

INSTALL KUBERNETES WITH KUBEADM

This COMMAND will apply on all worker nodes including Master or Control-plane

```
sudo apt update
sudo apt upgrade -y
sudo apt-get install -y ca-certificates curl
sudo apt-get install -y apt-transport-https
sudo apt install docker.io -y
sudo systemctl start docker
sudo systemctl enable docker
```

Download the Google Cloud public signing key:

```
curl -fsSL https://packages.cloud.google.com/apt/doc/apt-key.gpg | sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-archive-keyring.gpg
```

Note: In releases older than Debian 12 and Ubuntu 22.04, /etc/apt/keyrings does not exist by default. You can create this directory if you need to, making it world-readable but writeable only by admins.

Add the Kubernetes apt repository:

```
echo "deb [signed-by=/etc/apt/keyrings/kubernetes-archive-keyring.gpg] https://apt.kubernetes.io/ kubernetes-xenial main" | sudo tee /etc/apt/sources.list.d/kubernetes.list
```

Update apt package index, install kubelet, kubeadm and kubectl, and pin their version:

```
sudo apt-get update
sudo apt-get install -y kubelet kubeadm kubectl
sudo apt-mark hold kubelet kubeadm kubectl
```

```
sudo swapoff -a
```

PASTE THE KUBEADM JOIN.... KEY ON ALL WORKER NODES

```
*****
*****
```

THIS COMMANDS WILL APPLY ONLY ON MASTER OR CONTROL-PLANE

Initialize the Kubernetes cluster by running the following command:

```
kubeadm init --pod-network-cidr=192.168.0.0/16
OR
sudo kubeadm init
```

Configure kubectl for your regular user by running the following commands:

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

also copy kubeadm join key for future use.

```
kubectl create -f https://raw.githubusercontent.com/projectcalico/calico/v3.26.0/manifests/tigera-operator.  
yaml
```

```
kubectl create -f https://raw.githubusercontent.com/projectcalico/calico/v3.26.0/manifests/custom-resourc  
es.yaml
```

OR

```
{{  
  curl https://raw.githubusercontent.com/projectcalico/calico/v3.26.0/manifests/custom-resources.yaml -O  
  ls  
  kubectl create -f filename or custom-resources.yaml  
}}
```

Check the status of the control plane components:

```
kubectl get nodes
```

```
kubectl get pods -n kube-system
```

```
kubectl get pods -A
```