

TASK 3- Minikube Depolyement Task

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Step 1:

Start the minikube cluster using the command:

minikube start

```
jenkins@Swetha:/root$ minikube start
🐹 minikube v1.35.0 on Ubuntu 24.04 (amd64)
🌟 Automatically selected the docker driver. Other choices: none, ssh
🚀 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% 4.65 Mi
> gcr.io/k8s-minikube/kicbase...: 500.31 MiB / 500.31 MiB 100.00% 2.81 Mi
🔥 Creating docker container (CPUs=2, Memory=2200MB) ...
🌐 Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...
  ▪ Generating certificates and keys ...
  ▪ Booting up control plane ...
  ▪ Configuring RBAC rules ...
🔗 Configuring bridge CNI (Container Networking Interface) ...
🔍 Verifying Kubernetes components...
  ▪ Using image gcr.io/k8s-minikube/storage-provisioner:v5
🌞 Enabled addons: storage-provisioner, default-storageclass
🎉 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

sudo snap install kubectl --classic

```
jenkins@Swetha:/root$ sudo snap install kubectl --classic
kubectl 1.32.3 from Canonical✓ installed
```

Step 3: Verify kubectl Installation

Kubectl version

```
jenkins@Swetha:/root$ kubectl version -client
error: extra arguments: [-client]
jenkins@Swetha:/root$ kubectl version
Client Version: v1.32.3
Kustomize Version: v5.5.0
Server Version: v1.32.0
```

Step 4: Create a deployment

kubectl create deployment r2 --image=swethamurugesan/devopsgit --port=80

```
jenkins@Swetha:/root$ kubectl create deployment r2 --image=swethamurugesan/devopsgit --port=80
deployment.apps/r2 created
```

Step 5: Expose the document

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

```
jenkins@Swetha:/root$ kubectl create deployment r2 --image=swethamurugesan/devopsgit --port=80
deployment.apps/r2 created
jenkins@Swetha:/root$ kubectl expose deployment r2 --port=80 --type=NodePort
error: the server doesn't have a resource type "deployment"
jenkins@Swetha:/root$ kubectl expose deployment r2 --port=80 --type=NodePort
service/r2 exposed
```

Step 6: Access the service

minikube service r2

```
jenkins@Swetha:/root$ minikube service r2
-----
| NAMESPACE | NAME | TARGET PORT | URL |
|-----|-----|-----|-----|
| default | r2 | 80 | http://192.168.49.2:31921 |
|-----|-----|-----|-----|
🌟 Starting tunnel for service r2.
-----
| NAMESPACE | NAME | TARGET PORT | URL |
|-----|-----|-----|-----|
| default | r2 |  | http://127.0.0.1:36617 |
|-----|-----|-----|-----|
🌟 Opening service default/r2 in default browser...
👉 http://127.0.0.1:36617
! Because you are using a Docker driver on linux, the terminal needs to be open to run it.
👉 Stopping tunnel for service r2.
```

Step 7: Check the Output in Browser

