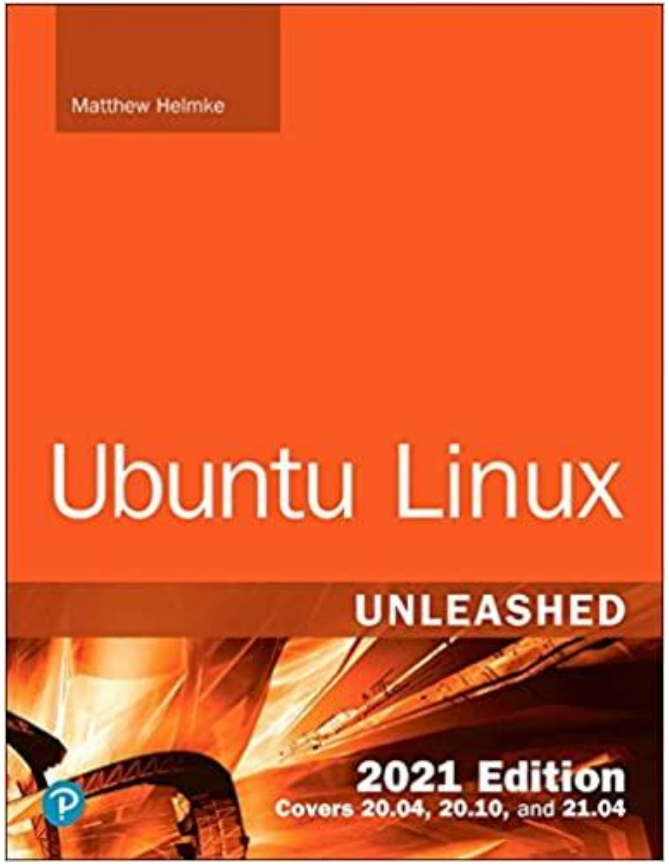
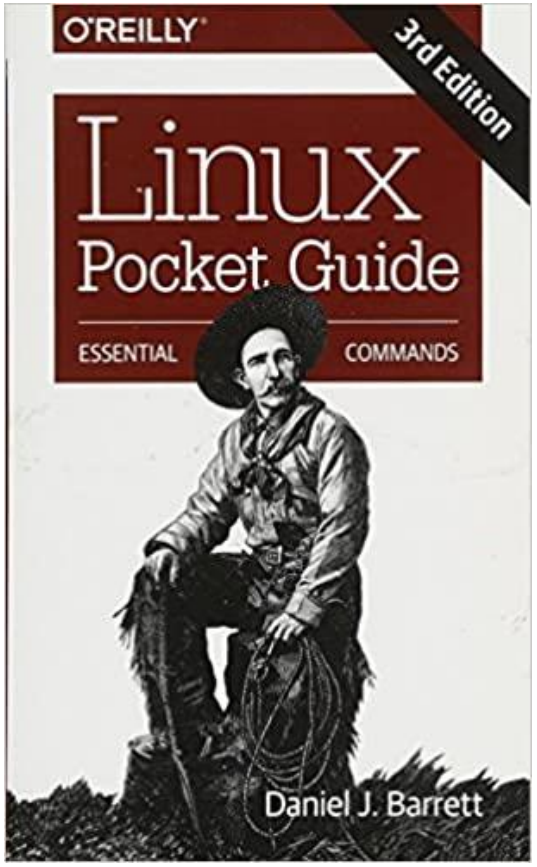
LINUX AND OPEN SOURCE SOFTWARE

CH2. MANAGING SOFTWARE

Syllabus & Text-books

1) Matthew Helmke, *Ubuntu Linux unleashed*, Pearson, 2021 Edition.
2) Daniel J. Barrett, *Linux pocket guide*, 3rd edition, O'Reilly, June 2016.





Main contents

- Ubuntu Software
- Using Synaptic for Software Management
- Staying Up to Date
- Working on the Command Line
- Compiling Software from Source
- Configuration Management
- Using the Snappy Package Manager

Ubuntu Software

- The package and executable program is named *Ubuntu-software*.
- Ubuntu Software enables you to easily select and install a large array of applications.

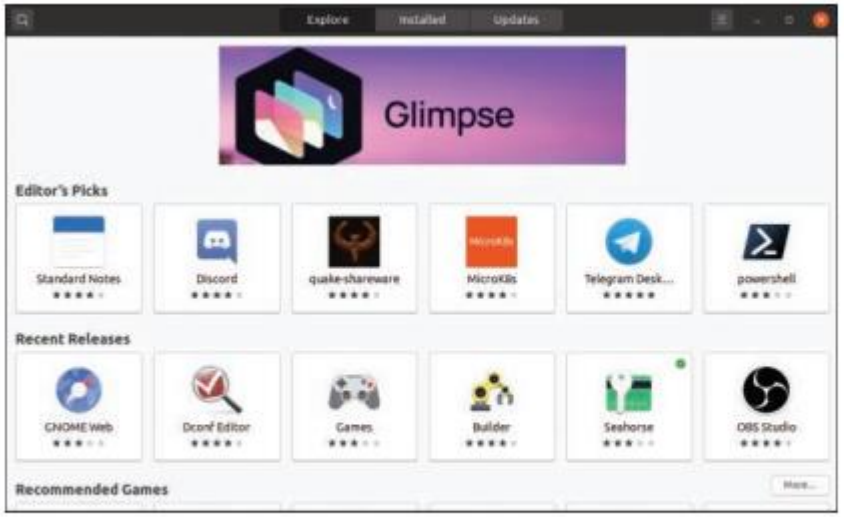
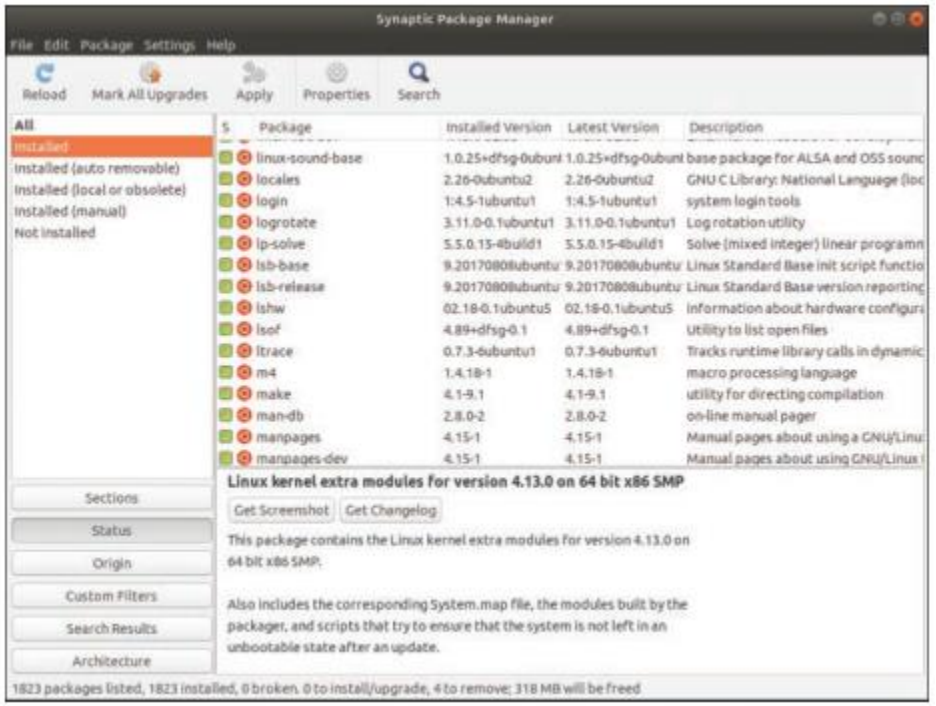


FIGURE 9.1 The initial Ubuntu Software screen enables you to browse through packages sorted into categories.

Using Synaptic for Software Management

- Ubuntu Software works just fine for adding and removing applications. To install something specific - such as a library - you need to use the command line or Synaptic.

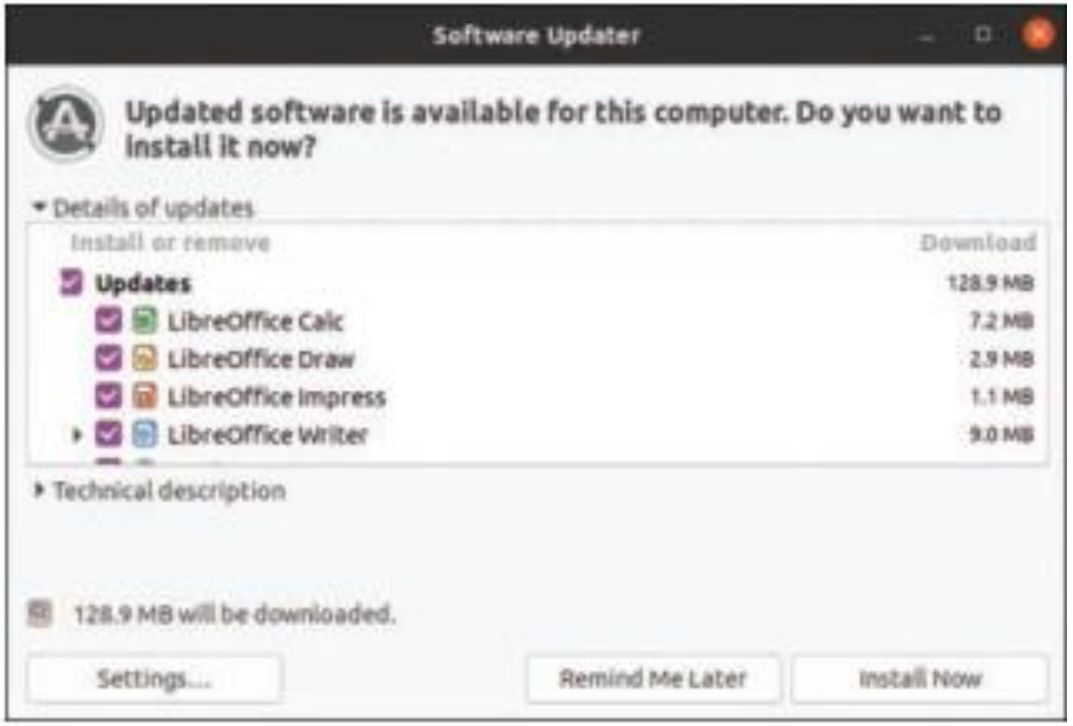


Using Synaptic for Software Management

- Synaptic options:
  - unmark: if you have marked the package for installation, upgrade, or one of the other options, this option removes that mark.
  - Mark for installation: Click this option to add this package to the list that will be installed.
  - Mark for Re-installation: If you have some software already installed, but for some reason it's not working, click this option to reinstall it from scratch.
  - Mark for upgrade: If the software has updates available, select this option to download and install them.
  - Mark for removal: Select this option to delete the selected package from you system.
  - Mark for Complete Removal: Select this option to delete the selected package from your system and also remove any configuration files and purge everything from the system.

Staying Up to Date

- Software Updater automatically downloads the list of updates available and checks them all in the list it shows.



Working on the Command Line

- APT (Advanced Package Tool) is designed to automatically find and download dependencies for your packages.
- APT is used to manage software installation.
  - $*sudo apt update*
  - *$sudo apt upgrade*
  - *$sudo apt install mysql-server*
  - *$sudo apt install mysql-server mailx*
  - *$sudo apt remove firefox*
  - *$sudo apt remove -purge firefox*
  - *$sudo apt purge firefox*
  - *$sudo apt-cache search kde*
  - *$sudo apt-cache -n search kde*

Working on the Command Line

Table 9.1 `apt-get` Versus `apt`

`apt-get` Command	`apt` Command
`apt-get install`	`apt install`
`apt-get remove`	`apt remove`
`apt-get update`	`apt update`
`apt-get upgrade`	`apt upgrade`
`apt-get dist-upgrade`	`apt full-upgrade`
`apt-get remove --purge`	`apt purge`
`apt-get autoremove`	`apt autoremove`
`apt-get search`	`apt search`
`apt-get show`	`apt show`
`dpkg --get-selections`	`apt list --installed`
`apt-get purge`	`apt purge`

Compiling Software from Source

- Compiling from a Tarball

```
matthew@seymour:~$ tar zxvf packagename.tgz -C ~/source
matthew@seymour:~$ tar zxvf packagename.tar.gz -C ~/source
matthew@seymour:~$ tar jxvf packagename.bz -C ~/source
matthew@seymour:~$ tar jxvf packagename.tar.bz2 -C ~/source
```

Configuration Management

- dotdee
- Ubuntu Core

Using the Snappy Package Manager

- To show a list of snap packages that are available to be installed, use the following:
  - *$snap find*
- To find a specific package in the list:
  - *$snap find searchterm*
- To install a snap package, use the following:
  - *$sudo snap install packagename*
- To show a list of snap packages that are currently installed, use the following:
  - *$snap list*

Using the Snappy Package Manager

- To update a snap package, use the following:
  - *$sudo snap refresh packagename*
- To remove a snap package, use the following:
  - *$sudo snap remove packagename*
- To display a list of changes, such as when snaps were installed, updated, or removed, use the following:
  - *$snap changes*

QUESTION
&
ANSWER