1     Running   1 (109s ago)    17h
root@Ubuntu:/home/Bala# kubectl get svc
NAME      TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)          AGE
kubernetes  ClusterIP   10.96.0.1    <none>        443/TCP          41h
react-ecommerce-service  NodePort    10.104.99.123 <none>        80:30087/TCP     40h
webapp      NodePort    10.103.150.11 <none>        80:31895/TCP     17h
root@Ubuntu:/home/Bala# minikube service webapp
-----|-----|-----|-----|
| NAMESPACE | NAME   | TARGET PORT | URL                                |
|-----|-----|-----|-----|
| default   | webapp | 80          | http://192.168.49.2:31895/      |
|-----|-----|-----|-----|
🔗 Opening service default/webapp in default browser...
```

