dpkg Debian package tool

.deb file ar archive `--unpack` → **Unpacked** files placed `--configure` → **Installed** maintainer scripts run `-r` → **Removed** config kept (rc) `-P` → **Purged** config gone

CONCEPTS

dpkg works on single .deb files and the local database. It does not fetch packages or resolve dependencies: use apt for that.

The two-letter state in dpkg -l: ii is installed, rc is removed with config left, hi is installed and held.

INSTALL AND REMOVE

sudo dpkg -i *<file.deb>*
Install or upgrade from a file

sudo dpkg -i *<dir>*/*.deb
Install several files at once

sudo dpkg -R *<dir>*
Install every .deb in a directory

sudo dpkg -r *<pkg>*
Remove, keep config files

sudo dpkg -P *<pkg>*
Purge: remove with config files

sudo dpkg --configure -a
Finish interrupted configuration

INSTALL AND REMOVE (cont.)

sudo dpkg-reconfigure *<pkg>*
Rerun a package's configuration questions

sudo dpkg --configure *<pkg>*
Configure one unpacked package

dpkg --force-help
List all --force- options

Prefer sudo apt install ./<file.deb>: it installs a local file and pulls in dependencies.

QUERY INSTALLED

dpkg -l
List all packages

dpkg -l '*<pattern>***'**
List packages matching a glob

dpkg -s *<pkg>*
Show status, version, depends

dpkg -L *<pkg>*
List files owned by a package

dpkg -S *<path>*
Find the package owning a file

QUERY INSTALLED (cont.)

dpkg -l | grep ^ii
Only installed packages

dpkg -l | grep ^rc
Removed packages with config left

dpkg -C
Audit for half-installed packages

dpkg -V [*<pkg>***]**
Verify installed files against the database

dpkg --print-architecture
Native architecture

dpkg --add-architecture *<arch>*
Enable a foreign architecture

dpkg --compare-versions *<a>* **lt** *<b>*
Test version order (exit code)

DPKG-QUERY

dpkg-query -W *<pkg>*
Package and version

dpkg-query -W -f='${Package} ${Version}\n'
Custom output for all packages

DPKG-QUERY (cont.)

dpkg-query -W -f='${Installed-Size}\t${Package}\n' | sort -n
Largest packages last

HOLDS AND SELECTIONS

echo '*<pkg>* **hold' | sudo dpkg --set-selections**
Hold a package at its version

echo '*<pkg>* **install' | sudo dpkg --set-selections**
Release a hold

dpkg --get-selections
List selections

dpkg --get-selections | grep hold
Show held packages

dpkg --get-selections > *<file>*
Save the package list

sudo dpkg --set-selections < *<file>*
Restore a saved list

INSPECT .DEB FILES

dpkg-deb -I *<file.deb>*
Show control info

INSPECT .DEB FILES (cont.)

dpkg-deb -c *<file.deb>*
List contained files

dpkg-deb -W *<file.deb>*
Name and version only

dpkg-deb -f *<file.deb>* *<field>*
Print one control field

dpkg-deb -x *<file.deb>* *<dir>*
Extract files without installing

dpkg-deb -b *<dir>* *<file.deb>*
Build a .deb from a tree

RECIPES

Which package owns this command

```
# resolve symlinks first
dpkg -S "$(readlink -f
"$(command -v <cmd>)")"
```

Look inside a download before installing

```
dpkg-deb -I <file.deb>
dpkg-deb -c <file.deb>
dpkg-deb -x <file.deb> /tmp/
peek
```

Recover from a broken install

```
sudo dpkg --configure -a
sudo apt -f install
dpkg -C
```