

# DEPLOY A WEB APPLICATION 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
CopyEdit
kubectl apply -f namespace.yaml
```

## 4. Deploy Resources in the Namespace:

- ☒ Apply the resources in the lampdemo namespace:

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

## 5. Check Pods:

- ☒ Verify that the pods are running:

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

## 6. Check Services:

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

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

## 7. Access the Service:

- ❑ Open the service URL in your browser:

```
bash
CopyEdit
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:

```
Command Prompt - docker es X Windows PowerShell X ranjaniks@democode: ~/sri X + v
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 Fri Mar 21 18:03:00 UTC 2025

System load:  2.76          Processes:      62
Usage of /:   0.7% of 1006.85GB   Users logged in: 0
Memory usage: 48%           IPv4 address for eth0: 172.24.11.221
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/ranjaniks/.hushlogin file.
swadhinik@democode: $ ls
sriam_code
swadhinik@democode: $ cd sri*
swadhinik@democode: ~/sriam_code$ cd kuber*
swadhinik@democode: ~/sriam_code/kubernete$ cd de*
swadhinik@democode: ~/sriam_code/kubernete/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" ...
🔥 Failing to connect to https://registry.k8s.io/ from both inside the minikube container and host machine
💡 To pull new external images, you may need to configure a proxy: https://minikube.sigs.k8s.io/docs/reference/networking/proxy/
```

```
Command Prompt - docker
Windows PowerShell
ranjaniks@democode: ~/srija

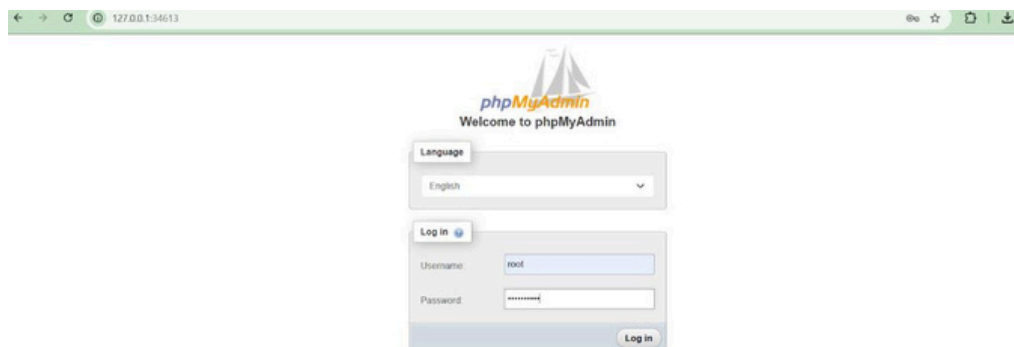
Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
swadhinink@democode: ~/srija_code/kubernetes/deploy$ cd yaml
swadhinink@democode: ~/srija_code/kubernetes/deploy/yaml$ cd ap*
swadhinink@democode: ~/srija_code/kubernetes/deploy/yaml/apache_phpadmin_mysql$ cd PH*
swadhinink@democode: ~/srija_code/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ minikube service lamp -n lampdemo 2>&
1

Exiting due to SVC_NOT_FOUND: Service 'lamp' was not found in 'lampdemo' namespace.
You may select another namespace by using 'minikube service lamp -n <namespace>'. Or list out all the services using 'minikube service list'

swadhinink@democode: ~/srija_code/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl apply -n lampdemo -k ./
secret/mysql-pass-6d2997f772 created
service/lamp created
service/lamp-mysql created
persistentvolumeclaim/lamp-pv-claim created
persistentvolumeclaim/mysql-pv-claim created
deployment.apps/lamp created
deployment.apps/lamp-mysql created
swadhinink@democode: ~/srija_code/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl get po -n lampdemo -w
NAME                                READY    STATUS    RESTARTS   AGE
lamp-d68899b54-hb9sq                0/1      ErrImagePull    0           38s
lamp-mysql-6f8bb57c87-82hwt         1/1      Running        0           38s
lamp-d68899b54-hb9sq                0/1      ImagePullBackOff 0           43s
^C
swadhinink@democode: ~/srija_code/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl get po -n lampdemo
NAME                                READY    STATUS    RESTARTS   AGE
lamp-d68899b54-hb9sq                0/1      ErrImagePull    0           59s
lamp-mysql-6f8bb57c87-82hwt         1/1      Running        0           59s
swadhinink@democode: ~/srija_code/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl get svc -n lampdemo
NAME      TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)          AGE
lamp      LoadBalancer 10.104.196.187 <pending>       80:32570/TCP     74s
lamp-mysql ClusterIP     None          <none>         3306/TCP         74s
swadhinink@democode: ~/srija_code/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ minikube service lamp -n lampdemo 2>&
1
```

```
swadhinink@democode: ~/srija_code/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl apply -n lampdemo -k ./
secret/mysql-pass-6d2997f772 created
service/lamp created
service/lamp-mysql created
persistentvolumeclaim/lamp-pv-claim created
persistentvolumeclaim/mysql-pv-claim created
deployment.apps/lamp created
deployment.apps/lamp-mysql created
swadhinink@democode: ~/srija_code/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl get po -n lampdemo -w
NAME                                READY    STATUS    RESTARTS   AGE
lamp-d68899b54-hb9sq                0/1      ErrImagePull    0           38s
lamp-mysql-6f8bb57c87-82hwt         1/1      Running        0           38s
lamp-d68899b54-hb9sq                0/1      ImagePullBackOff 0           43s
^C
swadhinink@democode: ~/srija_code/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl get po -n lampdemo
NAME                                READY    STATUS    RESTARTS   AGE
lamp-d68899b54-hb9sq                0/1      ErrImagePull    0           59s
lamp-mysql-6f8bb57c87-82hwt         1/1      Running        0           59s
swadhinink@democode: ~/srija_code/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl get svc -n lampdemo
NAME      TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)          AGE
lamp      LoadBalancer 10.104.196.187 <pending>       80:32570/TCP     74s
lamp-mysql ClusterIP     None          <none>         3306/TCP         74s
swadhinink@democode: ~/srija_code/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ minikube service lamp -n lampdemo 2>&
1

+-----+-----+-----+-----+
| NAMESPACE | NAME | TARGET PORT | URL |
+-----+-----+-----+-----+
| lampdemo  | lamp | 80           | http://192.168.49.2:32570 |
+-----+-----+-----+-----+
```



phpMyAdmin

Recent Favorites

New

information\_schema

mysql

performance\_schema

sys

testdb

Server: lamp-mysql/3306

DatabasesSQLStatusUser accountsExportImportSettingsBinary logReplicationVariablesCharsetsMore

General settings

Change password

Server connection collation: utf8mb4\_unicode\_ci

More settings

Appearance settings

Language: English

Theme: pmahomme View all

Database server

- Server: lamp-mysql via TCP/IP
- Server type: MySQL
- Server connection: SSL is not being used
- Server version: 8.0.41 - MySQL Community Server - GPL
- Protocol version: 10
- User: root@10.244.0.9
- Server charset: UTF-8 Unicode (utf8mb4)

Web server

- Apache/2.4.62 (Debian)
- Database client version: libmysql - mysqlnd 8.2.27
- PHP extension: mysql curl mbstring sodium
- PHP version: 8.2.27

phpMyAdmin

- Version information: 5.2.2 (up to date)
- Documentation
- Official Homepage
- Contribute
- Get support
- List of changes

Console

127.0.0.1:35141 / lamp-mysql | x +

127.0.0.1:35141/index.php?route=/ Verify it's you

# phpMyAdmin

Recent Favorites

- New
- information\_schema
- mysql
- performance\_schema
- sys
- testdb

Server: lamp-mysql:3306

Databases SQL Status User accounts Export Import Settings Binary log Replication More

### General settings

Change password

Server connection collation: utf8mb4\_unicode\_ci

More settings

### Appearance settings

Language: English

Theme: pmahomme View all

### Database server

- Server: lamp-mysql via TCP/IP
- Server type: MySQL
- Server connection: SSL is not being used
- Server version: 8.0.41 - MySQL Community Server - GPL
- Protocol version: 10
- User: root@10.244.0.59
- Server charset: UTF-8 Unicode (utf8mb4)

### Web server

- Apache/2.4.62 (Debian)
- Database client version: libmysql - mysqlnd 8.2.27
- PHP extension: mysqli curl mbstring sodium
- PHP version: 8.2.27

### phpMyAdmin

Console

Type here to search

29°C Mostly clear 11:27 PM 3/21/2025