# pacman Arch package manager

## CONCEPTS

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

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

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

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

## 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

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

## SEARCH AND INSPECT (cont.)

**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List out-of-date packages

## ORPHANS AND INSTALL REASON

**pacman -Qdt**
List orphaned dependencies

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

**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 /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