

Installing Lazarus on Linux mint 17.3

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December 19, 2015

Abstract

The Lazarus team does not provide packages for all Linux distributions. The distributions themselves distribute very outdated versions of Lazarus. So what to do if you want to install a new Lazarus on your Linux Mint 17.x distribution ? This article shows how.

1 Introduction

Linux comes in many flavors, called distributions: Fedora, SuSE, Debian, Arch, Ubuntu (in various flavors), and it's derivative Mint. Many distributions pack Lazarus, but not always in the latest version. For instance, the Lazarus version shipped with Ubuntu is 1.0.10, which is rather old (the Lazarus version in preparation now is 1.6). Likewise, the Free Pascal compiler is 2.6.2, when the current version is 3.0.0.

If you want to install a recent version of Lazarus on your Linux distribution, then it should be done manually. This is not as scary or difficult as it may seem. The biggest problem is installing the necessary preliminaries and choosing the version of Lazarus you want to install.

In this article, we'll explain how to install the most recent versions of Free Pascal and Lazarus. The installation was done on Linux Mint 17.3 Rosa, 64-bit.

2 Installing the necessary dependencies

Free Pascal and Lazarus need some prerequisites installed. The following are needed:

make Lazarus and FPC can be built from source if you have the makefiles.

binutils Although FPC has a built-in linker and assembler, the GNU linker `ld` and assembler `as` are needed for some special cases.

gdb the gnu debugger. Needed if you want to debug programs.

gcc is strictly speaking not needed, but it can be handy.

subversion is needed to get the sources for Lazarus (and Free Pascal) from the subversion repositories.

libgtk2.0-dev installs the necessary symlinks and header files for gtk 2.0 development. Installing this will pull in a lot of other packages, which are all needed for Lazarus development anyway.

To install these dependencies, the following command must be given on a terminal command-line:

```
sudo apt-get install subversion make binutils gdb gcc libgtk2.0-dev
```

If you are running the command as the root user, the 'sudo' is not necessary. Otherwise, the sudo command will prompt you for your password, and after asking confirmation that this is what you really want, apt-get will install everything you need. If some of the things in the above list are already installed, apt-get will inform you of this.

3 Installing Free Pascal

Most distributions pack an older version of Free Pascal. Luckily, Free Pascal can be easily installed using a simple installer program. For Lazarus to be able to perform code completion, the Free Pascal sources are also needed. They can be simply downloaded and copied somewhere on the system.

To install the Free Pascal compiles, the following commands can be given in a terminal: (best to do this in a temporary directory)

```
BASEURL=ftp://ftpmaster.freepascal.org/pub/fpc/dist/3.0.0
wget $BASEURL/source/fpc-3.0.0.source.tar.gz
wget $BASEURL/x84_64-linux/fpc-3.0.0.x64_64-linux.tar
```

the variable BASEURL just serves to shorten the command-line. If you are on a 32-bit system the second command should be

```
wget $BASEURL/i386-linux/fpc-3.0.0.i386-linux.tar
```

The installer archive must be unpacked:

```
tar xvf fpc-3.0.0.x64_64-linux.tar
```

then the installer can be executed:

```
cd fpc-3.0.0.x86_64-linux
sudo ./install.sh
```

The above command will start the installer as root, but you can also install as a regular user. When running as root, the installer will ask you to install in /usr, but for custom packages, it is better to install under /usr/local. For i386, the commands are:

```
cd fpc-3.0.0.i386-linux
sudo ./install.sh
```

after this, the free pascal compiler should be installed. You can test this by typing the command

```
fpc -i -l
```

which will print a logo and some information on the screen.

The next thing to do is to install the sources. It is best to install the sources in a subdirectory fpc below your home directory: then lazarus will be able to find them by itself. If you have downloaded the sources in your home directory, then the following command will take care of this:

```
cd ~
tar xvzf fpc-3.0.0.source.tar.gz
```

4 Fetching and installing Lazarus

The latest Lazarus can be downloaded and compiled straight from subversion. There is nothing magical about this. The lazarus sources always compile using the latest released Free Pascal compiler, the only exception is if you use the trunk (development) version of Lazarus. The following command will download lazarus:

```
SVNURL=http://svn.freepascal.org/svn/lazarus
svn co $SVNURL/tags/lazarus_1_6_RC1 lazarus
```

Again, a variable has been used to shorten the command-line.

If you prefer the latest development version (trunk) of lazarus, you can do

```
svn co $SVNURL/trunk lazarus
```

or you can download a branch that will be filled with fixes to the 1.6 release:

```
svn co $SVNURL/branches/fixes_1_6/ lazarus
```

In general, the safest option is the tagged version.

Once the subversion command has finished downloading the Lazarus sources, the following will compile Lazarus:

```
cd lazarus
make bigide
```

the **bigide** target compiles the IDE with many common packages included. If you don't want to have so many packages, you can do

```
make ide
```

instead. You can always add packages to the installation later on.

When the make command has finished (this can take several minutes) then you can install the IDE.

```
sudo make install
```

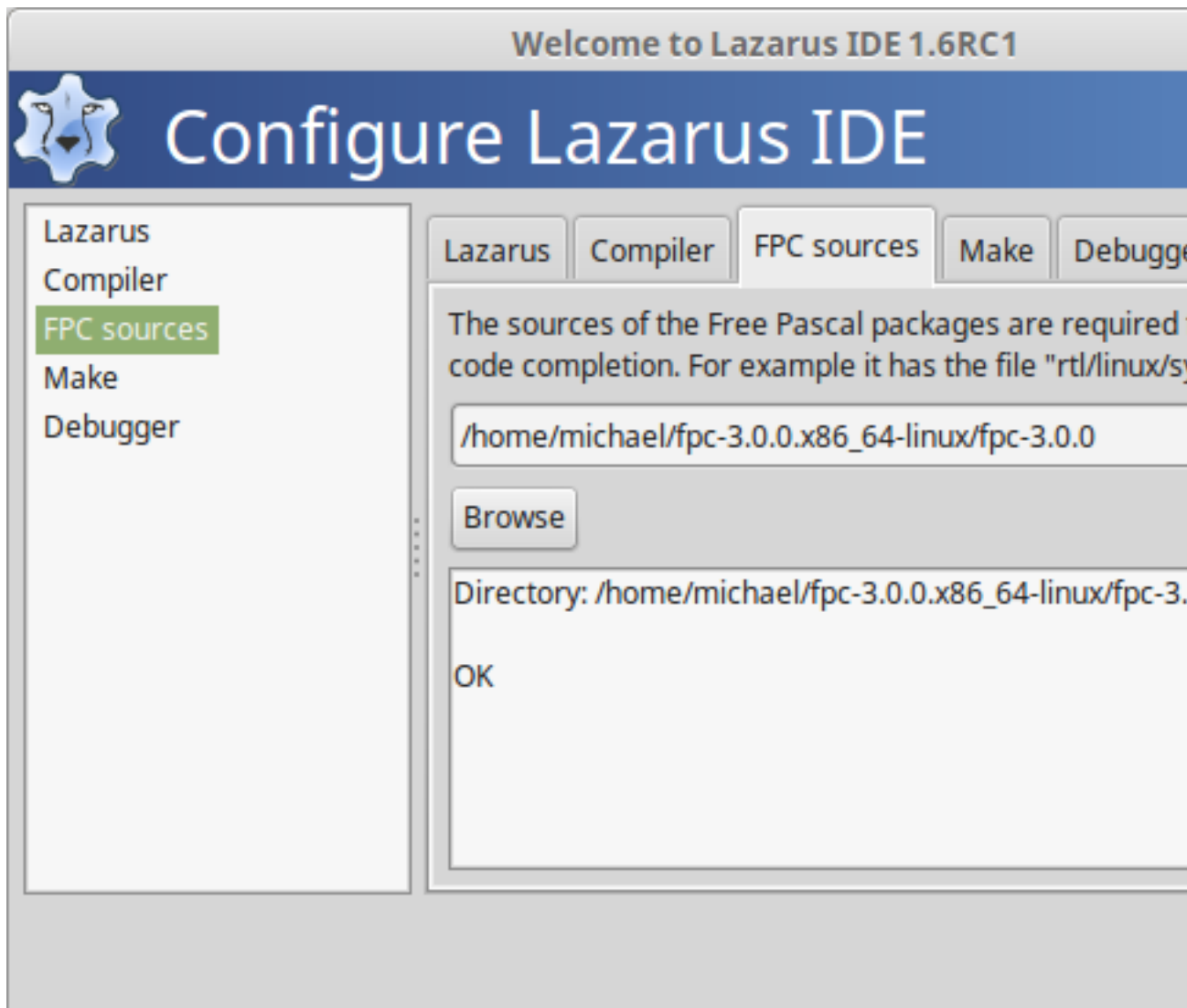
will install lazarus globally, under `/usr/local/share/lazarus`.

If all this is done, you can start lazarus

```
./lazarus
```

this should show the dialog in figure 1 on page 4 If the FPC sources cannot be found, lazarus will ask for help, you can simply point the IDE to the location of the sources. It needs this to be able to perform code completion.

Figure 1: The lazarus startup screen



5 Conclusion

There is nothing hard or mystical about installing lazarus on Linux mint (or any Linux/Unix). The main worry is getting all the dependencies installed correctly, in particular GTK and friends. This article described one way of performing the installation. A script that automates this process (`getlaz.s`) is available from the website, it contains all commands described here, and was tested on a newly installed Linux mint 17.3 cinnamon installation.