

Execute all the steps shown in video.

1. Upgrade k8s cluster from 1.26 to 1.28 Version. Note:

Document to upgrade

cluster. <https://devopscube.com/upgrade-kubernetes-cluster-kubeadm/>

Login into master machine

- **Kubectl get nodes**

```
[root@master ~]# kubectl get nodes
NAME      STATUS   ROLES      AGE      VERSION
master    Ready    control-plane   16d     v1.34.3
worker-01  Ready    <none>     16d     v1.34.3
worker-02  Ready    <none>     16d     v1.34.3
[root@master ~]# |
```

- **kubeadm version -o json**

```
[root@master ~]# kubeadm version -o json
{
  "clientVersion": {
    "major": "1",
    "minor": "34",
    "gitVersion": "v1.34.3",
    "gitCommit": "df11db1c0f08fab3c0baee1e5ce6efbf816af7f1",
    "gitTreeState": "clean",
    "buildDate": "2025-12-09T15:05:15Z",
    "goVersion": "go1.24.11",
    "compiler": "gc",
    "platform": "linux/amd64"
  }
}
[root@master ~]# |
```

- **sudo yum install -y 'dnf-command(versionlock)'**

```
[root@master ~]# sudo yum install -y 'dnf-command(versionlock)'
Last metadata expiration check: 0:15:26 ago on Fri Jan  2 10:11:33 2026.
Dependencies resolved.
=====
 Package                               Architecture      Version
=====
Installing:
 python3-dnf-plugin-versionlock          noarch        4.3.0-13.amzn2023.0.5

Transaction Summary
=====
Install 1 Package

Total download size: 26 k
Installed size: 35 k
Downloading Packages:
python3-dnf-plugin-versionlock-4.3.0-13.amzn2023.0.5.noarch.rpm
-----
Total
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing           :
  Installing         : python3-dnf-plugin-versionlock-4.3.0-13.amzn2023.0.5.noarch
  Running scriptlet: python3-dnf-plugin-versionlock-4.3.0-13.amzn2023.0.5.noarch
  Verifying           : python3-dnf-plugin-versionlock-4.3.0-13.amzn2023.0.5.noarch

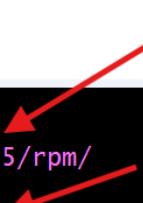
Installed:
  python3-dnf-plugin-versionlock-4.3.0-13.amzn2023.0.5.noarch

Complete!
[root@master ~]# |
```

- **ls /etc/yum.repos.d/**
- **vi /etc/yum.repos.d/kubernetes.repo**

```
[kubernetes]
name=Kubernetes
baseurl=https://pkgs.k8s.io/core:/stable:/v1.34/rpm/
enabled=1
gpgcheck=1
gpgkey=https://pkgs.k8s.io/core:/stable:/v1.34/rpm/repo/repodata/repomd.xml.key
exclude=kubelet kubeadm kubectl cri-tools kubernetes-cni
~
```

Change the version into 1.35



```
[kubernetes]
name=Kubernetes
baseurl=https://pkgs.k8s.io/core:/stable:/v1.35/rpm/
enabled=1
gpgcheck=1
gpgkey=https://pkgs.k8s.io/core:/stable:/v1.35/rpm/repo/repodata/repomd.xml.key
exclude=kubelet kubeadm kubectl cri-tools kubernetes-cni
~
```

- **yum list --showduplicates kubeadm --**
disableexcludes=kubernetes

```
[root@master ~]# yum list --showduplicates kubeadm --disableexcludes=kubernetes
Last metadata expiration check: 0:01:40 ago on Fri Jan  2 10:44:17 2026.
Installed Packages
kubeadm.x86_64                               1.34.3-150500.1.1
Available Packages
kubeadm.aarch64                                1.35.0-150500.1.1
kubeadm.ppc64le                                 1.35.0-150500.1.1
kubeadm.s390x                                  1.35.0-150500.1.1
kubeadm.src                                    1.35.0-150500.1.1
kubeadm.x86_64                                1.35.0-150500.1.1
[root@master ~]#
```

- **sudo yum install -y kubeadm-1.35.0 -- disableexcludes=kubernetes**

```
[root@master ~]# sudo yum install -y kubeadm-1.35.0 --disableexcludes=kubernetes
Last metadata expiration check: 0:03:39 ago on Fri Jan  2 10:44:17 2026.
Dependencies resolved.
=====
 Package          Architecture      Version
=====
Upgrading:
 kubeadm          x86_64           1.35.0-150500.1.1

Transaction summary
=====
Upgrade 1 Package

Total download size: 12 M
Downloading Packages:
 kubeadm-1.35.0-150500.1.1.x86_64.rpm
-----
Total
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing       :
  Upgrading       : kubeadm-1.35.0-150500.1.1.x86_64
  Cleanup         : kubeadm-1.34.3-150500.1.1.x86_64
  Running scriptlet: kubeadm-1.34.3-150500.1.1.x86_64
  Verifying       : kubeadm-1.35.0-150500.1.1.x86_64
  Verifying       : kubeadm-1.34.3-150500.1.1.x86_64
```

- **kubeadm version**

```
[root@master ~]# kubeadm version
kubeadm version: &version.Info{Major:"1", Minor:"35", EmulationMajor:"", EmulationMinVersion:"v1.35.0", GitCommit:"66452049f3d692768c39c797b21b793dce80314e", GitTreeState:"25.5", Compiler:"gc", Platform:"linux/amd64"}
[root@master ~]#
```

- **sudo yum versionlock add kubeadm**

```
[root@master ~]# sudo yum versionlock add kubeadm
Last metadata expiration check: 0:06:08 ago on Fri Jan  2 10:44:17 2026.
Adding versionlock on: kubeadm-0:1.35.0-150500.1.1.*
```

- **sudo kubeadm upgrade plan**

```
[root@master ~]# sudo kubeadm upgrade plan
[preflight] Running pre-flight checks.
[upgrade/config] Reading configuration from the "kubeadm-config" ConfigMap in namespace "kube-system"
[upgrade/config] Use 'kubeadm init phase upload-config kubeadm --config your-config-file' to re-upload it
[upgrade] Running cluster health checks
[upgrade] Fetching available versions to upgrade to
[upgrade/versions] Cluster version: v1.34.3
[upgrade/versions] kubeadm version: v1.35.0
[upgrade/versions] Target version: v1.35.0
[upgrade/versions] Latest version in the v1.34 series: v1.34.3

Components that must be upgraded manually after you have upgraded the control plane:
COMPONENT      NODE      CURRENT      TARGET
kubelet        master    v1.34.3     v1.35.0
kubelet        worker-01  v1.34.3     v1.35.0
kubelet        worker-02  v1.34.3     v1.35.0

Upgrade to the latest stable version:

COMPONENT      NODE      CURRENT      TARGET
kube-apiserver  master    v1.34.3     v1.35.0
kube-controller-manager  master    v1.34.3     v1.35.0
kube-scheduler   master    v1.34.3     v1.35.0
kube-proxy       master    v1.34.3     v1.35.0
CoreDNS          master    v1.12.1     v1.13.1
etcd            master    3.6.5-0    3.6.6-0

You can now apply the upgrade by executing the following command:
  kubeadm upgrade apply v1.35.0
```

- **kubeadm upgrade apply v1.35.0**

```
[root@master ~]# kubeadm upgrade apply v1.35.0
[upgrade] Reading configuration from the "kubeadm-config" ConfigMap in namespace "kube-system"...
[upgrade] Use 'kubeadm init phase upload-config kubeadm --config your-config-file' to re-upload it
[upgrade/preflight] Running preflight checks
[upgrade] Running cluster health checks
[upgrade/preflight] You have chosen to upgrade the cluster version to "v1.35.0"
[upgrade/versions] Cluster version: v1.34.3
[upgrade/versions] kubeadm version: v1.35.0
[upgrade] Are you sure you want to proceed? [y/N]: y
[upgrade/preflight] Pulling images required for setting up a Kubernetes cluster
[upgrade/preflight] This might take a minute or two, depending on the speed of your internet connection
[upgrade/preflight] You can also perform this action beforehand using 'kubeadm config images pull'
[upgrade/control-plane] Upgrading your static Pod-hosted control plane to version "v1.35.0" (time: 0s)
[upgrade/staticpods] Writing new Static Pod manifests to "/etc/kubernetes/tmp/kubeadm-upgraded-manifests"
[upgrade/staticpods] Preparing for "etcd" upgrade
[upgrade/staticpods] Renewing etcd-server certificate
[upgrade/staticpods] Renewing etcd-peer certificate
[upgrade/staticpods] Renewing etcd-healthcheck-client certificate
[upgrade/staticpods] Moving new manifest to "/etc/kubernetes/manifests/etcd.yaml" and backing up old manifest "etcd.yaml"
[upgrade/staticpods] Backing up manifest "etcd.yaml" to "/etc/kubernetes/manifests/etcd.yaml~2026-01-02-10-52-25/etcd.yaml"
```

- **kubectl drain master --ignore-daemonsets**

```
[root@master ~]# kubectl drain master --ignore-daemonsets
node/master cordoned
Warning: ignoring DaemonSet-managed Pods: kube-flannel/kube-flannel-ds-m14e-system/kube-proxy-bj2xt
node/master drained
[root@master ~]# |
```

- **sudo yum versionlock delete kubelet kubectl**
- **sudo yum makecache**
- **sudo yum install -y **
- **kubelet-1.35.0 \kubectl-1.35.0 \-- disableexcludes=Kubernetes**

```
[root@master ~]# sudo yum versionlock delete kubelet kubectl
Last metadata expiration check: 1:12:15 ago on Fri Jan  2 10:44:17 2026.
[root@master ~]# sudo yum makecache
Amazon Linux 2023 repository
Amazon Linux 2023 Kernel Livepatch repository
Kubernetes
Metadata cache created.
[root@master ~]# sudo yum install -y \
kubelet-1.35.0 \kubectl-1.35.0 \--disableexcludes=kubernetes
Last metadata expiration check: 0:01:34 ago on Fri Jan  2 11:56:47 2026.
Dependencies resolved.
=====
Package           Architecture      Version
=====
Upgrading:
  kubectl          x86_64          1.35.0-150500.1.1
  kubelet          x86_64          1.35.0-150500.1.1

Transaction Summary
=====
Upgrade 2 Packages

Total download size: 23 M
Downloading Packages:
(1/2): kubelet-1.35.0-150500.1.1.x86_64.rpm
(2/2): kubectl-1.35.0-150500.1.1.x86_64.rpm
-----
Total
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing       :
  Upgrading      : kubelet-1.35.0-150500.1.1.x86_64
  Running scriptlet: kubelet-1.35.0-150500.1.1.x86_64
  Upgrading      : kubectl-1.35.0-150500.1.1.x86_64
```

- **systemctl daemon-reload**
- **systemctl restart kubelet**
- **kubectl uncordon master**
- **kubectl get nodes**

```
[root@master ~]# systemctl daemon-reload
[root@master ~]# systemctl restart kubelet
[root@master ~]# kubectl uncordon master
node/master uncordoned
[root@master ~]# kubectl get nodes
NAME      STATUS    ROLES     AGE   VERSION
master    Ready     control-plane   16d   v1.35.0
worker-01  Ready     <none>    16d   v1.34.3
worker-02  Ready     <none>    16d   v1.34.3
[root@master ~]# client_loop: send disconnect: Connection reset by peer
```



- **kubelet --version**
- **kubectl version**

```
[root@master ~]# kubelet --version
Kubernetes v1.35.0
[root@master ~]# kubectl version
Client Version: v1.35.0
Kustomize Version: v5.7.1
Server Version: v1.35.0
[root@master ~]# |
```

Worker nodes:

login into worker machines and execute

- **sudo yum install -y 'dnf-command(versionlock)'**

```
[root@worker-01 ~]# sudo yum install -y 'dnf-command(versionlock)'
Last metadata expiration check: 2:15:31 ago on Fri Jan  2 10:11:32 2026.
Dependencies resolved.
=====
Package                                Architecture      Version
=====
Installing:
python3-dnf-plugin-versionlock          noarch          4.3.0-13.amzn2023.0.5
Transaction Summary
Install 1 Package
Total download size: 26 k
Installed size: 35 k
Downloading Packages:
python3-dnf-plugin-versionlock-4.3.0-13.amzn2023.0.5.noarch.rpm
=====
Total
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing       :
  Installing      : python3-dnf-plugin-versionlock-4.3.0-13.amzn2023.0.5.noarch
  Running scriptlet: python3-dnf-plugin-versionlock-4.3.0-13.amzn2023.0.5.noarch
```

- **yum versionlock delete kubeadm**

```
[root@worker-01 ~]# sudo yum versionlock delete kubeadm
Last metadata expiration check: 2:17:11 ago on Fri Jan  2 10:11:32 2026.
[root@worker-01 ~]# 
```

- **yum clean all**
- **yum makecache**

```
[root@worker-01 ~]# sudo yum clean all
22 files removed
[root@worker-01 ~]# sudo yum makecache
Amazon Linux 2023 repository
Amazon Linux 2023 Kernel Livepatch repository
Kubernetes
Metadata cache created.
[root@worker-01 ~]# 
```

Change the file in worker machines

- **vi /etc/yum.repos.d/kubernetes.repo**

```
[kubernetes]
name=Kubernetes
baseurl=https://pkgs.k8s.io/core:/stable:/v1.34/rpm/
enabled=1
gpgcheck=1
gpgkey=https://pkgs.k8s.io/core:/stable:/v1.34/rpm/repo/repomd.xml.key
exclude=kubelet kubeadm kubectl cri-tools kubernetes-cni
~
~
~
```

```
[kubernetes]
name=Kubernetes
baseurl=https://pkgs.k8s.io/core:/stable:/v1.35/rpm/
enabled=1
gpgcheck=1
gpgkey=https://pkgs.k8s.io/core:/stable:/v1.35/rpm/repo/repomd.xml.key
exclude=kubelet kubeadm kubectl cri-tools kubernetes-cni
~
~
~
```

- **sudo yum clean all**
- **sudo yum makecache**
- **yum list --showduplicates kubeadm -- disableexcludes=kubernetes**

```
[root@worker-01 ~]# sudo yum clean all
22 files removed
[root@worker-01 ~]# sudo yum makecache
Amazon Linux 2023 repository
Amazon Linux 2023 Kernel Livepatch repository
Kubernetes
Metadata cache created.
[root@worker-01 ~]# yum list --showduplicates kubeadm --disableexcludes=kubernetes
Last metadata expiration check: 0:00:08 ago on Fri Jan  2 13:03:48 2026.
Installed Packages
kubeadm.x86_64                               1.34.3-150500.1.1
Available Packages
kubeadm.aarch64                                1.35.0-150500.1.1
kubeadm.ppc64le                                 1.35.0-150500.1.1
kubeadm.s390x                                  1.35.0-150500.1.1
kubeadm.src                                    1.35.0-150500.1.1
kubeadm.x86_64                                1.35.0-150500.1.1
[root@worker-01 ~]# |
```

- **`sudo yum install -y kubeadm-1.35.0-150500.1.1 -- disableexcludes=kubernetes`**

```
[root@worker-01 ~]# sudo yum install -y kubeadm-1.35.0-0 --disableexcludes=kubernetes
Last metadata expiration check: 0:02:01 ago on Fri Jan  2 13:03:48 2026.
No match for argument: kubeadm-1.35.0-0
Error: Unable to find a match: kubeadm-1.35.0-0
[root@worker-01 ~]# sudo yum install -y kubeadm-1.35.0-150500.1.1 --disableexcludes=kubernetes
Last metadata expiration check: 0:02:46 ago on Fri Jan  2 13:03:48 2026.
Dependencies resolved.
=====
Package           Architecture      Version        Repo
Upgrading:
  kubeadm          x86_64          1.35.0-150500.1.1   kube
Transaction Summary
=====
Upgrade 1 Package

Total download size: 12 M
Downloading Packages:
kubeadm-1.35.0-150500.1.1.x86_64.rpm
-----
Total
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing       :
```

- **`kubeadm upgrade node`**

```
[root@worker-01 ~]# sudo kubeadm upgrade node
[upgrade] Reading configuration from the "kubeadm-config" ConfigMap in namespace "kube-system"...
[upgrade] use 'kubeadm init phase upload-config kubeadm --config your-config-file' to re-upload it.
[upgrade/preflight] Running pre-flight checks
[upgrade/preflight] skipping prepull. Not a control plane node.
[upgrade/control-plane] skipping phase. Not a control plane node.
[upgrade/kubeconfig] skipping phase. Not a control plane node.
w0102 13:11:38.739128 57427 postupgrade.go:105] Using temporary directory /etc/kubernetes/tmp/kubeadm-38 for kubelet config. To override it set the environment variable KUBEADM_UPGRADE_DRYRUN_DIR
[upgrade] Backing up kubelet config file to /etc/kubernetes/tmp/kubeadm-kubelet-config-2026-01-02-13-11
[patches] Applied patch of type "application/strategic-merge-patch+json" to target "kubeletconfiguration"
[kubelet-start] Writing kubelet configuration to file "/var/lib/kubelet/config.yaml"
[upgrade/kubelet-config] The kubelet configuration for this node was successfully upgraded!
[upgrade/addon] skipping the addon/coredns phase. Not a control plane node.
[upgrade/addon] Skipping the addon/kube-proxy phase. Not a control plane node.
w0102 13:11:38.755692 57427 postupgrade.go:203] Using temporary directory /etc/kubernetes/tmp/kubeadm-3677897390 for kubelet env file. To override it set the environment variable KUBEADM_UPGRADE_DRYRUN_DIR
[upgrade] Backing up kubelet env file to /etc/kubernetes/tmp/kubeadm-kubelet-env3677897390/kubeadm-flag
[kubelet-start] Writing kubelet environment file with flags to file "/var/lib/kubelet/kubeadm-flags.env"
[root@worker-01 ~]# |
```

Run this command in master node

- **kubectl drain worker-01 --ignore-daemonsets**
- **kubectl drain worker-02 --ignore-daemonsets**

```
[root@master ~]# kubectl drain worker-01 --ignore-daemonsets
node/worker-01 cordoned
error: unable to drain node "worker-01" due to error: cannot delete Pods with local storage
/ebs-csi-controller-5d6d9d4bff-wn8gr, kube-system/efs-csi-controller-5dbf8c9698-j4jls, cont
There are pending nodes to be drained:
  worker-01
cannot delete Pods with local storage (use --delete-emptydir-data to override): kube-system
csi-controller-5dbf8c9698-j4jls
[root@master ~]# kubectl drain worker-02 --ignore-daemonsets
node/worker-02 cordoned
error: unable to drain node "worker-02" due to error: cannot delete Pods with local storage
/ebs-csi-controller-5d6d9d4bff-2p24q, kube-system/efs-csi-controller-5dbf8c9698-ffnrh, cont
There are pending nodes to be drained:
  worker-02
cannot delete Pods with local storage (use --delete-emptydir-data to override): kube-system
csi-controller-5dbf8c9698-ffnrh
[root@master ~]# |
```

- **yum version delete kubelet kubectl**
- **yum makecache**

```
[root@worker-01 ~]# sudo yum versionlock delete kubelet kubectl
Last metadata expiration check: 0:15:47 ago on Fri Jan 2 13:03:48 2026.
[root@worker-01 ~]# sudo yum makecache
Amazon Linux 2023 repository
Amazon Linux 2023 Kernel Livepatch repository
Kubernetes
Metadata cache created.
```

- **sudo yum install -y \kubelet-1.35.0-150500.1.1**
\kubectl-1.35.0-150500.1.1 \--
disableexcludes=kubernetes

```
[root@worker-01 ~]# sudo yum install -y \
kubelet-1.35.0-150500.1.1 \kubectl-1.35.0-150500.1.1 \--disableexcludes=kubernetes
Last metadata expiration check: 0:01:36 ago on Fri Jan 2 13:19:50 2026.
Dependencies resolved.
=====
 Package           Architecture      Version       Repository
=====
Upgrading:
 kubelet           x86_64          1.35.0-150500.1.1   kubernetes
 kubectl           x86_64          1.35.0-150500.1.1   kubernetes
=====
Transaction Summary
=====
Upgrade 2 Packages

Total download size: 23 M
Downloading Packages:
(1/2): kubelet-1.35.0-150500.1.1.x86_64.rpm                                98
(2/2): kubectl-1.35.0-150500.1.1.x86_64.rpm                                 61
=====
Total                                         128
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
```

- **yum versionlock add kubelet kubectl**

```
[root@worker-01 ~]# sudo yum versionlock add kubelet kubectl
Last metadata expiration check: 0:03:17 ago on Fri Jan  2 13:19:50 2026.
Adding versionlock on: kubelet-0:1.35.0-150500.1.1.* 
Adding versionlock on: kubectl-0:1.35.0-150500.1.1.* 
[root@worker-01 ~]# |
```

- **systemctl daemon-reload**
- **systemctl restart kubelet**

```
[root@worker-01 ~]# systemctl daemon-reload
[root@worker-01 ~]# systemctl restart kubelet
[root@worker-01 ~]# |
```

- **kubectl uncordon worker-01**
- **kubectl uncordon worker-02**

```
[root@master ~]# kubectl uncordon worker-01
node/worker-01 uncordoned
[root@master ~]# kubectl uncordon worker-02
node/worker-02 uncordoned
[root@master ~]# |
```

- **kubectl get nodes**

```
[root@master ~]# kubectl get nodes
NAME      STATUS   ROLES      AGE   VERSION
master    Ready    control-plane   16d   v1.35.0
worker-01  Ready    <none>     16d   v1.35.0
worker-02  Ready    <none>     16d   v1.35.0
[root@master ~]# |
```

- **kubectl version**
- **kubelet --version**

```
[root@master ~]# kubectl version
Client Version: v1.35.0
Kustomize Version: v5.7.1
Server Version: v1.35.0
[root@master ~]# kubelet --version
Kubernetes v1.35.0
[root@master ~]# |
```