

Minikube

Your own local Kubernetes Cluster

Lab 1 - Getting Started with Minikube

Objective:

- Deploy a sample application to Minikube using a test container image
- Run the app, view logs, access via LoadBalancer, and explore dashboard and addons

Steps

1. Start Minikube

```
minikube start
```

2. Open the Dashboard (optional)

In a new terminal:

```
minikube dashboard
```

This opens the Kubernetes web UI and runs a proxy.

3. Create a Deployment

```
kubectl create deployment hello-node --image=registry.k8s.io/e2e-test-images/agnhost:2.39 -- /agnhost netexec --http-port=8080
```

Check deployment status:

```
kubectl get deployments  
kubectl get pods
```

4. View Pod Logs

Get the pod name:

```
kubectl get pods
```

Then:

```
kubectl logs <your-pod-name>
```

You should see:

```
Started HTTP server on port 8080
```

5. Expose the Pod with a LoadBalancer Service

```
kubectl expose deployment hello-node --type=LoadBalancer --port=8080
```

Check the service:

```
kubectl get services
```

On Minikube, access the app using:

```
minikube service hello-node
```

6. View Cluster State and Config

```
kubectl get events  
kubectl config view
```

7. Enable an Addon

```
minikube addons enable metrics-server  
kubectl get pod,svc -n kube-system  
kubectl top pods
```

8. Clean Up

```
kubectl delete service hello-node  
kubectl delete deployment hello-node  
minikube stop  
# Optional  
minikube delete
```