

# Question 2

Exposing the **nginx deployment** using ClusterIP service

```
kubectl expose deployment nginx-deploy --type=ClusterIP --port=80
```

```
Editor  Tab 1  +
controlplane $ kubectl expose deployment nginx-deploy --type=ClusterIP --port=80 --target-port=80 --name=cluster-svc
service/cluster-svc exposed
controlplane $
```

Exposing the **nginx deployment** using NodePort service

```
kubectl expose deployment nginx-deploy --type=NodePort --port=80 --target-port=80 --name=node-svc
```

```
Editor  Tab 1  +
controlplane $ kubectl expose deployment nginx-deploy --type=NodePort --port=80 --target-port=80 --name=node-svc
service/node-svc exposed
controlplane $
```

Verifying the port for verification

```
controlplane $ kubectl get svc
NAME            TYPE          CLUSTER-IP    EXTERNAL-IP  PORT(S)          AGE
cluster-svc     ClusterIP     10.101.219.81 <none>       80/TCP           3m6s
kubernetes      ClusterIP     10.96.0.1     <none>       443/TCP          15d
node-svc        NodePort      10.108.35.198 <none>       80:32163/TCP     48s
controlplane $
```

Using **curl** utility to verify

For **ClusterIP service**:

```
curl http://10.101.219.81
```

```

Editor  Tab 1  +
controlplane $ curl http://10.101.219.81
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
html { color-scheme: light dark; }
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>
controlplane $

```

For **Nodeport service**

```
curl http://10.108.35.198:32163
```

```

Editor  Tab 1  +
controlplane $ curl http://10.108.35.198:32163
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
html { color-scheme: light dark; }
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>

```

Redirecting to an output file

```
curl http://10.101.219.81 > output.txt
```

```

controlplane $ curl http://10.101.219.81 > output.txt
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100  615  100  615    0    0  120k      0 --:--:-- --:--:-- --:--:-- 120k
controlplane $ █

```

```
curl http://10.108.35.198:32163
```

```
controlplane $ curl http://10.108.35.198:32163 > nodeport-output.txt
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
           %             0         0             0      0      0      0      0
0      0      0      0      0      0      0      0  --:--:--  0:00:04  --:--:--    0
```

## Verifying

```
Editor  tab 1  +
controlplane $ cat nodeport-output.txt
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
html { color-scheme: light dark; }
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>
controlplane $
```

## Describing deployment using **describe** command

```
kubectl describe deployment nginx-deploy
```

```

controlplane $ kubectl describe deployment nginx-deploy
Name:          nginx-deploy
Namespace:     default
CreationTimestamp: Wed, 23 Oct 2024 08:16:17 +0000
Labels:        app=nginx
               role=webserver
Annotations:   deployment.kubernetes.io/revision: 1
Selector:      app=nginx
Replicas:      3 desired | 3 updated | 3 total | 3 available | 0 unavailable
StrategyType:  RollingUpdate
MinReadySeconds: 0
RollingUpdateStrategy: 25% max unavailable, 25% max surge
Pod Template:
  Labels:  app=nginx
          role=webserver
  Containers:
    nginx:
      Image:      nginx:latest
      Port:       80/TCP
      Host Port:  0/TCP
      Environment: <none>
      Mounts:      <none>
      Volumes:     <none>
      Node-Selectors: <none>
      Tolerations:  <none>
Conditions:
  Type           Status  Reason
  ----           -
  Available      True    MinimumReplicasAvailable
  Progressing    True    NewReplicaSetAvailable
OldReplicaSets: <none>
NewReplicaSet:  nginx-deploy-6598d58844 (3/3 replicas created)
Events:
  Type           Reason             Age   From                  Message
  ----           -
  Normal         ScalingReplicaSet  28m   deployment-controller  Scaled up replica set nginx-deploy-6598d58844 to 3
controlplane $

```