RPM RPM package tool

CONCEPTS

rpm handles single package files and the local database. It does not download or resolve dependencies: use dnf for that.

.rpm file rpm -qp reads it
↓ `rpm -U`
RPM database rpm -q reads it
↓ `rpm -V`
Files on disk checked against db

Packages are named name-version-release.arch, e.g. tree-2.2.1-4.fc44.x86_64. Any leading part works as a query: tree or tree-2.2.1.

Add -p to any query to read a .rpm file instead of the installed database.

QUERY INSTALLED

`rpm -qa`
List all installed packages

`rpm -qa '<pattern>'`
List packages matching a glob

`rpm -q <pkg>`
Is it installed, and which version

`rpm -qi <pkg>`
Show package details

`rpm -ql <pkg>`
List files of a package

`rpm -qf <path>`
Which package owns a file

`rpm -qc <pkg>`
List its config files

`rpm -qd <pkg>`
List its documentation files

`rpm -qa --last`
Packages by install time, newest first

`rpm -q --changelog <pkg>`
Show the package changelog

`rpm -q --scripts <pkg>`
Show install and remove scriptlets

DEPENDENCIES

`rpm -qR <pkg>`
What a package requires

DEPENDENCIES (cont.)

`rpm -q --provides <pkg>`
What a package provides

`rpm -q --whatprovides <cap>`
Which package provides a capability

`rpm -q --whatrequires <cap>`
Which installed packages need it

PACKAGE FILES

`rpm -qip <file.rpm>`
Details of a package file

`rpm -qlp <file.rpm>`
List files in a package file

`rpm -qRp <file.rpm>`
Requirements of a package file

`rpm -qp --scripts <file.rpm>`
Scriptlets it would run

`rpm2cpio <file.rpm> | cpio -idmv`
Extract files without installing

INSTALL, UPGRADE, REMOVE

`sudo rpm -Uvh <file.rpm>`
Install or upgrade, with progress

`sudo rpm -ivh <file.rpm>`
Install, keep other versions

`sudo rpm -Fvh <file.rpm>`
Upgrade only if already installed

`sudo rpm -e <pkg>`
Remove a package

`sudo rpm -Uvh --test <file.rpm>`
Dry run: would it install?

`sudo rpm --reinstall <file.rpm>`
Reinstall the same version

`sudo rpm -Uvh --oldpackage <file.rpm>`
Downgrade to an older version

Prefer sudo dnf install ./<file.rpm>: it installs the local file and pulls in its dependencies.

VERIFY

`rpm -V <pkg>`
Check files against the database

`rpm -Va`
Verify every installed package

VERIFY (cont.)

`rpm -Vf <path>`
Verify the package owning a file

`sudo rpm --restore <pkg>`
Reset owner, mode, mtime and caps

rpm -V flags, e.g. S.5....T.

Char	Changed
`S`	size
`M`	mode or file type
`5`	digest (contents)
`D`	device number
`L`	symlink target
`U / G`	owner / group
`T`	mtime
`P`	capabilities
`. / ?`	passed / could not test
`c d g l r`	config, doc, ghost, license, readme file

SIGNATURES AND KEYS

`sudo rpmkeys --import <key.asc>`
Trust a signing key

`rpmkeys -K <file.rpm>`
Check digests and signature

`rpmkeys -Kv <file.rpm>`
Show each signature and digest

`rpmkeys --list`
List imported keys

QUERY FORMAT

`rpm -q --qf '%{NAME} %{VERSION}\n' <pkg>`
Print chosen tags

DATABASE AND CONFIG

`sudo rpmdb --rebuilddb`
Rebuild the package database

RECIPES

Which package owns this command

```
rpm -qf "$(command -v <cmd>)"
# not installed yet? ask dnf
dnf provides '*/bin/<cmd>'
```

Look inside a download before installing

```
rpmkeys -K <file.rpm>
rpm -qip <file.rpm>
rpm -qp --scripts <file.rpm>
mkdir peek && cd peek &&
rpm2cpio ../<file.rpm> | cpio -idmv
```