Dr. Linux

Help Is On for Woody

During a Woody installation I only specified my CD as a package source. How can I tell **APT** to additionally use sources on the Internet? I also answered "no" when prompted to specify if I wanted automatic security updates, and I suspect that might not have been such a good idea. Is there any way of selecting that option now?

Dr. Linux: Of course you can! Debian experts simply edit the */etc/apt/ sources.list* file to do so. You will need superuser privileges. Newcomers to Debian might like to try the *apt-setup* tool first, instead of tackling the file syntax (Box 1).

You can then issue the *apt-get update* command to ensure that the descriptions of the Debian packages in the local package source are written to a local database and can be accessed offline. If your data sources include directories on servers that you access on the Web, you will need to be online to synchronize your data.

The format for the data sources in */etc/apt/sources.list* is as follows:

Ever since Woody, aka Debian GNU/Linux 3.0, hit the scene, users have started turning to the flagship amongst the free distributions. Dr. Linux helps you get over some initial obstacles. **BY MARIANNE WACHHOLZ**

```
Type URI Distribution ⮒
[Category1] [Category2] [...]
```

- Type specifies the package type: If this column contains the deb keyword, the source contains pre-compiled Debian packages. deb-src refers to source code packages.
- The URI ("Uniform Resource Identifier") identifies the actual data source, where the packages can be retrieved. This section will include entries such as ftp://ftp.uk.debian.org/debian/ or http://non-us.debian.org/. The manpage for sources.list shows additional options. Although it might be simple enough to edit the entries for Internet servers manually, you might prefer to use the apt-cdrom tool (or apt-setup) when adding CD ROM sources.
- The Distribution entry allows you to specify the Debian version you want to install: stable is the keyword for the current stable version, and unstable will install the current developer version. testing allows you to install a large proportion of the packages in the developer version, but omits anything that is really unstable. If you prefer to do so, you can alternatively type the name of the Debian issue, such as woody for the stable version 3.0, sarge for the current testing version or sid for the developer version.
- Each line ends with the package Category from which you want to add

software to your database. The categories include main, contrib, non-free and non-US. Multiple entries can be separated by space characters.

A complete source file description could appear as follows:

```
deb ftp://ftp.uk.debian.org/⮒
debian/ stable main
```

When editing these resources manually, avoid new lines within entries and space characters at the beginning of new lines, otherwise APT will reject the file and display an error message.

If you negated the prompt for automatic updates from http://security.debian.org/ *stable/updates main* during the installation, the corresponding entry is **commented out** of */etc/apt/sources.list*. Remove the comment character *#* at the beginning of the line and possibly add additional software categories (such as *contrib* and *non-free*) if you additionally require security updates for these categories.

Incidentally, the *apt-get update* command (Listing 1) is not only useful after changing your installation sources, but can be used to update your local package version list. It makes sense to perform this task regularly, if you have added Internet based servers to your *sources.list*.

Be careful not to confuse this command with *apt-get upgrade*! This

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Dr. Linux

Complicated organisms, which is just what Linux systems are, have some little complaints all of their own. Dr. Linux observes the patients in the Linux newsgroups, issues prescriptions here for the latest problems and proposes alternative healing methods.

Listing 1: Updating the local package database

```
woody:/# apt-get update
Get:1 http://security.debian.org stable/updates/main Packages [55.1kB]
Get:2 http://security.debian.org stable/updates/main Release [110B]
Fetched 9203B in 1s (4620B/s)
Reading Package Lists... Done
Building Dependency Tree... Done
```

Figure 1: Selecting a server in apt-setup

Figure 2: What language do you want your system to speak?

command is used to update your Debian installation and will download security updates and updated packages before installing them on top of the version you have already installed. Of course, this requires an up-to-date package database.

Local Flavor

The error message shown in Listing 2 has been driving me mad! Can you tell me the right way to set these variables?

Dr. Linux: The *locales* package is the source of this issue. It contains files and tools that support non-US language environments. If this has not yet been installed, ensure that you are *root* and simply issue the following command

```
apt-get install locales
```

If the package has already been installed on your system, it might simply have "forgotten" your settings during the installation or an upgrade, i.e. the **Locale Variables** may not have been set. Fortunately, the *dpkg-reconfigure* tool allows you to reconfigure your packages. Simply pass the name of the package as a parameter:

```
dpkg-reconfigure locales
```

First, select the languages and character sets you require on you system (Figure 2). The seemingly cryptic abbreviations (such as *en_IE@euro ISO-8859-15*) are in

fact quite easy to decipher. Of course it helps if you know that the language comes first (such as *en* for "English"), followed by the regional variant (*IE* for "*I*reland"), and finally the character set (*ISO-8859-15*). *@euro* indicates the "Euro character", as this symbol is not part of traditional character sets.

The system administrator can then define a default language for the system (Figure 3). You will want to keep the default setting *C*: this will ensure that your system speaks English and avoid weird side-effects when running scripts. Of course, a multiuser system such as Linux can provide non-English speakers with individual language settings in the command line, if required.

After responding to the *dpkg-reconfigure* prompts, the tool will switch back to the command line and tell you that it is generating the "locales" you specified:

```
Generating locales...
   fr_BE.ISO-8859-15@euro... done
   fr_BE.ISO-8859-1... done
Generation complete.
```

Listing 2: Trouble with locales

```
perl: warning: Setting locale failed.
perl: warning: Please check that your locale settings:
        LANGUAGE = (unset),
        LC_ALL = (unset),
        LANG = "fr_BE@euro"
    are supported and installed on your system.
perl: warning: Falling back to the standard locale ("C").
```

GLOSSARY

APT: *The "Advanced Package Tool" is a collection of package management tools for Debian [1]. The package management system allows you to install and remove software packages for Debian – either online or offline, depending on the configuration. You can also perform an upgrade to a different version of the distribution.*
main: *All the packages in this category are available for free distribution; the source code is available. As the name would suggest, main comprises the bulk of the Debian distribution.*

contrib: *This category comprises packages that are free themselves, but require libraries or other programs that are subject to licensing restrictions at runtime.*
non-free: *Conditions may apply to the use of non-free packages, some authors restrict the distribution of their work by CD or require some kind of payment.*
non-US: *This category does not refer to the language base of the package, but to export restrictions for US software. If non-US use of a package is either prohibited or restricted (normally due to it using strong encryption,*

such as SSH or PGP), the package will be made available on a separate (normally European) server.
Comment out: *Scripts and many configuration files allow you to skip lines when parsing a file by prepending the # character at the start of the line. Thus, any lines marked in this way can be used to add comments to a file without affecting its functionality. This additional information is human-readable, but will be ignored on parsing. Adding a comment character to a file is referred to as "commenting out".*
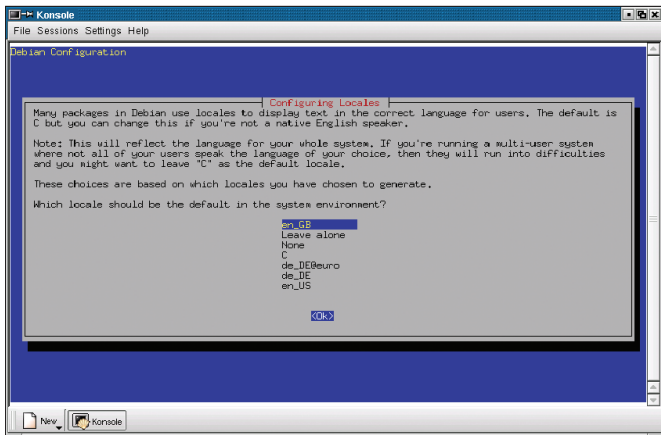
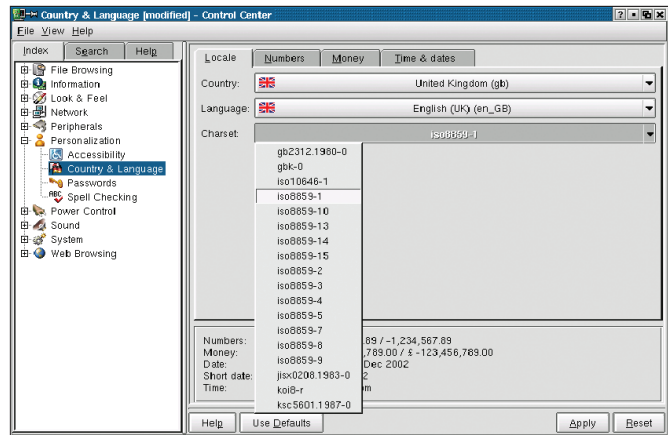Figure 3: Selecting the default locale for the whole system

Figure 5: KDE Control Center language selection

To find out exactly what locales you generated, you might like to take a look at the */etc/locale.gen* file. Incidentally, you can complete the whole procedure manually without using *dpkg-reconfigure*. To do so edit */etc/locale.gen* before running the *locale-gen* command.

Foreign Language Support

My last Linux distribution displayed non-English screen output. Can I get Woody to do this?

Dr. Linux: Provided the superuser has installed the *language-env* package, users can invoke the *set-language-env* command to specify support for their own language environment (Figure 4). The tool prompts the user for a few settings and uses the responses to define a series of personal configuration files. The user will need to log off and back on to apply the changes.

set-language-env additionally supports the system and provides a few hints on the packages that *root* should additionally install to support non-English language users:

```
You should additionally install⇗
the following packages:
xfonts-base-transcoded, xfonts⇗
-100dpi-transcoded, xfonts⇗
-75dpi-transcoded
Press [Enter] to quit ⇗
the program.
```

Without the packages suggested in this example, desktops or programs will not
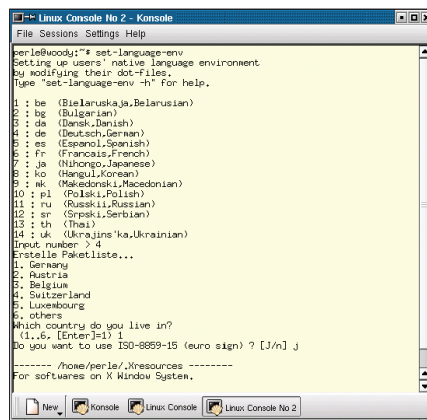
Figure 4: set-language-env prompts the user to specify an output language

have fonts to support the characters displayed by the ISO 8859-15 character set – this will lead to weird replacements for the Euro character, for example. Figure 5 shows the options you have after installing these fonts in the KDE control center.

Talk to me, KDE!

After installing Woody I discovered that KDE refused to talk to me in my own language, which happens to be French. I just don't believe it!

Dr. Linux: The KDE control center needs the appropriate language package in order to support a specific language. If the packages was not installed automatically, or selected manually, during the initial installation procedure, you will need to install it now. The Debian packages are called *kde-i18n-xy*, where *xy* refers to the language (*fr* for "*Fr*ench" and so on). So, if I want KDE to talk French to me, I need to log on as *root* and install the *kde-i18n-fr* package. As the saying goes "We have ways of making the control center talk" (Figure 5). ■

Box 1: apt-setup

The superuser command *apt-setup* (Figure 2) provides a pseudo-graphical interface for configuring */etc/apt/sources.list*. Five menu items are available: *cdrom* allows you to specify any new CD sets you may have acquired as an installation source. If sufficient bandwidth is available, you might instead or additionally prefer to specify web (*http*) or FTP (*ftp*) servers on the Internet. Use the *Filesystem* option to add update sources in your own file system (such as CD images). Finally, the menu item *Edit Source List Manually* allows you to manipulate the contents of *sources.list* by hand using a text editor (this defaults to *vi*).

If you decide to access an FTP server for the update, *apt-setup* will prompt you to specify if you are interested in packages from the *non-free* and *contrib* categories. The first time you select the *ftp* menu item, you also need to select the country where you will be accessing the machine. If possible, try to select the nearest possible server, for example *United Kingdom*. Then decide what mirror will be default within this country (Figure 2); you can then specify additional FTP servers.

If you have not yet used the automatic security updates provided by *http://security.debian.org/*, you can start doing so by confirming when prompted at the end of the *apt-setup* procedure.

GLOSSARY

Locale Variables: *These variables specify regional settings that program output should adhere to. They define the language used for system messages, the character set used by the display, the time, date, numeric, and currency formats. Programs must be capable of reacting to these settings if they are to support multiple countries and regions.*

INFO

[1] Martin Loschwitz: "Packman", Linux Magazine, Issue 23, p49