RPM's and YOU

RPM's
What They Are
How To Use Them
How To Create Them

RPM's
What They Are

RPM
RedHat Package Manager
(or RPM Package Manager)

It is a way to install and uninstall programs, files, scripts, or whatever you wish, quickly and easily on a Linux System.

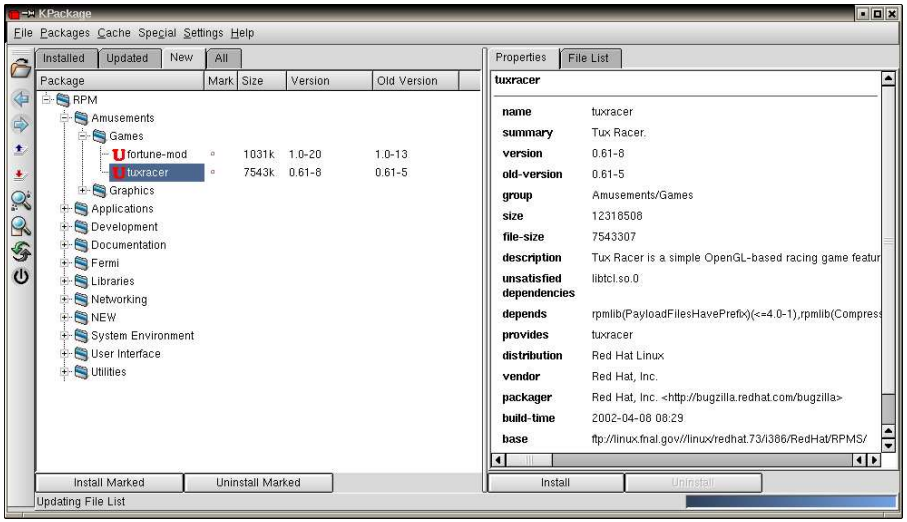
RPM's
How To Use Them

RPM's have been around so long that there is quite a few tools help users with their general use. All of these tools are graphical so that installing an rpm can be a simple point and click operation.

- Graphicall Interface's
  - KPackage (KDE)
  - gnorpm (GNOME)
  - Software Manager (Mandrake)

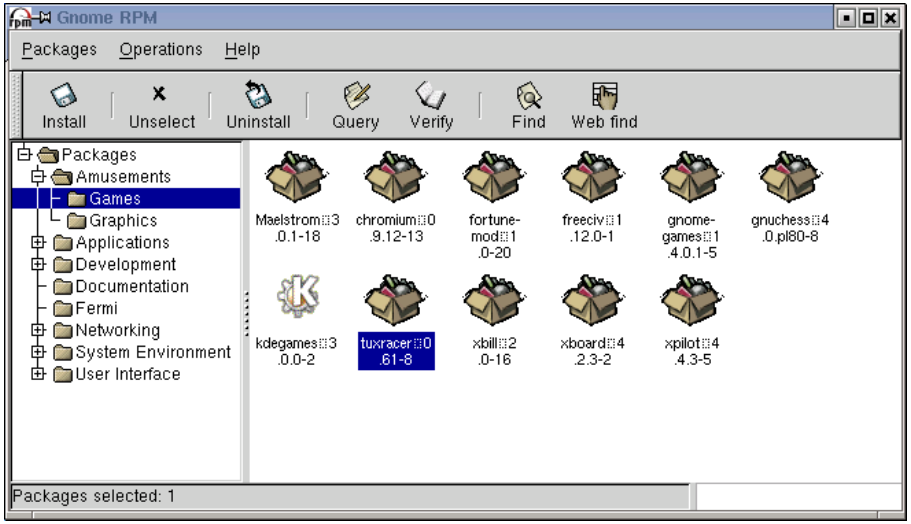
RPM's
How To Use Them

KPackage (made for KDE)



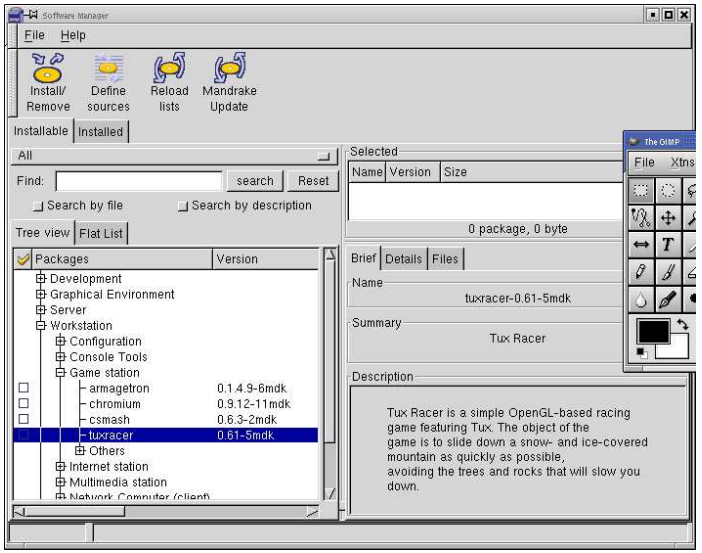
RPM's
How To Use Them

GNORPM (made for Gnome)



RPM's
How To Use Them

Software Manger (made for Mandrake Linux)



RPM's
How To Use Them

Using RPM's By Hand

The majority of work that you do will be working with RPM's by hand in some type of text mode.

Benefits of doing things by hand

- always the same
- quicker
- more options
- it's Linux

RPM's
How To Use Them

RPM Options

READ THE MAN PAGE

The RPM man page is very well written, plus there are so many options that there is just no way that I can cover them all.

RPM's
How To Use Them
RPM Common Options and Tips

Common Options and Terms

- -v
  - Verbose - the more v's you put, the more verobose it get's
- -h
  - Print 50 hash marks as the package is unpacked.
- --force
  - Just like what it sounds like, overrides most fatal errors
- --nodeps
  - Don't do a dependancy check before installing or upgrading a package

RPM's
How To Use Them
RPM Common Options and Tips

Common Options and Terms

- <packagefilename>
  - The full rpm file name. This can be a network path.
  - myrpm-32-1.i386.rpm
  - ftp://linux.fnal.gov/linux/contrib/java/jdk-1.3.1-03.i386.rpm
- <packagename>
  - The rpm name for a package
  - myrpm-32-1
  - jdk-1.3.1-03

RPM's
How To Use Them
RPM Common Options and Tips

Installing / Upgrading / Removing

- Install
  - rpm -ivh <packagefilename>
- Upgrade
  - rpm -Uvh <packagefilename>
- Freshen
  - rpm -Fvh <packagefilename>
- Erase
  - rpm -e <packagename>

RPM's
How To Use Them
RPM Common Options and Tips

Installing / Upgrading / Removing

- Install
  - rpm -ivh <packagefilename>
- Example
  - rpm -ivh kernel-2.4.18-4.i686.rpm

Install does just what it sounds like. It installs an RPM. Install is quite capable of installing two rpm's with the same name. Because of this, you usually want to use Upgrade instead of Install.

RPM's
How To Use Them
RPM Common Options and Tips

Installing / Upgrading / Removing

- Upgrade
  - rpm -Uvh <packagefilename>
- Example
  - rpm -Uvh nedit-5.2-2.i386.rpm

Upgrade does more than it sounds. Upgrade will upgrade a package, if there is already a package installed. If there is not already a package installed, it will install it. Because Upgrade does both upgrades and installs, it is usually better to try to do the upgrade instead of an install. Rule of thumb: If it's ok to have more than one of the same package, use Install, for everything else, use Upgrade.

RPM's
How To Use Them
RPM Common Options and Tips

Installing / Upgrading / Removing

- Freshen
  - rpm -Fvh <packagefilename>
- Example
  - rpm -Fvh *.rpm

Freshen is basically a selective Upgrade. If an rpm is already installed, it will upgrade the rpm. If the rpm is not already installed, it won't do anything with an rpm.
This option is very useful if you have a pile of rpm's, and don't want to have to sort through them to see what needs updating.

RPM's
How To Use Them
RPM Common Options and Tips

Installing / Upgrading / Removing

- Erase
  - rpm -e <packagename>
- Example
  - rpm -e myrpm
  - rpm -e --force --nodeps myrpm-3.6
  - rpm -e --allmatches myrpm

Erase removes an rpm.
There are times when a rpm might be stuck and not want to be removed. This is often the case when you have accidentally force in two of the same rpm. In that case you will want to use one, or both of the options above.

RPM's
How To Use Them
RPM Common Options and Tips

Querying (rpm -q)

- -i --info
  - Display package information, including name and description
- -l --list
  - list the files in a package
- -f --file <FILE>
  - Find what rpm own's FILE (FILE must be a rpm installed file)
- -p --package <packagefilename>
  - Perform the query on an uninstalled package
- --scripts
  - List the package specific scriptlets that are used as part of the installation and uninstallation process

RPM's
How To Use Them
RPM Common Options and Tips

Querying (rpm -q)

- Examples
  - rpm -qi nedit
  - rpm -ql kdebase
  - rpm -qf /lib/libNoVersion-2.2.4.so
  - rpm -qpil /tmp/kmix-3.0.0-3.i386.rpm
  - rpm -q --scripts ricepaper
  - rpm -qpil --scripts oddball-3.2-12.i386.rpm

RPM's
How To Use Them
RPM Common Options and Tips

Misc Tips

How to get get a query to output in a form you want
- rpm -q --queryformat "%{NAME}\n%{URL}\n" nedit

To get a list of all the tags you can use for the queryformat
- rpm --querytags

How to pull out just one file, or directory from a rpm
- rpm2cpio paket.rpm | cpio -ivd path/filename

RPM's
How To Create Them

Basic RPM Creation Commands

Build an rpm from a spec file
- rpm -ba <spec file

Build an rpm from a special tar file
- rpm -ta <tarfile>

RPM's
How To Create Them

On To The Web Pages

What we are going to do from now on will be done from web pages and actual examples.

Troy Dawson's
"Pinky and the Brain do RPM's"

Dan Porier
"Packaging software with RPM"

RPM's
MISC. STUFF

Source -vs- src

There is often confusion when a person is asked to install the kernel "source" rpm. This is because if I were to ask you to install the nedit source rpm, you would install 'nedit-5.2-4.src.rpm'. But when a person needs to install the kernel source rpm, it is usually because they want the source code for the kernel, it isn't because they are going to rebuild the rpm. So what they really want is 'kernel-source-2.4.18-4.i386.rpm' and not 'kernel-2.4.18-4.src.rpm'

I need to install the kernel source rpm so I can compile AFS

- rpm -Uvh kernel-source-2.4.18-4.i386.rpm

I need to install the kernel source rpm because I need to rebuild the kernel rpm for my Linux distribution

- rpm -Uvh kernel-2.4.18-4.src.rpm