Application Containerization

And

Orchestration Lab

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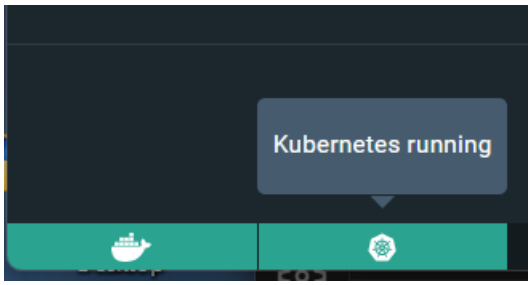
Batch – DevOps B4

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:

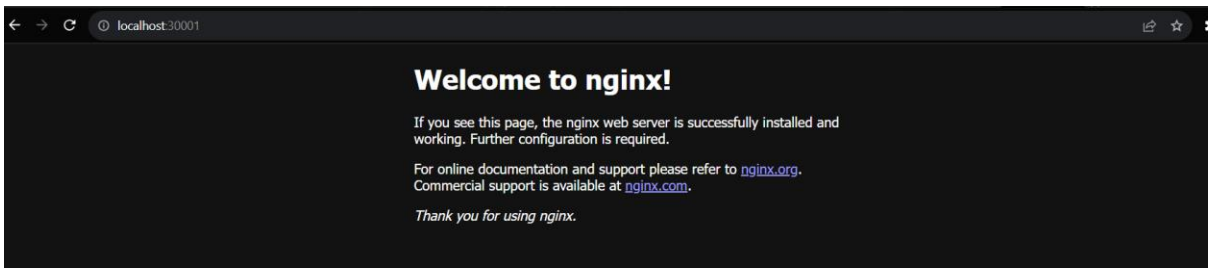
  “kubectl get services”

```
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.