

[22] Kubernetes Upgrade

□ Cluster Upgrade - only Master

- upgrade system: k8s-master
- Given an existing Kubernetes cluster running version `1.22.4`, upgrade all of the Kubernetes control plane and node components on the master node only to version `1.23.3`
- Be sure to `drain` the `master` node before upgrading it and `uncordon` it after the upgrade.

Reference

docs□□ upgrade kubeadm □□

[Upgrading kubeadm clusters](#)



```
[user@console ~]$ kubectl config use-context k8s

[user@console ~]$ ssh k8s-master

[user@k8s-master ~]$ sudo -i

# □□□□ ubuntu □□□□ □□ □□ □□
# Ubuntu
[root@k8s-master ~]# apt-update
[root@k8s-master ~]# apt-cache madison kubeadm

# Ubuntu
[root@k8s-master ~]# apt-mark unhold kubeadm && \\\
apt-get update && apt-get install -y kubeadm=1.23.3-00 && \\\
apt-mark hold kubeadm
```

```
# v1.23.3 更新 master component
[root@k8s-master ~]# kubeadm upgrade plan v1.23.3
[root@k8s-master ~]# sudo kubeadm upgrade apply v1.23.3

# 通过 ssh 连接到 k8s-master
# 在 master 节点上执行 drain 操作
# exit 退出 console
[root@k8s-master ~]# exit
[user@k8s-master ~]$ exit
[user@console ~]$ kubectl drain k8s-master --ignore-daemonsets

# 通过 ssh 连接到 k8s-master
[user@console ~]$ ssh k8s-master

# Ubuntu
[user@k8s-master ~]$ sudo apt-mark unhold kubelet kubectl && \
apt-get update && \
apt-get install -y kubelet=1.23.3-00 kubectl=1.23.3-00 && \
apt-mark hold kubelet kubectl

[user@k8s-master ~]$ sudo -i
[root@k8s-master ~]# systemctl daemon-reload
[root@k8s-master ~]# systemctl restart kubelet

# 退出 console
[root@k8s-master ~]# exit
[user@k8s-master ~]$ exit
[user@console ~]$ kubectl uncordon k8s-master
[user@console ~]$ kubectl get nodes
```



upgrade system : k8s-worker1, k8s-worker2 k8s worker 1.23.3

-

```
# Ubuntu ☐☐  
kubectl config use-context k8s
```

```
ssh k8s-worker1
```

```
sudo -i
```

```
apt-mark unhold kubeadm && \  
apt-get update && apt-get install -y kubeadm=1.23.3-00 && \  
apt-mark hold kubeadm
```

```
sudo kubeadm upgrade node
```

```
# console ☐☐ ☐☐  
exit
```

```
kubectl drain k8s-worker1 --ignore-daemonsets
```

```
ssh k8s-worker1
```

```
apt-mark unhold kubelet kubectl && \  
apt-get update && apt-get install -y kubelet=1.23.3-00 kubectl=1.23.3-00 && \  
apt-mark hold kubelet kubectl
```

```
sudo systemctl daemon-reload
```

```
sudo systemctl restart kubelet
```

```
# console ☐☐ ☐☐  
exit
```

```
kubectl uncordon k8s-worker1  
--> k8s-worker2 ☐☐☐☐ ☐☐
```

```
kubectl get nodes  
--> ☐☐ ☐☐ ☐☐
```

Lab (25%)

Given an existing Kubernetes cluster running version 1.20.0, upgrade all of the Kubernetes control plane and node components on the master node only to version 1.20.1. Be sure to drain the master node before upgrading it and uncordon it after the upgrade.

You are also expected to upgrade kubelet and kubectl on the master node.

- []

```
kubectl get nodes
```

```
--> node [ ] [ ]
```

```
ssh {Node [ ]}
```

```
sudo -i
```

```
# Ubuntu [ ]
```

```
apt update
```

```
apt-cache madison kubeadm
```

```
apt-mark unhold kubeadm && \
```

```
apt-get update && apt-get install -y kubeadm=1.20.1-00 && \
```

```
apt-mark hold kubeadm
```

```
kubeadm version
```

```
kubeadm upgrade plan
```

```
sudo kubeadm upgrade apply v1.20.1
```

```
# console [ ] [ ]
```

```
exit
```

```
kubectl drain <node-to-drain> --ignore-daemonsets
```

```
ssh {Node [ ]}
```

```
apt-mark unhold kubelet kubectl && \\  
apt-get update && apt-get install -y kubelet=1.20.1-00 kubectl=1.20.1-00 && \\  
apt-mark hold kubelet kubectl
```

```
sudo systemctl daemon-reload
```

```
sudo systemctl restart kubelet
```

```
# console ☐ ☐  
exit
```

```
kubectl uncordon <node-to-drain>
```

```
# ☐ ☐  
kubectl get nodes  
-> ☐☐☐☐ Node ☐ ☐
```

Revision #1

Created 31 May 2023 00:16:59 by ☐

Updated 20 June 2023 13:20:12 by ☐