

# System Administration 1

1.

#apt-get update: update the list of available packages and their versions, but does not perform upgrade.

#apt-get upgrade: upgrade packages already installed in the system, but if there is a dependency problem, nothing will be done.

#apt-get dist-upgrade: not only upgrade exist packages but also install or remove packages to solve dependency problem.

Reference:

(1) <http://askubuntu.com/questions/94102/what-is-the-difference-between-apt-get-update-and-upgrade>

(2) [https://blog.longwin.com.tw/2008/03/debian\\_ubuntu\\_apt\\_dist\\_upgrade\\_difference\\_2008/](https://blog.longwin.com.tw/2008/03/debian_ubuntu_apt_dist_upgrade_difference_2008/)

2.

#apt-get remove: remove binary files but not configuration or data files

#apt-get purge: remove everything relating to the package

#apt-get autoremove: remove dependencies after remove a package

Reference:

(1) <http://askubuntu.com/questions/187888/what-is-the-correct-way-to-completely-remove-an-application>

3.

#dpkg -list | grep "perl"

Reference:

(1) <http://www.cyberciti.biz/faq/howto-display-list-of-all-installed-software/>

4.

#dpkg -S /usr/bin/ncat

Reference:

(1) <http://askubuntu.com/questions/481/how-do-i-find-the-package-that-provides-a-file>

5.

#aptitude why gcc

Reference:

(1) <http://askubuntu.com/questions/5636/can-i-see-why-a-package-is-installed#4503>

6.

#sudo apt-mark manual gcc

or

#sudo aptitude unmarkauto gcc

Reference:

(1) <http://www.arthurtoday.com/2015/05/ubuntu-apt-mark-how-to.html>

(2) <https://www.debian.org/doc/manuals/aptitude/rn01re01.en.html>

7.

```
#gpg --gen-key
```

Choose RSA (sign only)

Keysize: 2048

Choose key does not expire

Real name: Nasa Student

```
#sudo dpkg-sig --sign builder nasa-meta.deb
```

8.

```
#sudo gpg --output keyFile --armor --export $keyid
```

```
#sudo apt-key add keyFile
```

9.

```
#mkdir /srv/repo
```

```
#vim /etc/apt/sources.list
```

Add the line "deb file:/srv/repo ./"

```
#cd /srv/repo
```

```
#apt-ftparchive packages . > Packages
```

```
#gzip -c Packages > Packages.gz
```

```
#apt-ftparchive release . > Release
```

```
#gpg --clearsign -o InRelease Release
```

```
#gpg -abs -o Release.gpg Release
```

```
#apt-get update
```

Reference for 7, 8, 9:

(1) <http://ubuntuforums.org/showthread.php?t=1999221>

(2) <http://stackoverflow.com/questions/11708334/pgp-asymmetric-not-enough-random-bytes-available-please-do-some-other-work-to>

(3) <http://askubuntu.com/questions/170348/how-to-make-my-own-local-repository>