Additional Information and Resources

We have been given a three-node cluster that is in need of an upgrade. We must perform the upgrade to all of the cluster components, including kubeadm, kube-controller-manager, kube-scheduler, kubeadm, and kubectl. We need to perform the following to complete this hands-on lab:

* Get version 1.13.5 of kubeadm.
* Upgrade kubeadm and verify it has been installed correctly.
* Before initiating, first plan the upgrade to check for errors.
* Perform the upgrade to v1.13.5 and verify it was installed correctly.
* Get the latest version of kubelet.
* Install kubelet on each node and restart the kubelet service.
* Verify kubelet was installed correctly.
* Get the latest version of kubectl.
* Install the latest version of kubectl.

Learning Objectives

check\_circle**Get version 1.13.5 of kubeadm**keyboard\_arrow\_up

Use the following commands to create a variable and get the latest version of kubeadm:

export VERSION=v1.13.5

export ARCH=amd64

curl -sSL https://dl.k8s.io/release/${VERSION}/bin/linux/${ARCH}/kubeadm > kubeadm

check\_circle**Install kubeadm and verify it has been installed correctly.**keyboard\_arrow\_up

Run the following commands to install kubeadm and verify the version:

sudo install -o root -g root -m 0755 ./kubeadm /usr/bin/kubeadm

sudo kubeadm version

check\_circle**Plan the upgrade in order to check for errors.**keyboard\_arrow\_up

Use the following command to plan the upgrade:

sudo kubeadm upgrade plan

check\_circle**Perform the upgrade of the kube-scheduler and kube-controller-manager.**keyboard\_arrow\_up

Use this command to apply the upgrade (also in the output of upgrade plan):

sudo kubeadm upgrade apply v1.13.5

check\_circle**Get the latest version of kubelet.**keyboard\_arrow\_up

Use the following commands to get the latest version of kubelet on each node:

export VERSION=v1.13.5

export ARCH=amd64

curl -sSL https://dl.k8s.io/release/${VERSION}/bin/linux/${ARCH}/kubelet > kubelet

check\_circle**Install kubelet on each node and restart the kubelet service.**keyboard\_arrow\_up

Use these commands to install kubelet and restart the kubelet service:

sudo install -o root -g root -m 0755 ./kubelet /usr/bin/kubelet

sudo systemctl restart kubelet.service

check\_circle**Verify the kubelet was installed correctly.**keyboard\_arrow\_up

Use the following command to verify the kubelet was installed correctly:

kubectl get nodes

check\_circle**Get version 1.13.5 of kubectl**keyboard\_arrow\_up

Use the following command to get the latest version of kubectl:

curl -sSL https://dl.k8s.io/release/${VERSION}/bin/linux/${ARCH}/kubectl > kubectl

check\_circle**Upgrade kubectl**keyboard\_arrow\_up

Use the following command to install the latest version of kubectl:

sudo install -o root -g root -m 0755 ./kubectl /usr/bin/kubectl