Application Containerization And Orchestration Lab

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Batch – DevOps B4

Submitted to

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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
```

- Apply the service using the following command:

```
kubectl apply -f service.yaml
```

```
PS C:\Users\Vidyarthi\Desktop\ACO-LAB-2021-25> kubectl apply -f service.yml
service/my-nginx-service created
```

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

```
kubectl get services
```

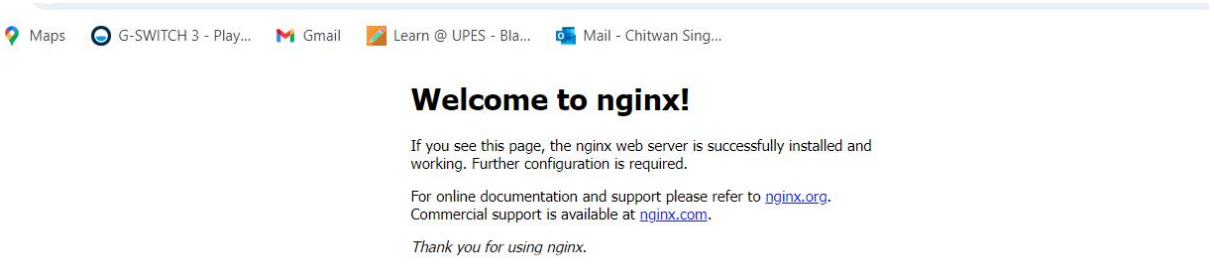
```
NAME               TYPE           CLUSTER-IP      EXTERNAL-IP   PORT(S)        AGE
kubernetes         ClusterIP      10.96.0.1       <none>        443/TCP        18d
my-nginx-service   LoadBalancer   10.110.214.24   localhost     80:31667/TCP   50s
nginx-service      ClusterIP      10.98.59.202    <none>        80/TCP         2d10h
```

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\Vidyarthi\Desktop\ACO-LAB-2021-25> kubectl delete service my-service
service "my-service" deleted
```

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.

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.