



Kernel



```
# rpm --import https://www.elrepo.org/RPM-GPG-KEY-elrepo.org
# rpm -Uvh http://www.elrepo.org/elrepo-release-7.0-2.el7.elrepo.noarch.rpm
[ ] http://www.elrepo.org/elrepo-release-7.0-2.el7.elrepo.noarch.rpm
[ ] http://elrepo.org/elrepo-release-7.0-4.el7.elrepo.noarch.rpm
[ ] ... ##### [100%]
Updating / installing...
 1:elrepo-release-7.0-4.el7.elrepo ##### [100%]
```

[] 5.x []

```
# yum --enablerepo=elrepo-kernel install kernel-ml -y
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
* base: mirror01.idc.hinet.net
* elrepo: ftp.yz.yamagata-u.ac.jp
* elrepo-kernel: ftp.yz.yamagata-u.ac.jp
* extras: mirror01.idc.hinet.net
* updates: mirror01.idc.hinet.net

elrepo | 3.0 kB 00:00
elrepo-kernel | 3.0 kB 00:00
(1/2): elrepo/primary_db | 580 kB 00:00
(2/2): elrepo-kernel/primary_db | 2.1 MB 00:00
Resolving Dependencies
--> Running transaction check
---> Package kernel-ml.x86_64 0:5.18.6-1.el7.elrepo will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
```

```
=====
Package      Arch      Version      Repository      Size
=====
Installing:
kernel-ml     x86_64    5.18.6-1.el7.elrepo    elrepo-kernel    56 M

Transaction Summary
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=====
Install 1 Package

Total download size: 56 M
Installed size: 257 M
Is this ok [y/d/N]: y
Downloading packages:
kernel-ml-5.18.6-1.el7.elrepo.x86_64.rpm          | 56 MB  00:05
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Warning: RPMDB altered outside of yum.
Installing : kernel-ml-5.18.6-1.el7.elrepo.x86_64    1/1
Verifying  : kernel-ml-5.18.6-1.el7.elrepo.x86_64    1/1

Installed:
kernel-ml.x86_64 0:5.18.6-1.el7.elrepo

Complete!
```



```
# rpm -qa |grep kernel
kernel-tools-3.10.0-1160.66.1.el7.x86_64
kernel-3.10.0-1160.49.1.el7.x86_64
kernel-tools-libs-3.10.0-1160.66.1.el7.x86_64
kernel-3.10.0-1160.66.1.el7.x86_64
kernel-3.10.0-1160.53.1.el7.x86_64
kernel-3.10.0-1160.59.1.el7.x86_64
kernel-3.10.0-1160.62.1.el7.x86_64
```

```
kernel-ml-5.18.6-1.el7.elrepo.x86_64
```

Diagram illustrating the relationship between kernel, tools, and libs for different versions:

- Top row: kernel (6 blocks), tools (1 block), libs (8 blocks)
- Bottom row: kernel-5.18 (6 blocks), libs (1 block)

A red bar highlights the tools block in the top row and the libs block in the bottom row.

```
# yum remove kernel-tools-3.10.0-1160.66.1.el7.x86_64 kernel-tools-libs-3.10.0-1160.66.1.el7.x86_64
Loaded plugins: fastestmirror
Resolving Dependencies
--> Running transaction check
---> Package kernel-tools.x86_64 0:3.10.0-1160.66.1.el7 will be erased
---> Package kernel-tools-libs.x86_64 0:3.10.0-1160.66.1.el7 will be erased
--> Finished Dependency Resolution

Dependencies Resolved

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=====
Package            Arch    Version              Repository    Size
=====
=====
Removing:
kernel-tools       x86_64  3.10.0-1160.66.1.el7 @updates     337 k
kernel-tools-libs  x86_64  3.10.0-1160.66.1.el7 @updates      18 k

Transaction Summary

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Remove 2 Packages

Installed size: 355 k
Is this ok [y/N]:☐ ☐ ☐ ☐ y ☐
```

 Kernel

```
# rpm -qa|grep kernel                                kernel-3.10.0-1160.49.1.el7.x86_64
kernel-3.10.0-1160.66.1.el7.x86_64
kernel-3.10.0-1160.53.1.el7.x86_64
kernel-3.10.0-1160.59.1.el7.x86_64
kernel-3.10.0-1160.62.1.el7.x86_64
```

❏ kernel-ml-5.18.6-1.el7.elrepo.x86_64 ❏ kernel-3.10.0-1160.66.1.el7.x86_64

■■■■■■■■■■

```
# yum remove kernel-3.10.0-1160.49.1.el7.x86_64 kernel-3.10.0-1160.53.1.el7.x86_64 kernel-3.10.0-1160.59.1.el7.x86_64 kernel-3.10.0-1160.62.1.el7.x86_64
Loaded plugins: fastestmirror
Resolving Dependencies
--> Running transaction check
---> Package kernel.x86_64 0:3.10.0-1160.49.1.el7 will be erased
---> Package kernel.x86_64 0:3.10.0-1160.53.1.el7 will be erased
---> Package kernel.x86_64 0:3.10.0-1160.59.1.el7 will be erased
---> Package kernel.x86_64 0:3.10.0-1160.62.1.el7 will be erased
--> Finished Dependency Resolution
```

Dependencies Resolved

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Package	Arch	Version	Repository	Size
=====				
=====				
Removing:				
kernel	x86_64	3.10.0-1160.49.1.el7	@updates	64 M
kernel	x86_64	3.10.0-1160.53.1.el7	@updates	64 M
kernel	x86_64	3.10.0-1160.59.1.el7	@updates	64 M
kernel	x86_64	3.10.0-1160.62.1.el7	@updates	64 M

Transaction Summary

```
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Remove 4 Packages

Installed size: 257 M
Is this ok [y/N]:■■■■■■ y
```

■■■■■■■■

libs ❏ tools ■■

```
# yum --enablerepo=elrepo-kernel install kernel-ml-headers kernel-ml-tools kernel-ml-tools-libs -y
Loaded plugins: fastestmirror
```

Loading mirror speeds from cached hostfile

- * base: mirror01.idc.hinet.net
- * elrepo: ftp.ne.jp
- * elrepo-kernel: ftp.ne.jp
- * extras: mirror01.idc.hinet.net
- * updates: mirror01.idc.hinet.net

Resolving Dependencies

--> Running transaction check
---> Package kernel-ml-headers.x86_64 0:5.18.6-1.el7.elrepo will be installed
---> Package kernel-ml-tools.x86_64 0:5.18.6-1.el7.elrepo will be installed
---> Package kernel-ml-tools-libs.x86_64 0:5.18.6-1.el7.elrepo will be installed
--> Finished Dependency Resolution

Dependencies Resolved

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=====				
Package	Arch	Version	Repository	Size
=====				
=====				

Installing:

kernel-ml-headers	x86_64	5.18.6-1.el7.elrepo	elrepo-kernel	1.6 M
kernel-ml-tools	x86_64	5.18.6-1.el7.elrepo	elrepo-kernel	267 k
kernel-ml-tools-libs	x86_64	5.18.6-1.el7.elrepo	elrepo-kernel	152 k

Transaction Summary

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Install 3 Packages				

Total download size: 2.0 M

Installed size: 6.2 M

Downloading packages:

- (1/3): kernel-ml-tools-5.18.6-1.el7.elrepo.x86_64.rpm | 267 kB 00:00
- (2/3): kernel-ml-tools-libs-5.18.6-1.el7.elrepo.x86_64.rpm | 152 kB 00:00
- (3/3): kernel-ml-headers-5.18.6-1.el7.elrepo.x86_64.rpm | 1.6 MB 00:00

Total 2.6 MB/s | 2.0 MB 00:00

Running transaction check

Running transaction test

Transaction test succeeded

Running transaction

Installing : kernel-ml-tools-libs-5.18.6-1.el7.elrepo.x86_64	1/3
Installing : kernel-ml-tools-5.18.6-1.el7.elrepo.x86_64	2/3
Installing : kernel-ml-headers-5.18.6-1.el7.elrepo.x86_64	3/3
Verifying : kernel-ml-headers-5.18.6-1.el7.elrepo.x86_64	1/3
Verifying : kernel-ml-tools-5.18.6-1.el7.elrepo.x86_64	2/3
Verifying : kernel-ml-tools-libs-5.18.6-1.el7.elrepo.x86_64	3/3

Installed:

kernel-ml-headers.x86_64 0:5.18.6-1.el7.elrepo
kernel-ml-tools.x86_64 0:5.18.6-1.el7.elrepo
kernel-ml-tools-libs.x86_64 0:5.18.6-1.el7.elrepo

Complete!



```
# yum update -y
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
* base: mirror01.idc.hinet.net
* elrepo: hkg.mirror.rackspace.com
* extras: mirror01.idc.hinet.net
* updates: mirror01.idc.hinet.net
Resolving Dependencies
--> Running transaction check
---> Package elrepo-release.noarch 0:7.0-4.el7.elrepo will be updated
---> Package elrepo-release.noarch 0:7.0-5.el7.elrepo will be an update
--> Finished Dependency Resolution
```

Dependencies Resolved

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Package	Arch	Version	Repository	Size
=====				
=====				

Updating:

elrepo-release	noarch	7.0-5.el7.elrepo	elrepo	8.6 k
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Transaction Summary

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Upgrade 1 Package

Total download size: 8.6 k

Downloading packages:

Delta RPMs disabled because /usr/bin/applydeltarpm not installed.

elrepo-release-7.0-5.el7.elrepo.noarch.rpm | 8.6 kB 00:00

Running transaction check

Running transaction test

Transaction test succeeded

Running transaction

Updating : elrepo-release-7.0-5.el7.elrepo.noarch 1/2

Cleanup : elrepo-release-7.0-4.el7.elrepo.noarch 2/2

Verifying : elrepo-release-7.0-5.el7.elrepo.noarch 1/2

Verifying : elrepo-release-7.0-4.el7.elrepo.noarch 2/2

Updated:

elrepo-release.noarch 0:7.0-5.el7.elrepo

Complete!

Revision #2

Created 24 June 2022 08:55:00 by kevin

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