

# 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
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:

```
uresh@Ureshvel: ~/devops/ki x + v
Termination behavior can be configured in advanced profile settings. Don't show again

Setting up libheif-plugin-aomenc:amd64 (1.17.6-1ubuntu4.1) ...
Processing triggers for libc-bin (2.39-0ubuntu8.4) ...
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for shared-mime-info (2.4-4) ...
Processing triggers for udev (255.4-1ubuntu8.4) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
N: Download is performed unsandboxed as root as file '/home/uresh/devops/kubernetes/minikube_latest_amd64.deb' couldn't
Permission denied)
👤 Profile "minikube" not found. Run "minikube profile list" to view all profiles.
👉 To start a cluster, run: "minikube start"
uresh@Ureshvel:~/devops/kubernetes$ minikube start
🐳 minikube v1.35.0 on Ubuntu 24.04 (amd64)
🔧 Automatically selected the docker driver. Other choices: ssh, none
🚀 Using Docker driver with root privileges
👍 Starting "minikube" primary control-plane node in "minikube" cluster
📦 Pulling base image v0.0.46 ...
📦 Downloading Kubernetes v1.32.0 preload ...
> preloaded-images-k8s-v18-v1...: 333.57 MiB / 333.57 MiB 100.00% 886.82
> gcr.io/k8s-minikube/kicbase...: 500.31 MiB / 500.31 MiB 100.00% 1.26 Mi
^X
^X^C
uresh@Ureshvel:~/devops/kubernetes$ cd deploy
uresh@Ureshvel:~/devops/kubernetes/deploy$
uresh@Ureshvel:~/devops/kubernetes/deploy$ cd yaml
uresh@Ureshvel:~/devops/kubernetes/deploy/yaml$ cd apache_phpadmin_mysql/
uresh@Ureshvel:~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql$ cd PHPMYADMIN_MYSQL/
uresh@Ureshvel:~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ ls
kustomization.yaml lamp-phpadmin.yaml mysql.yaml namespace.yaml
uresh@Ureshvel:~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ ts
Command 'ts' not found, but can be installed with:
uresh@Ureshvel:~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$ nano namespace.yaml
uresh@Ureshvel:~/devops/kubernetes/deploy/yaml/apache_phpadmin_mysql/PHPMYADMIN_MYSQL$
```

```
uresh@Ureshvel: ~/devops/ka X + v
Termination behavior can be configured in advanced profile settings. Don't show again X

uresh@Ureshvel:~/devops$ cd kubernetes
uresh@Ureshvel:~/devops/kubernetes$ ls
README.md  deploy  install_kubectrl.sh  logging  startminikube.sh
README.txt  install_helm.sh  install_minikube.sh  remove_minikube.sh
uresh@Ureshvel:~/devops/kubernetes$ chmod +x *.sh
uresh@Ureshvel:~/devops/kubernetes$ ./install_helm.sh
Downloading https://get.helm.sh/helm-v3.17.2-linux-amd64.tar.gz
Verifying checksum... Done.
Preparing to install helm into /usr/local/bin
[sudo] password for uresh:
helm installed into /usr/local/bin/helm
uresh@Ureshvel:~/devops/kubernetes$ ./install_kubernetes.sh
-bash: ./install_kubernetes.sh: No such file or directory
uresh@Ureshvel:~/devops/kubernetes$ ./install_kubectrl.sh
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
Dload  Upload   Total   Spent    Left   Speed
100 138 100 138 0 0 205 0 --:--:-- --:--:-- --:--:-- 205
100 53.7M 100 53.7M 0 0 598k 0 0:01:32 0:01:32 --:--:-- 1557k
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
Dload  Upload   Total   Spent    Left   Speed
100 138 100 138 0 0 254 0 --:--:-- --:--:-- --:--:-- 254
100 64 100 64 0 0 72 0 --:--:-- --:--:-- --:--:-- 72
kubectrl: OK
Client Version: v1.31.4
Kustomize Version: v5.4.2
clientVersion:
  buildDate: "2024-12-10T11:43:21Z"
  compiler: gc
  gitCommit: a78aa47129b8539636eb86a9d00e31b2720fe06b
  gitTreeState: clean
  gitVersion: v1.31.4
  goVersion: go1.22.9
  major: "1"
  minor: "31"
  platform: linux/amd64
kustomizeVersion: v5.4.2
uresh@Ureshvel:~/devops/kubernetes$
```

```
uresh@Ureshvel: ~/devops/ka X + v
Termination behavior can be configured in advanced profile settings. Don't show again X

100 138 100 138 0 0 254 0 --:--:-- --:--:-- --:--:-- 254
100 64 100 64 0 0 72 0 --:--:-- --:--:-- --:--:-- 72
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  major: "1"
  minor: "31"
  platform: linux/amd64
kustomizeVersion: v5.4.2
uresh@Ureshvel:~/devops/kubernetes$ ./install_minikube.sh
Hit:1 https://download.docker.com/linux/ubuntu noble InRelease
Hit:2 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:3 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:4 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:5 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
curl is already the newest version (8.5.0-2ubuntu10.6).
0 upgraded, 0 newly installed, 0 to remove and 130 not upgraded.
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
Dload  Upload   Total   Spent    Left   Speed
100 37.0M 100 37.0M 0 0 1296k 0 0:00:29 0:00:29 --:--:-- 1935k
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Note, selecting 'minikube' instead of './minikube_latest_amd64.deb'
The following additional packages will be installed:
  alsa-topology-conf alsa-ucm-conf build-essential bzip2 cpp cpp-13 cpp-13-x86-64-linux-gnu cpp-x86-64-linux-gnu dkms dpkg-dev fakeroot g++
```



Language

English

Log in

Username: root

Password: .....

Log in

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=/

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

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- Language: English
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- 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

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