

## NÂNG CẤP KUBERNETES CLUSTER SỬ DỤNG KUBEADM

### 1. Cài đặt kubeadm v1.18 trên Master node

#### a. Kiểm tra phiên bản hiện tại của kubeadm

```
kubeadm version
kubeadm version: &version.Info{Major:"1", Minor:"17", GitVersion:"v1.17.8",
GitCommit:"35dc4cdc26cfc6614059c4c6e836e5f0dc61dee",
GitTreeState:"clean", BuildDate:"2020-06-26T03:41:15Z",
GoVersion:"go1.13.9", Compiler:"gc", Platform:"linux/amd64"}
```

#### b. Unhold kubeadm

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

#### c. Nâng cấp lên phiên bản v1.18.5

```
apt install -y kubeadm=1.18.5-00
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 9 not upgraded.
Need to get 8,164 kB of archives.
After this operation, 463 kB of additional disk space will be used.
Get:1 https://apt.kubernetes.io kubernetes-xenial/main amd64 kubeadm amd64
1.18.5-00 [8,164 kB]
Fetched 8,164 kB in 12s (638 kB/s)
(Reading database ... 54695 files and directories currently installed.)
Preparing to unpack ../kubeadm_1.18.5-00_amd64.deb ...
Unpacking kubeadm (1.18.5-00) over (1.17.8-00) ...
Setting up kubeadm (1.18.5-00) ...
```

#### d. Nâng cấp lên phiên bản v1.18.5

```
kubeadm version
kubeadm version: &version.Info{Major:"1", Minor:"18", GitVersion:"v1.18.5",
GitCommit:"e6503f8d8f769ace2f338794c914a96fc335df0f",
GitTreeState:"clean", BuildDate:
"2020-06-26T03:45:16Z", GoVersion:"go1.13.9", 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 -oyaml'
[preflight] Running pre-flight checks.
[upgrade] Running cluster health checks
[upgrade] Fetching available versions to upgrade to
[upgrade/versions] Cluster version: v1.17.8
[upgrade/versions] kubeadm version: v1.18.5
[upgrade/versions] Latest stable version: v1.18.5
[upgrade/versions] Latest stable version: v1.18.5
[upgrade/versions] Latest version in the v1.17 series: v1.17.8
[upgrade/versions] Latest version in the v1.17 series: v1.17.8
```

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

COMPONENT	CURRENT	AVAILABLE
Kubelet	3 x v1.17.8	v1.18.5

Upgrade to the latest stable version:

COMPONENT	CURRENT	AVAILABLE
API Server	v1.17.8	v1.18.5
Controller Manager	v1.17.8	v1.18.5
Scheduler	v1.17.8	v1.18.5
Kube Proxy	v1.17.8	v1.18.5
CoreDNS	1.6.5	1.6.7
Etd	3.4.3	3.4.3-0

You can now apply the upgrade by executing the following command:  
`kubeadm upgrade apply v1.18.5`

### b. Tiến hành nâng cấp:

```
kubeadm upgrade apply v1.18.5
```

### 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=1.18.5-00
```

Reading package lists... Done

Building dependency tree

Reading state information... Done

The following packages will be upgraded:

kubelet

1 upgraded, 0 newly installed, 0 to remove and 8 not upgraded.

Need to get 19.5 MB of archives.

After this operation, 1,617 kB of additional disk space will be used.

Get:1 <https://apt.kubernetes.io> kubernetes-xenial/main amd64 kubelet amd64 1.18.5-00 [19.5 MB]

Fetched 19.5 MB in 41s (473 kB/s)

(Reading database ... 54695 files and directories currently installed.)

Preparing to unpack .../kubelet\_1.18.5-00\_amd64.deb ...

Unpacking kubelet (1.18.5-00) over (1.17.8-00) ...

Setting up kubelet (1.18.5-00) ...

#### c. Kiểm tra nodes

```
kubectl get nodes
```

NAME	STATUS	ROLES	AGE	VERSION
------	--------	-------	-----	---------

lab1	Ready	master	4d19h	v1.18.5
------	-------	--------	-------	---------

lab2	Ready	<none>	4d19h	v1.17.8
------	-------	--------	-------	---------

lab3	Ready	<none>	4d19h	v1.17.8
------	-------	--------	-------	---------

### 4. Nâng cấp kubectl trên master node

#### a. Unhold kubectl

```
apt-mark unhold kubectl
```

Canceled hold on kubectl.

**b. Cài đặt kubectl 1.18.5**

```
apt install -y kubectl=1.18.5-00
```

Reading package lists... Done

Building dependency tree

Reading state information... Done

The following packages will be upgraded:

kubectl

1 upgraded, 0 newly installed, 0 to remove and 7 not upgraded.

Need to get 8,822 kB of archives.

After this operation, 524 kB of additional disk space will be used.

Get:1 <https://apt.kubernetes.io> kubernetes-xenial/main amd64 kubectl amd64 1.18.5-00 [8,822 kB]

Fetched 8,822 kB in 19s (441 kB/s)

(Reading database ... 54695 files and directories currently installed.)

Preparing to unpack .../kubectl\_1.18.5-00\_amd64.deb ...

Unpacking kubectl (1.18.5-00) over (1.17.8-00) ...

Setting up kubectl (1.18.5-00) ...

```
apt install -y kubeadm=1.18.5-00
```

**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 1.18.5**

```
apt install -y kubelet=1.18.5-00
```

Reading package lists... Done

Building dependency tree

Reading state information... Done

The following packages will be upgraded:

kubelet

1 upgraded, 0 newly installed, 0 to remove and 8 not upgraded.

Need to get 19.5 MB of archives.

```
After this operation, 1,617 kB of additional disk space will be used.  
Get:1 https://apt.kubernetes.io/kubernetes-xenial/main amd64 kubelet amd64  
1.18.5-00 [19.5 MB]  
Fetched 19.5 MB in 41s (473 kB/s)  
(Reading database ... 54695 files and directories currently installed.)  
Preparing to unpack .../kubelet_1.18.5-00_amd64.deb ...  
Unpacking kubelet (1.18.5-00) over (1.17.8-00) ...  
Setting up kubelet (1.18.5-00) ...
```

```
apt install -y kubeadm=1.18.5-00  
kubeadm upgrade node
```

### c. Kiểm tra nodes

```
kubectl get nodes
```

NAME	STATUS	ROLES	AGE	VERSION
lab1	Ready	master	4d19h	v1.18.5
lab2	Ready	<none>	4d19h	v1.18.5
lab3	Ready	<none>	4d19h	v1.18.5