

TASK 4

Step 1: Start Minikube

```
minikube start --driver=docker --force
```

Step 2: Create a Deployment

```
kubectl create deployment webapp --image=nginx --port=80
```

Step 3: Expose the Deployment as a Service

```
kubectl expose deployment webapp --type=NodePort --port=80 --target-port=80
```

Step 4: Verify the Running Pods

```
kubectl get pod
```

Step 5: Verify the Service

```
kubectl get svc
```

Step 6: Open the Service in a Web Browser

```
minikube service webapp
```

Step 7: Test the Service Using curl

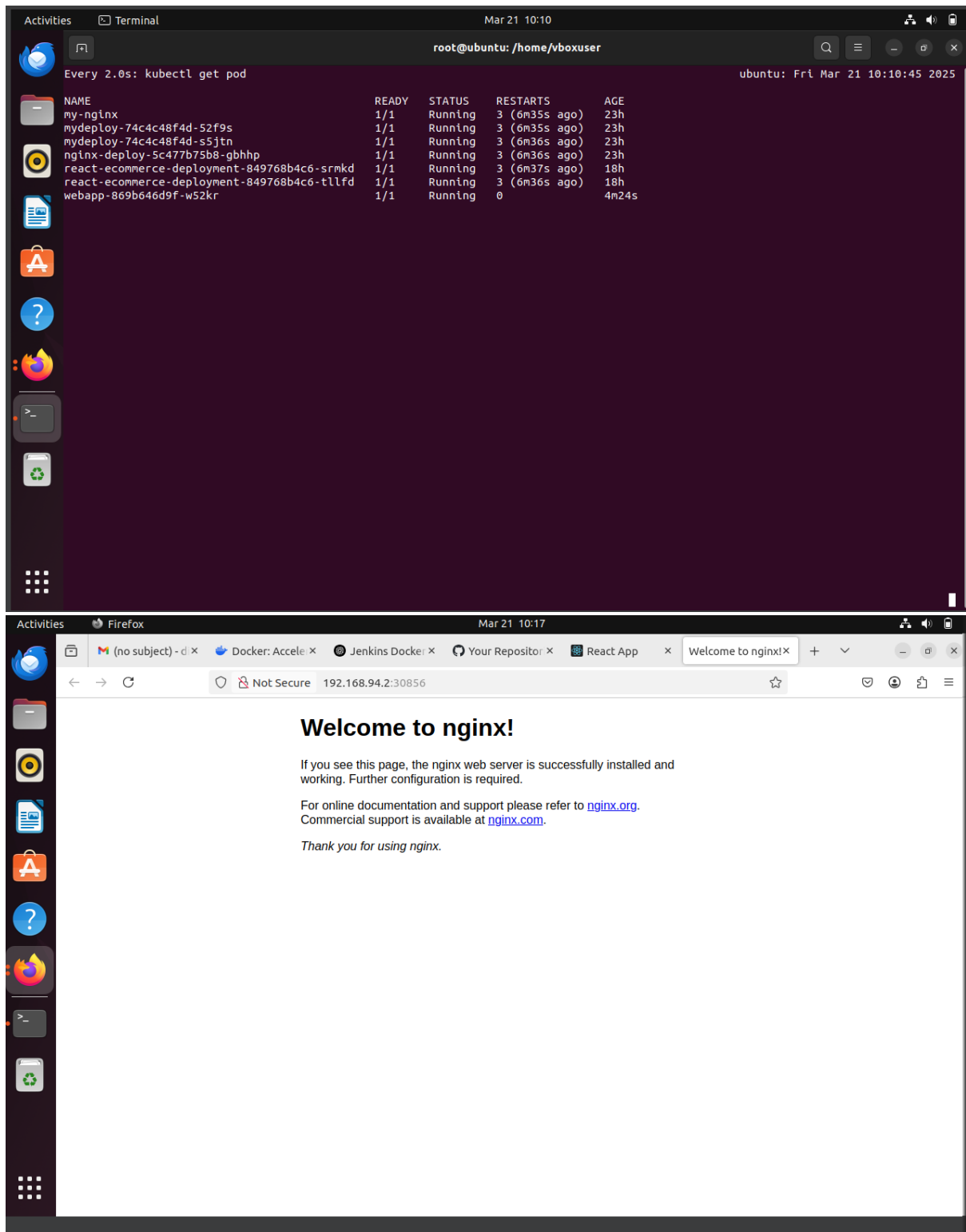
```
curl http://192.168.49.2:32172
```

Step 8: Continuously Monitor the Pods

```
watch kubectl get pod
```

Step 9: Continuously Monitor Pod Logs

```
watch kubectl logs webapp-869b646d9f-5nlp5
```



```
Activities Terminal Mar 21 10:19
root@ubuntu: /home/vboxuser
Every 2.0s: kubectl logs webapp-869b646d9f-w52kr ubuntu: Fri Mar 21 10:19:41 2025

/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Sourcing /docker-entrypoint.d/15-local-resolvers.envsh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2025/03/21 04:36:52 [notice] 1#1: using the "epoll" event method
2025/03/21 04:36:52 [notice] 1#1: ngnx/1.27.4
2025/03/21 04:36:52 [notice] 1#1: built by gcc 12.2.0 (Debian 12.2.0-14)
2025/03/21 04:36:52 [notice] 1#1: OS: Linux 6.8.0-52-generic
2025/03/21 04:36:52 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2025/03/21 04:36:52 [notice] 1#1: start worker processes
2025/03/21 04:36:52 [notice] 1#1: start worker process 29
2025/03/21 04:36:52 [notice] 1#1: start worker process 30
2025/03/21 04:36:52 [notice] 1#1: start worker process 31
2025/03/21 04:36:52 [notice] 1#1: start worker process 32
2025/03/21 04:36:52 [notice] 1#1: start worker process 33
2025/03/21 04:36:52 [notice] 1#1: start worker process 34
2025/03/21 04:36:52 [notice] 1#1: start worker process 35
2025/03/21 04:36:52 [notice] 1#1: start worker process 36
2025/03/21 04:36:52 [notice] 1#1: start worker process 37
2025/03/21 04:36:52 [notice] 1#1: start worker process 38
2025/03/21 04:36:52 [notice] 1#1: start worker process 39
10.244.0.1 - - [21/Mar/2025:04:38:48 +0000] "GET / HTTP/1.1" 200 615 "-" "Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:136.0) Gecko/20100101 Firefox/136.0" "-"
2025/03/21 04:38:49 [error] 29#29: *1 open() "/usr/share/nginx/html/favicon.ico" failed (2: No such file or directory), client: 10.244.0.1, server: localhost, request: "GET /favicon.ico HTTP/1.1", host: "192.168.94.2:30856", referer: "http://192.168.94.2:30856/"
10.244.0.1 - - [21/Mar/2025:04:38:49 +0000] "GET /favicon.ico HTTP/1.1" 404 153 "http://192.168.94.2:30856/" "Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:136.0) Gecko/20100101 Firefox/136.0" "-"
10.244.0.1 - - [21/Mar/2025:04:42:47 +0000] "GET / HTTP/1.1" 200 615 "-" "curl/7.81.0" "-"
```