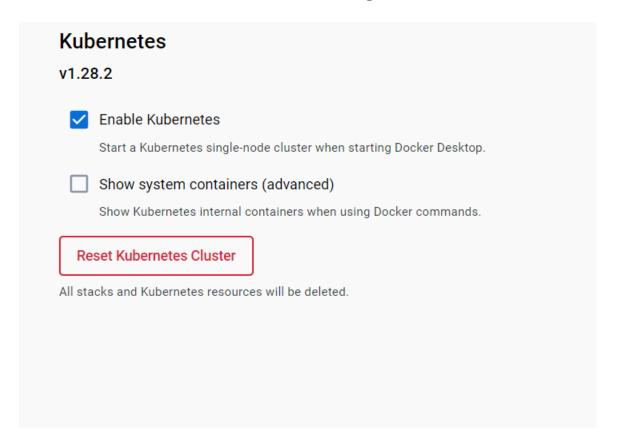
Lab Exercise 8- Creating Service in Kubernetes

Below is a lab exercise that will help you understand and practice creating a 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
```

```
> ! service.yaml
    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
```

```
rt"
PS C:\Users\manya\OneDrive\Desktop\ACO\exp8> kubectl apply -f service.yaml
service/my-service created
PS C:\Users\manya\OneDrive\Desktop\ACO\exp8>
```

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

```
kubectl get services
```

```
service/my-service created
PS C:\Users\manya\OneDrive\Desktop\ACO\exp8> kubectl get services
NAME
             TYPE
                         CLUSTER-IP
                                         EXTERNAL-IP
                                                       PORT(S)
                                                                      AGE
kubernetes
             ClusterIP
                         10.96.0.1
                                                       443/TCP
                                                                      15h
my-service
            NodePort
                         10.96.255.176
                                         <none>
                                                       80:30001/TCP
                                                                      2m21s
PS C:\Users\manya\OneDrive\Desktop\ACO\exp8>
```

Task 4: 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 5: Deleting the Service

Delete the service using the following command:

kubectl delete service my-service

```
PS C:\Users\manya\OneDrive\Desktop\ACO\exp8> kubectl delete service my-service service "my-service" deleted
PS C:\Users\manya\OneDrive\Desktop\ACO\exp8>
```

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

Task 6: Cleanup

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

```
PS C:\Users\manya\OneDrive\Desktop\ACO\exp8> kubectl get service

NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE

kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 16h

PS C:\Users\manya\OneDrive\Desktop\ACO\exp8>
```

Task 7: 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.