**Docker:**

docker ps -a

docker images -a

docker rm {containr\_id}

docker start {containr\_id}

docker attach {containr\_id}

docker exec -it {containr\_id} /bin/bash

Docker stop {containr\_id}

**Kubernetes:**

Contains Master node and Worker nodes. Master contains API server. If we want to do

Anything with k8 cluster we need to interact with API server.

**Pods**: Layer of abstraction on top of containers.

**Service**: Service communicates between pods. Permanent Ip for the Pod, Load Balancer

**Ingress**: Route traffic into cluster.

**External Configuration**: ConfigMap

Secret

**Volumes**: Data persistence. External DB storage

**Deployment**: Blueprint for the pods. It is abstraction on top of pods. We never work

with pods and we will work with Deployments only.

Pods will be replicated using scaling mechanism.

**Stateful Set**: DB pods can’t be replicated using Deployment. Because DB is a stateful.

Using Stateful set we can replicate DB pods. But it is very tedious. DBs

Should be outside of Kubernetes cluster.

**Local SetUp:**

Minikube ->Test on local machine for Kubernetes cluster. Setting up production type

Cluster in local is difficult because of memory issues. Using minikube

Which is an open source tool we

can setup kubernters cluster (Master and Worker processes) on 1

machine.

Minikube creates a virtual box on machine. Node run on that Virtual box.

It is like 1 node K8 cluster.

Kubectl -> It is a CLI tool to interact with K8. It is not only interact with Minikube, it can

interact with any cloud cluster.

brew install hyperkit

brew install minikube

minikube start –vm-driver=hyperkit

Getting status:

minikube status

kubectl get nodes

kubectl get services

Create Deployment:

Kubectl create deployment NAME –image=image –option1 –option2

Example-> kubectl create deployment nginxdepl –image=nginx

(or)

kubectl apply –f deployment.yaml

Kubectl get deployment

Kubectl get pod

Kubectl logs PODNAME

Kubectl exec –it PODNAME –bin/bash

<https://gitlab.com/nanuchi/youtube-tutorial-series/-/tree/master/demo-kubernetes-components>

<https://gitlab.com/nanuchi/youtube-tutorial-series/-/tree/master/kubernetes-configuration-file-explained>