

DEPLOY A WEB APPICATION USING KUBERNETES

1. Start Minikube:

- Run `minikube start` to start your local Kubernetes cluster.

2. Navigate to the Deployment Directory:

- Go to the directory containing your YAML files:

```
bash
CopyEdit
cd ~/Devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL
```

3. Apply Namespace:

- Apply the `namespace.yaml` configuration:

```
bash
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kubectl apply -f namespace.yaml
```

4. Deploy Resources in the Namespace:

- Apply the resources in the `lampdemo` namespace:

```
bash
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kubectl apply -n lampdemo -k ./
```

5. Check Pods:

- Verify that the pods are running:

```
bash
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kubectl get po -n lampdemo
```

6. Check Services:

- Check the services to get the external IP and port for access:

```
bash
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kubectl get svc -n lampdemo
```

7. Access the Service:

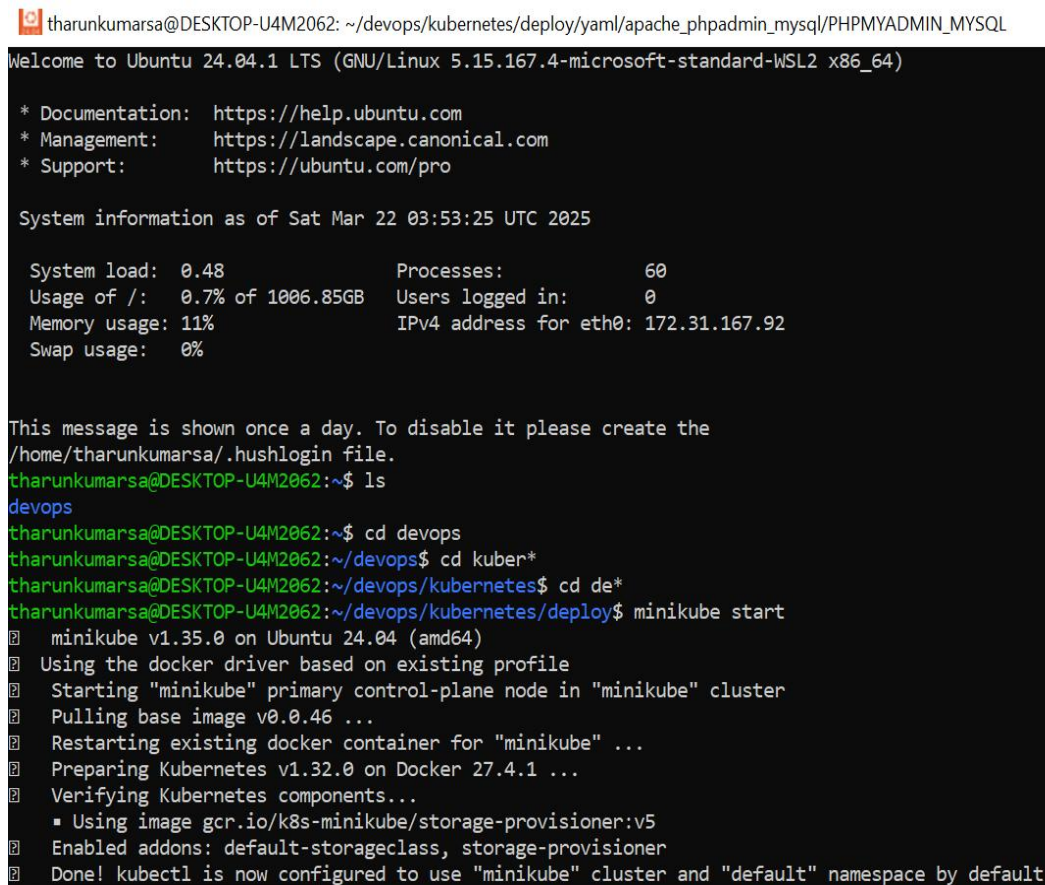
- Open the service URL in your browser:

```
bash
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minikube service lamp -n lampdemo
```

8. Verify:

- Ensure that the service is accessible at the URL provided (e.g., <http://127.0.0.1:35141>).

OUTPUT:



```
tharunkumarsa@DESKTOP-U4M2062: ~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL
Welcome to Ubuntu 24.04.1 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 03:53:25 UTC 2025

System load:  0.48           Processes:           60
Usage of /:   0.7% of 1006.85GB Users logged in:       0
Memory usage: 11%           IPv4 address for eth0: 172.31.167.92
Swap usage:   0%

This message is shown once a day. To disable it please create the
/home/tharunkumarsa/.hushlogin file.
tharunkumarsa@DESKTOP-U4M2062:~$ ls
devops
tharunkumarsa@DESKTOP-U4M2062:~$ cd devops
tharunkumarsa@DESKTOP-U4M2062:~/devops$ cd kuber*
tharunkumarsa@DESKTOP-U4M2062:~/devops/kubernetes$ cd de*
tharunkumarsa@DESKTOP-U4M2062:~/devops/kubernetes/deploy$ minikube start
🔗 minikube v1.35.0 on Ubuntu 24.04 (amd64)
🔗 Using the docker driver based on existing profile
🔗 Starting "minikube" primary control-plane node in "minikube" cluster
🔗 Pulling base image v0.0.46 ...
🔗 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
🔗 Enabled addons: default-storageclass, storage-provisioner
🔗 Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```

```
tharunkumarsa@DESKTOP-U4M2062: ~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL
Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
tharunkumarsa@DESKTOP-U4M2062:~/devops/kubernetes/deploy/yaml$ dc yaml
Command 'dc' not found, but can be installed with:
sudo apt install dc
tharunkumarsa@DESKTOP-U4M2062:~/devops/kubernetes/deploy$ cd yaml
tharunkumarsa@DESKTOP-U4M2062:~/devops/kubernetes/deploy/yaml$ cd ap*
tharunkumarsa@DESKTOP-U4M2062:~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql$ cd PH*
tharunkumarsa@DESKTOP-U4M2062:~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ minikube service lamp -n lampdemo
2>&1
-----|-----|-----|-----|
| NAMESPACE | NAME | TARGET PORT | URL |
|-----|-----|-----|-----|
| lampdemo | lamp | 80 | http://192.168.49.2:31057 |
|-----|-----|-----|-----|
Starting tunnel for service lamp.
-----|-----|-----|-----|
| NAMESPACE | NAME | TARGET PORT | URL |
|-----|-----|-----|-----|
| lampdemo | lamp |  | http://127.0.0.1:39549 |
|-----|-----|-----|-----|
Opening service lampdemo/lamp in default browser...
http://127.0.0.1:39549
Because you are using a Docker driver on linux, the terminal needs to be open to run it.

^C Stopping tunnel for service lamp.
tharunkumarsa@DESKTOP-U4M2062:~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl apply -n lampdemo -k ./
secret/mysql-pass-6d2997f772 unchanged
service/lamp unchanged
service/lamp-mysql unchanged
persistentvolumeclaim/lamp-pv-claim unchanged
persistentvolumeclaim/mysql-pv-claim unchanged
deployment.apps/lamp unchanged
```

```
tharunkumarsa@DESKTOP-U4M2062: ~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL
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persistentvolumeclaim/lamp-pv-claim unchanged
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deployment.apps/lamp unchanged
deployment.apps/lamp-mysql unchanged
tharunkumarsa@DESKTOP-U4M2062:~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl get po -n lampdemo -w
NAME READY STATUS RESTARTS AGE
lamp-d68899b54-6mks4 1/1 Running 1 (5m8s ago) 43h
lamp-mysql-6f8bb57c87-4bzmf 1/1 Running 1 (5m8s ago) 43h
^Ctharunkumarsa@DESKTOP-U4M2062:~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl get po -n lampdemo
Error from server (NotFound): pods "-" not found
tharunkumarsa@DESKTOP-U4M2062:~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl get po -n
lampdemo
NAME READY STATUS RESTARTS AGE
lamp-d68899b54-6mks4 1/1 Running 1 (13m ago) 43h
lamp-mysql-6f8bb57c87-4bzmf 1/1 Running 1 (13m ago) 43h
tharunkumarsa@DESKTOP-U4M2062:~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl get svc -n lampdemo
NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE
lamp LoadBalancer 10.108.95.199 <pending> 80:31057/TCP 43h
lamp-mysql ClusterIP None <none> 3306/TCP 43h
tharunkumarsa@DESKTOP-U4M2062:~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl apply -n lampdemo -k ./
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service/lamp-mysql unchanged
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```

