**Installation of kubeadm on ubuntu 22.04**

**Run this command in Master node:**

hostnamectl set-hostname Master

exec bash

**Run this command in Worker node:**

exec bash

**Run below commands in both master and worker node:**

**# Add Docker's official GPG key:**

**sudo apt-get update**

**sudo apt-get install ca-certificates curl**

**sudo install -m 0755 -d /etc/apt/keyrings**

**sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc**

**sudo chmod a+r /etc/apt/keyrings/docker.asc**

**# Add the repository to Apt sources:**

**echo \**

**"deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.docker.com/linux/ubuntu \**

**$(. /etc/os-release && echo "$VERSION\_CODENAME") stable" | \**

**sudo tee /etc/apt/sources.list.d/docker.list > /dev/null**

**sudo apt-get update**

**sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin**

sudo apt install -y curl gnupg2 software-properties-common apt-transport-https ca-certificates

sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmour -o /etc/apt/trusted.gpg.d/docker.gpg

sudo add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu $(lsb\_release -cs) stable"

sudo apt update  
sudo apt install -y containerd.io

containerd config default | sudo tee /etc/containerd/config.toml >/dev/null 2>&1

sudo sed -i 's/SystemdCgroup \= false/SystemdCgroup \= true/g' /etc/containerd/config.toml

sudo systemctl restart containerd  
sudo systemctl enable containerd

sudo apt-get update

sudo apt-get install -y apt-transport-https ca-certificates curl gpg

curl -fsSL https://pkgs.k8s.io/core:/stable:/v1.29/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-apt-keyring.gpg

echo 'deb [signed-by=/etc/apt/keyrings/kubernetes-apt-keyring.gpg] https://pkgs.k8s.io/core:/stable:/v1.29/deb/ /' | sudo tee /etc/apt/sources.list.d/kubernetes.list

sudo apt-get update

sudo apt-get install -y kubelet kubeadm kubectl

sudo apt-mark hold kubelet kubeadm kubectl

**Initialize Kubernetes Cluster with Kubeadm (master node)**

Sign out as a root user:

Sudo kubeadm init

After executing above command this will generate kubeadm join token command save that we will use it later.

mkdir -p $HOME/.kube  
sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config  
sudo chown $(id -u):$(id -g) $HOME/.kube/config

**Initialize this command in Worker Node:**

Execute the command in root user:

Run the command where we have saved the kubeadm join token command:

**Initialize this command in Master Node:**

kubectl apply -f <https://raw.githubusercontent.com/projectcalico/calico/v3.25.0/manifests/calico.yaml>

kubectl get nodes