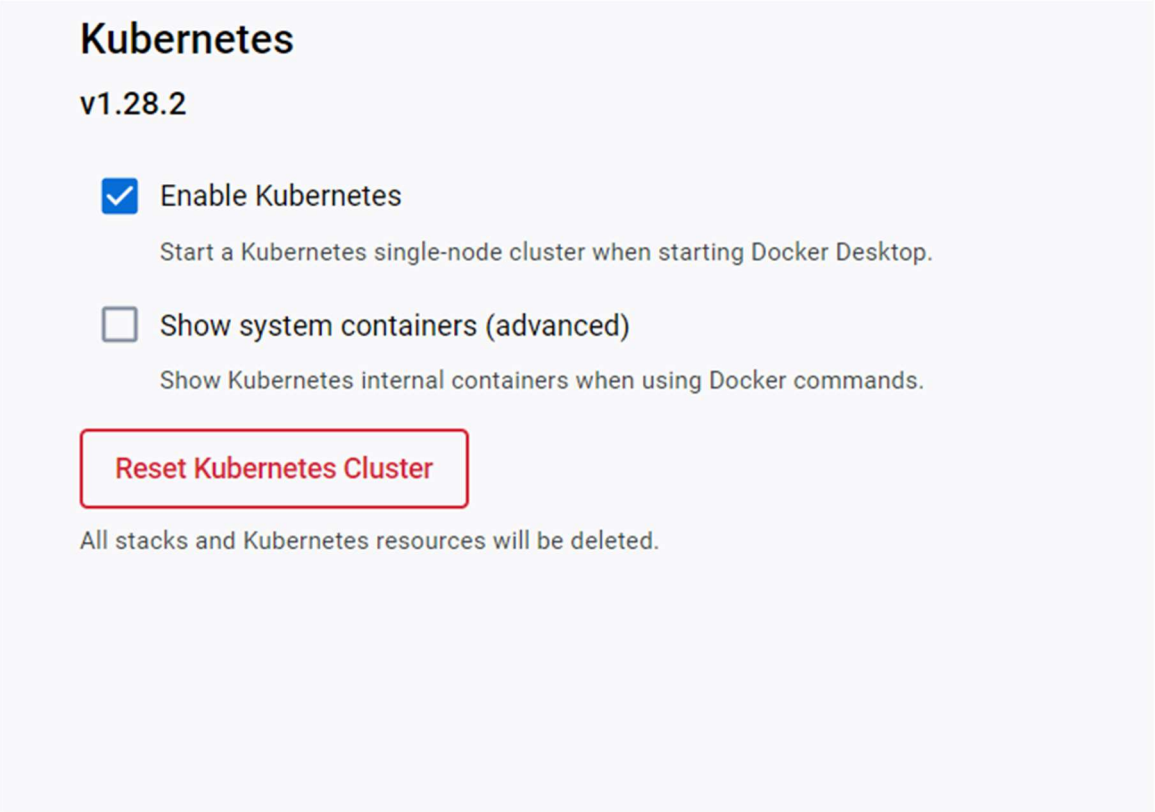
Lab Exercise 8– Creating Service in Kubernetes

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
```

```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       <none>        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.