Creating a Service

Method 1

Operation 1: Write a yaml file for the Deployment that you are creating

```
apiVersion: v1
kind: ReplicationController
metadata:
  name: rcsise
spec:
  replicas: 1
  selector:
    app: sise
  template:
    metadata:
      name: somename
      labels:
        app: sise
    spec:
      containers:
      - name: sise
        image: hshar/webapp
        ports:
        - containerPort: 9876
```

Go to command line and create a yaml file and paste the above created specs.

nano <filename>.yaml

```
aws  Services  Search                                    [Alt+S]
  GNU nano 4.8                                                  rc.yaml
apiVersion: v1
kind: ReplicationController
metadata:
  name: rcsise
spec:
  replicas: 1
  selector:
    app: sise
  template:
    metadata:
      name: somename
      labels:
        app: sise
    spec:
      containers:
      - name: sise
        image: hshar/webapp
        ports:
        - containerPort: 9876
```

Once done hit Ctrl+s and then Ctrl+x to save & exit

Do the same for service file

```
apiVersion: v1
kind: Service
metadata:
  name: simpleservice
spec:
  ports:
    - port: 80
      targetPort: 9876
  selector:
    app: sise
```

```
aws  Services  Search                                    [Alt+S]
  GNU nano 4.8                                                  serr.yaml
apiVersion: v1
kind: Service
metadata:
  name: simpleservice
spec:
  ports:
    - port: 80
      targetPort: 9876
  selector:
    app: sise
```

Operation 2: next thing to do is to create the yaml file.

kubectl create –f <file name>

```
ubuntu@ip-172-31-90-123:~$ nano rep.yaml
ubuntu@ip-172-31-90-123:~$ nano rc.yaml
ubuntu@ip-172-31-90-123:~$ nano serr.yaml
ubuntu@ip-172-31-90-123:~$ kubectl create -f rc.yaml
replicationcontroller/rcsise created
ubuntu@ip-172-31-90-123:~$
```

Before creating services let's check the service we have, you can have a look at the services by using the following command

kubectl get svc

```
ubuntu@ip-172-31-90-123:~$ kubectl get svc
NAME          TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)   AGE
kubernetes    ClusterIP   10.96.0.1    <none>        443/TCP   2d
ubuntu@ip-172-31-90-123:~$
```

As of now we have default service as kubernetes

Operation 3: now let's create service

kubectl create –f <name of the file>

```
ubuntu@ip-172-31-90-123:~$ kubectl create -f serr.yaml
service/simpleservice created
ubuntu@ip-172-31-90-123:~$
```

And now if will check services, one service name as simpleservices should be created

```
ubuntu@ip-172-31-90-123:~$ kubectl get svc
NAME            TYPE        CLUSTER-IP     EXTERNAL-IP   PORT(S)   AGE
kubernetes      ClusterIP   10.96.0.1      <none>        443/TCP   2d
simpleservice   ClusterIP   10.99.22.153   <none>        80/TCP    87s
ubuntu@ip-172-31-90-123:~$
```

Method 2 to create service

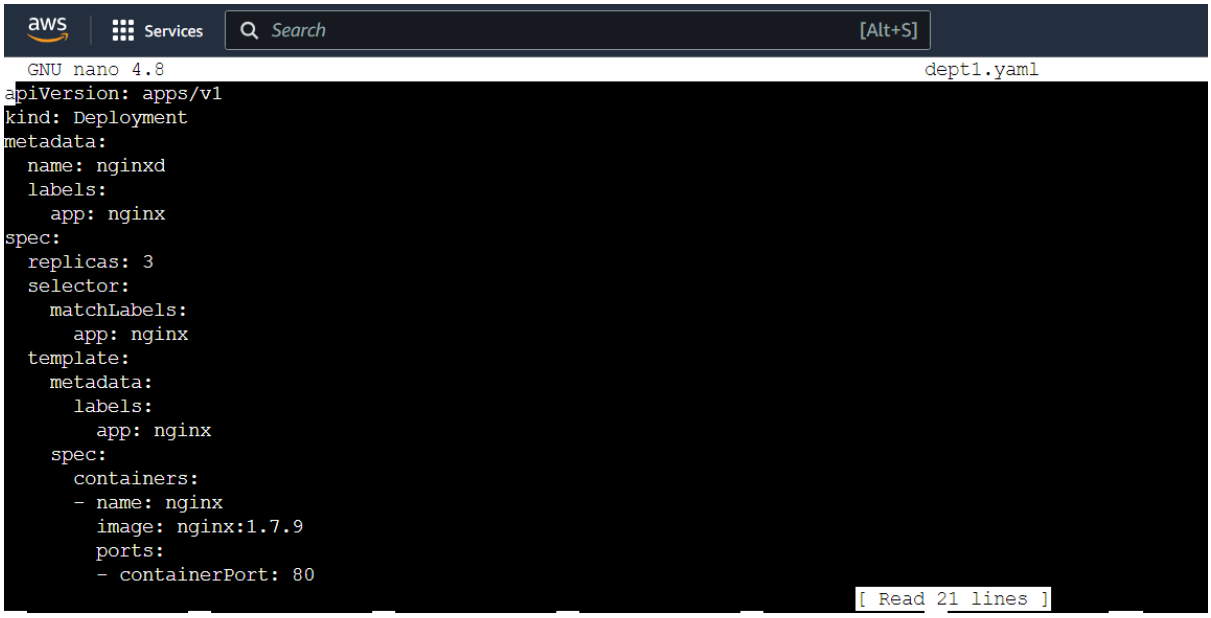
Now if I want to expose my deployment as a service will do the following opertions

Operation 4: first we need to create one yaml file with following commands:

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: nginxd
  labels:
    app: nginx
spec:
  replicas: 3
  selector:
    matchLabels:
      app: nginx
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
      - name: nginx
        image: nginx:1.7.9
        ports:
        - containerPort: 80
```

Go to command line and create a yaml file and paste the above created specs.

nano <filename>.yaml



Once done hit Ctrl+s and then Ctrl+x to save & exit

next thing to do is create the deployment yaml file.

kubectl create –f <file name>

I have already created, so I used kubectl get pods command to see the following pods

```
ubuntu@ip-172-31-90-123:~$ kubectl get pods
NAME                                READY   STATUS        RESTARTS   AGE
nginx-deployment-86dcfdf4c6-vqldx   1/1     Terminating   0          2d
nginxd-9d6cbcc65-2zkvs              1/1     Running       0          5m35s
nginxd-9d6cbcc65-6dwdv              1/1     Running       0          5m35s
nginxd-9d6cbcc65-kfhd9              1/1     Running       0          5m35s
rcsise-9xz8v                        1/1     Running       0          21m
ubuntu@ip-172-31-90-123:~$
```

And now let's check the deployments-

kubectl get deployment or kubectl get deploy

```
ubuntu@ip-172-31-90-123:~$ kubectl get deployment
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
nginxd    3/3     3            3           7m56s
ubuntu@ip-172-31-90-123:~$ kubectl get deploy
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
nginxd    3/3     3            3           8m5s
ubuntu@ip-172-31-90-123:~$
```

Operation 5: now to expose our deployment write-

kubectl expose deployment/nginxd --type="NodePort" --port 8080

```
ubuntu@ip-172-31-90-123:~$ kubectl expose deployment/nginxd --type="NodePort" --port 8080
service/nginxd exposed
ubuntu@ip-172-31-90-123:~$
```

And now we will do

kubectl get svc

```
ubuntu@ip-172-31-90-123:~$ kubectl get svc
NAME            TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)          AGE
kubernetes      ClusterIP   10.96.0.1       <none>        443/TCP          2d1h
nginxd          NodePort    10.104.156.49   <none>        8080:30470/TCP   2m9s
simpleservice   ClusterIP   10.99.22.153    <none>        80/TCP           26m
ubuntu@ip-172-31-90-123:~$
```

Method 3 to create service

Operation 6: using command line

kubectl create svc nodeport nginx --tcp=80:80

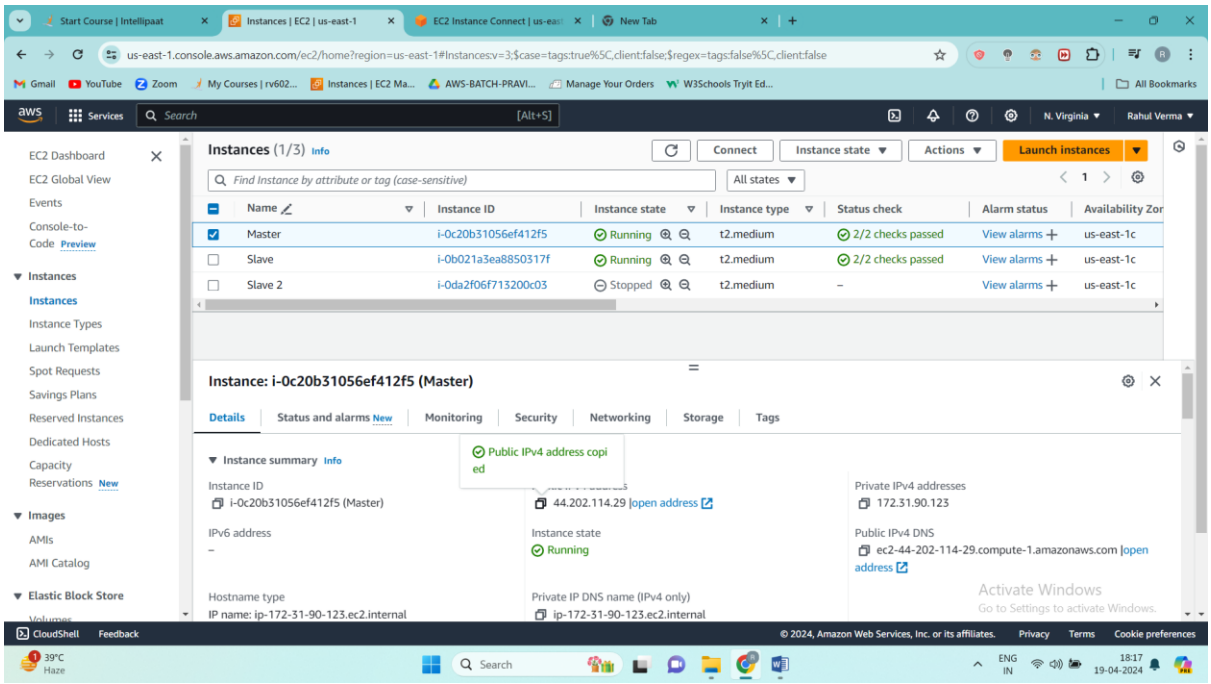
```
ubuntu@ip-172-31-90-123:~$ kubectl create svc nodeport nginx --tcp=80:80
service/nginx created
ubuntu@ip-172-31-90-123:~$
```

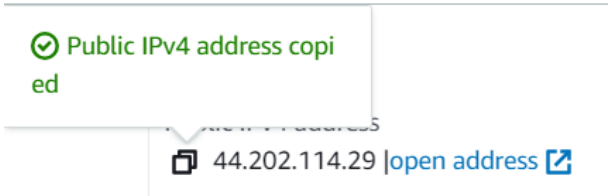
And if I do kubectl get svc then it should show me this new service named nginx as well

```
ubuntu@ip-172-31-90-123:~$ kubectl get svc
NAME            TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)          AGE
kubernetes      ClusterIP   10.96.0.1       <none>        443/TCP          2d1h
nginx           NodePort    10.97.197.131   <none>        80:32477/TCP     69s
nginxd          NodePort    10.104.156.49   <none>        8080:30470/TCP   9m30s
simpleservice   ClusterIP   10.99.22.153    <none>        80/TCP           34m
ubuntu@ip-172-31-90-123:~$
```

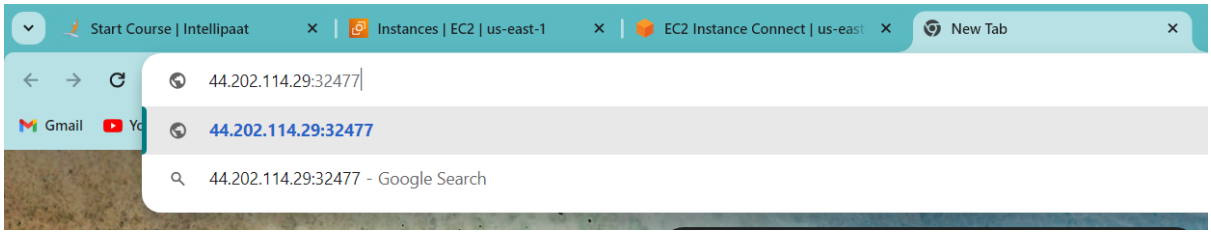
Now let's check the nginx port is exposed or not, for that will copy Master public IP and paste it in web browser followed by port

Publicip:port no





Copy paste publicip:portno in your web browser



And it’s showing nginx page so it is exposed to external world