Kubernetes Setup

Launch 2 Instances.

For the instance of **Master Node** choose instance type as **t2.small**

For the instance of **Worker Node** choose instance type as **t2.micro**

Master Node Setup

Step 1 –

sudo su

yum install docker -y

systemctl enable docker && systemctl start docker

Step 2 –

Create 1 file as -

vi /etc/yum.repos.d/kubernetes.repo

Copy the below content in that file

[kubernetes]

name=Kubernetes

baseurl=https://packages.cloud.google.com/yum/repos/kubernetes-el7-x86_64

enabled=1

gpgcheck=1

repo_gpgcheck=0

gpgkey=https://packages.cloud.google.com/yum/doc/yum-key.gpg
https://packages.cloud.google.com/yum/doc/rpm-package-key.gpg

exclude=kube*

Step 3 –

Again Create 1 file as –

vi /etc/sysctl.d/k8s.conf

Copy the below content in that file

---

net.bridge.bridge-nf-call-ip6tables = 1

net.bridge.bridge-nf-call-iptables = 1

EOF

sysctl --system

setenforce 0

Step 4 –

yum install -y kubelet kubeadm kubectl --disableexcludes=kubernetes

systemctl enable kubelet && systemctl start kubelet

Step 5 –

kubeadm init --ignore-preflight-errors=all

After running this command you will get the kube api token

But if you don’t get the token then run the following command

kubeadm token create --print-join-command

The token will look like this -

kubeadm join 172.31.32.75:6443 --token v6puvg.o7os499jqofdcked \--discovery-token-ca-cert-hash sha256:6fc07d081ea77c6bb42604a9c0abfbcbb12ba6691130afb94ef36ac57e3e10b9

Save this token somewhere in your machine.

Step 6 –

mkdir -p $HOME/.kube

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

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

export KUBECONFIG=/etc/kubernetes/admin.conf

Step 7 –
open port number 6443 & 10250 in master security group

Step 8 –
kubectl apply -f https://docs.projectcalico.org/v3.20/manifests/calico.yaml

After these steps your master node should work in a proper way.

WORKER NODE SETUP

Step 1 –

sudo su
yum install docker -y
systemctl enable docker && systemctl start docker

Step 2 –

Create 1 file as - **vi /etc/yum.repos.d/kubernetes.repo**

Copy the following content in that file

```
[kubernetes]

name=Kubernetes

baseurl=https://packages.cloud.google.com/yum/repos/kubernetes-el7-x86_64

enabled=1

gpgcheck=1

repo_gpgcheck=0

gpgkey=https://packages.cloud.google.com/yum/doc/yum-key.gpg https://packages.cloud.google.com/yum/doc/rpm-package-key.gpg

exclude=kube*
```

Step 3 –

Again create 1 file as - **vi /etc/sysctl.d/k8s.conf**

Copy the following content in that file

---
net.bridge.bridge-nf-call-ip6tables = 1
net.bridge.bridge-nf-call-iptables = 1
EOF

sysctl --system
setenforce 0

Step 4 –

yum install -y kubelet kubeadm kubectl --disableexcludes=kubernetes
systemctl enable kubelet && systemctl start kubelet

Step 5 –

now enter join command (**Your Generated Token**) you copied from master

After all this your Master Node & your Worker Node should work properly.

kubectl get nodes

Run the above command in master node only . & you will get to see the 2 nodes.