**Cài đặt k8s**

**Step 1: Cài đặt các package cần thiết và cài đặt Kubernetes (Thực hiện trên tất cả các server)**

KUBERNETES\_VERSION=v1.31

CRIO\_VERSION=v1.31

apt-get update

apt-get install -y software-properties-common curl

**Add the Kubernetes repository**

curl -fsSL https://pkgs.k8s.io/core:/stable:/$KUBERNETES\_VERSION/deb/Release.key |

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:/$KUBERNETES\_VERSION/deb/ /" |

tee /etc/apt/sources.list.d/kubernetes.list

**Add the CRI-O repository**

curl -fsSL https://pkgs.k8s.io/addons:/cri-o:/stable:/$CRIO\_VERSION/deb/Release.key |

gpg --dearmor -o /etc/apt/keyrings/cri-o-apt-keyring.gpg

echo "deb [signed-by=/etc/apt/keyrings/cri-o-apt-keyring.gpg] https://pkgs.k8s.io/addons:/cri-o:/stable:/$CRIO\_VERSION/deb/ /" |

tee /etc/apt/sources.list.d/cri-o.list

**Install the packages**

apt-get update

apt-get install -y cri-o kubelet kubeadm kubectl

**Start CRI-O**

systemctl start crio.service

**Bootstrap a cluster**

swapoff -a

modprobe br\_netfilter

sysctl -w net.ipv4.ip\_forward=1

# unable to resolve host ecs-bbb: Name or service not known

echo "alias sudo='sudo -h 127.0.0.1'" >> ~/.bash\_aliases

source ~/.bashrc

sudo systemctl restart crio

sudo systemctl enable crio

sudo systemctl status crio

sudo systemctl enable kubelet

sudo kubeadm config images pull --cri-socket unix:///var/run/crio/crio.sock

sudo sysctl -p

**Step 2: Khởi tạo K8s Cluster (chỉ thực hiện trên server Master)**

sudo kubeadm init --pod-network-cidr=192.168.1.0/24 --cri-socket unix:///var/run/crio/crio.sock

sudo kubeadm init --pod-network-cidr=192.168.0.0/24 --cri-socket unix:///var/run/crio/crio.sock

mkdir -p $HOME/.kube

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

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

kubectl create -f https://raw.githubusercontent.com/projectcalico/calico/v3.25.1/manifests/tigera-operator.yaml

curl https://raw.githubusercontent.com/projectcalico/calico/v3.25.1/manifests/custom-resources.yaml -O

sudo vi custom-resources.yaml

apiVer:sion: operator.tigera.io/v1

kind: Installation

metadata:

name: default

spec:

# Configures Calico networking.

calicoNetwork:

# Note: The ipPools section cannot be modified post-install.

ipPools:

- blockSize: 26

cidr: 192.168.0.0/16

encapsulation: VXLANCrossSubnet

natOutgoing: Enabled

nodeSelector: all()

kubectl create -f custom-resources.yaml

kubectl cluster-info

**Step 3: Join Node vào Master (Chỉ thực hiện trên các node nhé)**

sudo touch /proc/sys/net/bridge/bridge-nf-call-iptables

sudo kubeadm join 42.96.40.173:6443 --token g65qts.m7dbucytuvhttqbp --discovery-token-ca-cert-hash sha256:b43c16fa7467e1aed770058320c088c01e73ec67910ab5e7a22693fbab535125 --cri-socket /var/run/crio/crio.sock