APT Debian package manager

CONCEPTS

update only refreshes the lists; upgrade is what installs new versions. Run them in that order.

Sources sources.list
↓ `apt update`
Package lists local index
↓ `apt install`
Downloaded .deb /var/cache/apt
↓ `dpkg`
Installed system dpkg database

apt is the interactive front end; apt-get and apt-cache behave more stably and are better in scripts.

Debian and Ubuntu family only. Changing the system needs root, so prefix with sudo.

UPDATE AND UPGRADE

sudo apt update
Refresh the package lists

sudo apt upgrade
Upgrade, never remove packages

sudo apt full-upgrade
Upgrade, allow removals if needed

apt list --upgradeable
List packages with updates

sudo apt install --only-upgrade *<pkg>*
Upgrade one package only

sudo apt -s upgrade
Simulate, change nothing

sudo apt -y upgrade
Answer yes to prompts

INSTALL AND REMOVE

sudo apt install *<pkg>*
Install a package

sudo apt install *<pkg1> <pkg2>*
Install several at once

sudo apt remove *<pkg>*
Remove, keep config files

sudo apt purge *<pkg>*
Remove including config files

INSTALL AND REMOVE (cont.)

sudo apt autoremove
Remove unneeded dependencies

sudo apt autoremove --purge
Also delete their config

sudo apt install ./*<file>***.deb**
Install a local .deb with deps

sudo apt reinstall *<pkg>*
Reinstall a package

sudo apt install *<pkg>*=*<version>*
Install an exact version

sudo apt install --no-install-recommends *<pkg>*
Skip recommended packages

sudo apt install -f
Repair broken dependencies

SEARCH AND INSPECT

apt search *<term>*
Search names and descriptions

apt show *<pkg>*
Show version, depends, size

apt list --installed
List installed packages

apt list --installed | grep *<name>*
Is it installed?

apt list --all-versions *<pkg>*
Show every available version

apt policy *<pkg>*
Installed, candidate, sources

apt depends *<pkg>*
What a package needs

apt rdepends *<pkg>*
What needs a package

HOLD AND MARK

sudo apt-mark hold *<pkg>*
Freeze at current version

sudo apt-mark unhold *<pkg>*
Allow upgrades again

apt-mark showhold
List held packages

apt-mark showmanual
List manually installed packages

HOLD AND MARK (cont.)

sudo apt-mark manual *<pkg>*
Protect from autoremove

Autoremove only removes packages marked auto. Mark a package manual to keep it.

SOURCES AND CACHE

sudo apt edit-sources
Edit the sources file

ls /etc/apt/sources.list.d/
See extra repositories

sudo apt clean
Delete all downloaded .deb files

DPKG PAIRING

dpkg -l
List installed packages

dpkg -l *<pattern>*
Status of matching packages

dpkg -L *<pkg>*
Files a package installed

dpkg -S *<path>*
Which package owns a file

dpkg -s *<pkg>*
Installed status and details

sudo dpkg -i *<file>***.deb**
Install a .deb, no deps

sudo dpkg --configure -a
Finish interrupted installs

RECIPES

Routine system update

```
sudo apt update
apt list --upgradeable
sudo apt upgrade
sudo apt autoremove
```

Find which package provides a file

```
dpkg -S /usr/bin/<cmd>
# not installed yet? use apt-file
sudo apt install apt-file && sudo
apt-file update
apt-file search <path>
```

Pin a package, then release it

```
sudo apt-mark hold <pkg>
apt-mark showhold
sudo apt upgrade   # skips it
sudo apt-mark unhold <pkg>
```