

Royal University of Bhutan

LESSON – 15

MANAGING SOFTWARE

LEARNING OUTCOMES

- Find the path of installed software
- Use dpkg and apt command-line tool to manage software

Managing Software

- which/whereis commands:
 - [root@cst ~]#whereis vim
 - [root@localhost ~]#which cat

Managing Software

- is derived from the same system used by the Debian GNU/Linux distribution.
- The package files contain all the necessary files, metadata, and instructions to implement a particular function or software application.
- Typically have the extension .deb, and usually exist in repositories (online, or on physical media such as CD-ROMs).
- Normally in a pre-compiled binary format - installation is quick and requires no software compilation.
- Many packages use dependencies and all of its dependencies – must be installed (done automatically).

Managing Software

- Software Installation Methods:
 - dkpg
 - apt
 - Synaptic

Managing Software

- Software Installation Methods:

- `dpkg -l`

`dpkg` is a package manager for Debian-based systems. It can install, remove, and build packages, but unlike other package management systems, it cannot automatically download and install packages – or their dependencies.

- `dpkg -l | grep vim`

Pipe the output through `grep` to see if a specific package is installed.

Managing Software

- Software Installation Methods:
 - **List files** - To list the files installed by a package, in this case the ufw package, enter:

```
dpkg -L ufw
```

- **Installation**

```
sudo dpkg -i zip_3.0-4_amd64.deb
```

Note: It will not install the dependencies automatically.

- **Uninstalling packages:**

```
sudo dpkg -r zip
```

Caution: Uninstalling packages using dpkg, is NOT recommended in most cases.

Managing Software

- Software Installation Methods:
 - Apt
Installing packages

```
sudo apt install nmap
```

Removing packages

To remove the package installed in the previous example, run the following:

```
sudo apt remove nmap
```

Adding the `--purge` option to `apt remove` will remove the package configuration files as well. This may or may not be what you want, so use it with caution.

Managing Software

- Software Installation Methods:

- **Apt - Updating the package index**

The APT package index is a database of available packages from the repositories defined in the /etc/apt/sources.list file and in the /etc/apt/sources.list.d directory.

```
sudo apt update
```

Managing Software

- Software Installation Methods:

- **apt - Upgrading packages**

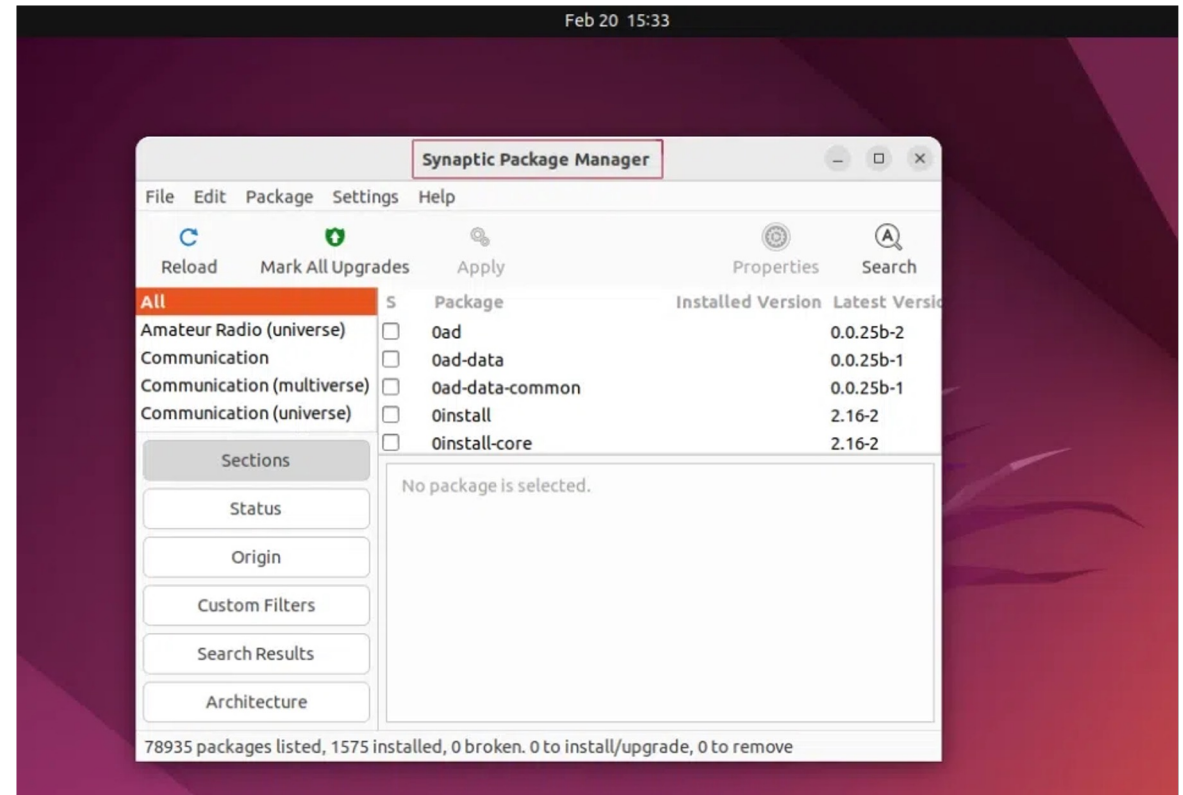
Installed packages on your computer may periodically have upgrades available from the package repositories (e.g., security updates).

```
sudo apt update
```

```
sudo apt upgrade
```

Managing Software

- Software Installation Methods:
 - Synaptic Software:
Go to the start menu and open synaptic software searching for it, or by visiting System > Administration > Synaptic Package Manager.



Managing Software

- Apt Package Manager:
 - Advanced Package Tool - is a command-line package manager
 - Simplifies the process of installing, updating, and removing software packages on Debian-based distributions, including Ubuntu.
 - Serves as a bridge between the user and a vast repository of software packages. It automates the intricate task of resolving dependencies, ensuring that when you install one package, all the required components seamlessly fall into place.

Managing Software

- Apt Package Manager:
 - Searching for Packages with Apt

apt search python

SUMMARY

- In this lesson, you have learnt that:
 - The different ways of installing software
 - Installing package with deb gets dependency error.
 - The apt installation is convenient way of installing software from repository