pacman Arch package manager

START HERE

sudo pacman -Syu
Sync and upgrade everything

sudo pacman -Rns *<pkg>*
Remove with unused deps

pacman -Ss *<term>*
Search the repositories

pacman -Qs *<term>*
Search installed packages

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

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

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

pacman -Qdt
List orphans

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.

Arch and Arch-based distributions only. Changing the system needs root, so prefix with sudo. AUR packages need a helper or makepkg.

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
Do not install afterwards without a full upgrade; it risks a partial upgrade.

sudo pacman -Syyu
Force-refresh, then upgrade

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

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

sudo pacman -S --asdeps *<pkg>*
Install and mark as dependency

sudo pacman -Syu --noconfirm
Upgrade without prompts

sudo pacman -Syuu
Upgrade and allow downgrades

sudo pacman -S --overwrite *<glob> <pkg>*
Overwrite conflicting files
Only for known file conflicts; the glob limits what may be replaced.

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
Cascades to everything that depends on the target; read the list.

sudo pacman -Rdd *<pkg>*
Remove ignoring all dependencies

sudo pacman -R --dbonly *<pkg>*
Drop the db entry, keep files

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 -Qn
List packages from the repos

pacman -Qu
List out-of-date packages
Compares against the local sync databases, so run -Sy first.

SEARCH AND INSPECT (cont.)

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

pacman -Sl *<repo>*
List all packages in a repo

pacman -Qip *<file>*.pkg.tar.zst
Inspect a package file

pacman -Qq
Print names only, for scripts

ORPHANS AND INSTALL REASON

pacman -Qdt
List orphaned dependencies

pacman -Qdtq | sudo pacman -Rns -
Remove all orphans
Check the list first; an empty list makes pacman -Rns complain about missing targets.

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
Searches repo packages you may not have installed; needs -Fy first.

pacman -Fl *<pkg>*
List files of a repo package

pacman -Fx *<regex>*
Search files by regex

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

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

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

CACHE AND CONFIG

sudo pacman -Sc
Clean uninstalled packages from cache

sudo pacman -Scc
Empty the whole cache
Removes every cached package, so you lose the option to downgrade from it.

paccache -r
Keep the last 3 versions of each
paccache comes from the pacman-contrib package.

ls /var/cache/pacman/pkg
See cached package files

pacman-conf
Print the effective pacman.conf

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

pacdiff
Merge .pacnew and .pacsave files
pacdiff is part of pacman-contrib.

sudo pacman-key --init && sudo pacman-key --populate
Set up the signing keyring

sudo pacman -S archlinux-keyring
Refresh the keyring package

Config lives in /etc/pacman.conf: enable Color, ParallelDownloads and extra repos there. IgnorePkg holds a package back.

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>
```

Downgrade a package from the cache

```
ls /var/cache/pacman/pkg | grep <pkg>
sudo pacman -U /var/cache/pacman/pkg/<pkg>-<ver>.pkg.tar.zst
# then add it to IgnorePkg in pacman.conf
```

List packages you installed by hand

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