Steps to perform both master and worker:

1. update repository
   1. apt-get update
2. Turn off Swap space
   1. swapoff -a

3. update hostname, hosts and set static ip

4. install openssh and docker

5. install kubeadm, kubelet, kubectl

Steps to perform only at master:

1. initiate kubernetes cluster

2. install pod network

3. setup kubernetes dashboard

Steps to perform only at worker:

1. Join the Cluster

CREATE ubuntu setups

1. Install required ubuntu version on hyper wiser
2. Setup static ip
3. Install open ssh server
   1. sudo apt-get install openssh-server
   2. sudo systemctl enable ssh
   3. sudo systemctl start ssh
4. setup password for root user
   1. sudo passwd root
5. login to root user enable login root permission
   1. sudo su
   2. vi /etc/ssh/sshd\_config
   3. PermitRootLogin yes
   4. systemctl reload sshd
6. setup user as a root user
   1. sudo -i
   2. visudo
   3. $USER ALL=(ALL) NOPASSWD: ALL
7. Install required basic commands like vim,curl, net-tools

Install docker in master and worker:

<https://docs.docker.com/engine/install/ubuntu/>

https://docs.docker.com/engine/install/linux-postinstall/

install kubeadm, kubelet and kubectl in master and worker node

<https://kubernetes.io/docs/setup/production-environment/tools/kubeadm/install-kubeadm/>

apt-mark hold kubelet kubeadm kubectl

Environment="KUBELET\_KUBECONFIG\_ARGS=--bootstrap-kubeconfig=/etc/kubernetes/bootstrap-kubelet.conf --kubeconfig=/etc/kubernetes/kubelet.conf"

Add below line in end of the file vi /etc/systemd/system/kubelet.service.d/10-kubeadm.conf

Environment="cgroup-driver=systemd/cgroup-driver=cgroupfs"

systemctl daemon-reload

systemctl enable kubelet

systemctl restart kubelet

systemctl status kubelet

**kubeadm init**

sudo kubeadm init --pod-network-cidr=192.168.0.0/16 --apiserver-advertise-address=192.168.29.39

you can see message like below

**Your Kubernetes control-plane has initialized successfully!**

To start using your cluster, you need to run the following as a regular user:

mkdir -p $HOME/.kube

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

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

Alternatively, if you are the root user, you can run:

export KUBECONFIG=/etc/kubernetes/admin.conf

You should now deploy a pod network to the cluster.

Run "kubectl apply -f [podnetwork].yaml" with one of the options listed at:

https://kubernetes.io/docs/concepts/cluster-administration/addons/

Then you can join any number of worker nodes by running the following on each as root:

**kubeadm join 192.168.29.39:6443 --token q3ylum.55jn54xyxqzgqqbd \**

**--discovery-token-ca-cert-hash sha256:66d073f2b832f923e11bc0ede469cab6e680e681d6a16a7a1253e9325e27f71f**