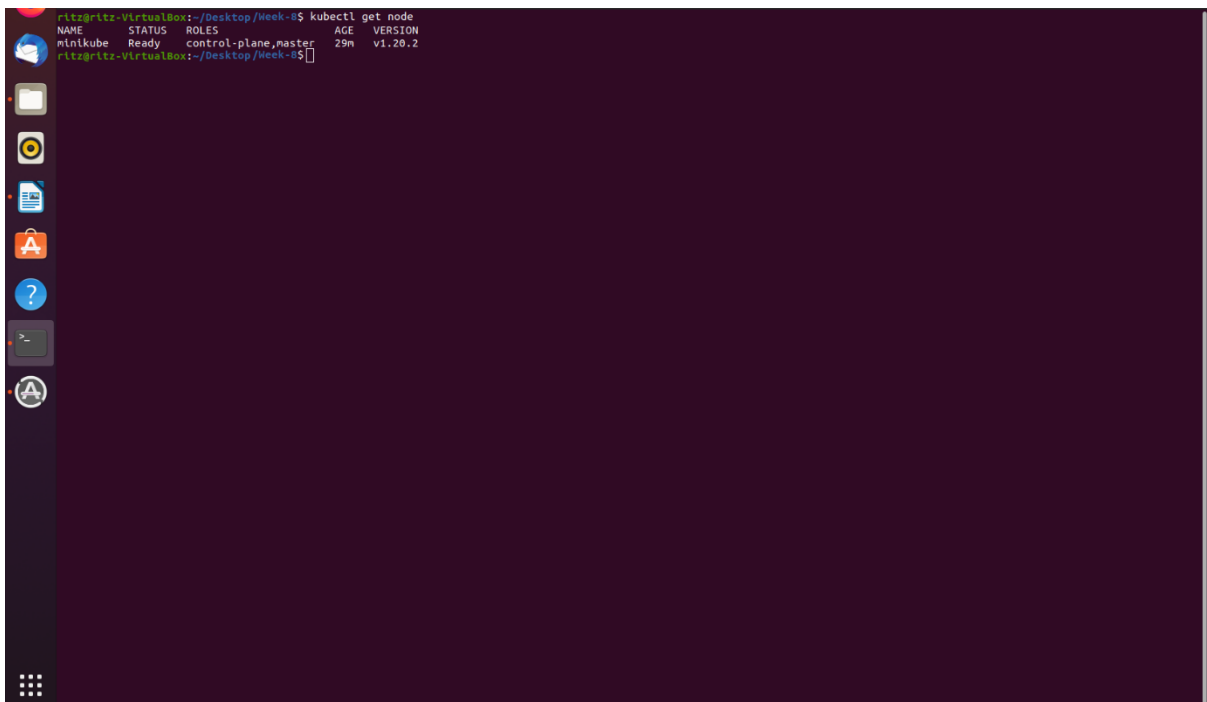


# CLOUD COMPUTING LAB: WEEK 8

PES1201802127

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## 1.) Task 1: Create a Kubernetes cluster using minikube



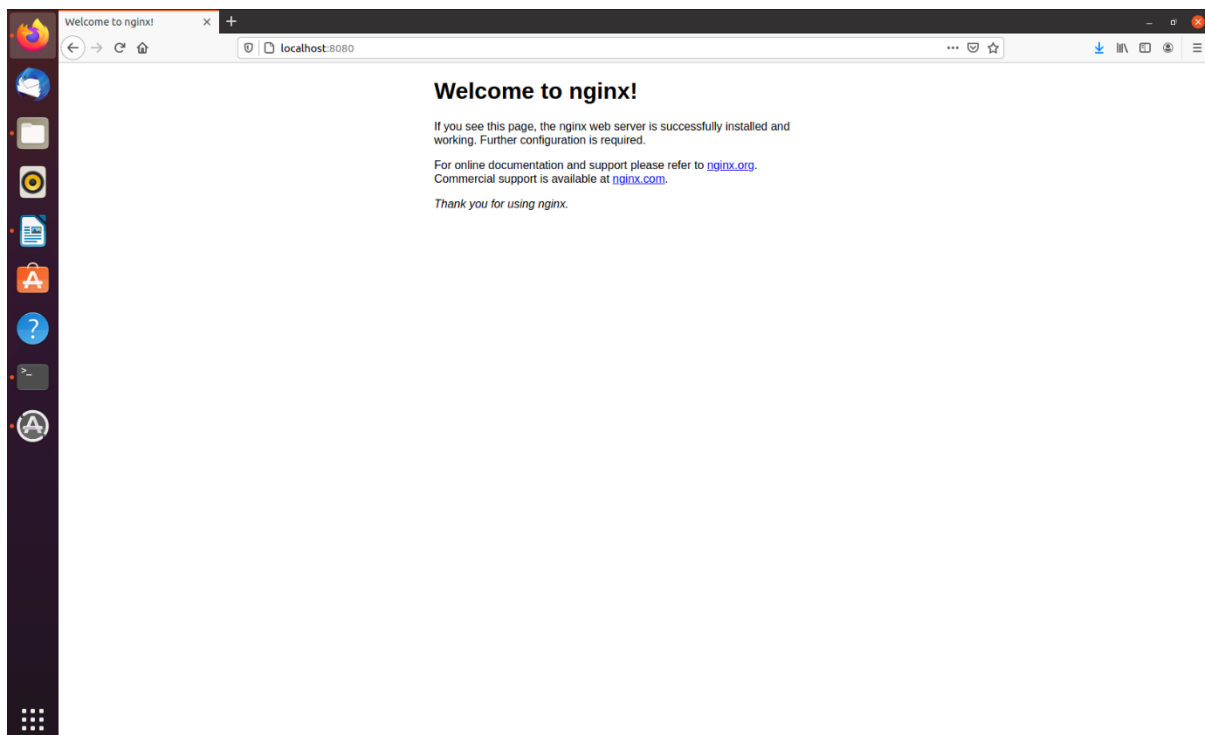
```
ritz@ritz-VirtualBox:~/Desktop/Week-8$ kubectl get node
NAME          STATUS    ROLES          AGE    VERSION
minikube      Ready     control-plane, 29m    v1.20.2
master
```

1a.png

## 2.) Task 2: Create a Kubernetes pod

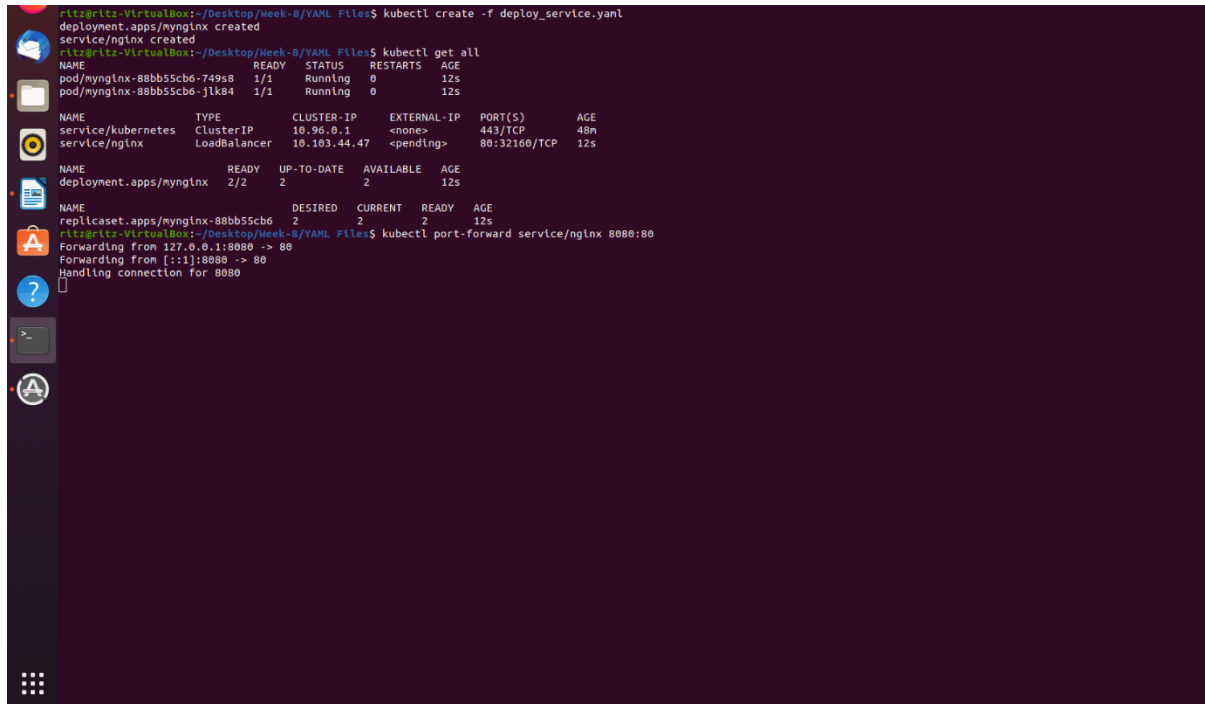
```
ritz@ritz-VirtualBox:~/Desktop/Week-8/YAML Files$ kubectl create -f pod.yaml
pod/nginx created
ritz@ritz-VirtualBox:~/Desktop/Week-8/YAML Files$ kubectl get all
NAME          READY   STATUS    RESTARTS   AGE
pod/nginx     0/1     ContainerCreating   0           29s
ritz@ritz-VirtualBox:~/Desktop/Week-8/YAML Files$ kubectl get pods
NAME          READY   STATUS    RESTARTS   AGE
nginx         1/1     Running   0           69s
ritz@ritz-VirtualBox:~/Desktop/Week-8/YAML Files$ kubectl port-forward pod/nginx 8080:80
Forwarding from 127.0.0.1:8080 -> 80
Forwarding from [::1]:8080 -> 80
Handling connection for 8080
```

2a.png



2b.png

### 3.) Task 3: Create a Kubernetes Deployment and create a Load Balancing Service



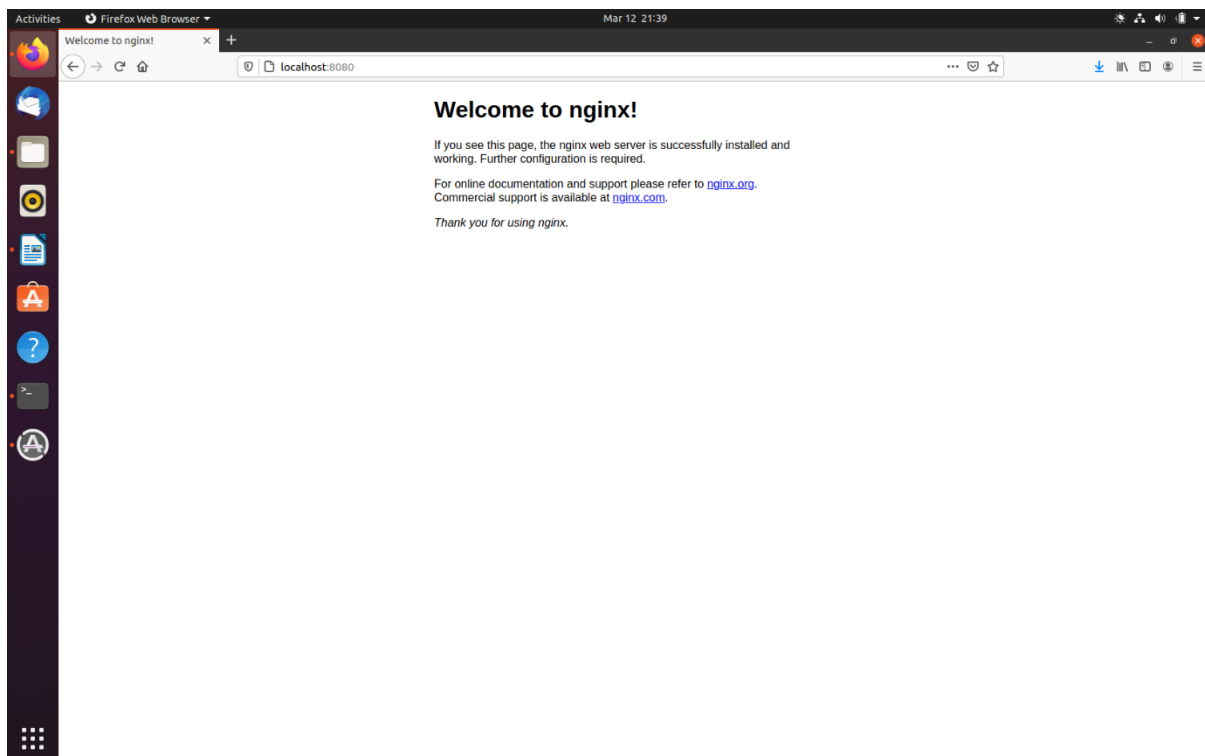
```
ritz@ritz-VirtualBox:~/Desktop/Week-8/YAML Files$ kubectl create -f deploy_service.yaml
deployment.apps/mynginx created
service/nginx created
ritz@ritz-VirtualBox:~/Desktop/Week-8/YAML Files$ kubectl get all
NAME                                READY   STATUS    RESTARTS   AGE
pod/mynginx-88bb55cb6-749s8         1/1     Running   0           12s
pod/mynginx-88bb55cb6-jlk84         1/1     Running   0           12s

NAME                                TYPE               CLUSTER-IP   EXTERNAL-IP   PORT(S)          AGE
service/kubernetes                  ClusterIP          10.96.0.1    <none>         443/TCP           48m
service/nginx                       LoadBalancer      10.103.44.47 <pending>     80:32160/TCP      12s

NAME                                READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/mynginx             2/2     2            2           12s

NAME                                DESIRED   CURRENT   READY   AGE
replicaset.apps/mynginx-88bb55cb6   2         2         2       12s
ritz@ritz-VirtualBox:~/Desktop/Week-8/YAML Files$ kubectl port-forward service/nginx 8080:80
Forwarding from 127.0.0.1:8080 -> 80
Forwarding from [::]:8080 -> 80
Handling connection for 8080
```

3a.png



3b.png

## 4.) Task 4: Scaling deployments

```
ritz@ritz-VirtualBox:~/Desktop/Week-8/YAML Files$ kubectl scale deploy mynginx --replicas=10
deployment.apps/mynginx scaled
ritz@ritz-VirtualBox:~/Desktop/Week-8/YAML Files$ kubectl get all
```

NAME	READY	STATUS	RESTARTS	AGE
pod/mynginx-88bb55cb6-5sqnm	1/1	Running	0	91s
pod/mynginx-88bb55cb6-749s8	1/1	Running	0	5m16s
pod/mynginx-88bb55cb6-9x89w	0/1	Pending	0	91s
pod/mynginx-88bb55cb6-crjdt	0/1	Pending	0	91s
pod/mynginx-88bb55cb6-cv1qm	1/1	Running	0	91s
pod/mynginx-88bb55cb6-dboft	0/1	Pending	0	91s
pod/mynginx-88bb55cb6-dgngs	0/1	Pending	0	91s
pod/mynginx-88bb55cb6-jlk84	1/1	Running	0	5m16s
pod/mynginx-88bb55cb6-l4hsr	0/1	Pending	0	91s
pod/mynginx-88bb55cb6-n8drf	0/1	Pending	0	91s

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
service/kubernetes	ClusterIP	10.96.0.1	<none>	443/TCP	53m
service/nginx	LoadBalancer	10.103.44.47	<pending>	80:32160/TCP	5m16s

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
deployment.apps/mynginx	4/10	10	4	5m16s

NAME	DESIRED	CURRENT	READY	AGE
replicaset.apps/mynginx-88bb55cb6	10	10	4	5m16s

```
ritz@ritz-VirtualBox:~/Desktop/Week-8/YAML Files$
```

4a.png