***Kubernetes Setup***

Choose Amazon Linux 2 for both master and worker node.

Launch 2 Instances.

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

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 172.31.83.243:6443 --token r2klmj.0b5el5vdd6rtvnqq \

--discovery-token-ca-cert-hash sha256:287b31cd61436ecb7fcc4173bec58458070dc1c97d70c4b2671a4c36cbc42ce5

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

**Step 6 –**

open port number 6443 & 10250 in security group

**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.**