

Software Distribution

- ▶ **Video:** Module Introduction
33 sec
- ▶ **Video:** Windows: Software Packages
5 min
- ⌕ **Reading:** Supplemental Reading for Windows Software Packages
10 min
- ▶ **Video:** Linux: Software Packages
2 min
- ▶ **Video:** Mobile App Packages
3 min
- ⌕ **Reading:** Supplemental Reading for Mobile App Packages
10 min
- ⌕ **Reading:** Supplemental Reading for Updating Mobile Apps
10 min
- ⌕ **Reading:** Supplemental Reading for Mobile Device Storage
10 min
- ▶ **Video:** Windows: Archives
3 min
- ⌕ **Reading:** Supplemental Reading for 7-Zip and PowerShell Zips
10 min
- ▶ **Video:** Linux: Archives
1 min
- ⌕ **Reading:** Supplemental Reading for the Linux Tar Command
10 min
- ▶ **Video:** Windows: Package Dependencies
6 min
- ⌕ **Reading:** Supplemental reading for Windows Package Dependencies
10 min
- ▶ **Video:** Linux: Package Dependencies
1 min
- ⌕ **Reading:** Supplemental Reading for Linux Package Dependencies
10 min
- ⌕ **Practice Quiz:** Software Distribution
5 questions

Package Managers

What's happening in the background?

Device Software Management

Graded Assessments

Supplemental Reading for Linux Package Dependencies

Linux Package Dependencies

In this reading, you will review how to install and manage Debian packages in Linux using the **dpkg** command. This skill may be helpful to IT Support professionals that work with Linux systems like Debian or Ubuntu.

The following is a list of terms used in this reading:

- **Debian:** One of many free Linux operating systems (OSes), used as the foundation for other OSes, like Ubuntu.
- **Linux packages:** A compressed software archive file that contains the files needed for a software application. These files can include binary executables, a software libraries, configuration files, package dependencies, command line utilities, and/or application(s) with a graphical user interface (GUI). A Linux package can also be an OS update. Linux OS installations normally come with thousands of packages. Common Linux package types include:
 - **.deb** - Debian packages
 - **.rpm** - Redhat packages
 - **.tgz** - TAR archive file
- **Linux repository:** Storage space on a remote server that hosts thousands of Linux packages. Repositories must be added to a Linux system in order for the system to search and download packages from the repository.
- **Stand alone package:** A package that does not require any dependencies. All files required to install and run the package on a Linux system are contained inside a single package.
- **Package dependency:** A package that other Linux packages depend upon to function properly. Often, packages do not include the dependencies required to install the software they contain. Instead, package manifests list the external dependencies needed by the package.
- **Package manager:** A tool on Linux systems used for installing, managing, and removing Linux packages. Package managers can also read package manifests to determine if any dependencies are needed. The package manager then finds and downloads the dependency packages before installing the packaged software. Several common Linux Package Managers include:
 - For Debian and Debian-based systems, like Ubuntu:
 - **dpkg** - Debian Package Manager
 - **APT** - Advanced Package Tool, uses dpkg commands
 - **aptitude** - user-friendly package manager
 - RedHat and RedHat-based systems, like CentOS:
 - **rpm** - RedHat Package Manager
 - **yum** - Yellowdog Updater Modified, comes with RedHat
 - **dnf** - Dandified Yum

The dpkg command

The Linux **dpkg** command is used to build, install, manage, and remove packages in Debian or Debian-based systems.

Syntax

The following are a few common **dpkg** command action parameters, with syntax and uses:

To install a package:

To update a package saved locally:

To remove a package:

To purge a package, which removes the package and all files belonging to the package:

To get a list of packages installed:

To get a list of all files belonging to or associated with a package:

To list the contents of a new package:

When an action parameter is added to the **dpkg** command, one of the following two commands are run in the background:

- **dpkg-deb:** A back-end tool for manipulating .deb files. The dpkg-deb tool provides information about .deb files, and can pack and unpack their contents.
- **dpkg-query:** A back-end tool for querying .deb files for information.

Additional Debian package managers

There are several alternate methods for managing Debian packages. Some have command-line interfaces (CLI) while others have GUIs. The alternative options to **dpkg** include:

- **APT (Advanced Package Tool)** - A powerful package manager designed to be a front-end for the **dpkg** command. APT installs and updates dependencies required for proper .deb package installation.
- **Synaptic Package Manager** – A popular GTK (GNU Image Manipulation Program ToolKit) widget with a GUI. Provides an array of package management features.
- **Ubuntu Software Center** – A GTK GUI developed by Ubuntu and integrated into the Ubuntu OS.
- **aptitude** – A user-friendly front-end for APT, with a menu-driven console and a CLI.
- **KPackage** – A part of KDE (Kool Desktop Environment) used to install and load packages that do not contain binary content. Non-binary content includes graphics and scripted extensions.

Mark as completed