



**UNIVERSITY OF PETROLEUM & ENERGY STUDIES**  
**Dehradun**

## **ACO LAB**

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**BRANCH- COMPUTER SCIENCE ENGINEERING**

**BATCH- B-4 DEVOPS**

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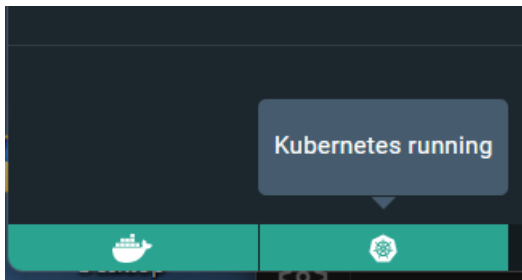
**SUBMITTED TO- Dr. Hitesh Kumar Sharma**

# Experiment – 8

## AIM : Creating Service in Kubernetes

### **Task 1:** Start Kubernetes in Docker-Desktop

- Start Kubernetes service in Docker-Desktop



### **Task 2:** Creating a Service

Create a service to expose the deployed application within the Kubernetes cluster. You can use the following sample YAML manifest as a reference:

```
apiVersion: v1
kind: Service
metadata:
  name: my-service
spec:
  selector:
    app: lbnginx
  ports:
    - protocol: TCP
      port: 80
      nodePort: 30001
  type: NodePort
```

- Apply the service using the following command:

**“ kubectl apply -f service.yaml ”**

```
91983@DELL MINGW64 ~/OneDrive/Desktop/SEM5/Kubernetes (main)
$ kubectl apply -f service.yaml
service/my-service created
```

- Verify that the service is created by running the following command:

**“kubectl get services”**

```
91983@DELL MINGW64 ~/OneDrive/Desktop/SEM5/Kubernetes (main)
$ kubectl get services
NAME          TYPE        CLUSTER-IP      EXTERNAL-IP  PORT(S)          AGE
kubernetes    ClusterIP   10.96.0.1        <none>       443/TCP          2d20h
my-service    NodePort    10.100.198.242   <none>       80:30001/TCP     86s
```

### Task 3: Accessing the Service

- Access the service using port forwarding. Run the following command:
- Access the Nginx server running in the service by opening a web browser and navigating to

**“ <http://localhost:30001> ”**



### Task 4: Deleting the Service

- Delete the service using the following command:

**“ kubectl delete service my-service ”**

```
91983@DELL MINGW64 ~/OneDrive/Desktop/SEM5/Kubernetes (main)
$ kubectl delete service my-service
service "my-service" deleted
```

- Verify that the service has been deleted by running the “ kubectl get services” command.

```
91983@DELL MINGW64 ~/OneDrive/Desktop/SEM5/Kubernetes (main)
$ kubectl get services
NAME          TYPE          CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
kubernetes    ClusterIP     10.96.0.1     <none>         443/TCP    2d20h
```

### **Task 5: Cleanup**

Delete any remaining deployments, services, and resources created during the exercise using the appropriate kubectl delete commands.

### **Task 6: Documentation and Best Practices**

Document your findings and the best practices for creating and managing services in Kubernetes.

Through this exercise, you'll gain a better understanding of how to create and manage services to expose applications within a Kubernetes cluster. Adjust the exercise based on your specific use case and requirements.