

Module-9: Kubernetes Assignment – 5

```
ubuntu@master: ~  
ubuntu@node1: ~  
ubuntu@node2: ~  
customresourcedefinition.apiextensions.k8s.io/globalnetworksets.crd.projectcalico.org created  
customresourcedefinition.apiextensions.k8s.io/hostendpoints.crd.projectcalico.org created  
customresourcedefinition.apiextensions.k8s.io/ipamblocks.crd.projectcalico.org created  
customresourcedefinition.apiextensions.k8s.io/ipamconfigs.crd.projectcalico.org created  
customresourcedefinition.apiextensions.k8s.io/ipamhandles.crd.projectcalico.org created  
customresourcedefinition.apiextensions.k8s.io/ippools.crd.projectcalico.org created  
customresourcedefinition.apiextensions.k8s.io/ippreservations.crd.projectcalico.org created  
customresourcedefinition.apiextensions.k8s.io/kubecontrollersconfigurations.crd.projectcalico.org created  
customresourcedefinition.apiextensions.k8s.io/networkpolicies.crd.projectcalico.org created  
customresourcedefinition.apiextensions.k8s.io/networksets.crd.projectcalico.org created  
clusterrole.rbac.authorization.k8s.io/calico-kube-controllers created  
clusterrole.rbac.authorization.k8s.io/calico-node created  
clusterrolebinding.rbac.authorization.k8s.io/calico-kube-controllers created  
clusterrolebinding.rbac.authorization.k8s.io/calico-node created  
daemonset.apps/calico-node created  
deployment.apps/calico-kube-controllers created  
ubuntu@master:~$ kubectl token create --print-join-command  
kubeadm join 172.31.43.27:6443 --token luo576.cmkvo2yujhcoz9 --discovery-token-ca-cert-hash sha256:c4b07c8481e0dfa7fb7f1838d3592488eb8900e0f636dec463e3f5d85a7b1bb6  
ubuntu@master:~$ kubectl get nodes  
NAME      STATUS    ROLES    AGE      VERSION  
master    Ready     control-plane   2m56s    v1.29.14  
node1     Ready     <none>         32s      v1.29.14  
node2     NotReady  <none>         27s      v1.29.14  
ubuntu@master:~$ kubectl get nodes  
NAME      STATUS    ROLES    AGE      VERSION  
master    Ready     control-plane   6m14s    v1.29.14  
node1     Ready     <none>         3m50s    v1.29.14  
node2     Ready     <none>         3m45s    v1.29.14  
ubuntu@master:~$
```

ubuntu@master: ~ X ubuntu@node1: ~ X ubuntu@node2: ~

```
ubuntu@master:~$ nano sample.yml
```

```
ubuntu@master:~$ cat sample.yml
```

```
apiVersion: apps/v1
```

```
kind: Deployment
```

```
metadata:
```

```
  name: nginx-deployment
```

```
  labels:
```

```
    app: nginx
```

```
spec:
```

```
  replicas: 3
```

```
  selector:
```

```
    matchLabels:
```

```
      app: nginx
```

```
  template:
```

```
    metadata:
```

```
      labels:
```

```
        app: nginx
```

```
    spec:
```

```
      containers:
```

```
      - name: nginx
```

```
        image: nginx:latest
```

```
        ports:
```

```
        - containerPort: 80
```

```
---
```

```
apiVersion: apps/v1
```

```
kind: Deployment
```

```
metadata:
```

```
  name: apache-deployment
```

```
  labels:
```

```
    app: apache
```

```
spec:
```

```
  replicas: 2
```

```
  selector:
```

```
    matchLabels:
```

```
      app: apache
```

```
  template:
```

```
    metadata:
```

```
      labels:
```

```
        app: apache
```

```
    spec:
```

```
      containers:
```

```
      - name: apache
```

```
        image: httpd:latest
```

```
        ports:
```

```
        - containerPort: 80
```

```
---
```

```
apiVersion: v1
```

```
kind: Service
```

```
metadata:
```

```
  name: nginx-service
```

```
spec:
```

```
    ports:
      - containerPort: 80
---
apiVersion: v1
kind: Service
metadata:
  name: nginx-service
spec:
  selector:
    app: nginx
  ports:
    - protocol: TCP
      port: 80
      targetPort: 80
  type: ClusterIP
---
apiVersion: v1
kind: Service
metadata:
  name: apache-service
spec:
  selector:
    app: apache
  ports:
    - protocol: TCP
      port: 80
      targetPort: 80
  type: ClusterIP
ubuntu@master:~$
```

```
ubuntu@master:~$ kubectl apply -f sample.yml
deployment.apps/nginx-deployment created
deployment.apps/apache-deployment created
service/nginx-service created
service/apache-service created
ubuntu@master:~$
```

```

ubuntu@master:~$ kubectl apply -f sample.yml
deployment.apps/nginx-deployment created
deployment.apps/apache-deployment created
service/nginx-service created
service/apache-service created
ubuntu@master:~$ kubectl get pod
error: the server doesn't have a resource type "pod"
ubuntu@master:~$ kubectl get pods

```

NAME	READY	STATUS	RESTARTS	AGE
apache-deployment-784dcc968c-6sfwb	1/1	Running	0	34s
apache-deployment-784dcc968c-dt4xz	1/1	Running	0	34s
nginx-deployment-7c79c4bf97-6cjdp	1/1	Running	0	34s
nginx-deployment-7c79c4bf97-p6ks4	1/1	Running	0	34s
nginx-deployment-7c79c4bf97-zlhp9	1/1	Running	0	34s

```

ubuntu@master:~$

```

```

ubuntu@master:~$ kubectl get service

```

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
apache-service	ClusterIP	10.105.19.40	<none>	80/TCP	68s
kubernetes	ClusterIP	10.96.0.1	<none>	443/TCP	10m
nginx-service	ClusterIP	10.102.139.74	<none>	80/TCP	68s

```

ubuntu@master:~$

```

```

GNU nano 7.2 ingress.yml *
apiVersion: networking.k8s.io/v1
kind: Ingress
metadata:
  name: app-ingress
  annotations:
    nginx.ingress.kubernetes.io/rewrite-target: /
spec:
  rules:
  - http:
      paths:
      - path: /nginx
        pathType: Prefix
        backend:
          service:
            name: nginx-service
            port:
              number: 80
      - path: /apache
        pathType: Prefix
        backend:
          service:
            name: apache-service
            port:
              number: 80

```

```
ubuntu@master:~$ kubectl get service
NAME                TYPE        CLUSTER-IP    EXTE
apache-service      ClusterIP   10.105.19.40   <nor
kubernetes           ClusterIP   10.96.0.1      <nor
nginx-service        ClusterIP   10.102.139.74  <nor
ubuntu@master:~$ nano ingress.yml
ubuntu@master:~$ kubectl apply ingress.yml
error: Unexpected args: [ingress.yml]
See 'kubectl apply -h' for help and examples
ubuntu@master:~$ kubectl apply -f ingress.yml
ingress.networking.k8s.io/app-ingress created
ubuntu@master:~$
```

```
nginx-service        ClusterIP   10.102.139.74  <none>
ubuntu@master:~$ kubectl get ingress
NAME          CLASS    HOSTS    ADDRESS    PORTS    AGE
app-ingress   <none>   *        *          80       49s
ubuntu@master:~$ kubectl get ingress -o wide
NAME          CLASS    HOSTS    ADDRESS    PORTS    AGE
app-ingress   <none>   *        *          80       68s
ubuntu@master:~$
```

Not secure 54.175.160.77:30080/apache

404 Not Found

nginx/1.27.4

Not secure 54.175.160.77:30080/nginx

404 Not Found

nginx/1.27.4