

DEVOPS

ASSIGNMENT 3

STEPS:

Step 1: Clone the Repository

Step 2: Build the Docker Image

```
docker build -t e-commerce-app .
```

Step 3: Start Minikube `minikube`

```
start --force minikube status
```

Step 4: Load the Docker Image into Minikube `minikube`

```
image load e-commerce-app
```

Verify the image is loaded:

```
minikube image list
```

Ensure "e-commerce-app" is listed

Step 5: Deploy the Application `kubectl apply -f`

```
deployment.yml kubectl get deployments kubectl get
```

```
Pods
```

If you need a NodePort service, apply it: `kubectl`

```
apply -f Nodeport.yml
```

Step 6: Fix Image Pull Issues (if necessary)

If Kubernetes tries to pull the image from a registry instead of using the local image, patch the deployment `kubectl patch deployment react-ecommercedeployment --type='json' p='[{"op": "replace", "path": "/spec/template/spec/containers/0/imagePullPolicy", "value": "Never"}]'`

Step 7: Expose the Service & Access the App `minikube ip minikube`

```
service react-ecommerce-service
```

Step 8: Push to Git: `git init` # If not already initialized `git add`
Dockerfile deployment.yml Nodeport.yml `git commit -m`
"Kubernetes deployment for React e-commerce app" `git remote`
`add origin` `git branch -M main` `git push -u origin main`.

OUTPUT:

```
pragalya@Pragalya: ~/Assig3
pragalya@Pragalya:~/Assig3/E-Commerce$ docker build -t e-commerce-app .
[+] Building 2.0s (7/7) FINISHED                                docker:default
=> [internal] load build definition from Dockerfile            0.0s
=> => transferring dockerfile: 276B                             0.0s
=> [internal] load metadata for docker.io/library/nginx:latest 2.0s
=> [internal] load .dockerignore                               0.0s
=> => transferring context: 2B                                    0.0s
=> [internal] load build context                               0.0s
=> => transferring context: 837B                                  0.0s
=> [1/2] FROM docker.io/library/nginx:latest@sha256:124b44bfc9ccd1f3cedf4b592d4d1e8bddb78b51ec2ed5056c 0.0s
=> CACHED [2/2] COPY build/ /usr/share/nginx/html             0.0s
=> exporting to image                                         0.0s
=> => exporting layers                                           0.0s
=> => writing image sha256:4d670166439d63edbd4a61bc4a8e0bda98e191953efd0beeff358d83db4dfe9 0.0s
=> => naming to docker.io/library/e-commerce-app              0.0s
pragalya@Pragalya:~/Assig3/E-Commerce$ docker images | grep e-commerce-app
e-commerce-app      latest      4d670166439d  30 minutes ago  195MB
pragalya@Pragalya:~/Assig3/E-Commerce$ minikube status
minikube
type: Control Plane
host: Stopped
kubelet: Stopped
apiserver: Stopped
kubeconfig: Stopped
pragalya@Pragalya:~/Assig3/E-Commerce$ minikube start --force
😄 minikube v1.35.0 on Ubuntu 22.04 (amd64)
! minikube skips various validations when --force is supplied; this may lead to unexpected behavior
🔧 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" ...
💡 StartHost failed, but will try again: driver start: start: docker start minikube: exit status 1
stdout:
stderr:
Error response from daemon: failed to create task for container: failed to create shim task: OCI runtime create failed: runc create failed: unab
```

```
pragalya@Pragalya: ~/Assig3
pragalya@Pragalya:~/Assig3/E-Commerce$ minikube status
minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured

pragalya@Pragalya:~/Assig3/E-Commerce$ minikube image load e-commerce-app
pragalya@Pragalya:~/Assig3/E-Commerce$ minikube image list | grep e-commerce-app
docker.io/library/e-commerce-app:latest
pragalya@Pragalya:~/Assig3/E-Commerce$ kubectl apply -f deployment.yml
deployment.apps/react-e-commerce-deployment unchanged
pragalya@Pragalya:~/Assig3/E-Commerce$ kubectl get deployments
NAME                READY   UP-TO-DATE   AVAILABLE   AGE
react-e-commerce-deployment  0/2     2            0           30m
pragalya@Pragalya:~/Assig3/E-Commerce$ kubectl get pods -o wide
NAME                READY   STATUS              RESTARTS   AGE   IP              NODE                NOMINATED NODE   READINESS G
ATES
react-e-commerce-deployment-849768b4c6-8fn7p  0/1     ErrImageNeverPull  0          24m   10.244.0.37     minikube             <none>            <none>
react-e-commerce-deployment-849768b4c6-ncxq4  0/1     ErrImageNeverPull  0          24m   10.244.0.41     minikube             <none>            <none>
pragalya@Pragalya:~/Assig3/E-Commerce$ kubectl patch deployment react-e-commerce-deployment --type='json' \
-p=[{"op": "replace", "path": "/spec/template/spec/containers/0/imagePullPolicy", "value": "Never"}]
deployment.apps/react-e-commerce-deployment patched (no change)
pragalya@Pragalya:~/Assig3/E-Commerce$ kubectl delete pod --all
pod "react-e-commerce-deployment-849768b4c6-8fn7p" deleted
pod "react-e-commerce-deployment-849768b4c6-ncxq4" deleted
pragalya@Pragalya:~/Assig3/E-Commerce$ kubectl get pods
NAME                READY   STATUS              RESTARTS   AGE
react-e-commerce-deployment-849768b4c6-2ccdl  0/1     ErrImageNeverPull  0          7s
react-e-commerce-deployment-849768b4c6-f5nhb  0/1     ErrImageNeverPull  0          7s
pragalya@Pragalya:~/Assig3/E-Commerce$ kubectl get deployment react-e-commerce-deployment -o yaml | grep image:
  image: e-commerce:latest
pragalya@Pragalya:~/Assig3/E-Commerce$ kubectl delete deployment react-e-commerce-deployment
deployment.apps "react-e-commerce-deployment" deleted
pragalya@Pragalya:~/Assig3/E-Commerce$ kubectl apply -f deployment.yml
deployment.apps/react-e-commerce-deployment created
pragalya@Pragalya:~/Assig3/E-Commerce$ kubectl patch deployment react-e-commerce-deployment --type='json' \
```


```
pod "react-e-commerce-deployment-845959cf77-z8ksz" deleted
pod "react-e-commerce-deployment-845959cf77-zwcjw" deleted
NAME                READY   STATUS              RESTARTS   AGE
react-e-commerce-deployment-845959cf77-8dww8  1/1     Running             0          3s
react-e-commerce-deployment-845959cf77-f28hs  1/1     Running             0          3s
pragalya@Pragalya:~/Assig3/E-Commerce$ kubectl get pods -o wide
NAME                READY   STATUS              RESTARTS   AGE   IP              NODE                NOMINATED NODE   READINESS GATES
react-e-commerce-deployment-845959cf77-8dww8  1/1     Running             0        11s   10.244.0.51     minikube             <none>            <none>
react-e-commerce-deployment-845959cf77-f28hs  1/1     Running             0        11s   10.244.0.52     minikube             <none>            <none>
pragalya@Pragalya:~/Assig3/E-Commerce$ kubectl apply -f deployment.yml
deployment.apps/react-e-commerce-deployment unchanged
pragalya@Pragalya:~/Assig3/E-Commerce$ kubectl get pods -o wide
NAME                READY   STATUS              RESTARTS   AGE   IP              NODE                NOMINATED NODE   READINESS GATES
react-e-commerce-deployment-845959cf77-8dww8  1/1     Running             0        35s   10.244.0.51     minikube             <none>            <none>
react-e-commerce-deployment-845959cf77-f28hs  1/1     Running             0        35s   10.244.0.52     minikube             <none>            <none>
pragalya@Pragalya:~/Assig3/E-Commerce$ minikube ip
192.168.49.2
pragalya@Pragalya:~/Assig3/E-Commerce$ minikube service react-e-commerce-service
|-----|
| NAMESPACE | NAME           | TARGET PORT | URL                               |
|-----|
| default   | react-e-commerce-service | 80          | http://192.168.49.2:30007        |
|-----|
★ Starting tunnel for service react-e-commerce-service.
|-----|
| NAMESPACE | NAME           | TARGET PORT | URL                               |
|-----|
| default   | react-e-commerce-service | 80          | http://127.0.0.1:37257          |
|-----|
🚀 Opening service default/react-e-commerce-service in default browser...
👉 http://127.0.0.1:37257
! Because you are using a Docker driver on linux, the terminal needs to be open to run it.
```

127.0.0.1:37257

OnlineShop

HomeLoginSignUp


OnePlus 9 5G



5.4 inch display399

Add to Cart


Iphone 13 mini



5.4 inch display399

Add to Cart


Samsung s21 ultra



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Add to Cart


xiomi mi 11



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OnePlus 9 5G



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