

6.3.4 Debian Package Management Facts

Debian packages are preconfigured installation packages similar to RPM packages.

This lesson covers the following topics:

- Debian package functions
- Common commands

Debian Package Functions

Debian packages:

- Are used with some Linux distributions, including Ubuntu, Knoppix, and Linspire.
- Use naming conventions similar to RPM naming conventions, but use a .deb file extension.
- Include dependency information.
- Are not natively compatible with RPM.

Common Commands

The following table lists and describes several common commands for managing Debian packages:

Command	Function	Examples
dpkg	<p>Installs Debian packages on Debian distributions. Be aware of the following dpkg options:</p> <ul style="list-style-type: none">• -i installs a package.• --configure reconfigures an unpacked package.• -r removes the package but does not delete the configuration files.• -P completely uninstalls the package including the configuration files.• -p lists information about a currently installed Debian package.• -I (uppercase i) or --info lists information about packages that are not installed.• -l (lowercase L) displays all packages with names that match a specified pattern.• -L shows the installed files for a package.	<p>dpkg -i docbook_4.5-4_all.deb installs the docbook package.</p> <p>dpkg -r docbook removes the docbook package.</p> <p>dpkg -P docbook removes the docbook package and its configuration files.</p> <p>dpkg -i docbook displays information about the package.</p> <p>dpkg -l dwm-tools_26-2_i386.deb displays information about the dwm-tools package.</p> <p>dpkg -l kcheckers* lists all packages that begin with kcheckers.</p> <p>dpkg -L docbook lists all files installed with the docbook package.</p> <p>dpkg -S /usr/share/base-</p>

	<ul style="list-style-type: none"> • -S finds a package associated with specified files. • -C searches for packages that have been installed only partially on the system. • B disables packages that have dependencies on the package being removed. • --ignore-dependends ignores dependency-checking for specified packages. • -no-act prevents changes from being written. • -G prevents a package from being installed if a newer version of the package already exists on the computer. • -E does not install the package if the same version of the package is already installed. • -R installs the package recursively. <div>  The dpkg-reconfigure command reconfigures an already installed package. </div>	<p>files/motd shows the package associated with the motd file.</p> <p>dpkg -B -r docbook removes the docbook package and disables any package dependent on the docbook package.</p> <p>dpkg -G -i docbook_4.5-4_all.deb installs the docbook package if it is a newer version than a previously installed package.</p>
apt-cache	<p>Retrieves information about the Debian package database. Be aware of the following apt-cache options:</p> <ul style="list-style-type: none"> • showpkg displays information about a package in the database. • stats shows the number of packages installed, dependency information, and other package cache statistics. • unmet lists any missing dependencies in the package cache. • depends shows all of the package's dependencies. • pkgnames displays whether a package is installed on the system. When the package name is left off, the command shows information for all packages on the computer. • search searches for a package in the cache. 	<p>apt-cache showpkg 3dchess shows information about the 3dchess package.</p> <p>apt-cache depends 3dchess shows dependency information for the 3dchess package.</p> <p>apt-cache pkgnames 3dchess displays whether the 3dchess package is installed.</p> <p>apt-cache search kde searches for all packages that contain kde anywhere in the name.</p>
apt-get	<p>Downloads and install packages. apt-get:</p> <ul style="list-style-type: none"> • Is similar to the yum utility on an RPM distribution. 	<p>apt-get dist-upgrade 3dchess shows dependency information for the 3dchess package.</p>

- Gets its information about the application repositories from the **/etc/apt/sources.list** file.
- Automatically calculates and resolves package dependencies when installing, updating, and removing packages.

Be aware of the following **apt-get** options:

- **update** updates **/etc/apt/sources.list** with the latest information about available packages.
- **upgrade** upgrades all installed packages to the latest versions in accordance with the information in **/etc/apt/sources.list**.
- **dist-upgrade** shows all of the package's dependencies.
- **install** installs a package using the package name. The package name is not the file name. During the install, **apt-get** retrieves the most recent version of the package.
- **remove** removes a specified package, but leaves the configuration files.
- **purge** removes the package and the configuration files.
- **source** retrieves the latest version of the package. The command accesses the **/etc/apt/sources.list** file to determine whether the latest package version is installed.
- **check** checks the package database for consistency and errors.
- **clean** removes unneeded package information files and logs. This command is needed when not using the **dselect** utility to install Debian packages.
- **autoclean** removes information files about packages that can no longer be downloaded.
- **-d** downloads packages without installing them.
- **-f** attempts to fix a computer with unsatisfied dependencies. Use this with **apt-get install** and **apt-get remove**.
- **-m** ignores package files that cannot be accessed or located.
- **-q** shows less progress information.
- **-s** simulates package installation without doing an actual install.

apt-get install 3dchess downloads and installs the 3dchess package from a package repository.

apt-get remove 3dchess removes the 3dchess package but leaves the 3dchess configuration files.

apt-get purge 3dchess removes the 3dchess package along with the 3dchess configuration files.



Before **purge** was added as a command in the **apt-get** utility, **--purge** had to be used as an option with the **remove** command, for example **apt-get remove --purge 3dchess** (this older syntax is still supported)

apt-get source 3dchess

determines whether a newer version of 3dchess is available, and if so, installs it.

apt-get -d install 3dchess

downloads the 3dchess package without installing it.

apt-get -f install 3dchess tries to fix dependency issues for the 3dchess package.

apt-get -m remove 3dchess

removes the 3dchess package but ignores missing files.

apt-get -q remove 3dchess

removes the 3dchess package but shows less of the information during the process.

apt-get -s install 3dchess tests the installation process of the 3dchess package without installing it.

apt-get -y install 3dchess installs the 3dchess package and automatically provides a yes answer to any yes/no prompts.

	<ul style="list-style-type: none">• -y automatically provides a <i>yes</i> response to <i>yes / no</i> questions in the package installation script.	
aptitude	Views the list of packages and perform package management tasks such as installing, upgrading, and removing packages in the Advanced Packaging Tool (APT). aptitude is the front-end to APT. It displays a list of software packages and allows the user to interactively pick packages to install or remove.	

Copyright © 2022 TestOut Corporation All rights reserved.