## Dpkg

| | |
|---|---|
| dpkg-query -W `--showformat=` *format* | Query installed packages, format e.g. `'${Package}` `${Version}` `${Installed-Size}\n'` |
| dpkg `--get-selections` `>` *file* | Write package selections to file. |
| dpkg `--set-selections` `<` *file* | Set package selections from file. |

## The Network

| | |
|---|---|
| `/etc/network/` `interfaces` | Interface configuration (if not controlled via network-manager). |
| if [up][down] *device* | Start, stop network interfaces according to the file above. |
| ip | Show and manipulate network interfaces and routing, needs `iproute2`. |
| ssh -X *user@host* | Login at another machine. |
| scp *files* *user@host:path* | Copy files to other machine (and vice versa). |

# Debian Reference Card
Version 12 – Debian 12 'Bookworm' – 2023-03-22
https://www.debian.org/

## Getting Help

| | |
|---|---|
| man *page* or man bash | Read help page for every command and many configuration files. Also available online: `https://www.manpages.debian.org/` |
| *command* [`--help`, `-h`] | Brief help for most commands. |
| `/usr/share/` `doc/`*package-name*`/` | Find all documentation here, optional file `README.Debian` contains specifics. |
| Web documentation | Reference, manuals, FAQs, HOWTOs, etc. at `https://www.debian.org/doc/` |
| Mailing lists at `https://lists.debian.org/` | The community is always helpful, search for `users`. Or use other channels like IRC: `https://www.debian.org/support/` |
| The Wiki at `https://wiki.debian.org/` | Contains all kind of useful information. |

## Installation

| | |
|---|---|
| Installer | All information about it at `https://www.debian.org/devel/debian-installer/` |
| CD images | Download from `https://www.debian.org/distrib/` |
| `boot: expert` | E.g. to set up the network w/o DHCP or to adapt bootloader installation. |
| Or use a Live image | Containing the user-friendly Calamares installer: `https://www.debian.org/CD/live/` |

## Bugs

| | |
|---|---|
| Bug Tracking at `https://bugs.debian.org/` | All about existing and fixed bugs. |

## Bugs

| | |
|---|---|
| Package specific | See `https://bugs.debian.org/`*`package-name`*`/`, use wnpp to ask for new packages. |
| reportbug | Report a bug by e-mail. |
| Reporting | Instructions at `https://www.debian.org/Bugs/Reporting` |

## Configuration

| | |
|---|---|
| `/etc/` | All system configuration files are under directory `/etc/`. |
| editor *`files`* | Default text editor. May be **nano**, **emacs**, **vi**, **joe**. |
| CUPS at `http://hostname:631` | Browser interface to printing system. |
| dpkg-reconfigure *`package-name`* | Reconfigure a package, e.g. *`keyboard-configuration`* (keyboard), *`locales`* (localization). |
| update-alternatives *`options`* | Manage command alternatives. |
| update-grub | After changing `/etc/default/grub`. |

## Daemons and System

| | |
|---|---|
| `systemctl restart `*`name`*`.service` | Restart a service, system daemon. |
| `systemctl stop `*`name`*`.service` | Stop a service, system daemon. |
| `systemctl start `*`name`*`.service` | Start a service, system daemon. |
| systemctl halt | Halts system. |
| systemctl reboot | Reboots system. |
| systemctl poweroff | Shuts down system. |
| systemctl suspend | Suspends system. |
| systemctl hibernate | Hibernates system. |
| `/var/log/` | All log files are under this directory. |
| `/etc/default/` | Default values for many daemons and services. |

## Important Shell Commands

| | |
|---|---|
| cat *`files`* | Print files to screen. |
| cd *`directory`* | Change to directory. |
| cp *`files dest`* | Copy files and directories. |
| echo *`string`* | Echo string to screen. |
| gzip, bzip2, xz `[-d]` *`files`* | Compress, uncompress files. |
| pager *`files`* | Show contents of files. |
| ls `[`*`files`*`]` | List files. |
| mkdir *`directory-names`* | Create directories. |
| mv *`file1 file2`* | Move, rename files. |
| rm *`files`* | Remove files. |
| rmdir *`dirs`* | Remove empty directories. |
| tar `[c][x][t][z][j][J]` `-f` *`file`*`.tar [`*`files`*`]` | Create (c), extract (x), list table of (t) archive file, z for `.gz`, j for `.bz2`, J for `.xz`. |
| find *`directories expressions`* | Find files like `-name` *`name`* or `-size` *`+1000`*, etc. |
| grep *`search-string files`* | Find search-string in files. |
| ln -s *`file link`* | Create a symbolic link to a file. |
| ps `[`*`options`*`]` | Show current processes. |
| kill `[`*`-9`*`]` *`PID`* | Send signal to process (e.g. terminate it). Use **ps** for PID. |
| su - `[`*`username`*`]` | Become another user, e.g. `root`. |
| sudo *`command`* | Execute a command as `root` as normal user, see `/etc/sudoers`. |
| *`command`* `>` *`file`* | Overwrite file with output of command. |
| *`command`* `>>` *`file`* | Append output of command to file. |
| *`cmd1`* `|` *`cmd2`* | Use output of command 1 as input of command 2. |
| *`command`* `<` *`file`* | Use file as input for command. |

## APT

| | |
|---|---|
| apt update | Update packages listings from package repositories as listed in `/etc/apt/sources.list`. Required whenever that file or the contents of the repositories change. |

## APT

| | |
|---|---|
| apt search *`search-string`* | Search packages and descriptions for *`search-string`*. |
| apt list -a *`package-name`* | Show versions and archive areas of available packages. |
| apt show -a *`package-name`* | Show package information incl. description. |
| apt install *`package-names`* | Install packages from repositories with all dependencies. |
| apt upgrade | Install newest versions of all packages currently installed. |
| apt full-upgrade | Like **apt upgrade**, but with advanced conflict resolution. |
| apt remove *`package-names`* | Remove packages. |
| apt autoremove | Remove packages that no other packages depend on. |
| apt depends *`package-name`* | List all packages needed by the one given. |
| apt rdepends *`package-name`* | List all packages that need the one given. |
| apt-file update | Update content listings from package repositories, see **apt update**. |
| apt-file search *`file-name`* | Search packages for file. |
| apt-file list *`package-name`* | List contents of a package. |
| aptitude | Console interface to APT, needs `aptitude`. |
| synaptic | GUI interface to APT, needs `synaptic`. |

## Dpkg

| | |
|---|---|
| dpkg -l `[`*`names`*`]` | List packages. |
| dpkg -I *`pkg`*`.deb` | Show package information. |
| dpkg -c *`pkg`*`.deb` | List contents of package file. |
| dpkg -S *`filename`* | Show which package a file belongs to. |
| dpkg -i *`pkg`*`.deb` | Install package files. |
| dpkg -V `[`*`package-names`*`]` | Audit check sums of installed packages. |
| dpkg-divert `[options]` *`file`* | Override a package's version of a file. |
| dpkg `--compare-versions` *`v1`* gt *`v2`* | Compare version numbers; view results with **echo $?**. |