pacman Arch package manager

Repositories sync databases → `-Sy` → **Package cache** /var/cache/pacman/pkg → `-S` / `-U` → **Installed system** local database → `-Q` → **Query results** owners, files, orphans

CONCEPTS

The capital letter picks the operation (S sync, R remove, Q query, U upgrade, F files, D database); lowercase letters modify it.

Never run -Sy alone or install after it without upgrading. A partial upgrade can break the system; use -Syu.

SYNC AND UPGRADE

sudo pacman -Syu
Refresh databases and upgrade all

sudo pacman -S *<pkg>*
Install a package with deps

sudo pacman -S *<pkg1> <pkg2>*
Install several at once

sudo pacman -Sy
Refresh the sync databases only

sudo pacman -Syyu
Force-refresh, then upgrade

sudo pacman -S --needed *<pkg>*
Skip packages already current

SYNC AND UPGRADE (cont.)

sudo pacman -S *<repo>/<pkg>*
Install from a specific repo

sudo pacman -Sw *<pkg>*
Download only, do not install

sudo pacman -Syu --ignore *<pkg>*
Upgrade but skip a package

REMOVE

sudo pacman -R *<pkg>*
Remove just the package

sudo pacman -Rs *<pkg>*
Remove with unused dependencies

sudo pacman -Rns *<pkg>*
Also skip .pacsave backups

sudo pacman -Rsu *<pkg>*
Remove only if nothing needs it

sudo pacman -Rc *<pkg>*
Also remove dependent packages

Removed config files you edited are saved as .pacsave; changed upgrades leave .pacnew next to the live file.

SEARCH AND INSPECT

pacman -Ss *<term>*
Search repos by name and description

pacman -Si *<pkg>*
Show repo package details

pacman -Qi *<pkg>*
Show installed package details

pacman -Qs *<term>*
Search installed packages

pacman -Ql *<pkg>*
List files a package installed

pacman -Qo *<file>*
Which package owns a file

pacman -Q
List all installed packages

pacman -Qe
List explicitly installed packages

pacman -Qm
List foreign (AUR) packages

pacman -Qu
List out-of-date packages

pacman -Qk *<pkg>*
Check that a package's files exist

pacman -Qq
Print names only, for scripts

ORPHANS AND INSTALL REASON

pacman -Qdt
List orphaned dependencies

pacman -Qdtq | sudo pacman -Rns -
Remove all orphans

pacman -Qet
Explicit packages nothing requires

pacman -Qt
Packages nothing requires

sudo pacman -D --asexplicit *<pkg>*
Mark explicit, protect from cleanup

sudo pacman -D --asdeps *<pkg>*
Mark as dependency

FILES AND LOCAL PACKAGES

sudo pacman -Fy
Refresh the file databases

pacman -F *<file>*
Which repo package ships a file

sudo pacman -U *<file>*.pkg.tar.zst
Install a local package file

sudo pacman -U *<url>*
Install a package from a URL

FILES AND LOCAL PACKAGES (cont.)

sudo pacman -U /var/cache/pacman/pkg/*<file>*
Downgrade from the cache

CACHE AND CONFIG

sudo pacman -Sc
Clean uninstalled packages from cache

paccache -r
Keep the last 3 versions of each

find /etc -name '*.pacnew'
Find config files to merge

RECIPES

Routine system update

```
sudo pacman -Syu
pacman -Qdt
find /etc -name '*.pacnew'
```

Find what owns a file or provides a command

```
pacman -Qo /usr/bin/<cmd>
# not installed yet?
sudo pacman -Fy
pacman -F <cmd>
```

List packages you installed by hand

```
pacman -Qeq
pacman -Qm
pacman -Qeq > pkglist.txt
```