

Debian Package Management Cheatsheet

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1 Update the local package list

Tool	Command	Notes
APT	apt update	
	apt-get update	
Aptitude	aptitude update	

2 Install new software packages

Tool	Command	Notes
APT	apt install <i>package</i>	Package is obtained from the package repository
	apt --no-download install <i>package</i>	Package is not obtained from the package mirror, but is instead taken from the package cache
	apt-get install <i>package</i>	Package is obtained from the package repository
	apt-get --no-download install <i>package</i>	Package is not obtained from the package mirror, but is instead taken from the package cache
Aptitude	aptitude install <i>package</i>	Package is obtained from the package repository
Dpkg	dpkg -i <i>filename</i>	Filename refers to a local package file in .deb format

3 Renew existing software packages

Tool	Command	Notes
APT	apt install <i>package</i>	Install an updated version of the same package if this package is already installed. Package is obtained from the package repository.
	apt safe-upgrade <i>package</i>	Install a newer version of the package. Package is obtained from the package repository.
	apt-get install <i>package</i>	Install an updated version of the same package if this package is already installed. Package is obtained from the package repository.
	apt-get upgrade <i>package</i>	Install a newer version of the package. Package is obtained from the package repository.
Aptitude	aptitude safe-upgrade <i>package</i>	Install a newer version of the package. Package is obtained from the package repository

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4 Reinstall an existing software package

Tool	Command	Notes
APT	<code>apt reinstall <i>package</i></code>	Package is obtained from the package repository
	<code>apt-get install --reinstall <i>package</i></code>	Package is obtained from the package repository
	<code>apt-get reinstall <i>package</i></code>	Package is obtained from the package repository
Aptitude	<code>aptitude reinstall <i>package</i></code>	Package is obtained from the package repository

5 Download software packages, only

Tool	Command	Notes
APT	<code>apt download <i>package</i></code>	The package is obtained from the package repository, saved in the current directory. After that it can be installed using the command <code>dpkg -i <i>filename</i></code>
Aptitude	<code>aptitude download <i>package</i></code>	The package is obtained from the package repository, saved in the current directory. After that it can be installed using the command <code>dpkg -i <i>filename</i></code>

6 Remove software packages, and keep the configuration files

Tool	Command	Notes
APT	<code>apt remove <i>package</i></code>	
	<code>apt-get remove <i>package</i></code>	
Aptitude	<code>aptitude remove <i>package</i></code>	
Dpkg	<code>dpkg -r <i>package</i></code>	
	<code>dpkg --remove <i>package</i></code>	

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7 Remove software packages as well as the configuration files

Tool	Command	Notes
APT	<code>apt purge <i>package</i></code>	
	<code>apt-get purge <i>package</i></code>	
	<code>apt-get --purge remove <i>package</i></code>	
Aptitude	<code>aptitude purge <i>package</i></code>	
Dpkg	<code>dpkg -P <i>package</i></code>	
	<code>dpkg --purge <i>package</i></code>	

8 List installed software packages

Tool	Command	Notes
APT	<code>apt list --installed</code>	List all installed packages
Apt-cache	<code>apt-cache search <i>package</i></code>	List all available packages for the given package name; search includes package name as well as the package description
	<code>apt-cache search --names-only <i>package</i></code>	List all available packages for the given package name; search includes package names, only
Aptitude	<code>aptitude search '~i'</code>	List all installed packages
Dpkg	<code>dpkg -l</code>	List all installed packages
	<code>dpkg --get-selections</code>	List all installed packages

9 Display information about a single software package

Tool	Command	Notes
APT	<code>apt list <i>package</i></code>	Display package information, and installation status
	<code>apt show <i>package</i></code>	Display detailed package information, and installation status
Aptitude	<code>aptitude show <i>package</i></code>	Display detailed package information, and installation status
Dpkg	<code>dpkg -l <i>package</i></code>	Display installation status
	<code>dpkg --get-selections <i>package</i></code>	Display installation status
	<code>dpkg -s <i>package</i></code>	Display package information
	<code>dpkg --get-architecture <i>package</i></code>	Display package information

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10 Display package dependencies

Tool	Command	Notes
Apt-cache	<code>apt-cache depends <i>package</i></code>	Display reverse dependencies
	<code>apt-cache rdepends <i>package</i></code>	Display dependencies
Aptitude	<code>aptitude search '~R' <i>package</i></code>	Display dependencies
	<code>aptitude search '~D' <i>package</i></code>	Display reverse dependencies
Apt-rdepends	<code>apt-rdepends -r <i>package</i></code>	Display dependencies
	<code>apt-rdepends <i>package</i></code>	Display reverse dependencies
Dpkg	<code>dpkg -f <i>filename</i> Depends</code>	Filename refers to a local .deb file; Display dependencies
	<code>dpkg-deb -f <i>filename</i> Depends</code>	Filename refers to a local .deb file; Display dependencies
Grep-status	<code>grep-status -F Package -s Depends <i>package</i></code>	Display dependencies
	<code>grep-status -P -s Depends <i>package</i></code>	Display dependencies

11 List files of a package prior to installation

Tool	Command	Notes
Dpkg	<code>dpkg -c <i>package</i></code>	
	<code>dpkg --contents <i>package</i></code>	
Dpkg-deb	<code>dpkg-deb -c <i>package</i></code>	
	<code>dpkg-deb --contents <i>package</i></code>	

12 List files of an installed package

Tool	Command	Notes
Apt-file	<code>apt-file -list <i>package</i></code>	
	<code>apt-file -show <i>package</i></code>	
Dpkg	<code>dpkg -L <i>package</i></code>	
	<code>dpkg --listfiles <i>package</i></code>	
Dpkg-query	<code>dpkg-query -L <i>package</i></code>	
	<code>dpkg-query --listfiles <i>package</i></code>	

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13 List configuration files of a package

Tool	Command	Notes
Dpkg	<code>dpkg -s <i>package</i></code>	
	<code>dpkg --status <i>package</i></code>	
Dpkg-query	<code>dpkg-query -s <i>package</i></code>	
	<code>dpkg-query --status <i>package</i></code>	

14 Identify the package from which a file originates

Tool	Command	Notes
Apt-file	<code>apt-file find <i>filename</i></code>	Search in all available packages
	<code>apt-file search <i>filename</i></code>	Search in all available packages
Dpkg	<code>dpkg -S <i>filename</i></code>	Search in all installed packages
	<code>dpkg --search <i>filename</i></code>	Search in all installed packages
Dpkg-query	<code>dpkg-query -S <i>filename</i></code>	Search in all installed packages
	<code>dpkg-query --search <i>filename</i></code>	Search in all installed packages

15 Display package status

Tool	Command	Notes
Apt-cache	<code>apt-cache show <i>package</i></code>	Search in all available packages
Aptitude	<code>aptitude show <i>package</i></code>	Search in all available packages
Dpkg	<code>dpkg -s <i>package</i></code>	Package has to be installed locally
	<code>dpkg --status <i>package</i></code>	Package has to be installed locally
	<code>dpkg -I <i>filename</i></code>	Filename refers to a local <code>.deb</code> file
	<code>dpkg --info <i>filename</i></code>	Filename refers to a local <code>.deb</code> file
Dpkg-query	<code>dpkg-query -s <i>package</i></code>	Package has to be installed locally
	<code>dpkg-query --status <i>package</i></code>	Package has to be installed locally

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16 Validate package signature

Tool	Command	Notes
Debsums	debsums <i>package</i>	Validate all files from the package (except configuration files)
Debsums	debsums	Validate all files for all packages (except configuration files)
Dpkg	dpkg -V <i>package</i>	Validate all files from the package
	dpkg --verify <i>package</i>	Validate all files from the package
Dpkg-sig	dpkg-sig --verify <i>package</i>	Validate the GPG signature of the package
Gpg	gpg --verify <i>package</i>	Validate the GPG signature of the package

17 Check package for changes

Tool	Command	Notes
Dpkg	dpkg --verify <i>package</i>	Check this package, only
	dpkg --verify	Check all packages

18 Display available packages

Tool	Command	Notes
APT	apt list	List all known, and available packages with its status
	apt list	List all known, and available package versions with its status
Apt-cache	apt-cache pkgnames	List all known, and available packages

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19 Display renewable packages

Tool	Command	Notes
Apt	<code>apt list --upgradable</code>	List available packages with a new version
	<code>apt list --upgradable <i>package</i></code>	List new versions for this package
	<code>apt-get upgrade -u</code>	List available packages with a new version
	<code>apt-get upgrade --show-upgraded</code>	List available packages with a new version
	<code>apt-get upgrade -u -s</code>	Simulate upgrading available packages with a new version
	<code>apt-get upgrade --show-upgraded --simulate</code>	Simulate upgrading available packages with a new version
Aptitude	<code>aptitude search '~U'</code>	List available packages with a new version
	<code>aptitude search ?upgradable</code>	List available packages with a new version

20 List software packages that are available as a new version

Tool	Command	Notes
APT	<code>apt list --upgradable</code>	List the available packages as well as the new version number
	<code>apt list --upgradable <i>package</i></code>	List the new versions for this package, only
	<code>apt-get upgrade -u</code>	List the available packages as well as the new version number
	<code>apt-get upgrade --show-upgraded</code>	List the available packages as well as the new version number
	<code>apt-get upgrade -u -s</code>	Simulate updating the available packages with the new version
	<code>apt-get upgrade --show-upgraded --simulate</code>	Simulate updating the available packages with the new version
Aptitude	<code>aptitude search '~U'</code>	List the available packages as well as the version number
	<code>aptitude search ?upgradable</code>	List the available packages as well as the version number

21 Update an existing release (distribution upgrade)

Tool	Command	Notes
APT	<code>apt full-upgrade</code>	Update all existing packages to the newest available version
	<code>apt-get dist-upgrade</code>	Update all existing packages to the newest available version
Aptitude	<code>aptitude full-upgrade</code>	Update all existing packages to the newest available version
	<code>aptitude safe-upgrade</code>	Update all existing packages to the newest available version except for the unused packages



22 Recommended books and resources

Axel Beckert, Frank Hofmann: Das Debian-Paketmanagement-Buch

Available languages: German
Project website: <https://dpmb.org/>
Contribute: via GitHub 🐙 <https://github.com/dpmb>
Debian package: `debian-paketmanagement-buch`

Raphaël Hertzog, Roland Mas: The Debian Administrator's Handbook

Available languages: French, English, German, Russian, Japanese, and other languages
Project website: <https://debian-handbook.info/>
Contribute: via Salsa 🐙 <https://salsa.debian.org/hertzog/debian-handbook/>
Debian package: `debian-handbook`

Frank Ronneburg: Das Debian GNU/Linux Anwenderhandbuch

Available languages: German
Project website: <https://debiananwenderhandbuch.de/>
Contribute: via email ✉ fr@debiananwenderhandbuch.de
Debian package: not available

Matthew Danish: The apt-dpkg-reference list

Available languages: English
Project website: not available
Contribute: not known
Debian package: `apt-dpkg-ref` (available until Debian 11 *Bullseye*)