

Obtaining and installing software on Ubuntu Linux

Software Sources

Software for Ubuntu can come from:

- Ubuntu Repositories
- The Ubuntu PPA service
- Third party repositories
- .deb software package files from any source
- other software package files (eg .rpm, .tgz, .run, .zip)
- source code that you “build” on your own computer
- software you write yourself

The first 4 of these rely on “software package managers” to install the software - all the separate files need to be installed are placed in an archive file along with rules for things such as how the files are to be installed on the computer, how to uninstall the package, additional pre- and post-installation actions, etc

Package managers usually create menu entries and program launch icons to make it easy to start up the new software. For other types of software you may have to create the menu entries and/or launch icons yourself (or just run the program from the command line).

Ubuntu Repositories

“Official” Software is held in the Ubuntu Repositories.

- reviewed by Ubuntu team before inclusion, so a trusted source for software
- updates automatically installed by Ubuntu software update system

Software may not be in the Official repositories because

- it is not widely used and not considered for inclusion
- it is new and has not yet been reviewed
- the software licensing chosen by the developers does not allow Ubuntu to offer it

The Ubuntu Repository has several sections. You can check and manage which are being used in your “Software Sources” settings.

Installing from the Ubuntu Repository ensures you get the correct version for your system, and automatically includes any software dependencies.

PPA = Personal Package Archive

PPA is a Software Repository hosted by Ubuntu on the LaunchPad platform. Launchpad provides a set of software services that help developers of Open Source programs to develop, distribute and support software.

Anyone can apply for an account to set up a PPA, and software available through PPAs is not checked in any way by the Ubuntu team, So don't assume software from a PPA is safe or reliable.

You can check and manage which PPAs are used in your “Software Sources” settings.

Installing from a PPA ensures you get the correct version for your system, but you may have to follow instructions to install additional software or to configure the software before it will work fully. (This depends on what approach the PPA developers take.)

Third party repositories

Some software developers set up their own repositories that support the same installation and update mechanisms as the Ubuntu repositories and PPAs.

.deb files

These files are the standard package files used by Debian Linux and derivatives including Ubuntu. They can be installed using the Ubuntu Software Centre or other GUI or command line installers.

Other package files

.rpm files are another widely used package format. (rpm = RedHat Package Manager)
It is better to search out equivalent **.deb** packages if they are available. But it is possible to install **.rpm** packages on Debian (Ubuntu) systems using the **alien** installer.

.run, **.bin** and other similar files are self-installing archives. In other words, the installer is included in the package along with the software.

.tgz, **.zip** and other standard compressed archive files are also widely used to distribute software. The installation process will vary – follow the instructions from where you obtained the file – but typically you will need to extract the archive to your home directory or to temporary directory and perhaps run an installation script after you have done so.

Compiling source code

If all goes smoothly this can be a very straightforward process, but less expert users may find it frustrating when following the installation steps results in errors or warning messages.

Writing your own software

If you know how to do this, you probably know how to install it!