

Package Management

RPM:

```
[root@vbox ~]# ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=255 time=69.5 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=255 time=67.1 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=255 time=59.9 ms
64 bytes from 8.8.8.8: icmp_seq=4 ttl=255 time=71.1 ms
64 bytes from 8.8.8.8: icmp_seq=5 ttl=255 time=72.8 ms
64 bytes from 8.8.8.8: icmp_seq=6 ttl=255 time=75.5 ms
64 bytes from 8.8.8.8: icmp_seq=7 ttl=255 time=73.0 ms
64 bytes from 8.8.8.8: icmp_seq=8 ttl=255 time=66.4 ms
64 bytes from 8.8.8.8: icmp_seq=9 ttl=255 time=64.0 ms
64 bytes from 8.8.8.8: icmp_seq=10 ttl=255 time=73.6 ms
64 bytes from 8.8.8.8: icmp_seq=11 ttl=255 time=62.7 ms
64 bytes from 8.8.8.8: icmp_seq=12 ttl=255 time=63.1 ms
^C
--- 8.8.8.8 ping statistics ---
12 packets transmitted, 12 received, 0% packet loss, time 11042ms
rtt min/avg/max/mdev = 59.898/68.216/75.537/4.864 ms
[root@vbox ~]# nmtui
[root@vbox ~]# ping 8.8.8.8
ping: connect: Network is unreachable
[root@vbox ~]# nmtui
```

```
[root@vbox ~]# rpm -ivh tree-1.8.0-10.el9.x86_64.rpm
Verifying... ##### [100%]
Preparing... ##### [100%]
package tree-1.8.0-10.el9.x86_64 is already installed
[root@vbox ~]# rpm -q tree
tree-1.8.0-10.el9.x86_64
[root@vbox ~]# rpm -qa
libgcc-11.5.0-7.el9.x86_64
fonts-filesystem-2.0.5-7.el9.1.noarch
linux-firmware-whence-20250604-153.el9.noarch
hwdata-0.348-9.18.el9.noarch
xkeyboard-config-2.33-2.el9.noarch
tzdata-2025b-1.el9.noarch
liberation-fonts-common-2.1.3-5.el9.noarch
mesa-filesystem-24.2.8-2.el9.x86_64
hyperv-daemons-license-0-0.43.20190303git.el9.noarch
gnome-control-center-filesystem-40.0-41.el9.noarch
abattis-cantarell-fonts-0.301-4.el9.noarch
yelp-xsl-40.2-1.el9.noarch
mozilla-filesystem-1.9-30.el9.x86_64
google-noto-fonts-common-20201206-5.el9.noarch
google-noto-cjk-fonts-common-20230817-2.el9.noarch
foomatic-db-filesystem-4.0-72.20210209.el9.noarch
cups-filesystem-2.3.3op2-33.el9.noarch
```

```
[root@vbox ~]# rpm -qi tree
```

```
Name       : tree
Version    : 1.8.0
Release    : 10.el9
Architecture: x86_64
Install Date: Saturday 14 June 2025 11:08:36 PM
Group      : Unspecified
Size       : 115900
License    : GPLv2+ and LGPLv2+
Signature  : RSA/SHA256, Monday 01 November 2021 08:14:20 PM, Key ID 05b555b38483c65d
Source RPM : tree-pkg-1.8.0-10.el9.src.rpm
Build Date : Monday 01 November 2021 07:16:53 PM
Build Host : x86-02.stream.rdu2.redhat.com
Packager   : builder@centos.org
Vendor     : CentOS
URL        : http://mama.indstate.edu/users/ice/tree/
Summary    : File system tree viewer
Description:
The tree utility recursively displays the contents of directories in a
tree-like format. Tree is basically a UNIX port of the DOS tree
utility.
[root@vbox ~]#
```

```
[root@vbox ~]# rpm -qip tree-1.8.0-10.el9.x86_64.rpm
```

```
Name       : tree
Version    : 1.8.0
Release    : 10.el9
Architecture: x86_64
Install Date: (not installed)
Group      : Unspecified
Size       : 115900
License    : GPLv2+ and LGPLv2+
Signature  : RSA/SHA256, Monday 01 November 2021 08:14:20 PM, Key ID 05b555b38483c65d
Source RPM : tree-pkg-1.8.0-10.el9.src.rpm
Build Date : Monday 01 November 2021 07:16:53 PM
Build Host : x86-02.stream.rdu2.redhat.com
Packager   : builder@centos.org
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Summary    : File system tree viewer
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The tree utility recursively displays the contents of directories in a
tree-like format. Tree is basically a UNIX port of the DOS tree
utility.
[root@vbox ~]#
```

```
[root@vbox ~]# rpm -ql tree
/usr/bin/tree
/usr/lib/.build-id
/usr/lib/.build-id/41
/usr/lib/.build-id/41/df41140e769031eb10c587b6162475d2d981e8
/usr/share/doc/tree
/usr/share/doc/tree/README
/usr/share/licenses/tree
/usr/share/licenses/tree/LICENSE
/usr/share/man/man1/tree.1.gz
[root@vbox ~]#
```

```
[root@vbox ~]# rpm -qd tree
/usr/share/doc/tree/README
/usr/share/man/man1/tree.1.gz
[root@vbox ~]# rpm -qc tree
[root@vbox ~]# rpm -evh tree
Preparing... ##### [100%]
Cleaning up / removing...
 1:tree-1.8.0-10.el9 ##### [100%]
[root@vbox ~]#
```

YUM:

```
[root@vbox ~]#
[root@vbox ~]# yum install httpd
Last metadata expiration check: 1:16:44 ago on Sunday 13 July 2025 07:35:21 PM.
Dependencies resolved.
=====
Package                        Architecture    Version          Repository
=====
Installing:
httpd                          x86_64          2.4.62-4.el9     appstream
Installing dependencies:
apr                            x86_64          1.7.0-12.el9     appstream
apr-util                       x86_64          1.6.1-23.el9     appstream
apr-util-bdb                   x86_64          1.6.1-23.el9     appstream
centos-logos-httpd             noarch          90.8-3.el9       appstream
httpd-core                      x86_64          2.4.62-4.el9     appstream
httpd-filesystem               noarch          2.4.62-4.el9     appstream
httpd-tools                    x86_64          2.4.62-4.el9     appstream
Installing weak dependencies:
apr-util-openssl               x86_64          1.6.1-23.el9     appstream
mod_http2                      x86_64          2.0.26-4.el9     appstream
mod_lua                        x86_64          2.4.62-4.el9     appstream

Transaction Summary
=====
Install 11 Packages

Total download size: 3.6 M
Installed size: 8.6 M
```

```

Proceed with changes? [N/y] y
[root@vbox ~]# yumdownloader tree
bash: yumdownloader: command not found...
Install package 'yum-utils' to provide command 'yumdownloader'? [N/y] ^C
[root@vbox ~]# yumdownloader tree -y
bash: yumdownloader: command not found...
Install package 'yum-utils' to provide command 'yumdownloader'? [N/y] y

* Waiting in queue...
The following packages have to be installed:
yum-utils-4.3.0-21.el9.noarch Yum-utils CLI compatibility layer
Proceed with changes? [N/y] y

* Waiting in queue...
* Waiting for authentication...
* Waiting in queue...
* Downloading packages...
* Requesting data...
* Testing changes...
* Installing packages...
Last metadata expiration check: 1:18:26 ago on Sunday 13 July 2025 07:35:21 PM.
[SKIPPED] tree-1.8.0-10.el9.x86_64.rpm: Already downloaded

```

```

[root@vbox ~]# yum provides httpd
Last metadata expiration check: 1:19:27 ago on Sunday 13 July 2025 07:35:21 PM.
httpd-2.4.57-5.el9.x86_64 : Apache HTTP Server
Repo                        : appstream
Matched from:
Provide                    : httpd = 2.4.57-5.el9

httpd-2.4.57-6.el9.x86_64 : Apache HTTP Server
Repo                        : appstream
Matched from:
Provide                    : httpd = 2.4.57-6.el9

httpd-2.4.57-8.el9.x86_64 : Apache HTTP Server
Repo                        : appstream
Matched from:
Provide                    : httpd = 2.4.57-8.el9

httpd-2.4.62-1.el9.x86_64 : Apache HTTP Server
Repo                        : appstream
Matched from:
Provide                    : httpd = 2.4.62-1.el9

httpd-2.4.62-4.el9.x86_64 : Apache HTTP Server
Repo                        : @System
Matched from:

```

```

[root@vbox ~]# yum list installed | grep httpd
centos-logos-httpd.noarch          90.8-3.el9          @appstream
httpd.x86_64                      2.4.62-4.el9        @appstream
httpd-core.x86_64                 2.4.62-4.el9        @appstream
httpd-filesystem.noarch           2.4.62-4.el9        @appstream
httpd-tools.x86_64                2.4.62-4.el9        @appstream

```

```
[root@vbox ~]# yum remove tree
```

```
No match for argument: tree  
No packages marked for removal.  
Dependencies resolved.  
Nothing to do.  
Complete!
```

```
[root@vbox ~]# yum autoremove tree
```

```
No match for argument: tree  
No packages marked for removal.  
Dependencies resolved.  
Nothing to do.  
Complete!
```

```
[root@vbox ~]# yum autoremove httpd
```

```
Dependencies resolved.
```

```
=====
```

Package	Architecture	Version	Repository	Size
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```
=====
```

Removing:

httpd	x86_64	2.4.62-4.el9	@appstream	59 k
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Removing unused dependencies:

apr	x86_64	1.7.0-12.el9	@appstream	288 k
apr-util	x86_64	1.6.1-23.el9	@appstream	211 k
apr-util-bdb	x86_64	1.6.1-23.el9	@appstream	15 k
apr-util-openssl	x86_64	1.6.1-23.el9	@appstream	23 k
centos-logos-httpd	noarch	90.8-3.el9	@appstream	2.6 M
httpd-core	x86_64	2.4.62-4.el9	@appstream	4.7 M
httpd-filesystem	noarch	2.4.62-4.el9	@appstream	464
httpd-tools	x86_64	2.4.62-4.el9	@appstream	199 k
mod_http2	x86_64	2.0.26-4.el9	@appstream	442 k