

Istios on microk8s

Install Kubectl

This is needed to interact with the Kubernetes cluster. You can install it using the following commands:

```
$ sudo snap install kubectl --classic
```

Set up Microk8s on ubuntu

Step 1: Install MicroK8s

Execute the following commands to install MicroK8s:

```
$ sudo snap install microk8s --classic
```

Step 2: Add your user to the 'microk8s' group to allow access to the cluster

```
$ sudo usermod -a -G microk8s $USER  
$ sudo chown -f -R $USER ~/.kube  
$ newgrp microk8s
```

Step 3: Enable necessary MicroK8s add-ons

```
$ microk8s enable dns storage  
$ microk8s enable ingress dashboard
```

Step 4: Set up MetalLB Load Balancer

Load Balancer service is required to expose the application out of the host machine. Finish this step and then continue with next step

Install MetalLB

```
$ microk8s kubectl apply -f  
https://raw.githubusercontent.com/metallb/metallb/v0.10.2/manifests/namespace.yaml  
  
$ microk8s kubectl apply -f
```

```
https://raw.githubusercontent.com/metallb/metallb/v0.10.2/manifests/metallb.yaml
```

Configure MetalLB

Apply the MetalLB configuration to enable it in Layer 2 mode.

Create a file metallb-config.yaml

```
$ nano metallb-config.yaml
# Paste the below yaml content
```

```
apiVersion: v1
kind: ConfigMap
metadata:
  namespace: metallb-system
  name: config
data:
  config: |
    address-pools:
    - name: default
      protocol: layer2
      addresses:
      - 172.18.255.200-172.18.255.250 # Specify the IP range here
```

Create LoadBalancer Service

Define a service of type LoadBalancer for your application

```
$ kubectl apply -f metallb-config.yaml
```

Step 5: Install Istio

You can use the Istio add-on for MicroK8s to install Istio

```
$ microk8s enable community
$ microk8s enable istio
$ microk8s istioctl version
```

Step 6: Verify the new namespace istio-system has been added

```
$ microk8s kubectl get ns
# Observe the istio-system namespace created
```

```
$ microk8s kubectl get pods -n istio-system  
# Observe the ingress-gateay with LoadBalancer service  
$ microk8s kubectl get svc -n istio-system
```