Lab 4:

Add add Kubernetes repository for Ubuntu 20.04 to all the servers.

sudo apt -y install curl apt-transport-https

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

echo "deb https://apt.kubernetes.io/ kubernetes-xenial main" | sudo tee /etc/apt/sources.list.d/kubernetes.list

Install kubeadm package

sudo apt update

sudo apt -y install vim git curl wget kubelet kubeadm kubectl

sudo apt-mark hold kubelet kubeadm kubectl

Confirm installation by checking the version of kubectl.

kubectl version --client && kubeadm version

Disable Swap

swapoff -a

Initialize Cluster with kubeadm

kubeadm init --pod-network-cidr=10.244.0.0/16

mkdir -p $HOME/.kube

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

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

Deploy flannel

kubectl apply -f https://raw.githubusercontent.com/coreos/flannel/master/Documentation/kube-flannel.yml

```
root@ubuntu20:~/test# kubectl get pods -n kube-system
NAME                                READY   STATUS      RESTARTS   AGE
coredns-565d847f94-nm6hr            0/1     Pending     0          7m53s
coredns-565d847f94-vtb6k            0/1     Pending     0          7m53s
etcd-ubuntu20                       1/1     Running     0          8m6s
kube-apiserver-ubuntu20             1/1     Running     0          8m6s
kube-controller-manager-ubuntu20    1/1     Running     0          8m6s
kube-proxy-vkm79                    1/1     Running     0          7m53s
kube-scheduler-ubuntu20             1/1     Running     0          8m6s
root@ubuntu20:~/test# kubectl get pods -n kube-system
NAME                                READY   STATUS             RESTARTS   AGE
coredns-565d847f94-nm6hr            0/1     ContainerCreating  0          7m58s
coredns-565d847f94-vtb6k            0/1     ContainerCreating  0          7m58s
etcd-ubuntu20                       1/1     Running            0          8m11s
kube-apiserver-ubuntu20             1/1     Running            0          8m11s
kube-controller-manager-ubuntu20    1/1     Running            0          8m11s
kube-proxy-vkm79                    1/1     Running            0          7m58s
kube-scheduler-ubuntu20             1/1     Running            0          8m11s
root@ubuntu20:~/test# kubectl get nodes
NAME       STATUS   ROLES          AGE     VERSION
ubuntu20   Ready    control-plane  8m19s   v1.25.0
root@ubuntu20:~/test# kubectl get pods -n kube-system
```