**URL FOR DRIVER installation :** [**https://github.com/Mirantis/cri-dockerd**](https://github.com/Mirantis/cri-dockerd)

**CRI CLI installation URL :** [**https://github.com/kubernetes-sigs/cri-tools/blob/master/docs/crictl.md**](https://github.com/kubernetes-sigs/cri-tools/blob/master/docs/crictl.md)

**Minikube Installation URL : https://minikube.sigs.k8s.io/docs/start/**

**Ways to install k8s**

**Kubeadm**

**Minikube**

**Kops**

**K8s in gcp**

**Step1:**

**On Master & worker node**

**sudo su**

**apt-get update**

**apt-get install docker.io -y**

**service docker restart**

**curl -s https://packages.cloud.google.com/apt/doc/apt-key.gpg | apt-key add -**

**echo "deb http://apt.kubernetes.io/ kubernetes-xenial main" >/etc/apt/sources.list.d/kubernetes.list**

**apt-get update**

**apt install kubeadm=1.20.0-00 kubectl=1.20.0-00 kubelet=1.20.0-00 -y**

**Step2:**

**On Master:**

**kubeadm init --pod-network-cidr=192.168.0.0/16**

**>Copy the token and paste it into the worker node.**

**kubeadm join 172.31.32.175:6443 --token hfrmb4.iyoveptiicf2inev \**

**--discovery-token-ca-cert-hash sha256:333bc1c50a26284466f632443bba81f136a23964bef07136dcbaf8fcdfa962f7**

**kubeadm join 172.31.43.206:6443 --token y0o2x5.lrgudj3pi8hcfdnr \**

**--discovery-token-ca-cert-hash sha256:0f13845cba2cd5066fb4e8a39bbf87dbe1c68f0c2b709edec4d3462016cf9ddf**

**mkdir -p $HOME/.kube**

**sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config**

**sudo chown $(id -u):$(id -g) $HOME/.kube/config**

**Step3:**

**On Master:**

**exit**

**mkdir -p $HOME/.kube**

**sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config**

**sudo chown $(id -u):$(id -g) $HOME/.kube/config**

**step4:**

**On Master:**

**kubectl apply -f** [**https://docs.projectcalico.org/manifests/calico.yaml**](https://docs.projectcalico.org/manifests/calico.yaml)

**kubectl apply -f https://raw.githubusercontent.com/kubernetes/ingress-nginx/controller-v0.49.0/deploy/static/provider/baremetal/deploy.yaml**

**Our Kubernetes installation and configuration are complete**

curl -LO "https://dl.k8s.io/release/**$(**curl -L -s https://dl.k8s.io/release/stable.txt**)**/bin/linux/amd64/kubectl"

sudo su

Now install docker

sudo apt update && apt -y install docker.io install Kubectl

curl -LO [https://storage.googleapis.com/kubern...](https://www.youtube.com/redirect?event=video_description&redir_token=QUFFLUhqazlRNE1aY2s3bDBtaHB6YnB2YjFjNmYzbmhqUXxBQ3Jtc0ttbXJiNU1SUDdsT2NGVlFNc2ZocVhWX0FVWWNWcTlXRENsbVNYUkJyYkd0Q1dzSkdwbm1nTFUxTmVIR3laeVgwN3c0ZS1WR0VBX2dmVW55dUwwc2tXQ2JZSVJPb0tSeEVEbTVWOFZxdE15N3V0Ukh1dw&q=https%3A%2F%2Fstorage.googleapis.com%2Fkubernetes-release%2Frelease%2F%24%28curl&v=hV8zi3vdQqk) -s [https://storage.googleapis.com/kubern...](https://www.youtube.com/redirect?event=video_description&redir_token=QUFFLUhqazNoSV9TUnNvczlGN1Zaem1waWhJYkJNRUUtZ3xBQ3Jtc0trb2Z5ZUhIVC1lTFZFTVhtRTZLenV2QUhrdXRadDRMRVJJT3V2UV9pNndzcnI5WEJOQjBFNmhsOEhnZGNISXd6OFg3eGNpaVRyTDZnTHRhXzZ1SkI1YWc0U0REbTFNUnNSSGcya3lYTzlocGZpTXRaRQ&q=https%3A%2F%2Fstorage.googleapis.com%2Fkubernetes-release%2Frelease%2Fstable.txt%29%2Fbin%2Flinux%2Famd64%2Fkubectl&v=hV8zi3vdQqk) && chmod +x ./kubectl && sudo mv ./kubectl /usr/local/bin/kubectl

install Minikube

curl -Lo minikube [https://storage.googleapis.com/miniku...](https://www.youtube.com/redirect?event=video_description&redir_token=QUFFLUhqa004UGkzaWFlR2lIbXlTT0xReEFmTGhGbmxlZ3xBQ3Jtc0tsLWpnd0dMVFVQdXJMQUpYX016SXRXREtRbGJtNDZRSWFEZE1hVGRjTlY2U1dNRXZtU0Noa1FzUDc4MVhacmpyZEtCWTF3RWRFRzdyYWVFbm9JNkVpQTlzcmpPM2dvNkNQbXI3SUxnZFdLUldhSUZ5SQ&q=https%3A%2F%2Fstorage.googleapis.com%2Fminikube%2Freleases%2Flatest%2Fminikube-linux-amd64&v=hV8zi3vdQqk) && chmod +x minikube && sudo mv minikube /usr/local/bin/

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

kind: Pod

apiVersion: v1

metadata:

name: testpod

spec: containers:

- name: c00

image: ubuntu

command: ["/bin/bash", "-c", "while true; do echo Hello-Bhupinder; sleep 5 ; done"]

restartPolicy: Never # Defaults to Always

kubectl apply -f pod1.yml \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* MULTI CONTAINER POD ENVIRONMENT

kind: Pod

apiVersion: v1

metadata:

name: testpod3

spec: containers:

- name: c00

image: Ubuntu

command: ["/bin/bash", "-c", "while true; do echo Technical-Guftgu; sleep 5 ; done"]

- name: c01

image: ubuntu command: ["/bin/bash", "-c", "while true; do echo Hello-Bhupinder; sleep 5 ; done"] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* POD ENVIRONMENT VARIABLES

kind: Pod

apiVersion: v1

metadata:

name: environments

spec: containers:

- name: c00

image: Ubuntu

command: ["/bin/bash", "-c", "while true; do echo Hello-Bhupinder; sleep 5 ; done"]

env: # List of environment variables to be used inside the pod

- name: MYNAME

value: BHUPINDER

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* POD WITH PORTS

kind: Pod

apiVersion: v1

metadata:

name: testpod4

spec:

containers:

- name: c00

image: httpd

ports:

- containerPort: 80