

TASK – 3 MINIKUBE DEPLOYMENT TASK

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STEP 1: Start Minikube

Start the Minikube cluster using the following command:

minikube start

```
sindhukumar@sindhu:~/taks22$ 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 ...
🔄 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: default-storageclass, storage-provisioner
🏁 Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```

This initializes the Minikube cluster using Docker as the driver.

STEP 2: Install Kubectl

Since kubectl is not found,install it with the following command:

sudo snap install kubectl --classic

Alternatively, you can download it using curl:

```
curl -LO "https://dl.k8s.io/release/$(curl -L -s
https://dl.k8s.io/release/stable.txt)/bin/linux/amd64/kubectl" sudo install -o root -g root -m
0755 kubectl /usr/local/bin/kubectl
```

STEP 3: Verify kubectl Installation

Check the client version to confirm successful installation:

Kubectl version -client

STEP 4: Create a Deployment

Create a deployment named `r2` with the image `sindhukavikumar/sample1`:

kubectl create deployment r2 --image=sindhukavikumar/sample1 --port=80

```
sindhukumar@sindhu:~/taks22$ kubectl create deployment r2 --image=sindhukavikumar/sample1 --port=80
deployment.apps/r2 created
```

STEP 5: Expose the Deployment

Expose the deployment as a NodePort service:

kubectl expose deployment r2 --port=80 --type=NodePort

```
sindhukumar@sindhu:~/taks22$ kubectl expose deployment.apps/r2 --port=80 --type=NodePort
service/r2 exposed
```

STEP 6: Verify the Pod

Check the running pods:

```
kubectl get pods
```

Step 7: Access the Service

Expose the service using Minikube and get the URL:

```
minikube service r2
```

```
sindhukumar@Sindhu:~/taks22$ minikube service r2
```

NAMESPACE	NAME	TARGET PORT	URL
default	r2	80	http://192.168.49.2:30485

🚀 Starting tunnel for service r2.

NAMESPACE	NAME	TARGET PORT	URL
default	r2		http://127.0.0.1:46711

🖱️ Opening service default/r2 in default browser...
http://127.0.0.1:46711
🔔 Because you are using a Docker driver on linux, the terminal needs to be open to run it.

STEP 8: Output in the Web Browser



DockerHub:

