

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

- <http://192.168.49.2:30176>

Output:

```
praveen@PRAVEEN: ~  
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 5.15.167.4-microsoft-standard-WSL2 x86_64)  
  
* Documentation: https://help.ubuntu.com  
* Management: https://landscape.canonical.com  
* Support: https://ubuntu.com/pro  
  
System information as of Sat Mar 22 00:39:34 UTC 2025  
  
System load: 0.67 Processes: 121  
Usage of /: 0.8% of 1006.85GB Users logged in: 1  
Memory usage: 24% IPv4 address for eth0: 172.20.130.215  
Swap usage: 0%  
  
* Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s  
just raised the bar for easy, resilient and secure K8s cluster deployment.  
  
https://ubuntu.com/engage/secure-kubernetes-at-the-edge  
  
This message is shown once a day. To disable it please create the  
/home/praveen/.hushlogin file.  
praveen@PRAVEEN:~$ minikube start --driver=docker --force  
minikube v1.35.0 on Ubuntu 24.04 (amd64)  
minikube skips various validations when --force is supplied; this may lead to unexpected behavior  
Using the docker driver based on existing profile  
Starting "minikube" primary control-plane node in "minikube" cluster  
Pulling base image v0.0.46 ...  
Updating the running docker "minikube" container ...  
Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...  
Verifying Kubernetes components...  
Using image gcr.io/k8s-minikube/storage-provisioner:v5  
Enabled addons: storage-provisioner, default-storageclass  
Done! kubectrl is now configured to use "minikube" cluster and "default" namespace by default  
praveen@PRAVEEN:~$ kubectl create deployment webapp --image=nginx --port=80  
error: unknown shorthand flag: 'i' in -image=nginx  
See 'kubectl create deployment --help' for usage.  
praveen@PRAVEEN:~$ kubectl create deployment webapp --image=nginx --port=80  
deployment.apps/webapp created  
praveen@PRAVEEN:~$ kubectl expose deployment webapp --type=NodePort --port=80 --target-port=80
```

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praveen@PRAVEEN:~$ kubectl create deployment webapp --image=nginx --port=80  
deployment.apps/webapp created  
praveen@PRAVEEN:~$ kubectl expose deployment webapp --type=NodePort --port=80 --target-port=80  
service/webapp exposed  
praveen@PRAVEEN:~$ kubectl get pod  
NAME READY STATUS RESTARTS AGE  
webapp-869b646d9f-vv7th 1/1 Running 0 72s  
praveen@PRAVEEN:~$ kubectl get svc  
NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE  
kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 40h  
webapp NodePort 10.194.112.245 <none> 80:30176/TCP 19s  
praveen@PRAVEEN:~$ minikube service web app  
  
✖ Exiting due to SVC_NOT_FOUND: Service 'web' was not found in 'default' namespace.  
You may select another namespace by using 'minikube service web -n <namespace>'. Or list out all the services using 'minikube service list'  
  
praveen@PRAVEEN:~$ minikube service webapp  


| NAMESPACE | NAME   | TARGET PORT | URL                       |
|-----------|--------|-------------|---------------------------|
| default   | webapp | 80          | http://192.168.49.2:30176 |

  
Starting tunnel for service webapp.  


| NAMESPACE | NAME   | TARGET PORT | URL                    |
|-----------|--------|-------------|------------------------|
| default   | webapp |             | http://127.0.0.1:41257 |

  
Opening service default/webapp in default browser...  
http://127.0.0.1:41257  
! Because you are using a Docker driver on linux, the terminal needs to be open to run it.
```

