*Lab - Kubernetes Networking

Wednesday, December 8, 2021 09:01 PM

Install Docker
$ sudo apt update && apt -y install docker.io

Install kubectl
$ curl -LO https://storage.googleapis.com/kubern... -s https://storage.googleapis.com/kubern... && chmod +x ./kubectl && sudo mv ./kubectl /usr/local/bin/kubectl

Install Minikube
$ curl -Lo minikube https://storage.googleapis.com/miniku... && chmod +x minikube && sudo mv minikube /usr/local/bin/

Start Minikube
$ apt install conntrack
$ minikube start --vm-driver=none
$ minikube status

==========
KUBERNETES NETWORKING
==========

```
kind: Pod
apiVersion: v1
metadata:
  name: testpod
spec:
  containers:
    - name: c00
      image: ubuntu
      command: ["/bin/bash", "-c", "while true; do echo Hello-World; sleep 5 ; done"]
    - name: c01
      image: httpd
      ports:
       - containerPort: 80
```

==========

```
kind: Deployment
apiVersion: apps/v1
metadata:
   name: mydeployments
spec:
   replicas: 1
   selector:      # tells the controller which pods to watch/belong to
    matchLabels:
     name: deployment
   template:
     metadata:
       name: testpod1
       labels:
```

```
        name: deployment
    spec:
     containers:
      - name: c00
        image: httpd
        ports:
        - containerPort: 80
====================
kind: Service                    # Defines to create Service type
Object
apiVersion: v1
metadata:
  name: demoservice
spec:
  ports:
    - port: 80                   # Containers port exposed
      targetPort: 80             # Pods port
  selector:
    name: deployment             # Apply this service to any pods
which has the specific label
  type: ClusterIP                # Specifies the service type i.e
ClusterIP or NodePort

$ kubectl get svc


==========================
volume labs
==========================


apiVersion: v1
kind: Pod
metadata:
  name: myvolemptydir
spec:
  containers:
  - name: c1
    image: centos
    command: ["/bin/bash", "-c", "sleep 15000"]
    volumeMounts:                # Mount definition inside
the container
      - name: xchange
        mountPath: "/tmp/xchange"
  - name: c2
    image: centos
    command: ["/bin/bash", "-c", "sleep 10000"]
    volumeMounts:
      - name: xchange
        mountPath: "/tmp/data"
  volumes:
  - name: xchange
```

```
    emptyDir: {}


========================
HOST PATH
========================


apiVersion: v1
kind: Pod
metadata:
  name: myvolhostpath
spec:
  containers:
  - image: centos
    name: testc
    command: ["/bin/bash", "-c", "sleep 15000"]
    volumeMounts:
    - mountPath: /tmp/hostpath
      name: testvolume
  volumes:
  - name: testvolume
    hostPath:
      path: /tmp/data
```