

DEVOPS TASK 3

Step 1 : Installed ubuntu wsl in windows as the virtual box is slow.

Step 2 : Install docker, kubernetes, jenkins in wsl shell.

Step 3 : In ubuntu , clone this repository using git clone <url> ,

url: <https://github.com/Jervinjeno/E-Commerce.git>

Step 4 : Execute the below commands.

```
root@kowsi: /home/kow x + v
26 sudo apt-get install ca-certificates curl
27 sudo install -m 0755 -d /etc/apt/keyrings
28 sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
29 sudo chmod a+r /etc/apt/keyrings/docker.asc
30 # Add the repository to Apt sources:
31 echo "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.docker.com/linux/ubuntu \
32 $(. /etc/os-release && echo "${UBUNTU_CODENAME:-$VERSION_CODENAME}") stable" | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
33 sudo apt-get update
34 sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin
35 cd
36 sudo apt install -y apt-transport-https ca-certificates curl
37 curl -s https://packages.cloud.google.com/apt/doc/apt-key.gpg | sudo apt-key add -
38 echo "deb https://apt.kubernetes.io/ kubernetes-xenial main" | sudo tee /etc/apt/sources.list.d/kubernetes.list
39 sudo snap install kubectl --classic
40 kubectl version --client
41 curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64
42 sudo install minikube-linux-amd64 /usr/local/bin/minikube
43 minikube version
44 minikube start --driver=docker
45 minikube status
46 kubectl cluster-info
47 kubectl config view
48 docker --version
49 docker build -t ecommerce:latest .
50 cd /home/kowsika/E-Commerce
51 docker build -t ecommerce:latest .
52 history
53 cat dockerfile
54 cat Dockerfile
55 docker build -t ecommerce:latest .
56 kubectl apply -f deployment.yml
57 kubectl get deployments
58 kubectl get pods
59 minikube image load ecommerce:latest
60 kubectl get pods
61 minikube image load ecommerce:latest
62 kubectl apply -f deployment.yml
63 kubectl get pods
64 minikube service react-ecommerce-service
65 kubectl apply -f Nodeport.yaml

root@kowsi: /home/kow x + v
root@kowsi: /home/kowsika/E-Commerce# histort
histort: command not found
root@kowsi: /home/kowsika/E-Commerce# history
1 sudo apt update
2 sudo apt install fontconfig openjdk-17-jre
3 java -version
4 openjdk version "17.0.13" 2024-10-15
5 sudo wget -O /usr/share/keyrings/jenkins-keyring.asc https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
6 echo "deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] https://pkg.jenkins.io/debian-stable binary/ | sudo tee /etc/apt/sources.list.d/jenkins.list > /dev/null
7 sudo apt-get update
8 sudo apt-get install jenkins
9 sudo systemctl enable jenkins
10 sudo systemctl start jenkins
11 sudo systemctl status jenkins
12 sudo cat /var/lib/jenkins/secrets/initialAdminPassword
13 cd /home/kowsika/E-Commerce
14 E-Commerce# docker build -t ecommerce:latest .
15 docker build -t ecommerce:latest .
16 systemctl status docker
17 sudo systemctl start docker
18 sudo systemctl enable docker
19 sudo systemctl restart docker
20 docker build -t ecommerce:latest .
21 sudo dockerd
22 sudo apt install -y apt-transport-https ca-certificates curl
23 docker build -t ecommerce:latest .
24 # Add Docker's official GPG key:
25 sudo apt-get update
26 sudo apt-get install ca-certificates curl
27 sudo install -m 0755 -d /etc/apt/keyrings
28 sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
29 sudo chmod a+r /etc/apt/keyrings/docker.asc
30 # Add the repository to Apt sources:
31 echo "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.docker.com/linux/ubuntu \
32 $(. /etc/os-release && echo "${UBUNTU_CODENAME:-$VERSION_CODENAME}") stable" | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
33 sudo apt-get update
34 sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin
35 cd
36 sudo apt install -y apt-transport-https ca-certificates curl
37 curl -s https://packages.cloud.google.com/apt/doc/apt-key.gpg | sudo apt-key add -
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35 sudo apt install -y apt-transport-https ca-certificates curl
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39 kubectl version --client
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41 sudo install minikube-linux-amd64 /usr/local/bin/minikube
42 minikube version
43 minikube start --driver=docker
44 minikube start --driver=docker --force
45 minikube status
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61 minikube image load ecommerce:latest
62 kubectl apply -f deployment.yml
63 kubectl get pods
64 minikube service react-ecommerce-service
65 kubectl apply -f Nodeport.yml
66 minikube service react-ecommerce-service
67 kubectl get svc
68 minikube services react-ecommerce-service
69 minikube services react-ecommerce-service
70 minikube service react-ecommerce-service
71 curl http://192.168.49.2:30087
72 histort
73 history
root@kowsi:/home/kowsika/E-Commerce#
```

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48 docker --version
49 docker build -t ecommerce:latest .
50 cd /home/kowsika/E-Commerce
51 docker build -t ecommerce:latest .
52 history
root@kowsi:/home/kowsika/E-Commerce# cat dockerfile
cat: dockerfile: No such file or directory
root@kowsi:/home/kowsika/E-Commerce# cat Dockerfile
FROM nginx:latest
# Copy the built files from the previous stage
COPY build/ /usr/share/nginx/html
# Expose port 80 (the default HTTP port)
EXPOSE 80
# Start Nginx and keep it running in the foreground
CMD ["nginx", "-g", "daemon off;"]
root@kowsi:/home/kowsika/E-Commerce# docker build -t ecommerce:latest .
[+] Building 2.2s (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 2.1s
=> [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@sha256:124b44bfc9ccd1f3cedf4b592d4d1e8bddb78b51ec2ed5856c52d3692bae 0.0s
=> CACHED [2/2] COPY build/ /usr/share/nginx/html               0.0s
=> exporting to image                                           0.0s
=> => exporting layers                                           0.0s
=> => writing image sha256:579b186fda3fede6d633e808d3c48bb85dbbfb0bc37bc24d08da9530a5421ff1 0.0s
=> => naming to docker.io/library/ecommerce:latest             0.0s
root@kowsi:/home/kowsika/E-Commerce# kubectl apply -f deployment.yml
deployment.apps/react-ecommerce-deployment created
root@kowsi:/home/kowsika/E-Commerce# kubectl get deployments
```

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root@kowsi:/home/kow x + v
CMD ["nginx", "-g", "daemon off;"]
root@kowsi:/home/kowsika/E-Commerce# docker build -t ecommerce:latest .
[+] Building 2.2s (7/7) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 276B
=> [internal] load metadata for docker.io/library/nginx:latest
=> [internal] load dockerignore
=> => transferring context: 2B
=> [internal] load build context
=> => transferring context: 837B
=> [1/2] FROM docker.io/library/nginx:latest@sha256:124b44bfc9ccdf3cedf4b592d4d1e8b8db78b51ec2ed5056c52d3692bae
=> CACHED [2/2] COPY build/ /usr/share/nginx/html
=> exporting to image
=> => exporting layers
=> => writing image sha256:579b109fda3fede6d633e808d3c48bb05dbbfff0bc37bc24d0da9530a5421ff1
=> => naming to docker.io/library/ecommerce:latest
root@kowsi:/home/kowsika/E-Commerce# kubectl apply -f deployment.yml
deployment.apps/react-ecommerce-deployment created
root@kowsi:/home/kowsika/E-Commerce# kubectl get deployments
NAME READY UP-TO-DATE AVAILABLE AGE
react-ecommerce-deployment 0/2 2 0 18s
root@kowsi:/home/kowsika/E-Commerce# kubectl get pods
NAME READY STATUS RESTARTS AGE
react-ecommerce-deployment-849768b4c6-kkhs7 0/1 ErrImageNeverPull 0 107s
react-ecommerce-deployment-849768b4c6-zxf2r 0/1 ErrImageNeverPull 0 107s
root@kowsi:/home/kowsika/E-Commerce# minikube image load ecommerce:latest
root@kowsi:/home/kowsika/E-Commerce# kubectl get pods
NAME READY STATUS RESTARTS AGE
react-ecommerce-deployment-849768b4c6-kkhs7 1/1 Running 0 3m15s
react-ecommerce-deployment-849768b4c6-zxf2r 1/1 Running 0 3m15s
root@kowsi:/home/kowsika/E-Commerce# minikube image load ecommerce:latest
root@kowsi:/home/kowsika/E-Commerce# kubectl apply -f deployment.yml
deployment.apps/react-ecommerce-deployment unchanged
root@kowsi:/home/kowsika/E-Commerce# kubectl get pods
NAME READY STATUS RESTARTS AGE
react-ecommerce-deployment-849768b4c6-kkhs7 1/1 Running 0 5m6s
react-ecommerce-deployment-849768b4c6-zxf2r 1/1 Running 0 5m6s
root@kowsi:/home/kowsika/E-Commerce# minikube service react-ecommerce-service
X Exiting due to SVC_NOT_FOUND: Service 'react-ecommerce-service' was not found in 'default' namespace.
You may select another namespace by using 'minikube service react-ecommerce-service -n <namespace>'. Or list out all the services using 'minikube service li
```

Step 5: Since I am working in wsl shell, I was not able to open the website , instead I got the code in the terminal.

```
root@kowsi:/home/kow x + v
http://192.168.49.2:30007
root@kowsi:/home/kowsika/E-Commerce# kubectl get svc
NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE
kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 22m
react-ecommerce-service NodePort 10.110.78.180 <none> 80:30007/TCP 60s
root@kowsi:/home/kowsika/E-Commerce# minikube services react-ecommerce-service
Command 'minikube' not found, did you mean:
  command 'minitube' from deb minitube (3.9.3-2)
Try: apt install <deb name>
root@kowsi:/home/kowsika/E-Commerce# minikube services react-ecommerce-service
Error: unknown command "services" for "minikube"

Did you mean this?
  service

Run 'minikube --help' for usage.
root@kowsi:/home/kowsika/E-Commerce# minikube services react-ecommerce-service
Error: unknown command "services" for "minikube"

Did you mean this?
  service

Run 'minikube --help' for usage.
root@kowsi:/home/kowsika/E-Commerce# minikube service react-ecommerce-service
+-----+-----+-----+-----+
| NAMESPACE | NAME | TARGET PORT | URL |
+-----+-----+-----+-----+
| default | react-ecommerce-service | 80 | http://192.168.49.2:30007 |
+-----+-----+-----+-----+
🔗 Opening service default/react-ecommerce-service in default browser...
http://192.168.49.2:30007
root@kowsi:/home/kowsika/E-Commerce# curl http://192.168.49.2:30007
<!doctype html><html lang="en"><head><meta charset="utf-8"/><link rel="icon" href="/favicon.ico"/><meta name="viewport" content="width=device-width,initial-scale=1"/><meta name="theme-color" content="#000000"/><meta name="description" content="Web site created using create-react-app"/><link rel="apple-touch-ico n" href="/logo192.png"/><link rel="manifest" href="/manifest.json"/><link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-1BmE4KWBq781YhFtdvKuhfTAU6auU8tY94wHfjDbrCEXSU1oBoqyl2QvZ6jIW3" crossorigin="anonymous"/><link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/bootstrap-icons@1.10.5/font/bootstrap-icons.css"/><title>React App</title><script defer="defer" src="/static/js/main.f1c48542.js"/></script><link href="/static/css/main.cf5c13c5.css" rel="stylesheet"/></head><body><body><noscript>You need to enable JavaScript to run this app.</noscript><div id="r
```