

## KUBERNETES INSTALLATION ON UBUNTU 18.04

### On Master Node:

```
sudo hostnamectl set-hostname "k8s-master"
```

### Installing docker

```
=====
```

```
sudo apt-get update
```

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

```
sleep 5
```

```
sudo systemctl start docker
```

```
sudo systemctl enable docker
```

```
docker version
```

```
root@ip-172-31-88-197:~# docker version
Client:
 Version:           20.10.7
 API version:       1.41
 Go version:        gol.13.8
 Git commit:        20.10.7-0ubuntu5~18.04.3
 Built:             Mon Nov  1 01:04:14 2021
 OS/Arch:           linux/amd64
 Context:           default
 Experimental:      true

Server:
 Engine:
  Version:          20.10.7
  API version:      1.41 (minimum version 1.12)
  Go version:       gol.13.8
  Git commit:       20.10.7-0ubuntu5~18.04.3
  Built:            Fri Oct 22 00:57:37 2021
  OS/Arch:          linux/amd64
  Experimental:     false
 containerd:
  Version:          1.5.5-0ubuntu3~18.04.2
  GitCommit:
 runc:
  Version:          1.0.1-0ubuntu2~18.04.1
  GitCommit:
 docker-init:
  Version:          0.19.0
  GitCommit:
```

## KUBEADM

sudo apt-get install apt-transport-https curl -y

wget https://packages.cloud.google.com/apt/doc/apt-key.gpg

sudo apt-key add apt-key.gpg

sudo swapoff -a

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

sudo apt-get install kubeadm -y

kubeadm version

```
root@ip-172-31-88-197:~# kubeadm version
kubeadm version: &version.Info{Major:"1", Minor:"24", GitVersion:"v1.24.2", GitCommit:"f66044f4361b9f1f96f0053dd46cb7dce5e990a8", GitTreeState:"clean", BuildDate:"2022-06-15T14:20:54Z", GoVersion:"gol.18.3", Compiler:"gc", Platform:"linux/amd64"}
root@ip-172-31-88-197:~#
```

## INITIALIZING KUBEADM INIT

```
kubeadm init --pod-network-cidr=172.31.28.0/24 --ignore-preflight-errors=all
```

## APPLYING WEAVE NETWORK

```
kubectl apply -f "https://cloud.weave.works/k8s/net?k8s-version=$(kubectl version | base64 | tr -d '\n')"
```

```
kubectl apply -f https://git.io/weave-kube
```

**kubectl get pods --all-namespaces**

**all the pods must be up and running:**

```
root@ip-172-31-88-197:~# kubectl get pods --all-namespaces
NAMESPACE   NAME                                     READY   STATUS    RESTARTS   AGE
kube-system  coredns-6d4b75cb6d-gzfbf              1/1     Running   0           15m
kube-system  coredns-6d4b75cb6d-qgt2z              1/1     Running   0           15m
kube-system  etcd-ip-172-31-88-197                  1/1     Running   0           15m
kube-system  kube-apiserver-ip-172-31-88-197        1/1     Running   0           15m
kube-system  kube-controller-manager-ip-172-31-88-197 1/1     Running   2 (10m ago) 15m
kube-system  kube-proxy-jrtmk                       1/1     Running   0           15m
kube-system  kube-scheduler-ip-172-31-88-197        1/1     Running   1 (11m ago) 15m
kube-system  weave-net-qjrcs                        2/2     Running   1 (11m ago) 11m
root@ip-172-31-88-197:~#
```

If you face any issue related to connection refused, it is due to config file not available

Use this:

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

**For checking the token list which we used to join the nodes for cluster**

```
root@ip-172-31-88-197:~# kubeadm token list
```

TOKEN	TTL	EXPIRES	USAGES	DESCRIPTION
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xn1lq6.dg1ba7aojtbxh7fp	23h	2022-06-22T13:25:56Z	authentication,signing	The default bootstrap token generated by 'kubeadm init'. system:bootstrappers:kubeadm:default-node-token
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## CREATE A NEW TOKEN FOR JOINING

```
root@ip-172-31-88-197:~# kubeadm token create --print-join-command
```

```
kubeadm join 172.31.88.197:6443 --token abo788.lljmycy3k1r0udh5 --discovery-token-ca-cert-hash  
sha256:83b23286792fde57dc36c3ee69adde61e84437fc50dae885a4a9fb4f4421a836
```

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## ON WORKER NODE FOR JOINING IN CLUSTER

```
kubeadm join 172.31.88.197:6443 --token 09lyi8.3l8iqjizjvs3cdn3 --discovery-token-ca-cert-hash  
sha256:83b23286792fde57dc36c3ee69adde61e84437fc50dae885a4a9fb4f4421a836 --ignore-preflight-  
errors=all
```