**Kubernetes**

Kubelet =

Kubeadm =

Kubectl =

kubernetes-cni =

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**# # Installation before init or before adding node**

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#!/bin/bash

# Update the Ubuntu & Upgrade

sudo apt-get update && apt-get upgrade -y

#Add Repository

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

#Add Repository

sudo cat <<EOF > /etc/apt/sources.list.d/kubernetes.list

deb http://apt.kubernetes.io/ kubernetes-xenial main

EOF

#Update Ubuntu

sudo apt-get update -y

#Install Docker

sudo apt-get install -y docker.io

#Install kubelet kubeadm kubectl kubernetes-cni

sudo apt-get install -y --allow-unauthenticated kubelet kubeadm kubectl kubernetes-cni

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**# # Master node Kubeadmin installation**

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#IChange host

vi /etc/hostname

192.168.2.10

Change

Master

#Specify Node Names

vi /etc/hosts

192.168.2.10

Change

192.168.2.10 Master

192.168.2.5 Node-1

192.168.2.5 Node-2

#Host Name expose Environment variable

export MASTER\_IP=”PUBLIC IP”

#Install kubeadmin

sudo kubeadm init --pod-network-cidr=10.244.0.0/16 --apiserver-advertise-address $MASTER\_IP

#kubeadm join --token 00927f.1cff17da1992d065 54.144.225.71:6443 --discovery-token-ca-cert-hash sha256:667bea506383238e9ea5413f54e759f737c1b2897785fade3c2d557198f79d5e

### Copy & SAVE Joining TOKEN IN TEXT FILE ###

# Export Config File #

sudo cp /etc/kubernetes/admin.conf $HOME/

sudo chown $(id -u):$(id -g) $HOME/admin.conf

export KUBECONFIG=$HOME/admin.conf

# Add Flannel Networking #

sudo curl -sSL "https://github.com/coreos/flannel/blob/master/Documentation/kube-flannel.yml?raw=true" | kubectl --namespace=kube-system create -f -

# Add for Dashboard BUT IT IS NOT WORKING #

sudo kubectl apply -f https://rawgit.com/kubernetes/dashboard/master/src/deploy/kubernetes-dashboard.yaml --namespace=kube-system

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**# # Node Adding to Cluster**

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#IChange host

vi /etc/hostname

192.168.2.1

Change

Node-1

#Specify Node Names

vi /etc/hosts

192.168.2.5

Change

192.168.2.10 Master

192.168.2.5 Node-1

192.168.2.5 Node-2

#Host Name expose Environment variable

export NODE-1\_IP=”NODE PUBLIC IP”

#Node adding to cluster “Copy & Past above token in to Node”

kubeadm join --token 00927f.1cff17da1992d065 54.144.225.71:6443 --discovery-token-ca-cert-hash sha256:667bea506383238e9ea5413f54e759f737c1b2897785fade3c2d557198f79d5e

### COMMANDS ###

kubectl cluster-info

lsof -i

kubectl get nodes #Show available nodes list

kubectl get pods #Show available pods list

kubectl get deployments #Show available Deployments list

kubectl get rs #show the replicas details

kubectl get service (OR) #show the exposed port no

kubectl get svc

kubectl get cs #Show cluster information

kubectl get pods --all-namespaces

kubectl get deployments #show the deployments details

kubectl get deploy

kubectl run --image=nginx <Container Name> # Create Pod

kubectl logs <Container name> #Show pod logs

kubectl expose pod myweb-999d5fcbc-n5k55 --port=80 --target-port=80 --type=NodePort ### Manual Expose the container port

kubectl describe pod web-pod ## Show the web pod details

kubectl scale rs/web-rs --replicas=10 ##### increase the replicas 10 no

kubectl scale rs/web-rs --replicas=2 ##### decrease the replicas from 10 to 2 no

kubectl create -f db-pod.yml -f db-service.yml -f web-pod.yml -f web-service.yml ## Create Pods & Services

kubectl delete pod myweb-999d5fcbc-n5k55 #### delete the pods

kubectl delete deployments <Name> ### delete the all deployments, replicas, pods

kubectl delete svc <Name> ### delete services

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##### WORKER NODE #####

#!/bin/bash

export NODE-1\_IP=<172.31.15.230 Public IP>

sudo apt-get update && apt-get upgrade -y

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

sudo cat <<EOF > /etc/apt/sources.list.d/kubernetes.list

deb http://apt.kubernetes.io/ kubernetes-xenial main

EOF

sudo apt-get update -y

sudo apt-get install -y docker.io

sudo apt-get install -y --allow-unauthenticated kubelet kubeadm kubectl kubernetes-cni

#Copy and paste Join ΓÇô Token from master

sudo kubeadm join --token f8cee2.60a21b1b0c5be636 35.172.109.185:6443 --discovery-token-ca-cert-hash sha256:2ef97a0a76c95d85775cc9eba2008f0f5d83dd3edfa772992efc4725b47a0637

# MOVE ADMIN.CONF FILE TO NODE

# Copy Node Pem-Key to /home/ubuntu folder

sudo scp -i /home/ubuntu/madhu.pem -r /etc/kubernetes/admin.conf ubuntu@34.236.244.6:/tmp

# Export Config File #

sudo cp /tmp/admin.conf $HOME/

sudo chown $(id -u):$(id -g) $HOME/admin.conf

export KUBECONFIG=$HOME/admin.conf