

Cluster Networking and Services

Lab 5: Cluster Networking and Services

Objective:

- Understand how Kubernetes networking and Services work by exposing Pods and accessing them.

Steps

1. Create a Sample Pod

```
kubectl run webserver --image=nginx --port=80 --expose
```

This creates both a Pod and a Service.

2. View the Pod and Service

```
kubectl get pods  
kubectl get svc
```

3. Describe the Service

```
kubectl describe svc webserver
```

Note the `ClusterIP` and exposed port.

4. Access the Pod Internally

Start a temporary Pod:

```
kubectl run busybox --image=busybox --rm -it --restart=Never -- sh
```

Inside the container, test connectivity:

```
wget -O- http://webserver
```

Type `exit` to leave the shell.

5. Change to NodePort

```
kubectl expose pod webserver --port=80 --target-port=80 --type=NodePort --name=webserver-np  
kubectl get svc webserver-np  
# Open a new terminal and access the service using:  
minikube service webserver-np
```

6. Clean Up

```
kubectl delete pod webserver  
kubectl delete svc webserver webserver-np
```