Hello everyone! In this video, you will learn about software packages in Linux and the tools, used to install them.

A Software Package is an archive of files or applications, that contain, Binary files to be installed, Any Configuration files needed for the application, and Metadata about the package

A package file comes with various extensions such as .deb or .rpm, based on the Linux distribution used.

They also come as a collection of packages.

Let's understand the package nomenclature.

Package names normally contain words separated by underscores and normally contain 4 components, Name, Version, Revision, and Architecture.

The package version is normally composed of 3 numbers separated by dots such as 3.10.40 and Architecture normally states what kind of processor this package is targeting. Name and revision have usual meaning.
For example, Gedit-commons_3.10.40ubuntu_i386.deb

Various commands are used to install packages with various extensions.

To install .deb file, dpkg command is used.
The normal syntax of using dpkg command is
Dpkg –i <package file>
To install, the package file needs to be downloaded first from the software download page.
To uninstall the package, use the dpkg command with r option such as
Dpkg –r <package file>

One of the major package management systems is APT (Advanced Package Tool), which is used in Debian and related distros (Ubuntu being a major one here).

It needs a repository to download and install the packages. The repository information can be set or found in /etc/apt/sources.list file. Each repo is represented as a line in this single file.
Such as
deb http://http.us.debian.org/debianstable main contrib non-free is a major Debian repository, mentioned in sources.list file.

Kali Linux distribution system also has a set of repositories These are online collections of software packages that you can download and install.

You will have the best results using repositories that are designed for your distro. In the figure, the Kali Linux repositories are listed.

Here are some examples of using the apt command for various purposes of package management. The apt commands are preceded by the sudo command in these examples because it is common practice for an Ubuntu administrator to run administrative commands as a regular user with sudo privilege.

RPM stands for Red Hat Package Manager which is used in Red Hat Linux, the major distro for corporate and server center environments.

Many major distros have adopted RPM as well such as OpenSUSE, Mandriva, etc.
RPM can be run by itself from the command line or can use an intermediate tool like YUM (Yellow dog Updater, Modified).

Yum is an automatic updater and package installer/remover for rpm systems. It automatically computes dependencies and figures out what things should occur to install packages.
It makes it easier to maintain groups of machines without having to manually update each one using rpm. More information about yum can be found at http://yum.baseurl.org/ .

Thank You...