

# Linux Administration Part 1

## Linux Package Management - Verifying Packages

- *rpm* allows you to verify the state of your installed packages, which is very useful if you suspect corruption due to spurious errors.
- To verify a specific package:-

**# rpm -V gzip**

- \* No output indicates successful verification.
- \* Want to see what's going on?:-

**# rpm -Vvv gzip**

D: opening database mode 0x0 in //var/lib/rpm/  
D: record number 5092568  
D: requires: /sbin/install-info satisfied by db file lists.  
D: requires: mktemp satisfied by db packages.  
D: requires: /bin/sh satisfied by db file lists.  
D: requires: ld-linux.so.2 satisfied by db provides.  
D: requires: libc.so.6 satisfied by db provides.  
D: requires: /bin/sh satisfied by db file lists.

- Any problems such as missing files, etc. will be notified.
- You can then decide if you need to re-install the affected package.
- To verify all installed packages:-

**# rpm -Va**

- \* This takes a long time and will throw up a few errors, even though you have only just installed the system!

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## Linux Package Management - Uninstalling Packages

- Use the `-e` option to *rpm* to uninstall packages.
- Example uninstall:-

**# *rpm -e gzip***

error: removing these packages would break dependencies:

gzip is needed by mkinitrd-2.6-1

gzip is needed by mkxauth-1.7-15

gzip is needed by tripwire-2.3-55

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## Linux Package Management - Upgrading Packages

- This is one of the major benefits of using rpm.
- Installed packages can easily be upgraded, either from some physical medium such as CD, or directly from the Internet using ftp!
- Some packages may use editable configuration files; these will automatically be saved for you.
- The upgrade process works in two ways:-
  - \* Upgrading, which will either replace an existing (older) package, or install the package if not already installed.
  - \* Freshening, which updated only if the package is already installed and out of date.
- To freshen your packages from a new distribution, for example, change to the appropriate directory (e.g. /cdrom/Redhat/RPMS) and run the following:-

**# rpm -Fvh \*.rpm**

- \* Remember that you also have a upgrade option during the build.

- To upgrade a specific package:-

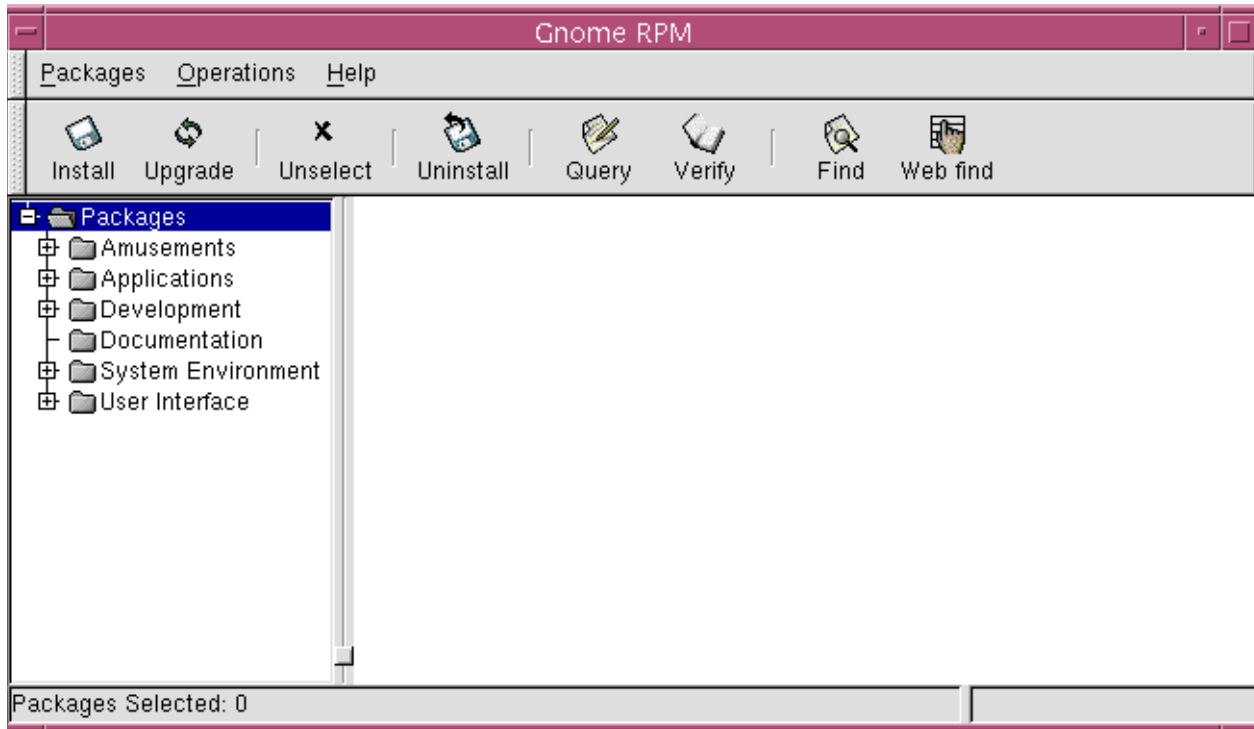
**# rpm -Uvh thing-2.0-1.i386.rpm**

- \* Where *thing-2.0-1.i386.rpm* is the new package file.

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## Linux Package Management - gnorpm

- *gnorpm* is a GUI for *rpm*; this is the initial *gnorpm* window:-

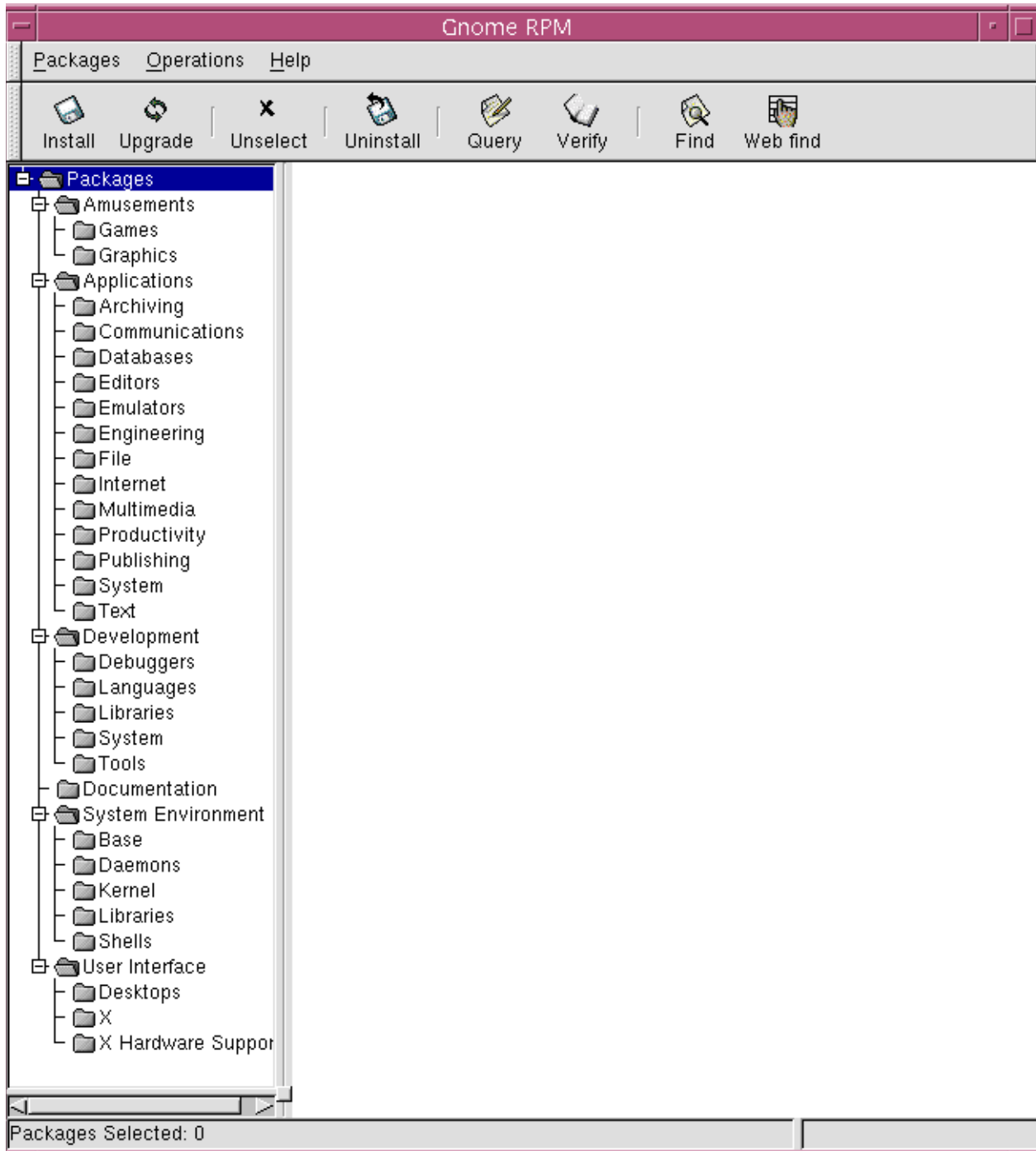


- The list on the left shows the categories of packages currently installed.

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## Linux Package Management - gnoRPM

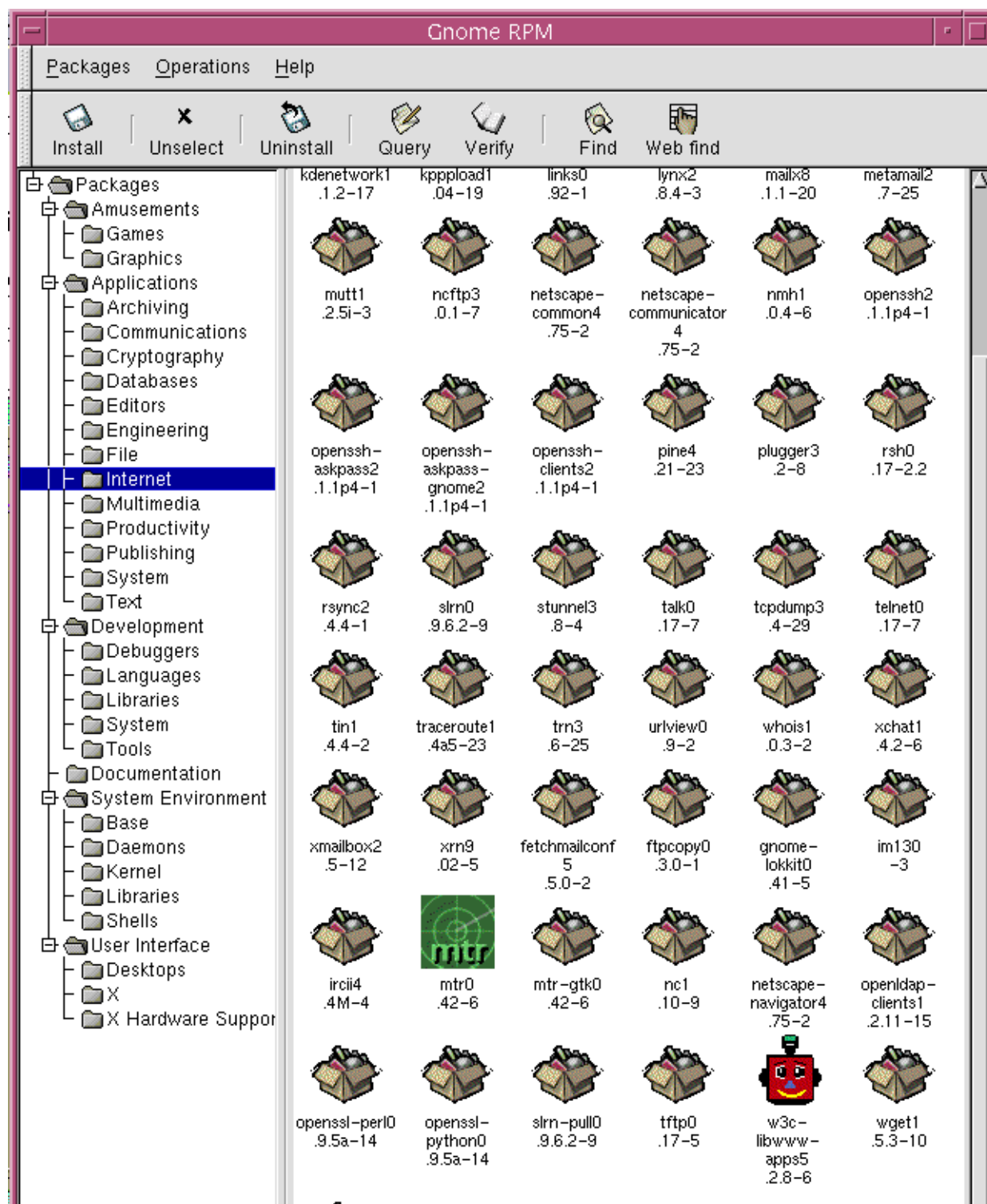
- By clicking on the folders, the list can be expanded:-



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## Linux Package Management - gnorpm

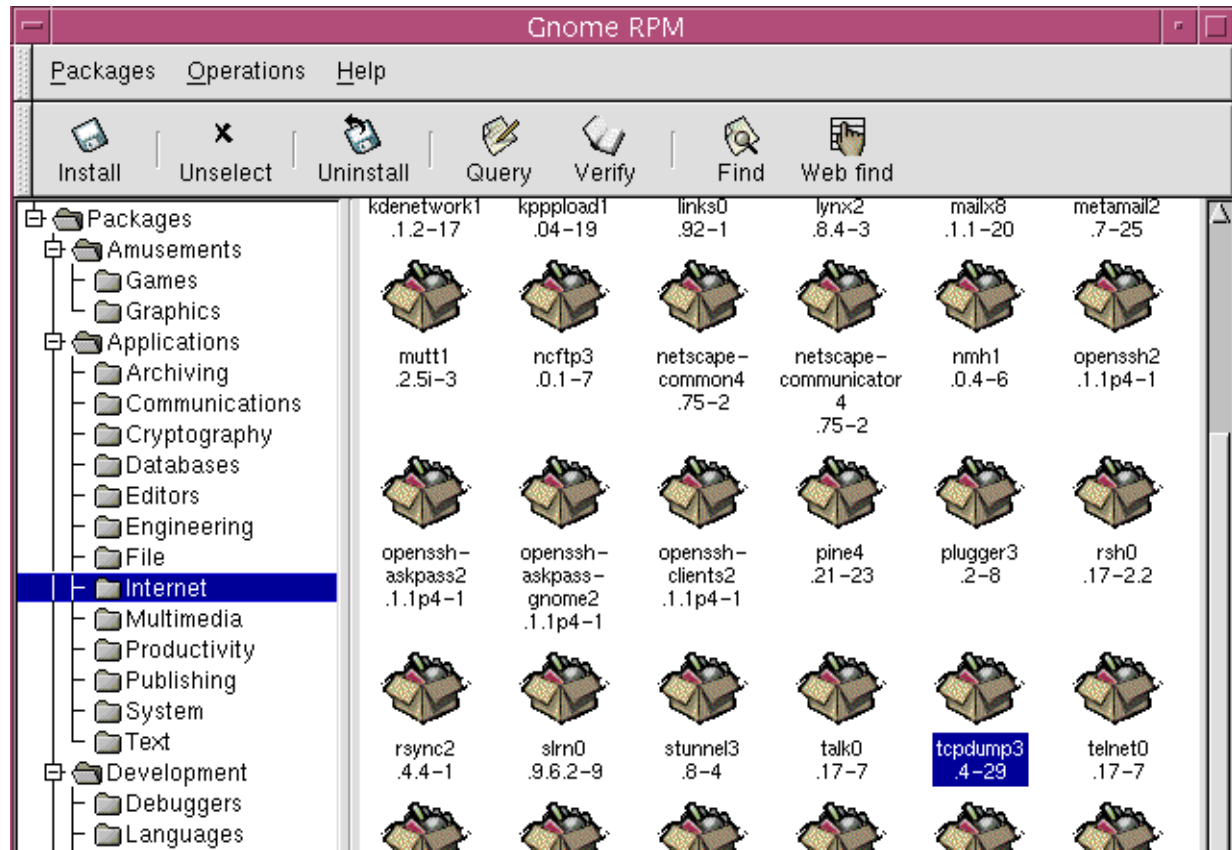
- Now select an individual folder, and the packages will be displayed:-



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## Linux Package Management - gnorpm

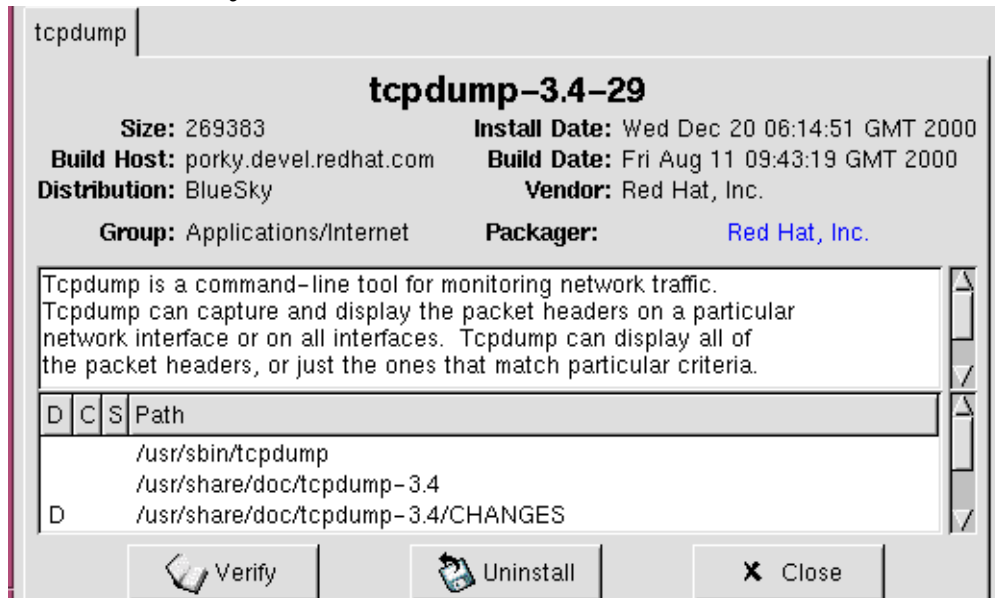
- Now select an individual package:-



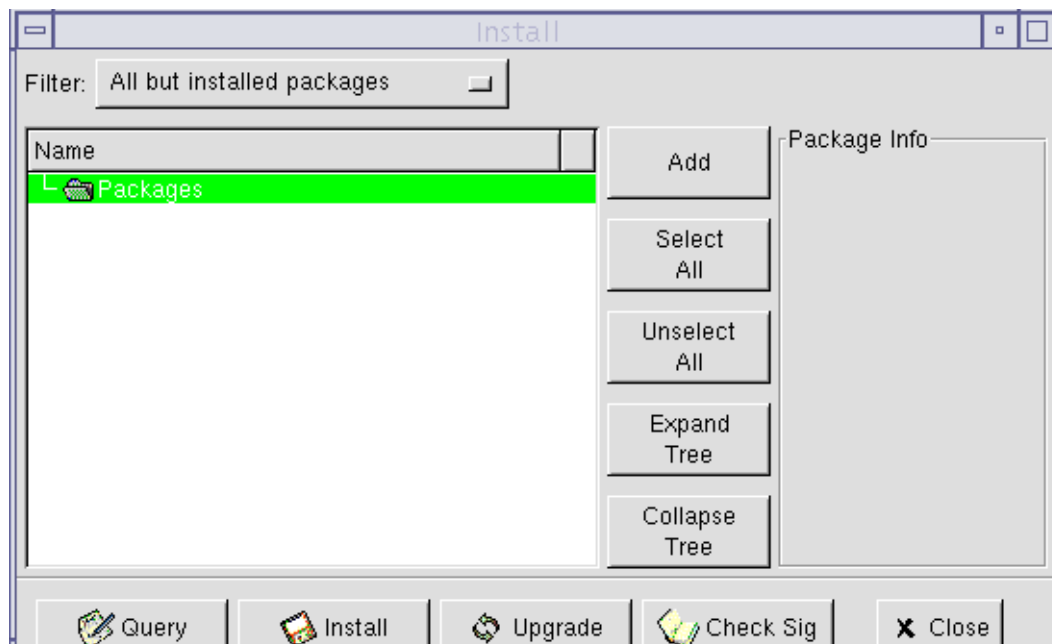
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## Linux Package Management - gnoRPM

- Click on Query:-



- gnoRPM allows other functions for verification and uninstalling.
- To install a new package, click on the Install button:-



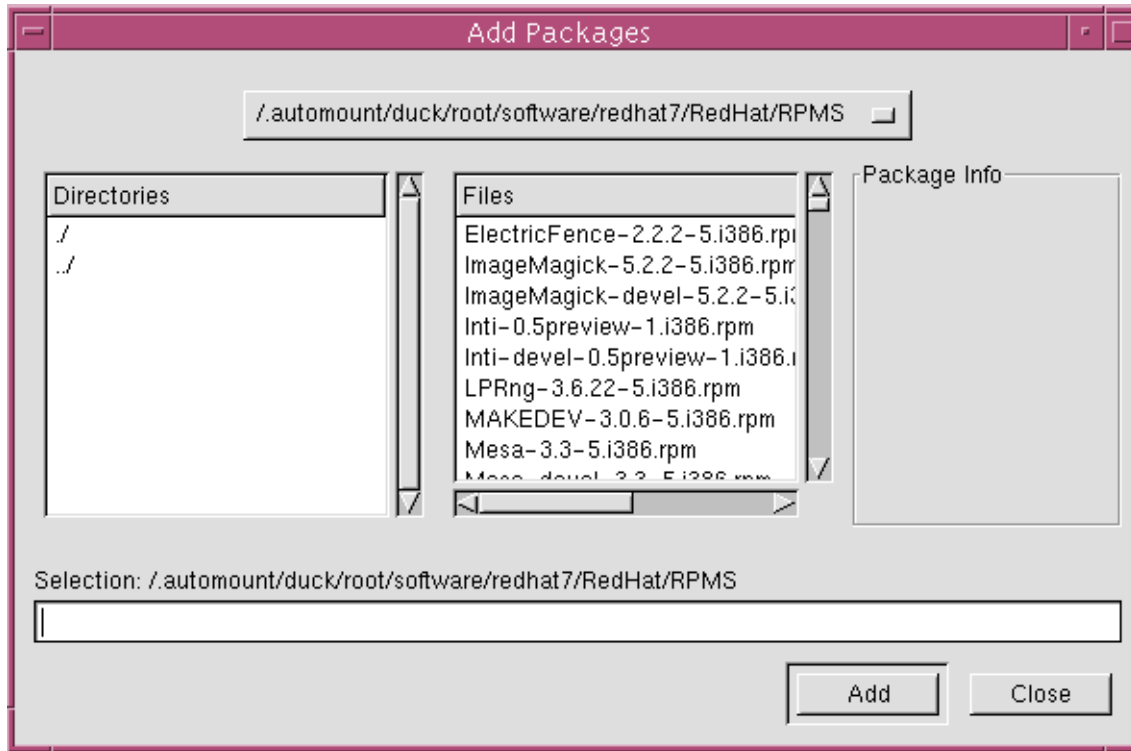
- Now click on Add at the top right:-



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## Linux Package Management - gnorpmp

- This shows the list of packages in the chosen directory:-

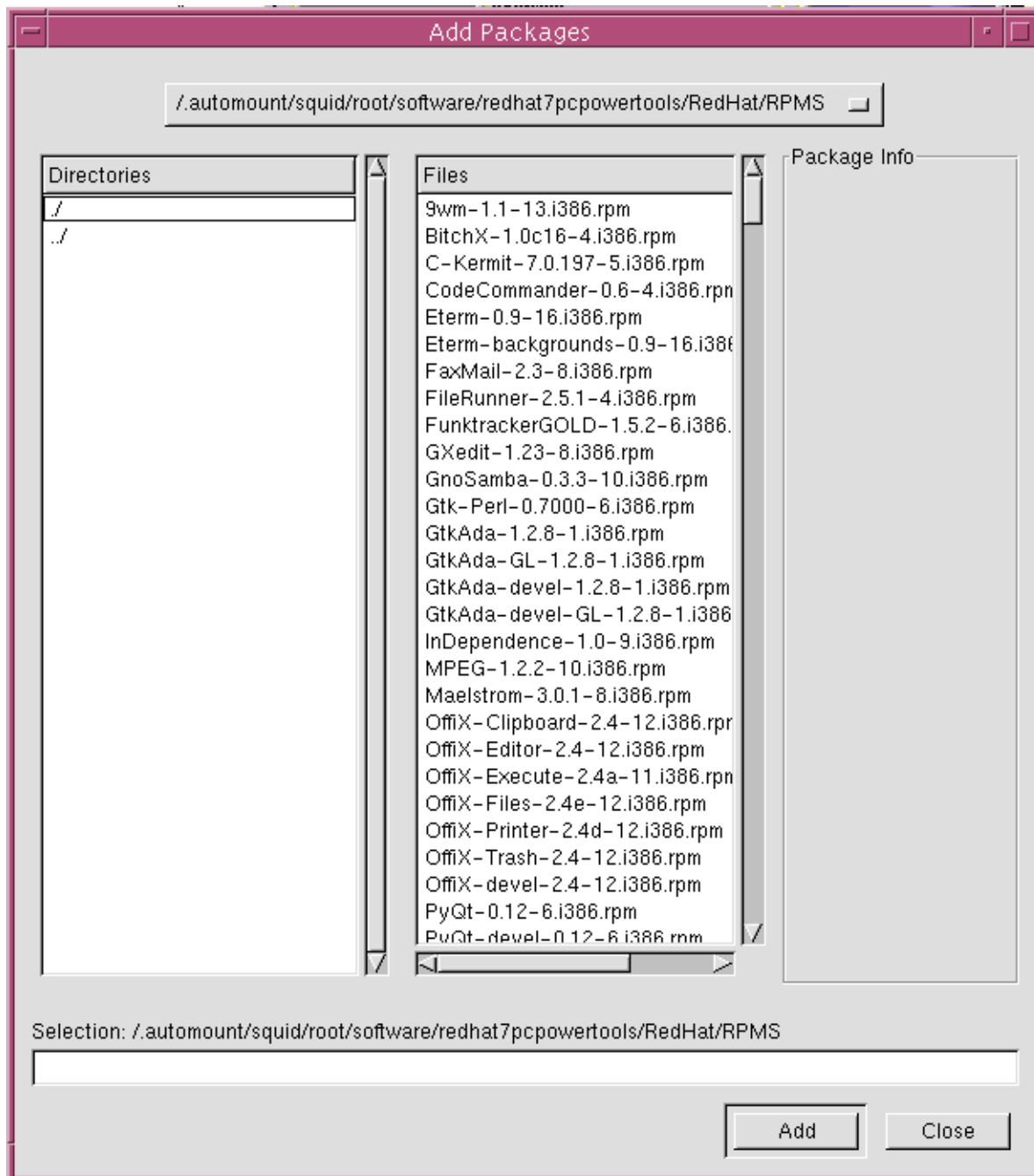


- The directory name can be seen at the top, and can be changed to any location containing packages.
- Simply select the packages in turn and then Add.

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## Linux Package Management - gnorpm

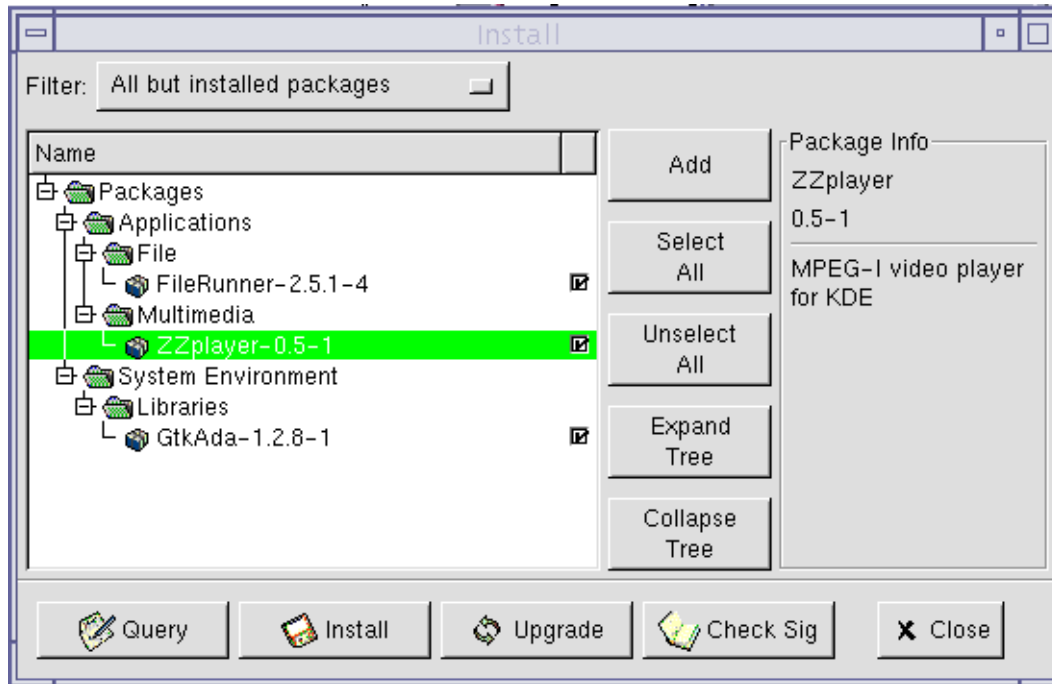
- Here, I have selected a different location, which contains the Power Tools packages provided with the RedHat distribution (copied to a directory on the server duck):-



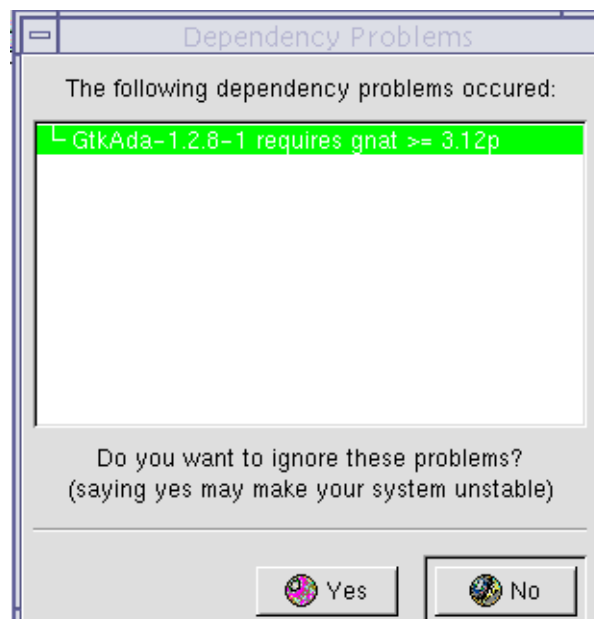
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## Linux Package Management - gnoRPM

- Here, I have added some of the packages and clicked on *Close* to return to the main Install screen:-



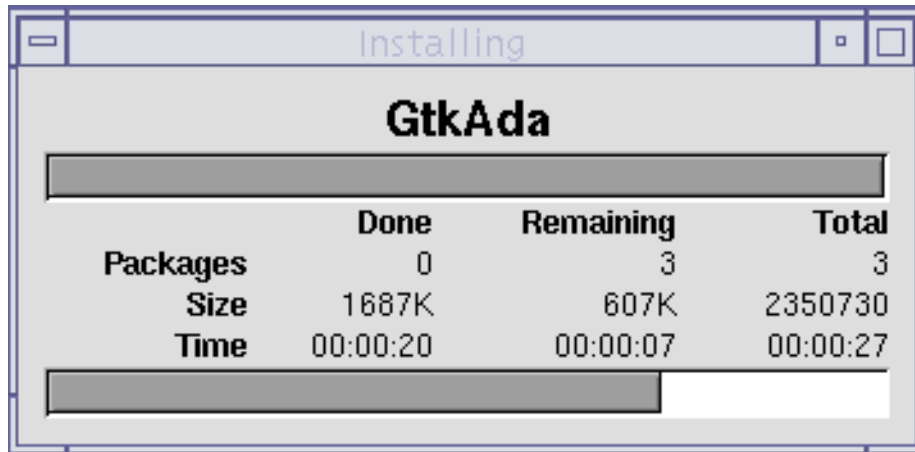
- Now I can click on *Install* and proceed.
- There may be dependency problems, however:-



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## Linux Package Management - gnoRPM

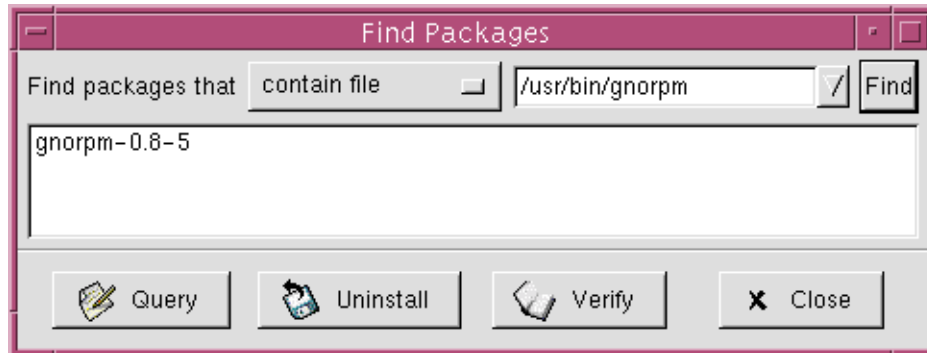
- I can choose to ignore the dependency if necessary.
- Once the installs are under way, progress will be displayed:-



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## Linux Package Management - gnorpm

- The Find function searches the current package directory, in a similar fashion to the rpm query function; here is an example:-



- Note the options to Install, etc.
- Be sure to select the item before attempting a further function
- Finally, have a look at the *gnorpm* preferences to configure things the way you require.
- Note the ability of *gnorpm* to access packages direct from an internet URL.