***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 sha256:6fc07d081ea77c6bb42604a9c0abfbcbb12ba6691130afb94ef36ac57e3 e10b9

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.**