Installing Open edX on Minikube

Prerequisites:

• Minikube installation on your machine.

• Installation of kubectl (Kubernetes command-line tool) on your machine.

• Docker installation on your machine.

Please ensure that you have met the above prerequisites before proceeding with the installation process.

**Step 1: Start Minikube**

Open a terminal or command prompt.

Execute the following command to start Minikube:

minikube start

**Step 2: Configure Minikube resources**

Ensure that Minikube is allocated sufficient resources for Open edX. Set the CPU and memory resources by running the following commands:

minikube config set cpus <num\_cpus>

minikube config set memory <memory\_size>

Replace <num\_cpus> with the desired number of CPUs (e.g., 4) and <memory\_size> with the desired amount of memory (e.g., 8192).

**Step 3: Enable CADDY SERVER**

tutor k8s Start caddy

**Step 4: Access Open edX**

Determine the IP address of your Minikube cluster by running the following command:

minikube tunnel

Add an entry to your /etc/hosts file, mapping the IP address to the domain name specified in the configuration files.

Please allow approximately 10 minutes for the setup to complete.

**Step 5: Start Open edX on Minikube**

Execute the following command to start Open edX on Minikube:

tutor k8s Start

Let the pods Deploy and then

Tutor k8s Qucikstart

**Step 6: Monitor the pods**

Access the Minikube dashboard to monitor the pods' status:

minikube dashboard

**Step 7: Access Open edX**

Congratulations! You have successfully installed Open edX on Minikube. You can now access and utilize the platform.

Thank you for following these installation instructions.

**If want to enable auto-healing of pods:**

enable auto-healing in Minikube, you need to enable the Kube-controller-manager component with the appropriate flags. Here is how you can do it:

Start Minikube with the --extra-config flag to enable the controller manager component:

**minikube start --extra-config=controller-manager.enable-hostpath-provisioner=true --extra-config=controller-manager.horizontal-pod-autoscaler-sync-period=10s --extra-config=controller-manager.node-monitor-grace-period=10s –extra-config=controller-manager.pod-eviction-timeout=10s**

he controller-manager.enable-hostpath-provisioner=true flag enables the hostpath provisioner for persistent volumes. The other flags set the sync period, grace period, and eviction timeout to low values for faster auto-healing.

This command starts Minikube with the following extra configurations for the controller manager:

controller-manager.enable-hostpath-provisioner=true:

* This flag enables the hostpath provisioner for persistent volumes.
* The hostpath provisioner allows you to create persistent volumes using the host's file system as storage.

controller-manager.horizontal-pod-autoscaler-sync-period=10s:

This flag sets the sync period for the horizontal pod autoscaler (HPA) controller. It determines how often the HPA controller synchronizes with the metrics to calculate the desired number of replicas for a deployment.

controller-manager.node-monitor-grace-period=10s:

This flag sets the grace period for node monitoring. It defines the duration for which a node should be unresponsive before considering it as not ready.

controller-manager.pod-eviction-timeout=10s:

This flag sets the timeout for pod eviction. It determines the duration after which a pod eviction request is considered as failed.

By providing these extra configurations, you are customizing the behavior of the controller manager component in Minikube.

For Check logs

minikube logs | grep controller-manager