

NÂNG CẤP KUBERNETES CLUSTER SỬ DỤNG KUBEADM

1. Cài đặt kubeadm v1.23.10 trên Master node

a. Kiểm tra phiên bản hiện tại của kubeadm

```
kubeadm version
kubeadm version: &version.Info{Major:"1", Minor:"23", GitVersion:"v1.23.3",
GitCommit:"816c97ab8cff8a1c72eccca1026f7820e93e0d25",
GitTreeState:"clean", BuildDate:"2022-01-25T21:24:08Z",
GoVersion:"go1.17.6", Compiler:"gc", Platform:"linux/amd64"}
```

b. Unhold kubeadm

```
apt-mark unhold kubeadm
Canceled hold on kubeadm.
```

c. Nâng cấp lên phiên bản v1.23.10

```
Apt-get install -y kubeadm=1.23.10-00
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages will be upgraded:
  kubeadm
1 upgraded, 0 newly installed, 0 to remove and 44 not upgraded.
Need to get 8,586 kB of archives.
After this operation, 12.3 kB of additional disk space will be used.
Get:1 https://packages.cloud.google.com/apt/kubernetes-xenial/main amd64
  kubeadm amd64 1.23.10-00 [8,586 kB]
Fetched 8,586 kB in 2s (3,668 kB/s)
(Reading database ... 145077 files and directories currently installed.)
Preparing to unpack ../kubeadm_1.23.10-00_amd64.deb ...
Unpacking kubeadm (1.23.10-00) over (1.23.5-00) ...
Setting up kubeadm (1.23.10-00) ...
```

d. Nâng cấp lên phiên bản v1.23.10

```
kubeadm version
kubeadm version: &version.Info{Major:"1", Minor:"23", GitVersion:"v1.23.10",
GitCommit:"7e54d50d3012cf3389e43b096ba35300f36e0817",
GitTreeState:"clean", BuildDate:"2022-08-17T18:31:47Z",
GoVersion:"go1.17.13", Compiler:"gc", Platform:"linux/amd64"}
```

2. Nâng cấp Control Plane bằng kubeadm

a. Xem trước nâng cấp:

```
kubeadm upgrade plan
```

```
[upgrade/config] Making sure the configuration is correct:
[upgrade/config] Reading configuration from the cluster...
[upgrade/config] FYI: You can look at this config file with 'kubectl -n kube-
system get cm kubeadm-config -o yaml'
[preflight] Running pre-flight checks.
[upgrade] Running cluster health checks
[upgrade] Fetching available versions to upgrade to
[upgrade/versions] Cluster version: v1.23.3
[upgrade/versions] kubeadm version: v1.23.10
I0819 14:07:55.532346 3829519 version.go:255] remote version is much newer:
v1.24.4; falling back to: stable-1.23
[upgrade/versions] Target version: v1.23.10
[upgrade/versions] Latest version in the v1.23 series: v1.23.10
```

Components that must be upgraded manually after you have upgraded the control plane with 'kubeadm upgrade apply':

COMPONENT	CURRENT	TARGET
kubelet	2 x v1.23.3	v1.23.10

Upgrade to the latest version in the v1.23 series:

COMPONENT	CURRENT	TARGET
kube-apiserver	v1.23.3	v1.23.10
kube-controller-manager	v1.23.3	v1.23.10
kube-scheduler	v1.23.3	v1.23.10
kube-proxy	v1.23.3	v1.23.10
CoreDNS	v1.8.6	v1.8.6
etcd	3.5.1-0	3.5.1-0

You can now apply the upgrade by executing the following command:

```
kubeadm upgrade apply v1.23.10
```

The table below shows the current state of component configs as understood by this version of kubeadm.

Configs that have a "yes" mark in the "MANUAL UPGRADE REQUIRED" column require manual config upgrade or resetting to kubeadm defaults before a successful upgrade can be performed. The version to manually upgrade to is denoted in the "PREFERRED VERSION" column.

API GROUP	CURRENT VERSION	PREFERRED VERSION	MANUAL UPGRADE REQUIRED
kubeproxy.config.k8s.io	v1alpha1	v1alpha1	no
kubelet.config.k8s.io	v1beta1	v1beta1	no

b. Tiến hành nâng cấp:

```
kubeadm upgrade apply v1.23.10
```

3. Nâng cấp kubelet trên master node

a. Unhold kubelet

```
apt-mark unhold kubelet
```

Canceled hold on kubelet.

b. Cài đặt kubelet 1.18.5

```
apt install -y kubelet=1.23.10-00
```

c. Kiểm tra nodes

```
kubectl get nodes
```

NAME	STATUS	ROLES	AGE	VERSION
lvthao	Ready	control-plane,master	30m	v1.23.10
worker01	Ready	<none>	22m	v1.23.3

4. Nâng cấp kubectl trên master node

a. Unhold kubectl

```
apt-mark unhold kubectl
```

```
Canceled hold on kubectl.
```

b. Cài đặt kubectl 1.23.10

```
apt install -y kubectl=1.23.10-00
```

5. Nâng cấp kubelet trên worker node

a. Unhold kubelet kubeadm

```
apt-mark unhold kubelet  
apt-mark unhold kubeadm
```

```
Canceled hold on kubelet.
```

b. Cài đặt kubelet 1.23.10

```
apt install -y kubeadm =1.23.10-00
```

```
kubeadm upgrade node  
apt install -y kubelet =1.23.10-00
```

c. Kiểm tra nodes

```
kubectl get nodes
```

NAME	STATUS	ROLES	AGE	VERSION
lvthao	Ready	control-plane,master	32m	v1.23.10
worker01	Ready	<none>	24m	v1.23.10