

Debian Package Management

DPKG and APT-GET in Debian
and Ubuntu

dpkg

- **dpkg** command installs "packages" from *.deb files at any source location.
- Basic commands:

dpkg -i | --install package_file... somefile.deb (install)

dpkg -r | --remove | -P | --purge package ... | -a | --pending

Remove an installed package. -r or --remove remove everything except configuration files
rpm -e somefile (remove)

dpkg -u | --update-avail package Update .deb package

dpkg -c | --contents filename List contents of a .deb package.

dpkg -l | --list package-name-pattern List packages matching given pattern.

dpkg -s | --status package-name Report status of specified package.

dpkg -L | --listfiles package List files installed to your system from package.

dpkg -S | --search filename-search-pattern ...

Search for a filename from installed packages.

dpkg -p | --print-avail package Display details about package

.deb's are digitally signed with a GPG key by the vendor to ensure trustworthiness.

dpkg files

- ***/etc/dpkg/dpkg.cfg***: Configuration file with default options. The other files listed below are in their default directories, see option **--admindir** to see how to change locations of these files.
- ***/var/lib/dpkg/available***: List of available packages.
- ***/var/lib/dpkg/status***: Statuses of available packages. This file contains information about whether a package is marked for removing or not, whether it is installed or not, etc

Examples

- `dpkg -i <packagename>` (install)
- `dpkg -l <packagename>` (list)
- `dpkg -r <packagename>` (remove)
- `dpkg -c <packagename>` (contents)
- `dpkg -s <packagename>` (status)
- `dpkg -L <packagename>` (list files)

apt-get

- **apt-get** is a frontend to the dpkg command. It has the advantage of seeking the most recent updates on the Internet (if desired) and resolving most dependencies automatically.
- apt-get is setup to work off of Internet "repositories" on the Internet. Files containing these locations are listed in */etc/apt/sources.list*
this list can be updated using the **apt-get update** command.
- You can add your own *.repo file directories in the same format and import gpg keys using the rpm --import command to insure integrity of the site. Internet is usually required for how to configure the latest repositories. Remember just as in Windows, make sure you can trust the .deb source site.

apt-get

- Basic commands:

apt-get update (look for .deb sources)

apt-get install somefile (install the package and any dependencies)

apt-get remove somefile (uninstall the package, leave directories intact)

apt-get purge somefile (uninstall the package and all directories)

apt-get autoremove removes packages that were installed by other packages and are no longer needed.

apt-get upgrade or **dist-upgrade** (upgrade the package removing prior versions)

apt-get source (source causes apt-get to fetch source packages)

apt-get check (check is a diagnostic tool; it updates the package cache and checks for broken dependencies.)

apt-get clean or **auto-clean** (clean clears out the local repository of retrieved package files. It removes everything but the lock file from */var/cache/apt/archives/* and */var/cache/apt/archives/partial/*)

apt-cache pkgnames This command provides a listing of every package in the system

apt-cache search <search_term> (same as `dpkg -l`)

apt-cache show <package_name> (same as `dpkg -p`)

apt-get files

- ***/etc/apt/sources.list*** :Locations to fetch packages from.
- ***/etc/apt/apt.conf*** :APT configuration file. See **apt-config**
- ***/etc/apt/apt.conf.d/***: APT configuration file fragments
- ***/etc/apt/preferences***: Version preferences file. This is where you would specify "pinning", i.e. a preference to get certain packages from a separate source or from a different version of a distribution.
- ***/var/cache/apt/archives/***: Storage area for retrieved package files.
/var/cache/apt/archives/partial/ :Storage area for package files in transit.
- ***/var/lib/apt/lists/***: Storage area for state information for each package resource specified in ***sources.list***
- ***/var/lib/apt/lists/partial/***: Storage area for state information in transit. Configuration Item: Dir::State::Lists (implicit partial).

Examples:

- apt-cache search “packagestring”
- apt-cache show “packagestring”
- apt-cache showpkg “packagestring”
- apt-cache depends “packagestring”

- apt-file search “filename”
- apt-file list “packagestring”

- apt-get install “packagestring”
- apt-get remove “packagestring”, apt-get –purge remove
- apt-get –u install “packagestring”, apt-get –u upgrade
- apt-get update (update repository)