DEVOPS

ASSIGNMENT4

**Kubernetes Deployment with Minikube**

This guide walks you through deploying a simple web application using Minikube and

Kubernetes. You will create a Minikube cluster, deploy a web app using an nginx image,

expose it as a service, and test it using curl. The following steps will guide you through setting

up and monitoring the deployment.

**STEPS:**

**Step 1: Start Minikube**

Start Minikube with Docker as the driver to set up your local Kubernetes cluster.

**Command**:

minikube start --driver=docker --force

**Step 2: Create a Deployment**

Create a Kubernetes deployment for the nginx web application, specifying the port for the

container.

**Command**:

kubectl create deployment webapp1 --image=nginx --port=80

**Step 3: Expose the Deployment as a Service**

Expose the webapp deployment as a NodePort service to make the app accessible outside the

cluster.

**Command**:

kubectl expose deployment webapp1 --type=NodePort --port=80 --target-port=80

**Step 4: Verify the Running Pods**

Check the status of the pods to ensure they are running as expected.

**Command**:

kubectl get pods

**Step 5: Verify the Service**

Check the details of the service to confirm the webapp is correctly exposed.

**Command**:

kubectl get svc

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

Open the webapp service in your browser to verify it’s running.

**Command**:

minikube service webapp1

**Step 7: Test the Service Using curl**

Use curl to test the service connection and ensure it's accessible.

**Command**:

curl http://192.168.49.2:31432

**Step 8: Continuously Monitor the Pods**

Monitor the pod status in real-time to ensure everything is working as expected.

**Command**:

watch kubectl get pod

**Step 9: Continuously Monitor Pod Logs**

Use watch to continuously monitor the logs of the webapp pod for any issues.

**Command**:

watch kubectl logs webapp-869b646d9f-b4hgr

**OUTPUT:**



