Help and resources

Switching to another operating system is no easy task, but before you shout "Heeeeeeeeeeelp!", read this...

FOR MOST people, the hardest part of installing Linux is stepping out of their comfort zone and trying new things. If it were just a matter of learning a new office suite the problem would be small enough to cope with, but Linux gives you a new web browser, a new desktop environment, a new filesystem and a new configuration panel – in short, it's faster to count the things that have stayed the same than the things that have changed. It's because of all these changes that lots of people install Linux with the best intentions then find themselves frustrated and upset two weeks later, ready to reformat their hard disks and install Windows.

We don't want that to happen, naturally. Linux is as easy as Windows once you get over the initial differences, and as long as you know where to find help we think you'll be a pro in no time. Because Linux is a much larger and more complex system than Windows, if you want to learn all of it the key to understanding lies not in knowing it all yourself but knowing where to look.

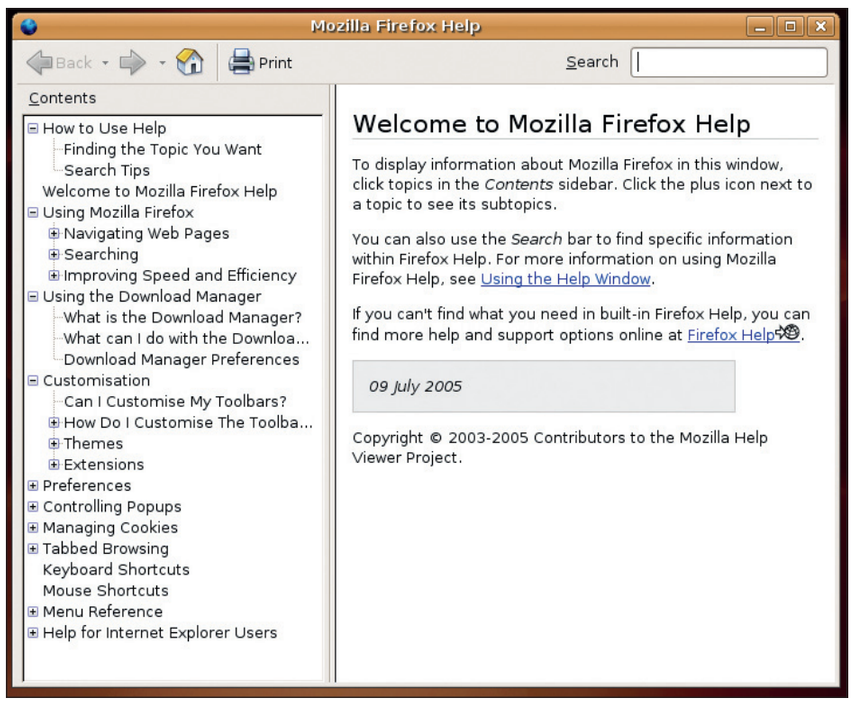
If you have a question, work your way through this list of possible resources, trying each one until you get the answer you need. Good luck!

HELP, I NEED SOMEBODY!

Linux is packed with documentation of all types; you just have to know where to look for it. Help files can be broadly split into two types – command line and GUI – but there is some crossover between them. The most basic help system is the manual page (usually called man page), which is a plain text system designed for command-line use. To try this out, open up a terminal window and type **man ls** to bring up the manual page for the *ls* command. You might think that *ls* is quite a simple command, but as you will see from the manual page it has many options that let you format and filter the output.

You can also view manual pages using *Konqueror*, the KDE web browser, by typing 'man:/' in the location bar, followed by the manual page you're interested in. For example, loading **man:/ls** would bring up the same *ls* manual page as before, but this time it would be formatted nicely for viewing in a graphical environment.

A step up from man pages are info pages, which are man pages with hyperlinks inside. This is useful for complex topics, such as how to use *bash*. Accessing an info page is much the same as



The *Firefox* help system is hugely comprehensive and contains hints and tips about every aspect of the program. If you don't find what you're looking for here, search the web.

accessing a man page: just type **info yourtopic** at the command line and you will load up the index page. If your documentation has more than one page, use the cursor keys to highlight a link to jump to, and press Enter to browse to it. You can also use the N key to flip to the next page, the P key to flip back to the previous page and U to go up a level.

As with man pages, you can view info pages inside *Konqueror* by using the protocol **info:/**. For example **info:/bash** would load the *bash* info page nicely formatted inside *Konqueror*. This has the added benefit that you can just click links to read topics rather than memorise keypresses.

If there's a particular command you're interested in, chances are it will have a special **--help** switch that prints out usage information. This is nearly always just a list of all the parameters you can use with a command, but because certain commands accept many parameters the output from this can be quite long. For example, **ls --help** lists all the ways you can use the *ls* command, which happens to be about three screens of information. To solve this problem, pipe the output through the *less* command by using | **less**, eg **ls --help** | **less** or **cd --help** | **less**. The pipe key, |, is usually Shift+\, but this depends on your keyboard.

For graphical user interface programs, which account for the majority of programs on Linux, there is usually a Help menu where you can get started. More often than not, pressing F1 on your keyboard will bring up the program help. If not, or if there is no Help menu for some reason, you can try looking in Gnome Help. Thankfully, this is easy to find: just look under the Help icon in the System menu on the desktop (spot the heartily nautical life belt), or you can run it manually by running the program **gnome-help**. This contains links to all the help files inside Gnome, along with shortcuts to the Unix man and info pages.

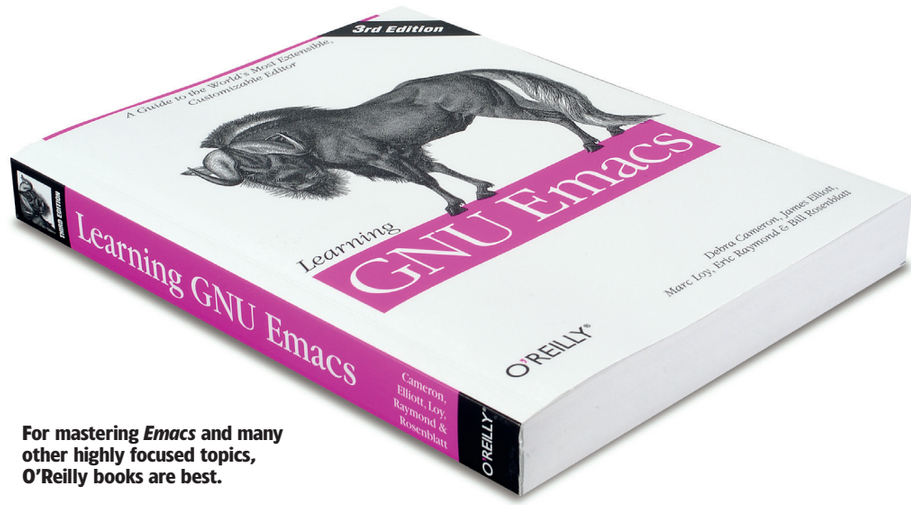
READING TREEWARE

Although there are thousands of documentation writers out there, help files generally serve as reference guides for a given program – they aren't very easy to use if you want to *learn* something from scratch. If this is your goal, your best bet is to either read magazines or buy books. This special edition of *Linux Format* contains 100 pages or so of tutorial content on a wide variety of topics, but we print a magazine every month that usually contains 20 or more pages of tutorials to help you get more from Linux, along with subject introductions, interviews, product and distro reviews, and features. The advantage to reading the monthly editions is that you can slowly build up your collection, following tutorial series that interest you, and over time you'll find yourself the master of your new Linux box.

Aside from *Linux Format*, several other magazines regularly print Linux tutorials, guides and news stories that the fledgling Linux user is likely to find interesting. *PC Plus* prints at least one Linux tutorial each month, along with a great selection of news and reviews. For a less experienced audience, *PC Answers* prints beginners' tutorials, as does *PC Format* magazine.

If you're looking for more immediate coverage of a specific topic, then it's time to invest in a book or two. There are four major book publishers that sell books on Linux:

- **Apress** sells technical books for technical readers that cover a wide range of highly niche topics. This is not necessarily a bad thing – in fact, Apress has made quite a name for itself in finding new markets. Unless you're already a well-seasoned veteran, Apress books probably aren't the best choice.
www.apress.com
- **O'Reilly** mainly sells highly technical books on niche topics, such as how to build your own compiler, how to master *Emacs* and how to program PHP. If you want accurate, well-written books on a single Linux topic, O'Reilly is simply unbeatable.
www.oreilly.com
- **Sams** sells books primarily aimed at newcomers to Linux. It prints *Ubuntu Unleashed* and the Teach Yourself series, as well as more complex books such as *Advanced Unix Programming*. If you're looking to move from absolute beginner to intermediate level, look for Sams books.
www.samspublishing.com
- **Wiley** sells a mix of intermediate and very technical books, primarily aimed at existing users who want to know more. Wiley publishes the Bible series, aimed at more experienced users, and the Dummies series, which is aimed at people who have little experience with computers, Linux or otherwise.
www.wiley.com



For mastering *Emacs* and many other highly focused topics, O'Reilly books are best.

> "If you've read all you can and are still drawing a blank, it's time to reach out to the community and ask for help."

The cost of an average 'small' Linux book that covers a single topic is usually around £15 from an online book store, and that rises to about £25 for a 'cover everything' book that can teach you a lot more. What you choose really depends on how much you want to learn, and most people find a mix of books and magazines satisfies their craving for knowledge.

GETTING IN TOUCH

If you've read the documentation, checked with magazines and books and are still drawing a blank, it's time to reach out to other members of the open source community and ask for help.

Very few people are naturally good at asking for help online – most of us ask the teenage kid next door, the son-in-law, or someone else stereotypically well-trained in the secrets of computers. It's a shame, as the open source community is a great place to get answers to your questions.

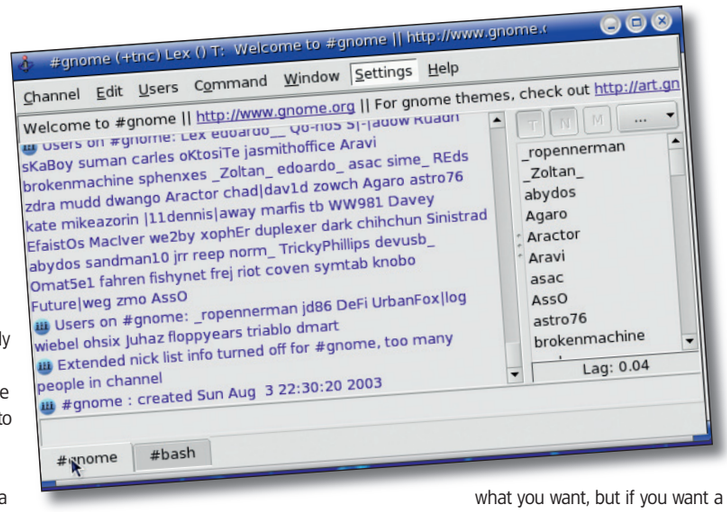
But it's important to remember that these people in the community aren't paid to help, they aren't trained to help and they aren't related to you: any help they offer comes from goodwill, so it's

COMMERCIAL SUPPORT

If you buy your copy of Linux you may be entitled to technical support from the distro maker. Most versions of Linux are free (or cost only a little, to pay for media and shipping), and therefore don't come with technical support. However, some distros offer a few months of telephone support, and business-targeted distros (such as Red Hat Enterprise Linux, Mandriva Corporate Server and SUSE Linux Enterprise Server) come with at least one year of technical support. Commercial support is the fastest, easiest and most precise way to get answers to your questions. If you are looking to deploy Linux on mission-critical systems, purchasing a maintenance contract is a vital addition – you can get four-hour priority turnaround, level 3 support (where the kernel developers themselves are assigned to fixing your problem), easy maintenance and more by using an enterprise distro.

important you do your best to be nice to them. If you want to ask a question, follow these seven simple guidelines and you'll give yourself the best chance of it being answered:

1. Read the manuals first, and if that fails, search the web. If your question has a very obvious answer that you could have found in the man page or by running the most basic query on Google, you can expect the rather abrupt answers "RTFM" (Read The Fine Manual) or "STFW" (Search The Flipping Web). These are meant to be a little insulting, as the person clearly thinks you haven't actually tried to answer the question yourself. Keep in mind that a lot of these people are naturally very blunt, and don't mean to hurt your feelings.
2. Don't ask to ask your question, just ask. That is, rather than saying, "Is this the right place to ask a question about Perl?", just go ahead and ask the question. If you're in the wrong place, you will be told.
3. If your question starts with "can I...?" it's probably best you don't continue. If you want to know whether something is possible, the answer is "try it". If it doesn't work, then either it isn't possible (in which case you've saved everyone's time) or if it is possible at least you can show some effort on your behalf when asking the question.
4. Don't force people to prise information out of you like a clam. Let them know your problem, what software you're using, what you expect to happen and what has actually happened. If you're running an unusual Linux distro or a very old computer, say so. If the problem only appears now and then, say so. No one can help you if you simply say "KDE crashes" – they need to know whether you compiled KDE yourself, what made it crash, whether it crashes by itself or whether you clicked a button, and so on. It's also very helpful if you can tell people what manual pages you have read and what search results you got when you tried looking up your problem on Google.
5. Be grateful when they help, and grateful if they can't. If you're writing an email to a mailing list, "thanks in advance" goes a long way to showing that you're a polite person.
6. If you get an answer you don't understand, go back to Step 1 by looking up the parts that confuse you, both in the manual pages and on Google. Usually you'll be fine, but if not it's OK to ask for clarification – as long as you can show that you have done your homework.
7. If you don't get an answer, the people you are asking may not know it. In this case, it's pointless to ask again and again until someone responds with an angry comment; instead, take your question elsewhere.



IRC is a good place to find experts waiting to help with your questions, but it's best to go online after 5pm New York time so that everyone is awake and talking.

Now you know how to ask questions, it's time to look at where to ask them. There are three places you can usually find help: message boards, mailing lists and IRC.

AMATEUR EXPERTS

Message boards – often called forums – are websites where you post questions for others to respond. Usually you will be asked to register first, primarily to discourage troublemakers. More often than not you will get responses back from several people, sometimes providing complementary answers but sometimes offering different solutions to your problem. The *Linux Format* forums (at **www.linuxformat.co.uk**) are full of people who are capable of answering questions of all types, including real beginner problems. Another great site is **www.linuxquestions.org**, which also has a number of people ready to help at all difficulty levels.

Usually it takes about a day to get sufficient response to your question that you'll be able to do what you want, but if you want a more immediate answer you can try Internet Relay Chat (IRC). This is an interactive text chat environment where you can join 'channels' of users who focus on specific topics, ask questions and get immediate answers. However, getting the best answers from IRC requires a bit of thought as to which IRC network to connect to (there are several, and usually have overlapping channel content), and also the time of your connection. IRC networks are large groups of interconnected servers that allow people to connect to a chat server near them.

There are also several different network groups, such as Dalnet, Efnet, Freenode, Undernet and more. Of them all, Efnet is usually the best place to check for general questions, but it's also one of the hardest networks to connect to because its servers frequently go down. Freenode hosts a number of official IRC channels for various Linux projects, such as #KDE, #Gnome, #WineHQ and #Bash, but with all of these networks your best bet is just to take a guess at the name of the channel, such as #linux, #linuxhelp or #php.

The last place to look is on mailing lists. These are project-specific group emails where you can email your question to the group and have them answer it. Mailing lists are somewhat tricky to use, because they invariably have very rigid guidelines (be sure that you're not sending your email in HTML format!), and you often need to subscribe to the mailing list to get an answer back. Subscribing is

> "If you are using a laptop and have a question, the best thing you can do is take it to your local Linux user group."

IF ALL ELSE FAILS...

If you've tried the forums, tried IRC, called your commercial support line, searched the web, read the manual, bought the O'Reilly book and still have problems, clearly it's something quite serious! When you get to this dire state, there is still one option left open to you: write in to *Linux Format*. Each issue we print (and solve!) the trickiest of reader questions to guide readers through installation, configuration and maintenance of their Linux computers. Our team of experts tackle all sorts of questions, such as how to install modems, how to configure your mail server and how to set up a secure virtual private network to communicate from home to office. If you have a general Linux question, drop us a line at lxf.answers@futurenet.co.uk. If your question is specifically about system administrations (databases, web servers, and so on), then email sysadminqa@rackspace.co.uk to ask your question direct to our on-hand expert from Rackspace. All the same tips for asking questions on IRC and message board apply here: the more information you provide, the more easily we can help you solve your problem.

HOWTO... REPORT A BUG

No software is perfect, even if it is open source. Sometimes a coding error can cause problems, or sometimes you manage to find something the developers hadn't thought of that causes a program to crash. But we cannot say enough times that the chances of you finding a legitimate bug are exceedingly small: some of the Linux software has been in continuous development for more than 20 years, tested by time and hundreds of thousands of people again and again until any bugs that remain are exceedingly obscure.

That said, if you think you have found a bug you should do the right thing and try to report it – hopefully someone will look into it and be able to fix it for others. If it is determined that the bug isn't real, at least you tried.

The first thing to do if you think you've found a bug is to figure out how to reproduce it as simply as possible. If you can get *Firefox* to crash on a given site every single time, that's great; if you need to go to several sites in sequence, press a certain key combination, hold down Ctrl+Alt+Shift and sing the part of Susanna from the *Marriage of Figaro* the chances are the developers won't be able to help you.

If you can't write documentation or code, you can still help out by submitting helpful bug reports.

Once you have a reproducible test case, discuss it with others on IRC, mailing lists, message boards or wherever you feel appropriate. It is important that others be able to verify the bug so that you know it's not a problem with your configuration.

Finally, once others have verified your bug and you have made the test case as simple as possible, it's time to submit it to the developers. Most open source projects have an obvious way to submit bugs, such as http://bugzilla.mozilla.org for *Mozilla* and *Firefox* and http://bugs.php.net for PHP. Once you are on there, search for bugs like yours to make sure someone hasn't submitted it already. If you pass that final test, submit your bug. Let the developers know what software and hardware you are using, what you tried to do, what you expected to happen, what actually happened and which other people if any have verified the bug. Be sure to include your email address so that the developers can get in touch with you if needed.

Congratulations: you just contributed to the open source movement!

usually easy, but it means you can expect to receive everyone else's questions and answers along with your own. If there is a Digest option, we recommend you use it. This will group all the emails together and send them *en masse*, either once a day or once a week depending on how popular the list is. You should be aware that many lists – particularly the general user lists – are extremely popular, and may receive thousands of messages each day.

Many mailing lists actually have archives of their emails stored online, which you can search for questions similar to yours. Unless you're encountering a real corner case that no one has come across before the chances are that someone will have already solved a similar problem.

FACE-TO-FACE HELP

Everything covered so far has been possible without leaving your computer chair. You can subscribe to *Linux Format*, you can buy books from Amazon, send email, all without really lifting a finger. Now it's time to go outside and greet the wider world by visiting a Linux user group (LUG). These are independent groups of Linux users that meet up in universities and pubs across the world to chat about open source software, offer training and exchange ideas. If you are using a laptop and have a question, the absolute best thing you can do is take that laptop to your local LUG and ask them to have a look – you can almost be guaranteed they will be happy to help solve your problem there and then.

Many towns and cities in the world have their own LUG – the UK alone has more than 80 at the time of writing (see *Linux Format* for locations) – and you can find a good list at **www.linux.org/groups**. If you're based in the UK, there's a better list of UK LUGs available at **www.lug.org.uk**.

Each issue of *Linux Format* prints a full list of Linux user groups around the UK and links to meetings worldwide.