

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
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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
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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
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.
shivavarsh@democode: $ ls
sri*
shivavarsh@democode: $ cd sri*
shivavarsh@democode: ~/sri$ cd kuber*
shivavarsh@democode: ~/sri/kuber$ cd de*
shivavarsh@democode: ~/sri/kuber/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: ~/sriam

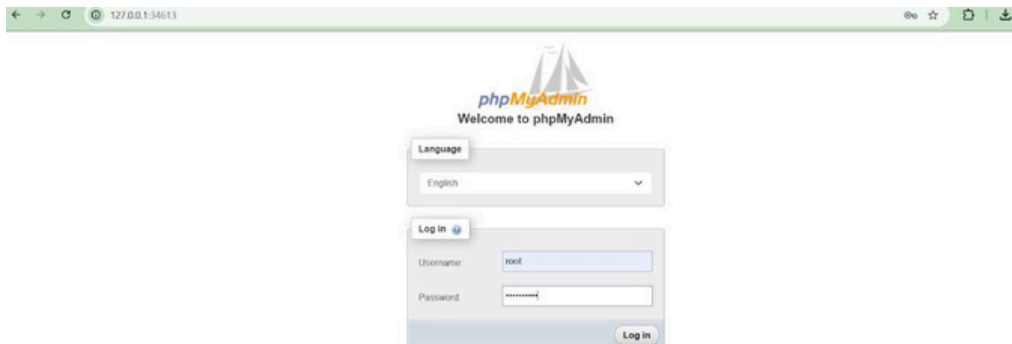
Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
shivavarsh@democode: ~/sriam_code/kubernetes/deploy$ cd yam
shivavarsh@democode: ~/sriam_code/kubernetes/deploy/yam$ cd ap*
shivavarsh@democode: ~/sriam_code/kubernetes/deploy/yam/apache_phpadmin_mysql$ cd PH*
shivavarsh@democode: ~/sriam_code/kubernetes/deploy/yam/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'

shivavarsh@democode: ~/sriam_code/kubernetes/deploy/yam/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
shivavarsh@democode: ~/sriam_code/kubernetes/deploy/yam/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 shivavarsh@democode: ~/sriam_code/kubernetes/deploy/yam/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ kubectl get po -n lampdemo
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shivavarsh@democode: ~/sriam_code/kubernetes/deploy/yam/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
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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

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- 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

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- information_schema
- mysql
- performance_schema
- sys
- testdb

Server: lamp-mysql:3306

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

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Console

Type here to search

29°C Mostly clear 11:27 PM 3/21/2025