Week 4

Learning

Goal: Deploy a frontend that connects to a backend all in the same kubernetes cluster.

This will simulate a real kubernetes cluster since deploying a single service on kubernetes is trivial.

Problems

Load Balancer not being given external IP access

Depending on where you are running your Kubernetes Cluster, the LoadBalancer may give you an external IP automatically. For example, when running a LoadBalancer in AWS or Google Cloud, they will assign an external IP to each LoadBalancer automatically. To get an external IP for a custom Kubernetes Cluster (like Minikube in my example), normally you would need to provide an Ingress Controller. However, Minikube provides a **Tunnel** that creates a network route on the host to the cluster using the cluster's IP address as a gateway. In other words, the tunnel command exposes the external IP of our LoadBalancer directly to any program running on the host operating system (like a web browser).

Minikube is not using the latest image when I load an image with the same name and tag

Definitions

(Review)

Node A worker machine in Kubernetes, part of a cluster.

Cluster A set of Nodes taht run containerized applications managed by Kubernetes.

Service Identifies a set of Pods using label selectors.

(Non-review)

Edge Router A router that enforces the firewall policy for a cluster.

Cluster Network A set of links, logical or physical, that facilitate communication with a cluster according to the Kubernetes networking model.

Ingress Manages external access to services in a cluster.