Day 34 Task: Working with Services in Kubernetes

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📌 What are services in K8s

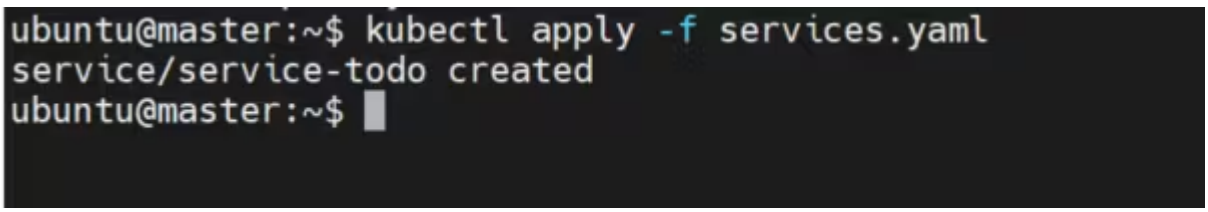
In Kubernetes, Ser le network identities to Pods and abstract away the details of Pod IP addresses.

Services allow Pods to receive traffic from other Pods, Services, and external clients.

📌 Task-1: NodePort Service in K8s

Create a Service for your todo-app Deployment from Day 32. Create a Service definition for your todo-app Deployment in a YAML file.

Apply the Service definition to your K8s (minikube) cluster using the kubectl apply -f service.yml -n command.



Verify that the Service is working by accessing the todo-app using the Service's IP and Port in your Namespace.

```
ubuntu@master:~$ kubectl get services -n deployment
NAME           TYPE       CLUSTER-IP      EXTERNAL-IP   PORT(S)          AGE
service-todo   NodePort   10.101.67.162   <none>        8000:30008/TCP   48s
ubuntu@master:~$
ubuntu@master:~$
```

📌 Task –2 ClusterIP Service in K8s

Create a ClusterIP Service for accessing the todo-app from within the cluster

```
ubuntu@master:~$ cat cluster-ip-service.yml
apiVersion: v1
kind: Service
metadata:
  name: service-todo
  namespace: deployment
spec:
  selector:
    app: todo
  ports:
    - port: 80
      targetPort: 8000
  type: ClusterIP
ubuntu@master:~$
ubuntu@master:~$
ubuntu@master:~$
ubuntu@master:~$
```

Apply the ClusterIP Service definition to your K8s (minikube) cluster using the kubectl apply -f cluster-ip-service.yml -n command.

```
ubuntu@master:~$ kubectl apply -f services.yaml
service/service-todo created
ubuntu@master:~$
ubuntu@master:~$
```

Verify that the ClusterIP Service is working by accessing the todo-app from another Pod i

```
ubuntu@master:~$ sudo  kubectl get services -n deployment
NAME           TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)   AGE
serivce-todo   ClusterIP   10.111.213.64   <none>        80/TCP    11m
ubuntu@master:~$ curl -L http://10.111.213.64
<!DOCTYPE html>

<html>

    <head>
        <title>My shaandaar todolist</title>
        <style>
            a {
                text-decoration: none;
                color: black;
            }

        </style>
    </head>

    <body>
        <h1>TrainWithShubham Community is Super Awesome</h1>
        <ul>

        </ul>

        <form action="/todo/add/" method="post">
            <p>
                <label for="newtodo">What shoud I do?</label>
                <input type="text" name="newtodo" id="newtodo" autofocus />
                <input type="submit" value="Add" />
            </p>
        </form>
    </body>

</html>
ubuntu@master:~$
```

📌 Task –3 LoadBalancer Service in K8s

Create a LoadBalancer Service for accessing the todo-app from outside the cluster .

Create a LoadBalancer Service definition for your todo-app Deployment in a YAML file

```
ubuntu@master:~$ cat load-balancer-service.yml
apiVersion: v1
kind: Service
metadata:
  name: serivce-todo
  namespace: deployment
spec:
  selector:
    app: todo
  ports:
    - port: 80
      targetPort: 8000
  type: LoadBalancer
ubuntu@master:~$
ubuntu@master:~$
ubuntu@master:~$
```

Apply the LoadBalancer Service definition to your K8s cluster using the kubectl apply -f load-balancer-service.yml -n command.

```
ubuntu@master:~$ sudo kubectl apply -f load-balancer-service.yml -n deployment
service/serivce-todo created
ubuntu@master:~$
ubuntu@master:~$
```

Verify that the LoadBalancer Service is working by accessing the todo-app from outside the cluster in your Namespace.

```
ubuntu@master:~$ sudo  kubectl get services -n deployment
NAME           TYPE           CLUSTER-IP      EXTERNAL-IP   PORT(S)        AGE
serivce-todo   LoadBalancer   10.106.15.214   <pending>     80:30309/TCP   37s
ubuntu@master:~$
ubuntu@master:~$
ubuntu@master:~$ curl -L http://192.168.241.149:30309
<!DOCTYPE html>

<html>

    <head>
        <title>My shaandaar todolist</title>
        <style>
            a {
                text-decoration: none;
                color: black;
            }

        </style>
    </head>

    <body>
        <h1>TrainWithShubham Community is Super Awesome</h1>
        <ul>

        </ul>

        <form action="/todo/add/" method="post">
            <p>
                <label for="newtodo">What shoud I do?</label>
                <input type="text" name="newtodo" id="newtodo" autofocus />
                <input type="submit" value="Add" />
            </p>
        </form>
    </body>

</html>
ubuntu@master:~$
```

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Written by

Nikhil Patil

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👨‍💻 I love Linux & DevOps! 💻

🐧 Linux👨‍💻 | DevOps & Cloud Enthusiast | 🌍 Azure Admin | 🛠️ Ansible | 📂 Git | 🐬 Docker | 🔑 OpenLDAP | 🖥️ System Admin | | 🚀 Jenkins 🛠️

🏠 Pune

🌟 I'm really into using and managing computers with Linux. I also like making things work smoothly and quickly.

📖 I work with Microsoft Azure, use tools like Ansible and Git to automate tasks, and make software run in containers with Docker.

🔒 I handle access and security using OpenLDAP, and I'm all about keeping systems running smoothly.

🌐 Exploring opportunities in cloud and DevOps.

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Following

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Day 33 Task: Working with Namespaces and Services in Kubernetes

📌 What are Namespaces and Services in k8s In Kubernetes, Namespaces are used to create isolated env...

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Day 32 Task: Launching your Kubernetes Cluster with Deployment

📌 What is Deployment in k8s A Deployment provides a configuration for updates for Pods

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Day 31 Task: Launching your First Kubernetes Cluster with Nginx running

📌 What about doing some hands-on now? Let's read about minikube and implement k8s in our local mach...