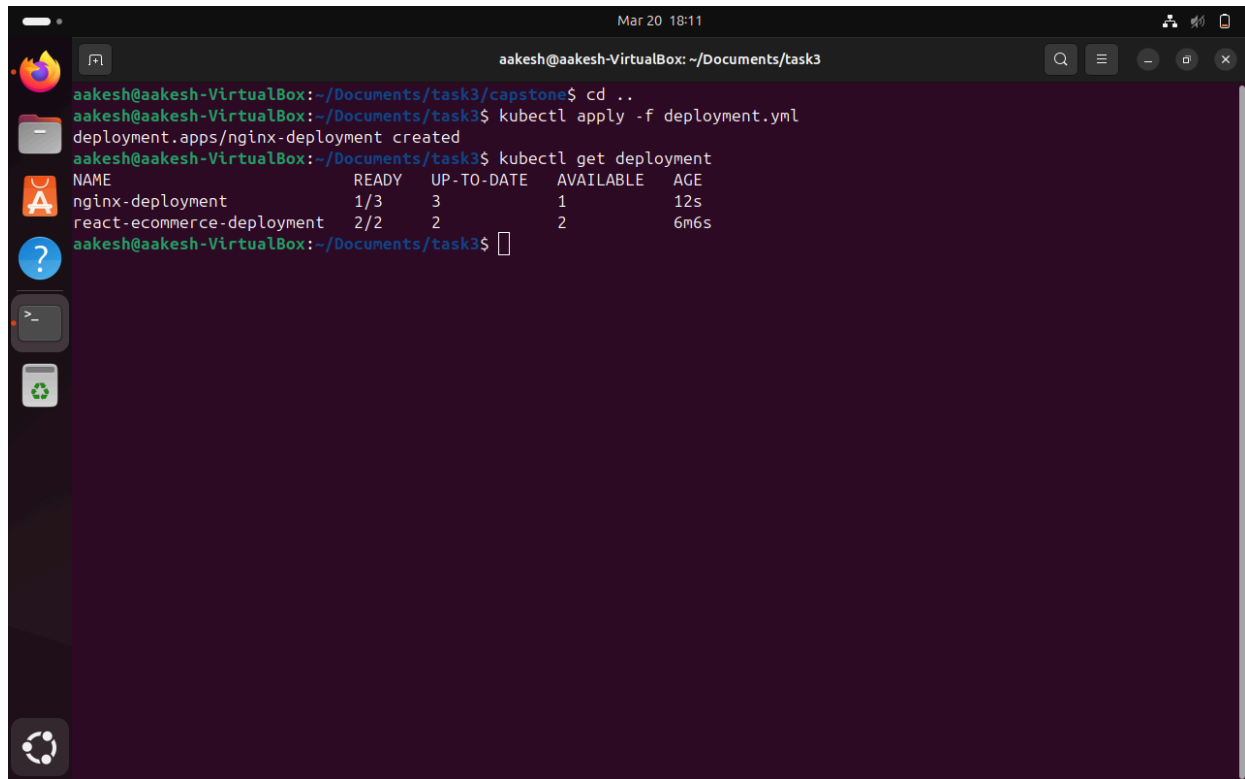


Created Deployment for nginx image:



The screenshot shows a terminal window titled 'aakesh@aakesh-VirtualBox: ~/Documents/task3' with a timestamp of 'Mar 20 18:11'. The terminal displays the following sequence of commands and output:

```
aakesh@aakesh-VirtualBox:~/Documents/task3/capstone$ cd ..
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl apply -f deployment.yml
deployment.apps/nginx-deployment created
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl get deployment
```

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
nginx-deployment	1/3	3	1	12s
react-ecommerce-deployment	2/2	2	2	6m6s

```
aakesh@aakesh-VirtualBox:~/Documents/task3$
```

Deleted Pod and checked whether it ups on its own:

```
Mar 20 18:13
aakesh@aakesh-VirtualBox: ~/Documents/task3

aakesh@aakesh-VirtualBox:~/Documents/task3$ cd ..
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl apply -f deployment.yml
deployment.apps/nginx-deployment created
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl get deployment
NAME                READY   UP-TO-DATE   AVAILABLE   AGE
nginx-deployment    1/3     3            1           12s
react-ecommerce-deployment 2/2     2            2           6m6s
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl get pod
NAME                READY   STATUS    RESTARTS   AGE
nginx-deployment-58cdc7b878-9srzz    1/1     Running   0           77s
nginx-deployment-58cdc7b878-kj9s2    1/1     Running   0           77s
nginx-deployment-58cdc7b878-mh9l9    1/1     Running   0           77s
react-ecommerce-deployment-b584d7d4c-kp2xv 1/1     Running   0           7m12s
react-ecommerce-deployment-b584d7d4c-vvl2t 1/1     Running   0           7m12s
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl delete pods nginx-deployment-58cdc7b878-9srzz
Error from server (NotFound): pods "nginx-deployment-58cdc7b878-9srzz" not found
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl delete pods nginx-deployment-58cdc7b878-9srzz
pod "nginx-deployment-58cdc7b878-9srzz" deleted
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl get pod
NAME                READY   STATUS    RESTARTS   AGE
nginx-deployment-58cdc7b878-kj9s2    1/1     Running   0           2m25s
nginx-deployment-58cdc7b878-mh9l9    1/1     Running   0           2m25s
nginx-deployment-58cdc7b878-vr8ng    1/1     Running   0           11s
react-ecommerce-deployment-b584d7d4c-kp2xv 1/1     Running   0           8m20s
react-ecommerce-deployment-b584d7d4c-vvl2t 1/1     Running   0           8m20s
aakesh@aakesh-VirtualBox:~/Documents/task3$
```

Scaled the pods of the nginx-deployment and checked for scaling:

```
Mar 20 18:15
aakesh@aakesh-VirtualBox: ~/Documents/task3

nginx-deployment-58cdc7b878-9srzz    1/1     Running   0           77s
nginx-deployment-58cdc7b878-kj9s2    1/1     Running   0           77s
nginx-deployment-58cdc7b878-mh9l9    1/1     Running   0           77s
react-ecommerce-deployment-b584d7d4c-kp2xv 1/1     Running   0           7m12s
react-ecommerce-deployment-b584d7d4c-vvl2t 1/1     Running   0           7m12s
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl delete pods nginx-deployment-58cdc7b878-9srzz
Error from server (NotFound): pods "nginx-deployment-58cdc7b878-9srzz" not found
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl delete pods nginx-deployment-58cdc7b878-9srzz
pod "nginx-deployment-58cdc7b878-9srzz" deleted
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl get pod
NAME                READY   STATUS    RESTARTS   AGE
nginx-deployment-58cdc7b878-kj9s2    1/1     Running   0           2m25s
nginx-deployment-58cdc7b878-mh9l9    1/1     Running   0           2m25s
nginx-deployment-58cdc7b878-vr8ng    1/1     Running   0           11s
react-ecommerce-deployment-b584d7d4c-kp2xv 1/1     Running   0           8m20s
react-ecommerce-deployment-b584d7d4c-vvl2t 1/1     Running   0           8m20s
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl get deployment
NAME                READY   UP-TO-DATE   AVAILABLE   AGE
nginx-deployment    3/3     3            3           3m52s
react-ecommerce-deployment 2/2     2            2           9m46s
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl scale deployment nginx-deployment --replicas=5
deployment.apps/nginx-deployment scaled
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl get pods
NAME                READY   STATUS             RESTARTS   AGE
nginx-deployment-58cdc7b878-kj9s2    1/1     Running            0           4m20s
nginx-deployment-58cdc7b878-mh9l9    1/1     Running            0           4m20s
nginx-deployment-58cdc7b878-rqr7x    0/1     ContainerCreating   0           10s
nginx-deployment-58cdc7b878-vr8ng    1/1     Running            0           2m6s
nginx-deployment-58cdc7b878-x9b6j    0/1     ContainerCreating   0           10s
react-ecommerce-deployment-b584d7d4c-kp2xv 1/1     Running            0           10m
react-ecommerce-deployment-b584d7d4c-vvl2t 1/1     Running            0           10m
aakesh@aakesh-VirtualBox:~/Documents/task3$
```

Updated nginx base image:

```
Mar 20 18:18
aakesh@aakesh-VirtualBox: ~/Documents/task3

react-ecommerce-deployment-b584d7d4c-vvl2t 1/1 Running 0 7m12s
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl delete pods nginx-deployment-58cdc7b8778-9srzz
Error from server (NotFound): pods "nginx-deployment-58cdc7b8778-9srzz" not found
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl delete pods nginx-deployment-58cdc7b878-9srzz
pod "nginx-deployment-58cdc7b878-9srzz" deleted
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl get pod
NAME                                READY    STATUS    RESTARTS   AGE
nginx-deployment-58cdc7b878-kj9s2    1/1     Running   0          2m25s
nginx-deployment-58cdc7b878-mh9l9    1/1     Running   0          2m25s
nginx-deployment-58cdc7b878-vr8ng    1/1     Running   0          11s
react-ecommerce-deployment-b584d7d4c-kp2xv 1/1     Running   0          8m20s
react-ecommerce-deployment-b584d7d4c-vvl2t 1/1     Running   0          8m20s
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl get deployment
NAME                                READY    UP-TO-DATE    AVAILABLE    AGE
nginx-deployment                    3/3      3             3            3m52s
react-ecommerce-deployment          2/2      2             2            9m46s
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl scale deployment nginx-deployment --replicas=5
deployment.apps/nginx-deployment scaled
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl get pods
NAME                                READY    STATUS             RESTARTS   AGE
nginx-deployment-58cdc7b878-kj9s2    1/1     Running            0          4m20s
nginx-deployment-58cdc7b878-mh9l9    1/1     Running            0          4m20s
nginx-deployment-58cdc7b878-rqr7x    0/1     ContainerCreating  0          10s
nginx-deployment-58cdc7b878-vr8ng    1/1     Running            0          2m6s
nginx-deployment-58cdc7b878-x9b6j    0/1     ContainerCreating  0          10s
react-ecommerce-deployment-b584d7d4c-kp2xv 1/1     Running            0          10m
react-ecommerce-deployment-b584d7d4c-vvl2t 1/1     Running            0          10m
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl set image deployment/nginx-deployment nginx-container=nginx:1..19
deployment.apps/nginx-deployment image updated
aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl set image deployment/nginx-deployment nginx-container=nginx:1.19
deployment.apps/nginx-deployment image updated
aakesh@aakesh-VirtualBox:~/Documents/task3$
```

Exposed the deployment:

```
Mar 20 18:19
aakesh@aakesh-VirtualBox: ~/Documents/task3

aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl get deployment
NAME                READY   UP-TO-DATE   AVAILABLE   AGE
nginx-deployment    3/3     3             3           3m52s
react-ecommerce-deployment 2/2     2             2           9m46s

aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl scale deployment nginx-deployment --replicas=5
deployment.apps/nginx-deployment scaled

aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl get pods
NAME                                READY   STATUS             RESTARTS   AGE
nginx-deployment-58cdc7b878-kj9s2   1/1     Running            0          4m20s
nginx-deployment-58cdc7b878-mh9l9   1/1     Running            0          4m20s
nginx-deployment-58cdc7b878-rqr7x   0/1     ContainerCreating  0          10s
nginx-deployment-58cdc7b878-vr8ng   1/1     Running            0          2m6s
nginx-deployment-58cdc7b878-x9b6j   0/1     ContainerCreating  0          10s
react-ecommerce-deployment-b584d7d4c-kp2xv 1/1     Running            0          10m
react-ecommerce-deployment-b584d7d4c-vvl2t 1/1     Running            0          10m

aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl set image deployment/nginx-deployment nginx-container=nginx:1.19
deployment.apps/nginx-deployment image updated

aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl set image deployment/nginx-deployment nginx-container=nginx:1.19
deployment.apps/nginx-deployment image updated

aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl expose deployment nginx-deployment --type=Nodeport --port=80
The Service "nginx-deployment" is invalid: spec.type: Unsupported value: "Nodeport": supported values: "ClusterIP", "ExternalName", "LoadBalancer", "NodePort"

aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl expose deployment nginx-deployment --type=NodePort --port=80
service/nginx-deployment exposed

aakesh@aakesh-VirtualBox:~/Documents/task3$ minikube ip
192.168.49.2

aakesh@aakesh-VirtualBox:~/Documents/task3$ kubectl get service
NAME                TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)          AGE
kubernetes          ClusterIP   10.96.0.1    <none>        443/TCP          27h
nginx-deployment    NodePort    10.104.156.224 <none>        80:31796/TCP     24s
react-ecommerce-service NodePort    10.96.127.164 <none>        80:30007/TCP     12m

aakesh@aakesh-VirtualBox:~/Documents/task3$
```

Checked for deployment status:

```
Mar 20 18:20
aakesh@aakesh-VirtualBox: ~/Documents/task3

kubernetes          ClusterIP   10.96.0.1    <none>        443/TCP          27h
nginx-deployment    NodePort    10.104.156.224 <none>        80:31796/TCP     24s
react-ecommerce-service NodePort    10.96.127.164 <none>        80:30007/TCP     12m

aakesh@aakesh-VirtualBox:~/Documents/task3$ curl 192.1168.49.2:31796
curl: (6) Could not resolve host: 192.1168.49.2:31796

aakesh@aakesh-VirtualBox:~/Documents/task3$ curl 192.168.49.2:31796
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
  body {
    width: 35em;
    margin: 0 auto;
    font-family: Tahoma, Verdana, Arial, sans-serif;
  }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>

aakesh@aakesh-VirtualBox:~/Documents/task3$
```

