

Pod and Service creation using Manifest file

Step 1:- Create an EKS Cluster

Step 2:- Create nodegroup for EKS Cluster

Step 3:- Use Cloudshell

Step 4:- AWS Configure

Access key =

Secret key =

Step 5:- Connect to Cluster

`aws eks --region <region_name> update-kubeconfig --name <cluster_name>`

Step 6:- Check nodes & cluster-info

`kubectl get nodes`

`kubectl cluster-info`

Step 7:- Create manifest files

pods.yml

```
apiVersion: v1
kind: Pod
metadata:
  name: nginx
  labels:
    app: new_app
spec:
  containers:
    - name: nginx
      image: nginx
      ports:
        - containerPort: 80
          protocol: TCP
    - name: tomcat
      image: tomcat
      ports:
        - containerPort: 8080
          protocol: TCP
```

Service.yml

```
apiVersion: v1
kind: Service
metadata:
  name: nodeportsrv
spec:
  selector:
    app: new_app
  type: NodePort
  ports:
    - port: 80
      targetPort: 80
      nodePort: 30080
      name: nginx
      protocol: TCP
```

```
- port: 8080
targetPort: 8080
nodePort: 30081
name: tomcat
protocol: TCP
```

Step 8:- Create Pods using manifest file

kubectl apply pods.yml

Kubectl get pods

```
[cloudshell-user@ip-10-132-29-246 kubernetes]$ kubectl apply -f pods.yml
pod/nginx created
[cloudshell-user@ip-10-132-29-246 kubernetes]$ kubectl get pods
NAME      READY   STATUS             RESTARTS   AGE
nginx     0/2     ContainerCreating   0           9s
[cloudshell-user@ip-10-132-29-246 kubernetes]$ kubectl get pods
NAME      READY   STATUS    RESTARTS   AGE
nginx     2/2     Running   0           25s
```

Step 9:- Create service using manifest file

kubectl apply service.yml

Kubectl get services

```
[cloudshell-user@ip-10-132-29-246 kubernetes]$ kubectl apply -f service.yml
service/nodeportsrv created
[cloudshell-user@ip-10-132-29-246 kubernetes]$ kubectl get services
NAME      TYPE      CLUSTER-IP   EXTERNAL-IP   PORT(S)          AGE
kubernetes ClusterIP  10.100.0.1    <none>         443/TCP           26m
nodeportsrv NodePort   10.100.254.127 <none>         80:30080/TCP,8080:30081/TCP 10s
```

Step 10:- Copy IP of instance node with port numbers and Paste in browser

nginx

← → ↻ ⚠ Not secure 3.0.146.24:30080 ☆ 📄 🔒 ⋮

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

tomcat

← → ↻ ⚠ Not secure 3.0.146.24:30081 ☆ 📄 🔒 ⋮

HTTP Status 404 – Not Found

type Status Report

Description The origin server did not find a current representation for the target resource or is not willing to disclose that one exists.

Apache Tomcat/10.1.20