K8S INSTALLATION STEPS

STEP 1: MASTER NODE INSTALLATION

Create EC2 Instance from **UBUNTU AMI** with type **t2.medium** (2 core CPU and 4GB Ram) and follow below installation steps.

1. **Install apt-transport-https**

```
sudo apt-get install -y apt-transport-https
sudo curl -s https://packages.cloud.google.com/apt/doc/apt-key.gpg | apt-key add
echo 'deb http://apt.kubernetes.io/ kubernetes-xenial main' > /etc/apt/sources.list.d/kubernetes.list
```

2. **Updating apt**

```
sudo apt-get update
```

3. **Installing docker.io**

```
sudo apt-get install -y docker.io
```

4. **Starting Docker Daemon and enable Service.**

```
sudo systemctl start docker

sudo systemctl enable docker.service
```

5. **Installing Kubernetes master components**

```
sudo apt-get install -y kubelet kubeadm kubectl kubernetes-cni
```

STEP 2: Kubernetes node template is now ready create an AMI from this instance to create worker nodes.

To create an AMI from an instance

1. Right-click on the instance you want to use as the basis for your AMI or Click-on Actions button.
2. Action --> Image --> Create Image

Once the Ami is available (usually it takes 2-8 minutes to get ready), create instances with t2.micro to create worker nodes.

STEP 3: Login back to Master instance created in STEP 1

```
sudo su -
kubeadm init
```

1. Copy token and keep it in a separate file so that we need to run this command in worker nodes.

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

2. installing a CNI network on master node

```
sysctl net.bridge.bridge-nf-call-iptables=1
kubectl apply -f "https://cloud.weave.works/k8s/v1.13/net.yaml"
exit
kubectl get nodes
```

STEP 4: CREATE WORKER NODES

1. ssh to worker nodes created from **STEP 2**

```
sudo su -
```

2. run the **`kubeadm join <TOKEN>`** command which we get from **STEP 3**

STEP 5: Login back to Master instance created in STEP 1

Sudo kubectl get nodes