

How to remove old unused kernels on CentOS Linux

 linuxconfig.org/how-to-remove-old-unused-kernels-on-centos-linux

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Objective

The objective is to remove old unused kernel.

Operating System and Software Versions

Operating System: - CentOS 7

Requirements

Privileged access to your CentOS server will be required.

Difficulty

EASY

Conventions

- **#** - requires given linux commands to be executed with root privileges either directly as a root user or by use of `sudo` command
- **\$** - requires given linux commands to be executed as a regular non-privileged user

Instructions

Under a normal circumstances the number of installed and unused kernels does not affect server's performance. However, removing old unused kernels will free some disk space. If your server is configured with a separate `/boot` partition and you run into a issue with low disk space, removing unused kernels will provide remedy.

Check for current Kernel

First, check what kernel is currently used by your server:

```
# uname -a
Linux localhost.localdomain 3.10.0-693.5.2.el7.x86_64 #1 SMP Fri Oct 20 20:32:50 UTC 2017 x86_64 x86_64 x86_64 GNU/Linux
```

List all installed kernels

In this step we will list all currently installed kernels:

```
# rpm -q kernel
kernel-3.10.0-327.36.3.el7.x86_64
kernel-3.10.0-514.2.2.el7.x86_64
kernel-3.10.0-693.5.2.el7.x86_64
```

Kernel `kernel-3.10.0-693.5.2.el7.x86_64` is currently loaded and used. based on the about output this is the latest version.

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Remove old kernels manually

At this stage we can use command to manually remove unused Linux kernels:

```
# yum remove kernel-3.10.0-327.36.3.el7.x86_64 kernel-3.10.0-514.2.2.el7.x86_64
Loaded plugins: fastestmirror
Resolving Dependencies
--> Running transaction check
----> Package kernel.x86_64 0:3.10.0-327.36.3.el7 will be erased
----> Package kernel.x86_64 0:3.10.0-514.2.2.el7 will be erased
--> Finished Dependency Resolution
```

Dependencies Resolved

Package	Arch	Version	Repository	Size
Removing:				
kernel	x86_64	3.10.0-327.36.3.el7	@anaconda	136 M
kernel	x86_64	3.10.0-514.2.2.el7	@updates	148 M

Transaction Summary

Remove 2 Packages

Installed size: 284 M
Is this ok [y/N]:

Remove old unused kernel automatically

Using `package-cleanup` command which is a part of `yum-utils` package we can uninstall any number of old kernels automatically. As an example using `--oldkernels -count=2` option with `package-cleanup` command the command will remove all unused kernel while keeping last three most recent kernel versions installed.

Let's remove all kernels expect the latest currently loaded kernel:

```
# package-cleanup --oldkernels --count=1
Loaded plugins: fastestmirror
--> Running transaction check
----> Package kernel.x86_64 0:3.10.0-327.36.3.el7 will be erased
----> Package kernel.x86_64 0:3.10.0-514.2.2.el7 will be erased
--> Finished Dependency Resolution
```

Dependencies Resolved

Package	Arch	Version	Repository	Size
Removing:				
kernel	x86_64	3.10.0-327.36.3.el7	@anaconda	136 M
kernel	x86_64	3.10.0-514.2.2.el7	@updates	148 M

Transaction Summary

Remove 2 Packages

Installed size: 284 M
Is this ok [y/N]:

By default CentOS will keep last 5 kernels installed on your system. This behavior is defined by `installonly_limit=5` line within `/etc/yum.conf` file. Update the `/etc/yum.conf` configuration file appropriately to keep desired number of old kernels on your system after update. The minimum value to be set is `2`. Example of `/etc/yum.conf` configuration file to keep only last two kernel versions:

```
[main]
cachedir=/var/cache/yum/$basearch/$releasever
keepcache=0
debuglevel=2
logfile=/var/log/yum.log
exactarch=1
obsoletes=1
gpgcheck=1
plugins=1
installonly_limit=2
bugtracker_url=http://bugs.centos.org/set_project.php?project_id=23&ref=http://bugs.centos.org/bug_report_page.php?category=yum
distroverpkg=centos-release
```