TASK 3-Minikube Deployment Task

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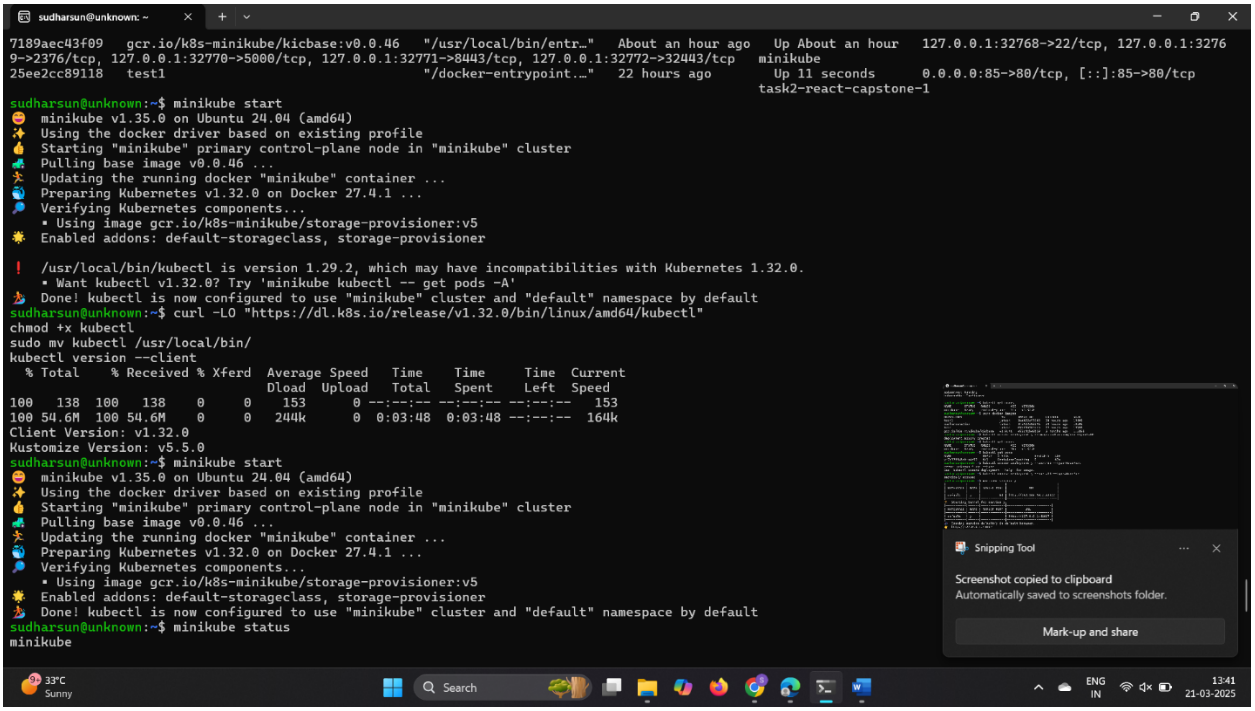
Step 1: Start Minikube

Start the Minikube cluster using the following command:

minikube start



```
7189aec43f09   gcr.io/k8s-minikube/kicbase:v0.0.46   "/usr/local/bin/entr…"   About an hour ago   Up About an hour   127.0.0.1:32768->22/tcp, 127.0.0.1:3276
9->2376/tcp, 127.0.0.1:32770->5000/tcp, 127.0.0.1:32771->8443/tcp, 127.0.0.1:32772->32443/tcp   minikube
25ee2cc89118   test1                                 "/docker-entrypoint.…"   22 hours ago        Up 11 seconds      0.0.0.0:85->80/tcp, [::]:85->80/tcp
                                                                                                 task2-react-capstone-1

sudharsun@unknown:~$ 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

❗  /usr/local/bin/kubectl is version 1.29.2, which may have incompatibilities with Kubernetes 1.32.0.
    ▪ Want kubectl v1.32.0? Try 'minikube kubectl -- get pods -A'
🏄  Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
sudharsun@unknown:~$ curl -LO "https://dl.k8s.io/release/v1.32.0/bin/linux/amd64/kubectl"
chmod +x kubectl
sudo mv kubectl /usr/local/bin/
kubectl version --client
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   138  100   138    0     0    153      0 --:--:-- --:--:-- --:--:--   153
100 54.6M  100 54.6M    0     0   244k      0  0:03:48  0:03:48 --:--:--  164k
Client Version: v1.32.0
Kustomize Version: v5.5.0
sudharsun@unknown:~$ 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
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    ▪ 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
sudharsun@unknown:~$ minikube status
minikube
```

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:

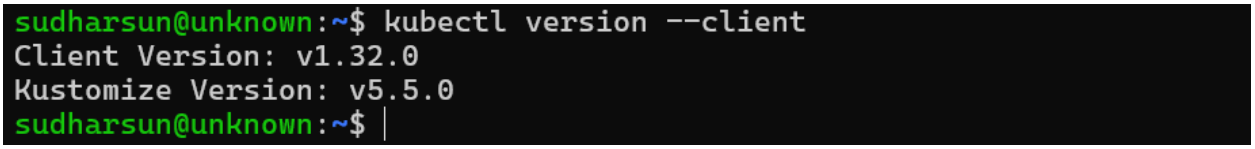
sudo snap install kubectl --classic

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

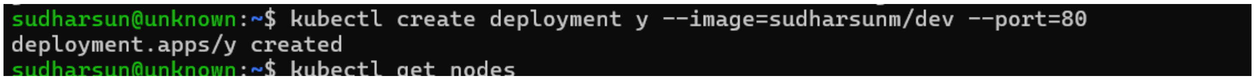


```
sudharsun@unknown:~$ kubectl version --client
Client Version: v1.32.0
Kustomize Version: v5.5.0
sudharsun@unknown:~$ |
```

Step 4: Create a Deployment

Create a deployment named `pod1` with the image `shankar4112/devops-training`:

kubectl create deployment y --image=sudharsunm/dev --port=80

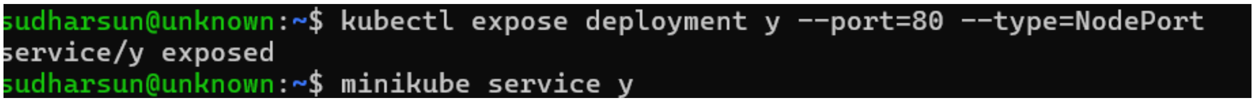


```
sudharsun@unknown:~$ kubectl create deployment y --image=sudharsunm/dev --port=80
deployment.apps/y created
sudharsun@unknown:~$ kubectl get nodes
```

Step 5: Expose the Deployment

Expose the deployment as a NodePort service:

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

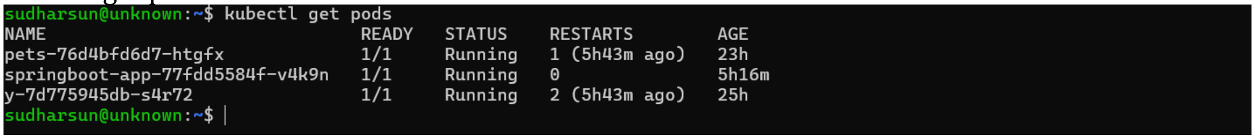


```
sudharsun@unknown:~$ kubectl expose deployment y --port=80 --type=NodePort
service/y exposed
sudharsun@unknown:~$ minikube service y
```

Step 6: Verify the Pod

Check the running pods:

kubectl get pods

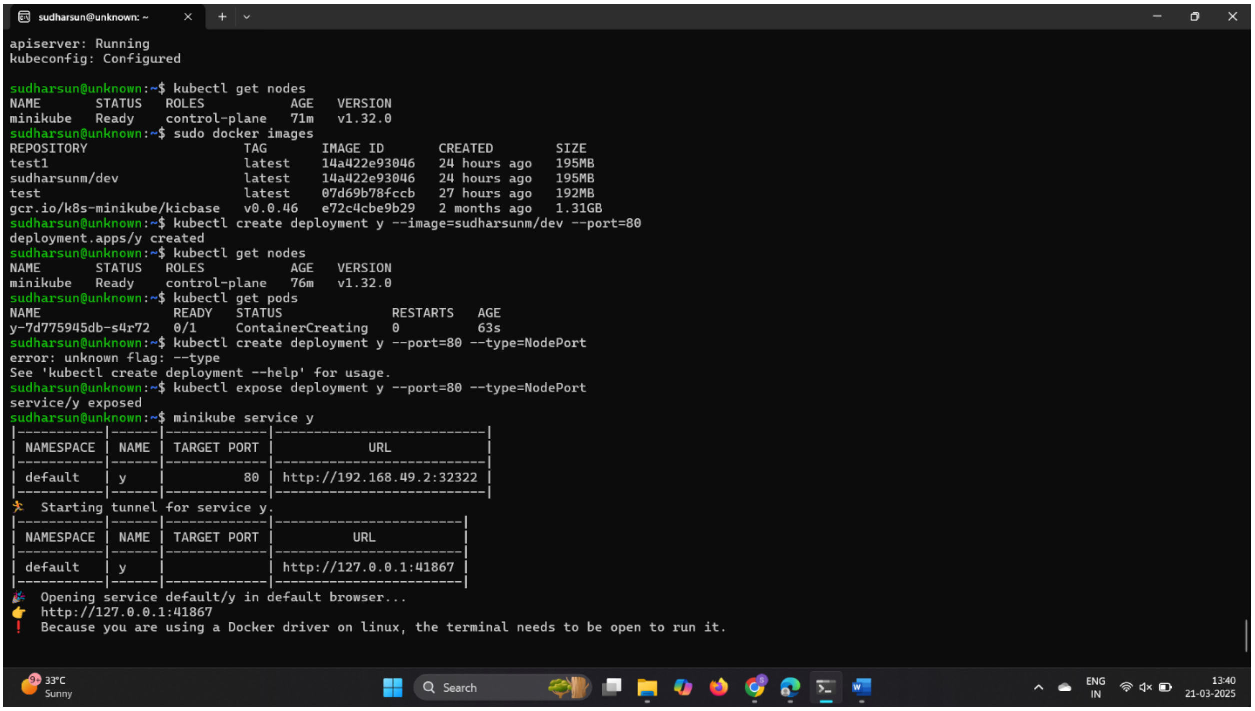


```
sudharsun@unknown:~$ kubectl get pods
NAME                                 READY   STATUS    RESTARTS        AGE
pets-76d4bfd6d7-htgfx                1/1     Running   1 (5h43m ago)   23h
springboot-app-77fdd5584f-v4k9n      1/1     Running   0               5h16m
y-7d775945db-s4r72                   1/1     Running   2 (5h43m ago)   25h
sudharsun@unknown:~$ |
```

Step 7: Access the Service

Expose the service using Minikube and get the URL:

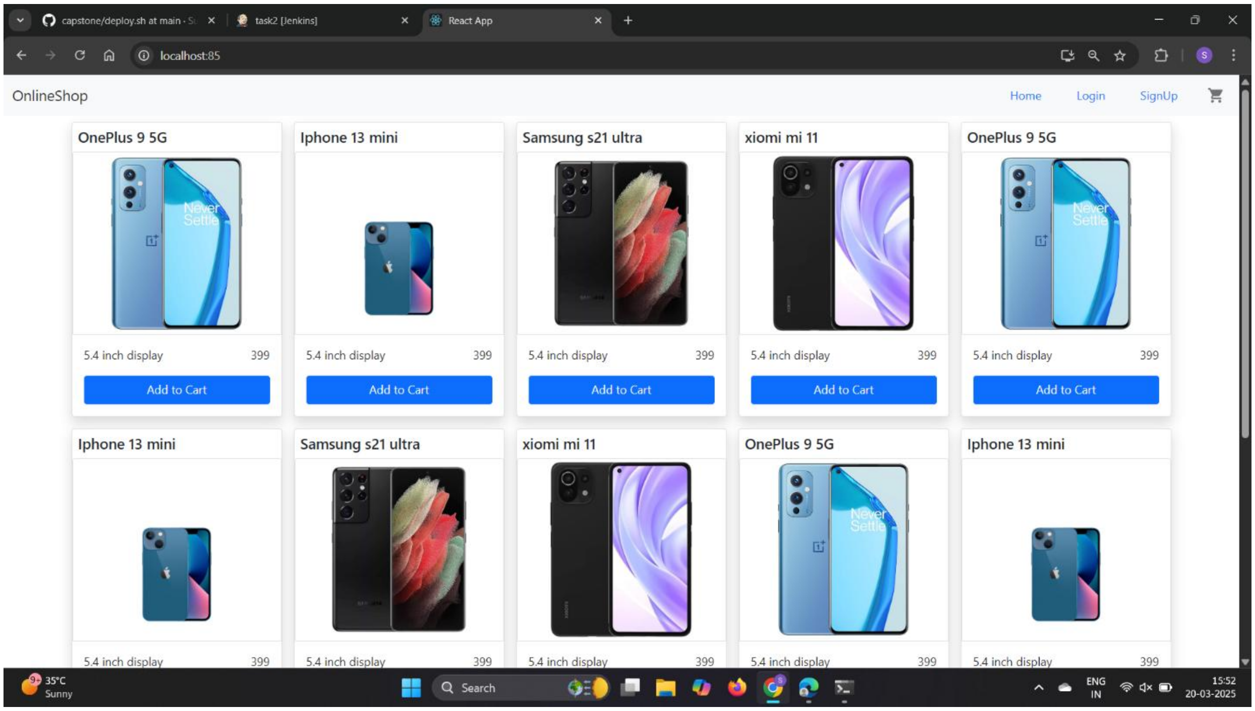
minikube service y



```
apiserver: Running
kubeconfig: Configured

sudharsun@unknown:~$ kubectl get nodes
NAME       STATUS   ROLES           AGE   VERSION
minikube   Ready    control-plane   71m   v1.32.0
sudharsun@unknown:~$ sudo docker images
REPOSITORY                    TAG       IMAGE ID       CREATED         SIZE
test1                         latest    14a422e93046   24 hours ago    195MB
sudharsunm/dev                latest    14a422e93046   24 hours ago    195MB
test                          latest    07d69b78fccb   27 hours ago    192MB
gcr.io/k8s-minikube/kicbase   v0.0.46   e72c4cbe9b29   2 months ago    1.31GB
sudharsun@unknown:~$ kubectl create deployment y --image=sudharsunm/dev --port=80
deployment.apps/y created
sudharsun@unknown:~$ kubectl get nodes
NAME       STATUS   ROLES           AGE   VERSION
minikube   Ready    control-plane   76m   v1.32.0
sudharsun@unknown:~$ kubectl get pods
NAME                 READY   STATUS              RESTARTS   AGE
y-7d775945db-s4r72   0/1     ContainerCreating   0          63s
sudharsun@unknown:~$ kubectl create deployment y --port=80 --type=NodePort
error: unknown flag: --type
See 'kubectl create deployment --help' for usage.
sudharsun@unknown:~$ kubectl expose deployment y --port=80 --type=NodePort
service/y exposed
sudharsun@unknown:~$ minikube service y
|-----------|------|-------------|---------------------------|
| NAMESPACE | NAME | TARGET PORT |            URL            |
|-----------|------|-------------|---------------------------|
| default   | y    |          80 | http://192.168.49.2:32322 |
|-----------|------|-------------|---------------------------|
🏃  Starting tunnel for service y.
|-----------|------|-------------|------------------------|
| NAMESPACE | NAME | TARGET PORT |          URL           |
|-----------|------|-------------|------------------------|
| default   | y    |             | http://127.0.0.1:41867 |
|-----------|------|-------------|------------------------|
🎉  Opening service default/y in default browser...
👉  http://127.0.0.1:41867
❗  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



capstone/deploy.sh at main · S
task2 [Jenkins]
React App
localhost:85
OnlineShop
Home
Login
SignUp
OnePlus 9 5G
5.4 inch display
399
Add to Cart
Iphone 13 mini
5.4 inch display
399
Add to Cart
Samsung s21 ultra
5.4 inch display
399
Add to Cart
xiomi mi 11
5.4 inch display
399
Add to Cart
OnePlus 9 5G
5.4 inch display
399
Add to Cart
Iphone 13 mini
5.4 inch display
399
Samsung s21 ultra
5.4 inch display
399
xiomi mi 11
5.4 inch display
399
OnePlus 9 5G
5.4 inch display
399
Iphone 13 mini
5.4 inch display
399
35°C
Sunny
Search
ENG
IN
15:52
20-03-2025