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# 1 Introduction for Beginners

This is an introduction for real beginners of source installation. If you are already somewhat experienced with UNIX-like systems and GNU source code install procedures, you should skip this chapter, otherwise

Welcome!

sourceinstall will try to make configuration, compilation, installation and removal of source packages easier for you as a beginner.

Instead of hiding information and operations from you, everything that happens will be available for you to see.

This way, if you are interested you can hopefully understand basic concepts by just looking at the commands executed by this program in the information frame.

Provided your system meets the requirements, and thus you manage to have a working installation of sourceinstall itself, you will be shortly able to install new software from its source code by surfing the web, identifying a Free Software you like, downloading its SOURCE package, and feeding it to GNU Source Installer.

# 1.1 Installing the Installer

If you have a fast internet connection, proceed to download sourceinstall-0.4-cvs-fullpack.sh or a newer version, and mark where the file will be placed (the "folder", the directory). For example, we will assume that you are downloading to

#### /home/user/downloads

After the download completes, start a console session. Your desktop environment should include a button, picture, or menu item that refers to a "shell", "terminal" or "console".

After the console is open, you should see a brief message ending in \$; this message will be represented here by a single dollar character, and you shall NOT type that character as part of the commands.

Reach the directory you just downloaded your file in, by typing in the shell this command, followed by a RETURN:

### \$ cd /home/user/downloads

where of course '/home/user/downloads' is the directory in which you downloaded the file.

If you get an error message, double check your command for typos. If things are going well, you will know because you will get nothing else than another \$ ended message (a prompt).

At this point, you can decide if you want to install as the super-user (root), or using your ordinary account.

Installing as root is more indicated for system-wide installs. To do so, type

#### \$ su

(Enter your root password)

At this point run the installer by typing:

## \$ /bin/sh sourceinstall-0.4-cvs-fullpack.sh

wait for the package to extract (this might take some minutes on slow or loaded systems), and follow the instructions. After being asked some simple questions, hopefully you will get a working installation of the GNU Source Installer. Mark the executable name that is showed at the end of the procedure, because that is the program that you need to run to start the installer.

This setup procedure installs in a subdirectory of your home directory by default if you are using an ordinary account. In particular, by default the installation *prefix* is ~/usr, where ~ represents your home directory.

If you are using a root account, then the setup procedure will instead use /usr/local as the default prefix. This is a common prefix for system-wide installs.

If you have a fast internet connection and want the easiest install, you can skip the rest of this section.

The releases whose names end in -fullpack are many megabytes in size, because they contain all the major dependencies in source form, and it could be that you already have the required packages.

So, if you are a bit more daring, you can try a normal source release instead. For example, download sourceinstall-0.4-cvs.tar.gz. We will assume the same directory as above.

At this point enter the following command (this assumes you have the GNU version of tar):

## \$ tar -zxvf sourceinstall-0.4-cvs.tar.gz

Note that you can use the tabulation (TAB) character to complete names. Experiment with pressing (TAB) around the middle of the file name.

All the files you'll see are being extracted from the archive, and a new directory is being created in the current one. At the end type:

- \$ cd sourceinstall
- \$ ./configure

A lot of output will be showing at this point. The software is being *configured* (adapted) for your system. If everything runs smooth, you will see at most WARNINGs but no ERRORs. After a while you will get the familiar dollar, and now you can write:

### \$ make

Some output will be shown, then again the familiar prompt. And now:

#### \$ su

(Enter your root password)

# make install

After writing su, you will be asked for your root password. You should have set your root password during your Operating System initial setup. If you do not know, try pressing ENTER. The # character before make install denotes the fact that after su you have gained root privileges. Since you are done, drop your root privileges by typing

#### # exit

Each time you want to run GNU Source Installer from the console, type:

#### sourceinstall

To run it from the graphical environment, you should create some kind of "shortcut" or "link" to the program on your desktop or in your program menus. The program to launch is (assuming a root installation and default values) '/usr/local/bin/sourceinstall'.

If you experience errors that prevent the correct installation and execution of the program, the next section tries to deal with these cases.

At the end of the procedure you will get the following files installed:

- 1. '/usr/local/bin/sourceinstall' (link to the program)
- 2. '/usr/local/bin/sourceinstall.tcl' (the program)
- 3. '/usr/local/info/sourceinstall.info' (texinfo manual)
- 4. '/usr/local/man/man1/sourceinstall.man' (man page)

To consult the GNU Source Installer manual type

#### \$ info sourceinstall

If you want a brief overview of program invocation and options, you can consult the traditional man page by issuing

\$ man sourceinstall

## 1.2 Troubleshooting sourceinstall Installation

If you could not install GNU Source Installer, this is most likely because you do not have the required software in your system. In other cases, it could be a bug in the installation procedure.

For the -fullpack releases, it is most likely the second (the special -fullpack release is meant to install without dependency errors). If you need to report a bug that prevented the correct installation of a -fullpack, please provide all the files ending in .log and .err that are generated during the procedure.

If you are using a normal release, look at the output of ./configure, instead, and you will see if some needed programs have not been found on your system.

The most blocking thing is if you miss tcl, Tk or Expect: in this case ./configure will exit with an error, and make will not be able to run.

If this is your case, you will need to install tcl, tk and/or expect (or try the -fullpack release instead). If you have your OS installation disk(s), chances are that the software is available there, and is installable using the OS specific installation system.

Otherwise you should fetch and build the Tcl, Tk and Expect source packages. You can fetch Tcl and Tk from http://sourceforge.net/projects/tcl/, while Expect is available at http://expect.nist.gov/. They are a bit tricky to install, so if you cannot find your way out of them, you can always revert to the -fullpack release.

If you succeed in building a working Tcl/Tk/Expect environment, restart the procedure from ./configure and things should be better.

If you miss any of the other helper programs, only the particular functionality offered by that program will be missing (a WARNING will be shown).

This is a comprensive list of programs that GNU Source Installer uses, from the most important ones, to the really secondary:

- tcl interpreter tclsh with the Tk and Expect tcl packages, or in alternative the all-inone expectk interpreter.
- sh, cp, mv, rm, du, su, rmdir, find these should be part of every unix-like. You must have them for GNU Source Installer to work correctly.
- tar this is necessary to extract the source .tar archive in theory you could use GNU Source Installer without this, but in practice you will need it.
- gzip, gunzip these are necessary to uncompress .gz files and to compress the stored source using the quick and space-efficient .gz compression.
- bunzip2, bzip2 these are necessary to uncompress .bz2 files and to compress the stored source using the very space-efficient (but more time consuming) .bz2 compression. By default, the source is stored using this compression.
- ps this command is used to better detect other sourceinstall processes. GNU Source Installer also uses a lock file, so it is not really necessary.
- unzip, zip these deal with .zip files. It is very unlikely that you will find Free Software source packages available only in .zip format so you can ignore this. Also, you do not want to compress your source using zip. I found both .gz and .bz2 to be more efficient at least when dealing with source. Ignore warning if not present.
- compress this deals with .Z files. The gzip utilities are used to uncompress .Z packages, so you would only need this if for some arcane reason you want to store source in .Z format. Ignore warning if not present.

If you still have problems, you can write an email to the sourceinstall users mailing list bug-sourceinstall@gnu.org and ask for help. Something that can help a lot is reporting the full output of

#### \$ ./configure

Feedback of any sort is also welcome. Good luck, and I hope this helps:)

# 2 Introduction for the Experienced

Source Installer (sourceinstall) is a program that offers a graphical interface to source package configuration, installation, tracking and removal.

It is intended to work on modern Unix-like systems (with GNU/Linux as a primary target).

This is a tool intended for the user, not for developers: it has nothing to do with package creation.

The user installs new source packages by browsing the web, downloading a source package (in .tar.gz or other formats), and then feeding it to the source installer.

# 2.1 Why should you use this program?

If you already build most of the software on your system from source code, you might try sourceinstall as a way to centralize and better organize your interactive source installs. Here is what this software offers to the experienced user:

• a GUI,

the most visible feature of sourceinstall. The GUI interfaces with the command line tools, and displays information about installed packages and available actions and preferences.

Other programs can interface with GNU Source Installer at the executable level, by running sourceinstall PACKAGE\_NAME PACKAGE\_NAME ...

- tracking of all currently installed source packages, with info about install size, source size, and all files relevant to each package.
- automatic quick check for broken installs.

If a file associated with an installed package goes missing, then clicking on the package will prompt the problem, and mark the missing file with big warnings. If you can not solve the issue yourself by restoring the file, you can click "Reinstall" and get a fresh reinstallation.

• implicit check for reliable and gnu-conforming packages.

The program will issue warnings if the package offers only a very spartane build system, or does not correctly honor common Makefile targets and features.

• full debugging output.

A pseudo-console with all the output is provided, so you will be able to get notified of warnings and errors from ./configure, make, and all other programs.

• clean uninstallation.

The program performs crosschecks between make uninstall results and internal information available on individual packages (gathered during the install process). These checks can detect files left over by the make uninstall procedure, and if no other package claims them, they are suggested for removal.

• portability.

The program should work on most modern Unices. Even though great care has been taken as to use only very portable code in both the program and its build system,

something can slip by, even more since I (the author) do not have other machines than a trusted GNU/Linux box. Just report them: chances are, you will get the portability problem solved sooner than expected.

# 2.2 Why should you avoid this program?

The following is a critique against this tool, that shows what you lose, or do not gain in contrast to relying for example on the good old command line:

- you can lose time.
  - sourceinstall basically installs two times. The program makes a test installation first (if DESTDIR is supported), to make a final check and gather useful information. This has an impact on total installation time. It is a necessary overhead to avoid non-portable low level solutions. In addition, other phases you can sometimes skip when running the commands yourself will add up to the total installation time.
- it is not really scriptable.
  - sourceinstall can be called with filename parameters, but during installation dialogs can be popped up if decisions have to be taken. This is a tool thought for interactive use, so if total automation is your goal, sourceinstall is not for you. A non-interactive mode of operation could be hopefully added in the future.
- some packages might not work.
  - sourceinstall has to make some generalizations and will not be able to install difficult packages. An experienced user or developer can quickly go through a broken or sketched Makefile and fix things for his system, but sourceinstall can not. Also, packages which use different installation conventions (for example imake), do not work with sourceinstall. This program actively supports the autotools and the derived build system. If enough people use this tool, this could further drive developers towards the autotools and to create better packages in general.
- no package-level dependency tracking, no repository, nothing at all

  This is not a GNU/Linux distribution. If your package blocks during configuration, you
  still look at that error message in the pseudo-console and act consequently (generally
  this involves browsing for that missing file/package). This program does not interact
  with a repository of "installable" packages and dependencies.
- people who install everything from source might not give a damn.

  After widespread adoption, however, even less experienced users could be able to approach the source packages (and hopefully become more experienced with time).

# 3 Invoking

This chapter shows the options and parameters that sourceinstall accepts.

# 3.1 Synopsis

```
sourceinstall [-hV] [[SOURCE_PACKAGE], ...]
```

If called without any arguments, the program starts a graphical interface and waits user input to decide the action to perform.

# 3.2 Options

If called with the '-h', or long equivalent '--help' option, then no graphical interface will be started, and a help message with the available options will be displayed on standard output.

If called with the '-V', or long equivalent '--version' option, then no graphical interface will be started, and a version string message will be displayed on standard output.

If one or more 'SOURCE\_PACKAGE' parameters are specified, then all specified source packages/directories will be installed in the given order. The first install failure breaks the chain.

# 4 Usage for Beginners

# 4.1 The default setup

For beginners, a default setup known to work well for GNU Source Installer is the following:

- 1. GNU Source Installer is installed system-wide as the root user in a different prefix than your OS distribution. For example '/usr/local'.
- 2. You login normally as you always do with your user name, then start the GNU Source Installer using command sourceinstall. You do NOT login as root. At the appropriate times, during installation, you will be asked for the root password if necessary.
- 3. The default prefix in your preferences is '/usr/local', and thus you install your source packages in '/usr/local'
- 4. You are the only one on the system that installs source packages, and always do that logging in as the same user.
- 5. When you need to remove or upgrade sourceinstall, login as root and run the program. You will see GNU Source Installer listed in the root user's packages.

# 4.2 Looking for the right package

First of all, think about a software you want. It is highly probable that such a software package is available under a Free license somewhere.

You can search by simply using a web search engine.

Tip: add GPL or another Free license name to your search, so you are sure to find real Free Software, and not freeware, shareware or whatelse. You can also try the term "Open Source" (the Free Software movement generally despises the term, but it is less prone to sending you to a freeware or even commercial page than trying to enter "Free Software" in your engine).

You can choose another road, and use a Directory instead. Good places to start are the Free Software Directory and Savannah (home to the sourceinstall project development). Other good places to search are Freshmeat and Sourceforge, although you will find a lot of not really Free software there too.

Once you have found an interesting software, look for a SOURCE download (.tar.gz, .tar.bz2, ..) Proceed with the download, and mark where the file will be downloaded.

# 4.3 Adding a new source package

Once you have a new shiny source package, it is time to add it from the Source Installer. Run sourceinstall, then press the Add button.

In the Add dialog that appears, you can choose Browse to locate the package, and finally choose Ok to proceed. Let the other checkboxes be with their default values.

If everything runs smooth and the package has been built with the autotools, you will be presented with a configuration window, where all package options can be tweaked prior to installation.

If you have no idea about what those options mean, at least take a look at the option descriptions. You can then try 'Auto' to go on with the defaults.

The option '--prefix' will be highlighted. This is because it's a very useful and important option, that lets you specify where your install tree should start.

When you are satisfied with the options, choose 0k and wait for the software to be configured and compiled.

If no problems occur, you will be eventually asked for the root password (if needed), and then you will be informed about the result of the install operation.

# 4.4 Changing the Preferences

The default prefix to use for your installs can be changed, like other options, in the Preferences from the Edit menu, and it is initially set to '/usr/local'.

Here are the preferences you can change and their description:

"Default installation choices: Manual configuration, Install, Keep Source" These are the default values for the checkboxes when you trigger the Add action. Beginners should keep all those selected.

"Manual configuration" means that you will be able to see the software configuration window. It will get you aquainted with the common options supported by the packages, so it is recommended to keep this selected.

You can always choose Auto in the configuration window to stick with the defaults.

"Install" means that when you add new packages, they will be installed. Most beginners would want this.

"Keep Source" means that the configured source code is compressed, archived and stored for later use. This does waste some space, but ensures a cleaner uninstall process, and can provide a future easy reinstallation.

"Strip binaries (not recommended)": this option should be off. It can cause a lot of trouble if you don't know what you are doing. It involves removing symbolic information from the installed programs.

"Default install prefix": this is the default prefix to use when installing software packages. Programs and data will generally be installed in a subtree of the specified directory. The default value is '/usr/local' and is a good one for system-wide installs.

"Src compression": this is the compression format to use when archiving source packages. By default it is .bz2 (which provides very space-efficient compression), but if you have plenty of space in your disk and prefer quicker installs and uninstalls you can change it to .gz

# 4.5 Querying package information

Clicking on the package will show all available information on that package, and will activate the actions for the installed package: Remove and Reinstall. This will also trigger a quick check to ensure that the package has all its needed files in place.

# 4.6 Removing a package

To remove a package, select it from the list and click the Remove button. When you Remove a package, you can decide to uninstall the package but keep it in compressed source form. This way, should you decide to install again later, you have the already configured source, and only need to select it from the list and choose Install.

These instructions should get you started. Read on if you want to know more.

# 5 Usage for the Experienced

A package processed by sourceinstall can exist in three forms:

- 1. installed + archived configured source
- 2. installed only
- 3. archived configured source only

For example, if you are short on space, and you are installing a well-behaved package (you get no warning about DESTDIR not being honoured during installation), you can decide to remove the archived source (losing all the advantages though) to free up some space. Alternatively, you can avoid to store it in the first place when you perform the Add action.

On the countrary, you might think that you do not require a certain installed program right now, so you select the Remove action for that package, but remove only the installation and not the source, so you can quickly reinstall should you require the software again in the future. Your configuration will be preserved, you will not need to pass through the configuration window anymore if you were fine with the last installation.

# 5.1 Consistency checks

Another service that sourceinstall silently offers is a simple set of consistency checks for existing installations. Selecting a package from the list at any time will show all available information about the installed package, and a check will be performed to see if the install looks ok. If some of the files required by the program are missing, you will find a notice and all the missing files will be highlighted and marked with asterisks (\*). At this point you can correct the problem by restoring the missing files yourself (for example, you might have accidentally moved them for arcane reasons), or just perform a Reinstall action for the package. Additionally, during the uninstallation cross-checks between make uninstall results and internal package information, only independent files (that is, files that are not being claimed by other packages) are proposed for removal. This works better if you avoid installing non-conforming packages, because Source Installer will not be able to know which files a non-conforming package claims.

# 5.2 Conforming and non-conforming packages

It is recommended to install only conforming packages using Source Installer. Conforming packages offer a configure script that generates a Makefile, and the Makefile honors the common install targets and environment variables. Generally, packages built (correctly) with the GNU autotools result as conforming packages, and the autotools are also expecially supported: only configure scripts generated with autoconf get the nice configuration window. However, there are also other tools that developers can use which are capable of producing a configure script and a Makefile. Even hand-written configure scripts and Makefiles are ok, as long as they honor the install targets and the environment variables.

Conforming packages get better uninstallation, better checks, more information in the Package information window. A single non-conforming package can make uninstallation

checks degrade. This is because the program can not detect which files a non-conforming package claims.

For these reasons, you will be warned when attempting to install a non-conforming package.

# 5.3 Other package management systems

It is highy probable that you will have many different tools that provide package management. For example, if you are running a GNU/Linux distribution, you probably have your distribution-specific way to handle binary (or even source) packages. What I suggest here is to make a clean separation between your distribution-provided packages (along with any additional packages installed using your distribution-specific tools), and the source packages installed using the distribution-independent GNU Source Installer. One good way to obtain this, is to use different prefixes for each package management system you use. Suppose your distribution-handled packages are in '/usr', then your source packages managed by GNU Source Installer can be prefixed using '/usr/local' (this is the initial value). This way you ensure that file dependency checks are not tainted by other packages managed by other tools.

## 5.4 Users

GNU Source Installer configuration and packages always refer to the particular user that runs it. What follows is a list of possible setups.

As the first example, suppose user Pip wants to install his private packages. He chooses to install in '/home/pip/usr', at the same time allowing user Merlin to install his own packages in '/home/merlin/usr'. Of course, in this case no one steps on anybody's toes and everything runs smooth.

As the second example, user Merlin is the system administrator, and personally deals with all system-wide package installations. Thus, he logs in using his merlin account, then runs sourceinstall and uses the default prefix value, which is '/usr/local' to install new programs. When requested by the system, he is asked for the root password. This is ideal for one-user systems.

As a third example, suppose both Pip and Merlin deal with system administration. They get along well, and both deal with system-wide package installations. Thus, they decide to both install packages logging in using the privileged root account, and then install using sourceinstall. They will both see the same packages, because they are logging in as the same user (root). However, only one of the two admins will be able to install software at the exact same time, because to prevent corruption of package data each user is entitled to a single running instance of GNU Source Installer. When the program is already in use, sourceinstall refuses to start and explains the error.

As a last example, here's what not to do. Imagine both Pip and Merlin deal with system administration, like before, but since they don't read the docs, they login using their regular accounts, and perform installs using the default system-wide prefix, '/usr/local', providing the root password when needed. Even if they install at different times this is a bad thing to

do: they will not be aware of each other's moves, file dependency tracking will be far less precise, and uninstallation crosschecks will degrade.

## 5.5 Files and Directories

If you want to dwell on the internals of sourceinstall, this is an interesting chapter. We will look at all files and directories that together make sourceinstall work.

The sourceinstall executable is in fact a symbolic link to the implementation in use. For example:

```
$ ls -l /usr/bin/sourceinstall*
lrwxrwxrwx 1 root root 11 Jun 3 03:15 sourceinstall -> sourceinstall.tcl
-rwxr-xr-x 1 root root 87019 Jun 3 03:15 sourceinstall.tcl
```

Currently there is only a tcl implementation, but in the future this system will be used to make different implementations of sourceinstall coesist.

The per user configuration directory is another story:

each user that runs sourceinstall gets a .sourceinstall directory created in his HOME. This is for example a directory tree:

```
$ tree ~/.sourceinstall
/home/claudio/.sourceinstall
|-- build
|-- install-destdir
|-- packages
| |-- a-renet-1.1.0rc5
| |-- cmdftp-0.9.2
| '-- libmikmod-3.2.0-beta2
|-- src
| |-- a-renet-1.1.0rc5.tar.bz2
| |-- cmdftp-0.9.2.tar.bz2
| '-- libmikmod-3.2.0-beta2.tar.bz2
'-- sourceinstallrc
```

If sourceinstall were running, you would see another file, '~/.sourceinstall/.sourceinstall\_lock', containing the process id of the running sourceinstall process.

In this case there are only three packages installed. Each package has a file name entry with the same name in the 'packages' directory. That file contains all information on that package.

The source for all three packaged has been archived in the 'src' directory.

The 'install-destdir' directory is used during the test installation, and then it is cleared.

The 'build' directory is used only while building packages, and then it is cleared.

Do not store anything in these directories yourself, because they will be regularily emptied.

The 'sourceinstallrc' file contains the current user preferences. These are the same options that can be tweaked from the Preferences in the Edit Menu.

Chapter 6: FAQ

# 6 FAQ

This is a small section in which I try to address the common questions I have gathered until now, in no particular order.

1. Q: Why doesn't sourceinstall use Checkinstall?

A: Checkinstall is a nice program that tracks a source installation using Installwatch, which is Copyright 1998 by Pancrazio 'Ezio' de Mauro, and is now part of the Checkinstall distribution. Installwatch is a low-level tool that intercepts calls to file functions in the dynamically linked glibc that alter the file system during 'make install' (or another installation command). Then, Checkinstall builds binary Slackware, RPM or Debian packages based on that information.

Now I find that the DESTDIR and INSTALL\_ROOT (its old, deprecated replacement) way used in sourceinstall is more clean and portable (although slower) than the low level installwatch approach, and is an incentive for developers to correctly support DESTDIR in their custom Makefiles or in their automake hooks. sourceinstall detects if the build system supports DESTDIR or the old INSTALL\_ROOT variables, and uses them for the installation tracking.

As for GNU/Linux distribution-specific binary package building features, GNU Source Installer is again an OS neutral program, so it is not its job to build them. However, a functionality to build simple, neutral binary packages in the form of a tarball archive will arrive soon, along with other, possibly more interesting "export" functions. From that package, it should be straightforward to build your desired distribution-specific package.

- 2. Q: Does sourceinstall build [:your format:] binary packages?
  - A: (see question above) No, but there are plans for the near future to be able to export a simple tarball containing the installed binaries.
- 3. Q: There's Gentoo and Portage already. Isn't sourceinstall pointless?
  - A: Surprisingly, I got many (well some) private mails stating that there's already the Gentoo GNU/Linux distribution and its Portage system, so sourceinstall was supposedly pointless. Again, this software is an installer for source packages, targeted at modern Unix systems (these include, but do not end with GNU/Linux). Of course, sourceinstall is not a GNU/Linux distribution and not a package repository.
- 4. Q: Why are you using Tk? Why don't you use gtk | Qt | [:yourtoolkit:]?
  - A: I do not have any real preference of one toolkit over another. They can all get the job done. However I really wished to use the GNU ToolKit at the beginning (gtk), because it's the GNU ToolKit (talk about tautology). There is one problem: dependencies and dependencies' size. I wanted to provide something that you could install from a bare-bones Unix + X11 system requiring nothing else. With the current tcl/tk/expect implementation I can provide, in 7 MB, a fullpack alternative shell-archive release of sourceinstall, which includes and autobuilds all its dependencies if necessary. The same thing would not be possible with gtk, which is bigger and less straightforward to autobuild.
- 5. Q: Why are you using Tcl? Why don't you use [:yourlanghere:]?
  - A: Tcl seemed the natural choice having to deal with both Tk and Expect, and it offered simpler Unix portability.

Chapter 6: FAQ 15

6. Q: I do not care about cross Unix portability, dependencies, building the whole system from scratch or anything like this. Is there an alternative, specific for my already working GNU/Linux desktop system?

A: There are these project I have been made aware of:

Kconfigure, QT based, for KDE: http://kconfigure.sourceforge.net/ Easinstaller, Ruby and Fox based: http://easinstaller.sourceforge.net/ GPaco, Gtk based, for GNU/Linux and Solaris: http://paco.sourceforge.net/

- 7. Q: The manual is not comprensive enough! It does not say anything about [:X:]
  A: The project is still very young, as is the documentation. It will be a lot better; you can speed up things by reporting what exactly is missing.
- 8. Q: This program does not deal with dependencies at all!

  A: This manual will be integrated with a detailed explanation on how to deal with dependencies. With some patience, I think almost everyone can learn to live with them.
- 9. Q: I have an older version of sourceinstall, how do I upgrade to the current version? A: Starting from sourceinstall-0.4, this has been made easier. Just download the regular new version (for example, sourceinstall-0.5.tar.gz), then run sourceinstall, and choose "Add"; select that new sourceinstall package (sourceinstall-0.5.tar.gz), and confirm with Ok. All your installed packages and preferences will not be harmed.
- 10. Q: I want to contribute to the project in some way, where do I start?

A: Start with the Bugs and Task list in the Savannah sourceinstall project page: http://savannah.gnu.org/projects/sourceinstall/. Even if you are not a programmer, the task list can contain very relevant work that does not involve programming or reading code at all.

If you have an interesting idea to share, by all means do so. You can contact the mailing list bug-sourceinstall@gnu.org, or if you prefer you can contact the author directly at claudio@gnu.org. As long as your mail is polite enough, you will not be judged by me in any way by the ideas you express, even if I do not agree with you.

11. Q: I want to join the project! Please add me to the project members list.

A: Great, but please do something for the project. If you make regular contributions, you will be added to the sourceinstall project.

# 7 Reporting Bugs

Email bug reports to bug-sourceinstall@gnu.org, trying to be as clear and precise as possible. This means that you should provide all useful information that could help to identify the problem, and a detailed way to reproduce it. A good starting point is to specify your OS name and version. If you have no idea about what OS you have, try:

\$ uname -a

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\$ ./configure

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Concept Index 31

# Concept Index

This is a general index of all issues discussed in this manual, with the exception of the sourceinstall commands and command-line options.

A	$\mathbf N$
Adding a new source package 8	no warranty
В	O
Bugs, reporting	Options
$\mathbf{C}$	Q
Changing the Preferences	Querying package information 9
Consistency checks	R
	Removing a package
F	C
FDL, GNU Free Documentation License	Synopsis
Thes and Directories	Synopsis
G	${f T}$
GPL, GNU General Public License	The default setup
I	TT
Installing the Installer	U
Introduction for Beginners	Usage for Beginners
Introduction for the Experienced	Users
	$\mathbf{W}$
L	Why should you avoid this program? 6
Looking for the right package 8	Why should you use this program? 5

Index 32

# $\mathbf{Index}$

This is an alphabetical list of all sourceinstall commands, command-line options, and environment variables.

help 7	-h
version 7	-V

# Table of Contents

1	Intro	oduction for Beginners	1
	1.1	Installing the Installer	. 1
	1.2	Troubleshooting sourceinstall Installation	
2	Intro	oduction for the Experienced	5
	2.1	Why should you use this program?	. 5
	2.2	Why should you avoid this program?	
3	Invo	oking	7
	3.1	Synopsis	. 7
	3.2	Options	
4	Usag	ge for Beginners	8
	4.1	The default setup	
	4.2	Looking for the right package	
	4.3	Adding a new source package	
	4.4	Changing the Preferences	. 9
	4.5	Querying package information	. 9
	4.6	Removing a package	. 9
5	Usaş	ge for the Experienced	11
	5.1	Consistency checks	11
	5.2	Conforming and non-conforming packages	11
	5.3	Other package management systems	
	5.4	Users	
	5.5	Files and Directories	13
6	FAQ	<b>)</b>	14
7	Rep	orting Bugs	16
8	Cop	ying	<b>17</b>
	8.1	GNU General Public License	18
	Pres	amble	
		RMS AND CONDITIONS FOR COPYING, DISTRIBUTION	
		AND MODIFICATION	
	Hov	v to Apply These Terms to Your New Programs	
	8.2		
	VD.	DENDUM: How to use this License for your documents	20

Concept Index	<b>31</b>
Index	32