Install on master and worker nodes

Docker – is a software responsible for running the containers.

kubeadm – a CLI tool that will install and configure the various components of a cluster in a standard way.

kubelet – a system service/program that runs on all nodes and handles node-level operations.

kubectl – a CLI tool used for issuing commands to the cluster through its API Server.

Run on master and nodes

1. $ apt-get update && apt-get install -y docker.io
2. $ docker version
3. $ apt-get update && apt-get install -y apt-transport-https
4. $ curl -s https://packages.cloud.google.com/apt/doc/apt-key.gpg | apt-key add -
5.

```
cat <<EOF | sudo tee /etc/apt/sources.list.d/kubernetes.list

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

 EOF
```

6. $ apt-get update
7. $ apt-get install -y kubelet kubeadm kubectl
8. $ apt-mark hold kubelet kubeadm kubectl

Create kubernetes cluster (Run on Master)

1. $ kubeadm init
2. Save ‘kubadm join’
   (use the command “$ kubeadm token create --print-join-command” to regenerate kubeadm token)
3. $ cp /etc/kubernetes/admin.conf $HOME/
4. $ chown $(id -u):$(id -g) $HOME/admin.conf
5. $ export KUBECONFIG=$HOME/admin.conf

Join Worker Nodes to the Kubernetes Cluster (Run on worker node)

1. Run ‘kubadm join’ command.

Testing the Kubernetes Cluster(Run on Master)

1. $ kubectl get nodes

2. $ kubectl apply -f https://cloud.weave.works/k8s/net?k8s-version=$(kubectl version | base64 | tr -d '\n')
3. $ kubectl get nodes
4. kubectl get pods -n kube-system

Run following commands if ‘kubectl apply’ fails..

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