## **Kubernetes Installation – Using kubeadm**

First, have two VM’s setup. One of which we will be using as our master node, and other as worker node.

1. Install Docker

$ sudo apt update

$ sudo apt install docker.io

$ sudo systemctl start docker

$ sudo systemctl enable docker

1. Install Kubernetes

$ sudo apt install apt-transport-https curl

$ curl -s https://packages.cloud.google.com/apt/doc/apt-key.gpg | sudo apt-key add

$ sudo apt-add-repository "deb http://apt.kubernetes.io/ kubernetes-xenial main"

$ sudo apt install kubeadm kubelet kubectl kubernetes-cni

1. Disable Swap Memory

$ sudo swapoff -a

$ sudo nano /etc/fstab

Inside this file, comment out the /swapfile line.

1. Set hostnames

$ sudo hostnamectl set-hostname kubernetes-master

$ sudo hostnamectl set-hostname kubernetes-worker

1. Initialize Kubernetes master server

Run these on the master node:

kubernetes-master:~$ sudo kubeadm init

kubernetes-master:~$ mkdir -p $HOME/.kube

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

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

1. Deploy a pod network

kubernetes-master:~$ kubectl apply -f https://raw.githubusercontent.com/coreos/flannel/master/Documentation/kube-flannel.yml

kubernetes-master:~$ kubectl apply -f https://raw.githubusercontent.com/coreos/flannel/master/Documentation/k8s-manifests/kube-flannel-rbac.yml

kubernetes-master:~$ kubectl get pods --all-namespaces

1. Join the Kubernetes cluster

Run these from the worker node:

kubernetes-worker:~$ sudo kubeadm join 192.168.1.220:6443 --token 1exb8s.2t4k3b5syfc3jfmo --discovery-token-ca-cert-hash sha256:72ad481cee4918cf2314738419356c9a402fb609263adad48c13797d0cba2341

kubernetes-master:~$ kubectl get nodes