Common Linux problems – solved!

Stumped? Read on to see if your system or software question has been answered.
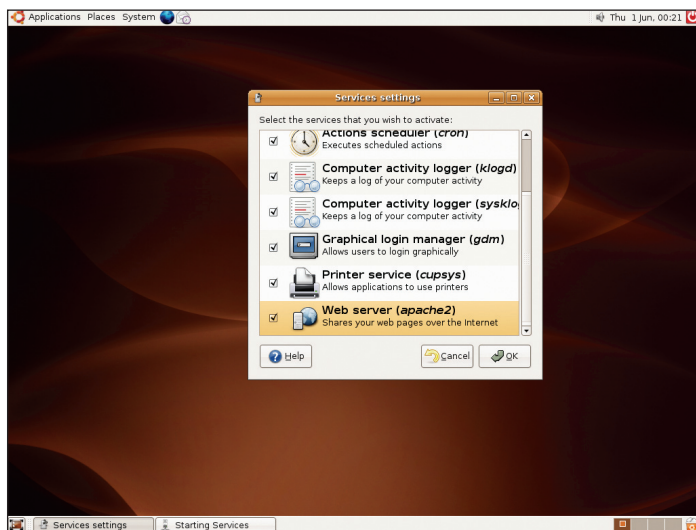
Unwanted services

Q **When I first installed the Ubuntu software, I wanted to try out everything and installed all sorts of things I wasn't familiar with. Some of these programs were internet services like web servers and stuff. How can I uninstall them or turn them off?**
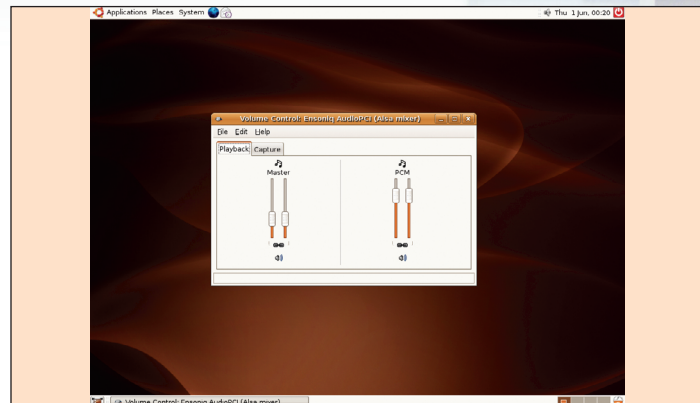
A Fortunately, you don't need to uninstall the software to turn services like these on or off. Linux uses a system of scripts and runlevels to determine which

applications get started when you turn on the computer. It's a fairly simple process to turn these off using the configuration tools provided with Ubuntu. Choose System > Administration > Services. The window that opens displays a list of services down the left-hand side next to a checkbox indicating whether they are enabled or not. Click on any of the entries to get a description.

Obviously you can turn things on and off here, but if you aren't sure what they do, it's best to leave them as they are!

If there's no sound, it might simply be because the volume is turned down.

The Service Configuration screen shows which software is run at startup.

No sound

Q **My install seems to have gone OK but I don't get any sound out of the system when I try to play CDs or games, or even the system notification noises. Does my sound hardware have a problem?**

A Well, it is of course possible that the audio drivers available for Linux don't support your sound hardware, but that's pretty unlikely. There are some soundcards whose features, such as 3D sound playback, are not completely supported, but even these will handle simple playback.

Thankfully, the answer is likely to be something much simpler than that.

Try opening *Alsa Mixer* by double-clicking on the small speaker icon in the top-right of the Gnome screen. You may find that the master volume just isn't turned up enough. Adjust it and try again.

Slow graphics

Q **I seem to have no problems with normal desktop graphics, but when I try to play games like *GL-117* or *FooBilliards*, the screen is very slow and jerky. I wouldn't mind but I have a top-of-the-range graphics card – what's going on?**

A The likely explanation here is that the *X* server – that's the software that actually draws the

Good graphics performance means finding the right drivers.

display for you, isn't using the full power of your graphics card, because it doesn't have the right drivers. ATI and Nvidia produce their own Linux drivers, and due to licensing restrictions these can't be included in the free version of Ubuntu. You should visit the relevant manufacturer's website and download the latest Linux drivers.

Windows worries

Q I have lots of documents and graphics that I created in Windows. Will I be able to use any of this stuff in Linux?

A Most likely you will, yes. Mainstream Windows apps usually have a Linux equivalent. For example, *OpenOffice.org* is able to open *Microsoft Office* documents such as *Word* files, spreadsheets and *PowerPoint* presentations.

For other software, it may be possible to save the documents in Windows first in a more compatible format, such as RTF (rich text format), or CSV for databases.

On the graphics side of things, there are myriad libraries and utilities on Linux. The graphics software *Gimp* can open probably every file format you have ever heard of.

Inaccessible archive

Q Is there a way to zip and unzip files in Linux? I have no idea how to deal with large files.

A Linux does have utilities to compress and uncompress files using the well-known zip format, but more often than not it

uses its own system based on formats known as tar and gzip. The *tar* program is an old utility that basically rolls lots of files into one. *Gzip* then compresses it, so you have the functional equivalent of a zip file.

Most of these utilities are best used in a terminal, but you can use desktop tools for most operations. You'll find *Ark* and other tools installed in Ubuntu but there's also a lot of functionality built in to *Konqueror* – just click on an archive file in *Konqueror*, and you will be able to see the contents, just as if it were a normal directory.

Digital cameras going unused

Q I have two or three different digital cameras. Am I going to be able to use them with Linux? Will I have to download drivers and so on?

A It depends. A huge number of cameras use a memory card for storage and treat it like a disk device. When you connect these devices up to your computer, Ubuntu just sees another disk, so it should be automatically mounted. Some cameras will be recognised and you

will be offered the chance to upload/copy images from them.

But other types of cameras may need to communicate with specific software. Try running the *Digikam* program from the Multimedia > Graphics menu. This has settings and drivers for all sorts of different cameras – but you'll need to set it up from the menu to work the way you want it.

With most cameras, you can just plug in and go.

Confusing installation

Q I would like to install some additional software from the install discs. Is there a

simple way to do this without re-installing the complete Ubuntu distro?

"There are myriad graphics libraries and utilities on Linux. Gimp can open probably every file format you have ever heard of."
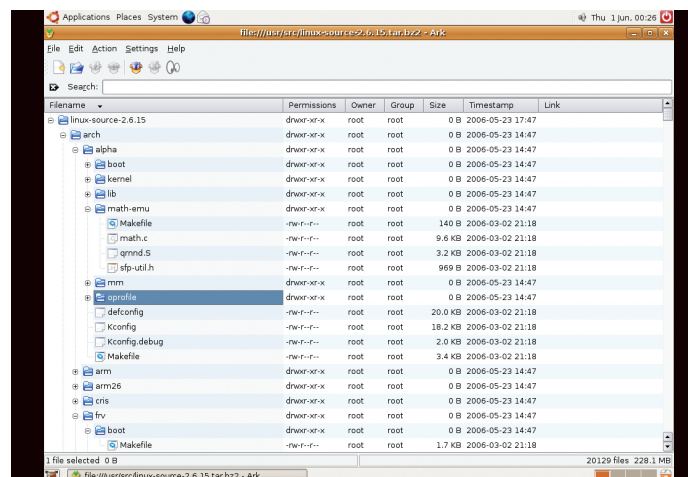
For working with compressed files, the *Ark* software is just one of a number of packages that supports various archive formats.

A Yes, otherwise we wouldn't have included your question! Here's how to do it. First, run the *Add/Remove Software* tool from the Applications menu. Enter your administrator (root) password when you're prompted, and you'll see a new window for the package manager. Now set the filter to List to give you an easy-to-read list of software that can be added.

This system is also used for removing software that you don't want. Be careful about removing some software – it may be interdependent with something you want to keep! Don't worry though, the system will sort out any conflicts.

Compilation ignorance

Q **I have seen some software that I want to try, and downloaded the source code. Apparently I have to compile this software to make it work – how do I do that?**

A It's not generally recommended that beginners compile software themselves because it's possible to damage the installation of your system in the process. You might, for example, compile a new or different version of some software already installed, which could cause problems with menus and other software that rely on it.

So it's as well to be cautious at least. Having said that, Linux and open source inside has, mostly, been set up with the standard *automake* and *autoconf* tools, so it follows a simple install procedure.

To install software, you'll need to be the root user, so use **su root** or log in as root first.

1. Begin by unpacking the archive:
   `tar xvzf nameofthing.tar.gz`
2. **cd** into the directory:
   `cd nameofthing`
3. Read the README file! There is nearly always one of these, and possibly an INSTALL file too!
   `less README`
4. The install instructions may contain some notes, so it's best to read them. Then it should be a simple matter of running the standard

Linux has impressive support for FireWire/ iLINK DV cameras.

> ## "It's not recommended that beginners compile software themselves, but Linux is all about doing what you want, so..."

source is all about doing what you want, so if you do want to compile software, here's a brief outline of how it works.

The vast majority of source code is distributed in a 'tarball' (a tar archive), usually compressed with *gzip*. The

commands, thus:
`./configure && make && make install`
The **&&** symbols chain these commands together so they follow one another – the **configure** command will execute first, and when that finishes **make** will start, and so on.

Digital video camera concern

Q **I have a DV camera that I would like to use with my computer. Can Ubuntu handle it?**

A A huge range of DV cameras is supported these days. FireWire/ iLINK models are well catered for. Currently, the best software for normal desktop use is *Kino*. The libraries for handling FireWire support and controlling the camera are part of the standard Ubuntu software set, so you should have no trouble at all.

PDFs aren't working

Q **I have downloaded several PDF documents. Most of them work, but some have strange blank areas, or redraw oddly and seem to be missing parts. I thought there may be something wrong with the files, but it seems to affect quite a few of them.**

A The tools provided with Ubuntu perform very well at viewing standard PDFs. However, what you may not know is that the PDF file format has gone through a number of different versions. The most recent editions include support for things like filling in forms and other interactive content. These work to varying degrees in the different open source browsers. However, Adobe also produces *Adobe Reader* for Linux, so you can use this to view even the most up-to-date PDF versions with no problems. Download the Linux version of *Reader* at **www.adobe.com/products/ acrobat/readermain.html**.
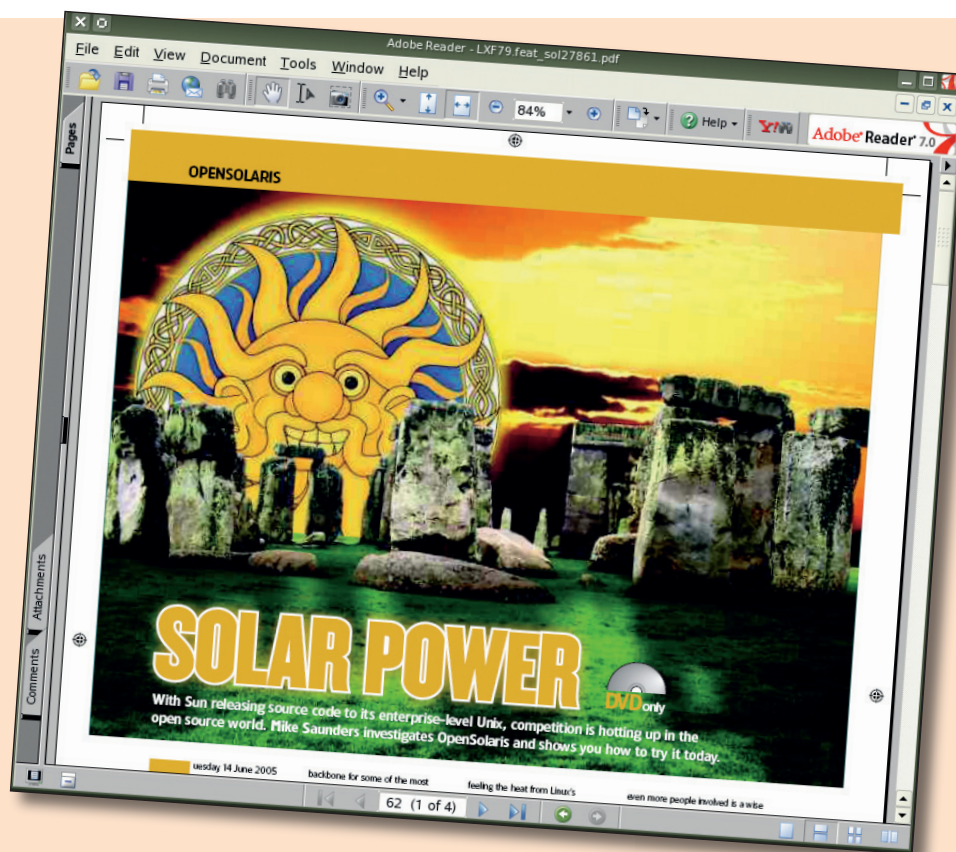
Happily, Adobe has created a version of *Adobe Reader* 7.0 for Linux.

I don't get a login screen

Q I installed Ubuntu fine, but when I rebooted, all I got was a black screen with some text on it saying 'login:'. What has gone wrong?

A Possibly nothing. It seems that, for one reason or another, Linux has started up without running the *X* server. The *X* server is the software that creates the graphical user interface – without it, you're left with just a command line.

If you failed to configure the *X* server during installation, changed your graphics card or, if you are using the Nvidia drivers, changed your kernel after installing them, the *X* server will not have started.

In the first two cases, you can reconfigure *X* from the command line, using the standard configuration tools. You will need to log in as root from the prompt, so type in **root**, press Enter, then enter the root password and press Enter.

You should now be in the command-line environment. Now type **system-config-display**. A new graphical screen will appear, and from here you will be able to adjust the settings. Some graphics cards may be problematic with the standard drivers installed. As a workaround for this, and also some laptop and embedded chipsets, you can always choose the VESA driver, which is a generic protocol pretty much any graphics card will work with.

If the problem is that you have updated the kernel and your Nvidia driver no longer works, you need to re-install the Nvidia drivers, as they are dependent on the kernel version (this is only the case if you downloaded the specific Nvidia drivers from their website, which is recommended if you have hardware of this type.
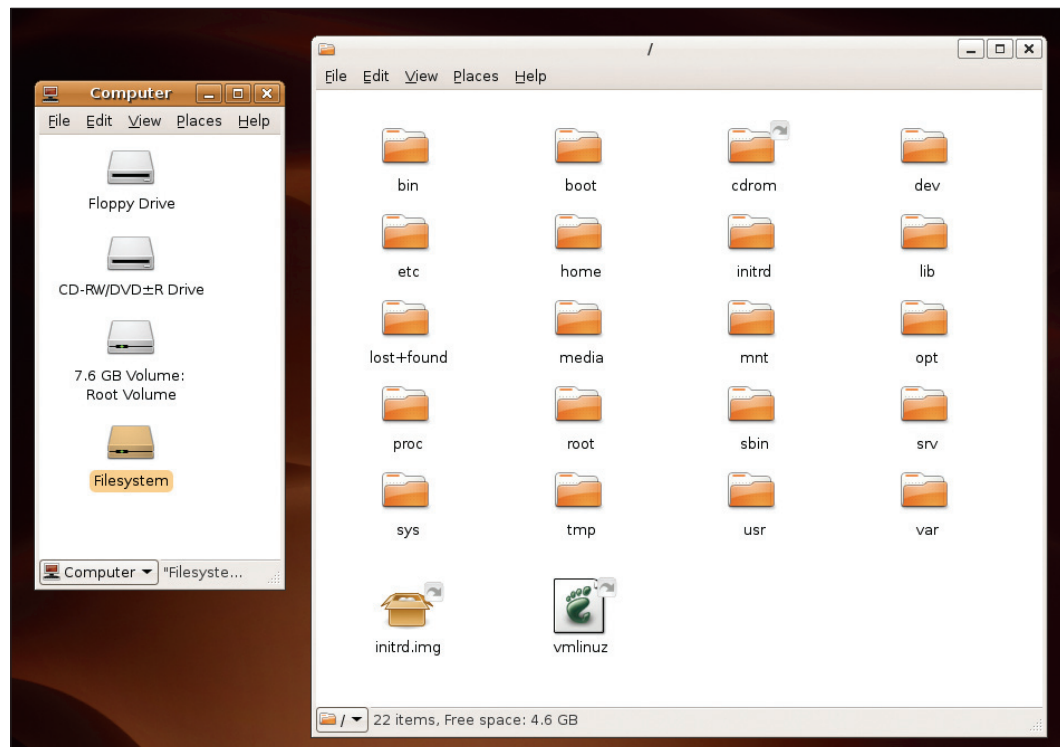
The naming system for folders can be confusing. Don't get the root folder mixed up with root's!

Copy and paste don't work

Q I want to copy and paste some text from the command line into a document I am writing. I use the Ctrl+C and Ctrl+V keys, but I keep getting the wrong text!

A There are some parts of the Linux desktop environment that won't play nicely with the clipboard, and a standard terminal is one of them. However, you can use the magic third button on the mouse to do this for you.

Select the text in the terminal by dragging out the cursor as usual. Now, without deselecting the text, click in the window of your document. Now, to paste the text, press the middle button on your mouse. If you have a wheel mouse, pressing the wheel in has the same effect. For a two-button mouse, press both buttons at once.

I want to ditch History

Q I've noticed that in a terminal window, using the up arrow pastes in the last command I typed. This seems to happen even after a reboot. Where does the computer store all the commands I typed and how can I get rid of them?

A The usual shell environment is *Bash*. As you mention, this keeps a history of the commands you type.

There isn't anything extra-specially clever going on here, it just saves the list of commands to the **.bash_history** file in your home directory. If you want to be rid of it, just edit it and change the permissions on the file.

Impotent keyboard

Q How do I make the 'media' keys on my keyboard work?

A Some of them are directly supported through KDE. Nip along to the KDE Control Centre (System > Configuration > Configure Your Desktop in the launch menu). For most keyboards though, you will need to install software such as *lineak* to map the extra keys to Linux functions.

I'm not sure how to run a web server

Q I installed Linux because I want to have a home server. How can I set up a web server and FTP server for use at home?

A For completely local use, you just need to set up *Apache* for web serving, and *ProFTP* for FTP. These may well already be installed (or you can simply install the packages that came on the Ubuntu discs). Other computers on your network will be able to access the severs by using the IP address.

Check out the Services tool from the System > Administration menu to make sure they are turned on.

Also, you should thoroughly read the guide to setting up the servers on page 74, especially if you intend to make the server available over the internet.

You may need to install *lineak* to use all your keyboard's keys.

Command not found

Q When typing in commands from the command line, I keep getting error messages like this:
'bash: Less: command not found'. What is wrong with my system?

A Nothing. Linux, like all Unix systems, is case-sensitive. That means that the commands have to be typed exactly right. In this case, **less**, like most commands, should be all lower-case letters.

Windows ignores Linux

Q I installed my system as dual boot. Windows XP runs fine, but obviously doesn't know that Linux is there. Linux runs fine too, but does list the Windows disk. I thought this would be a great way of exchanging files between the systems, but it doesn't work. I can see the files on my Windows disk, I can even copy them and open them, but I can't change them or put them back. I've tried logging in as root as I thought it might be a permissions problem, but that doesn't work either.

A Windows XP uses a filesystem called NTFS by default. It is easy to read files from this filesystem, but the support for writing is experimental. This is to prevent any problems on your disk. You can easily read and write to 'old' Windows partitions that use the FAT filesystem though, so you can create a FAT partition to share files with, or plug in a USB memory stick, and so on.

Gambas is a great new language for Linux, and the most similar to Visual Basic.

Joystick woes

Q I can't get my joystick to work in Linux. Is there any way to do it?

A Getting it to work depends on what type of joystick it is. In the dark old days of computing before the advent of USB, all PC joysticks had a strange connector and commonly plugged into soundcards. Most soundcards no longer have these 'gameports' and few manufacturers even remember these old devices. If you have one, and a soundcard to use it with, you should be able to just plug it in.

Modern joysticks are USB devices, but come with their own set of problems. Ninety-nine per cent of them should 'just work', but you may have trouble with the configuration of the buttons. Fortunately, most of the games that support joysticks allow you to configure the controller in-game – the games detect what joysticks you have plugged in, and will automatically set them up as player controllers.

Grab your stick and get gaming.

Strange root directory names

Q Which is the root folder? I'm confused. I thought it was the one called 'root', but apparently not...

A It is rather confusing. The naming system is carried over from Unix, and lots of people get mixed up at some point. The '/' directory is the root. This is the base from which all other directories spring. The folder '/**root**' is not the root folder, it is root's folder. All other users usually get a folder in /**home**, but the root user has /**root** instead.

LILO second thoughts

Q I have installed with the *LILO* software as a bootloader, but since then many people have told me *GRUB* is better, and I should be using *GRUB*.

A Well, this is just another example of Linux users having the freedom of choice. Some people prefer the simplicity of *LILO*, some people would rather have the extra flexibility of *GRUB* – being able to rewrite the bootloader on the fly as you run is quite cool. However,

our advice is, unless you particularly want to tinker or experiment, leave it well alone if it works for you.

Basic question

Q I wanted to do some programming in Linux. Can I use Visual Basic?

A Visual Basic is created by Microsoft, and they haven't made a version of it that runs on Linux. However, Linux is blessed with a wealth of free tools and utilities for creating software. Probably the language most like Visual Basic is Gambas (**http://gambas.sourceforge.net**). But you should also investigate some of the other languages that Linux has to offer – just because they are not Basic doesn't mean they are hard, just different. Python, PHP, Ruby and even Java would be worth investigating.

Login troubles

Q I used to be able to log in fine. One day the power went off while I was running Linux and since then it boots up OK, but after the login menu on screen the screen goes black for a second and then goes back to the prompt. I've managed to log in on the terminal and everything seems fine. Will I need to reinstall?

A Obviously, losing the power while using your computer can have some serious

consequences for files you have open. The most likely cause here, though, is that because you couldn't log out properly before the power went out, some files the system uses have been left open, locked or contain information that is no longer relevant.

A simple spell to clean up is to log in as your username in the terminal, and then type

```
cd ~
rm .DCOP*
chmod 777 .ICE*
```

This will change to your home directory, remove some temporary system files which may have been left over and reset the permissions on the security mechanism. Good luck.

Constant crashing

Q **One of the applications that I run frequently seems to freeze up. What happens is that the screen stops redrawing properly and nothing I do will make the thing go away. Even if I launch the application from a terminal and press Ctrl+C to stop it when it goes wrong, it just carries on.**

Searching for a calendar

Q **I want to subscribe to a web calendar from my friends. I can do this on *Outlook* and my friend uses *iCal* on the Mac. What is the equivalent on Linux?**

A Well, it is possible for you to still subscribe to calendars. The subscription process isn't quite as obvious as it may be in other software, but, for example, *KOrganizer* can subscribe to web-based calendars. The easiest way to do this is to use the *Konqueror* web browser to find the link you want to subscribe to.

This will have a link looking like **webcal://ical.mac.com/mymate/ stuff.ics**. Just click on the link and the option of what to do with it will be presented in a new window. Choose to open the calendar with
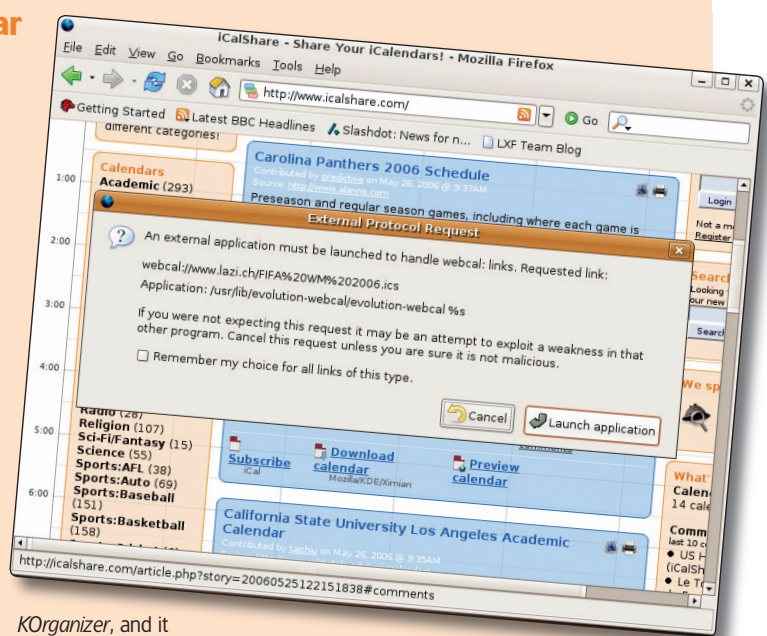
KOrganizer, and it will automatically add the information to your calendar.

Never miss a Patriots game again.

new application or add any number of system utilities to the bar. You can also create shortcuts on the desktop in pretty much the same way – right-

reassured me. Now that I have moved to Linux, is there an equivalent way to stop it clogging up my inbox?

it). Then open up *KMail* and select Tools > Anti-spam Wizard. Simply follow the directions to set up a series of filters that you can use to 'teach' *SpamAssassin* which mail that comes through is spam.

"Linux is blessed with a wealth of free tools and utilities for creating software. Python, PHP, Ruby and Java are worth investigating."

A Linux as a system is very stable, so individual applications can crash without taking everything else down with them. Of course, if you are using software, inevitably it may go wrong at some point. For graphical applications, the solution here is *Xkill*. Just hold down Ctrl+Alt+Escape on the keyboard and the cursor will change to a skull and crossbones. Now click on the offending window and it will be killed, along with any of the processes associated with it.

In need of a shortcut

**Q** **How do I add a new shortcut icon to the bar at the top of the screen?**

A The Gnome application bar is very configurable. Just right-click on any element to be able to change its properties or move it around. To add a new application, it's easier if it exists in the menu first. Then right-click on the bar itself and choose Add To Panel. You can then choose an application that already exists in the menu, set up a

click and choose Create Launcher from the pop-up menu.

Fear of spam

Q **On my Windows system I had a lot of anti-spam software installed, which**

A There are a few ways of filtering out a lot of spam on Linux too. *SpamAssassin* is probably the most widely used. If you use *KMail* for example, this can be set up easily. First, make sure you install *SpamAssassin* (use the Ubuntu software tool to install
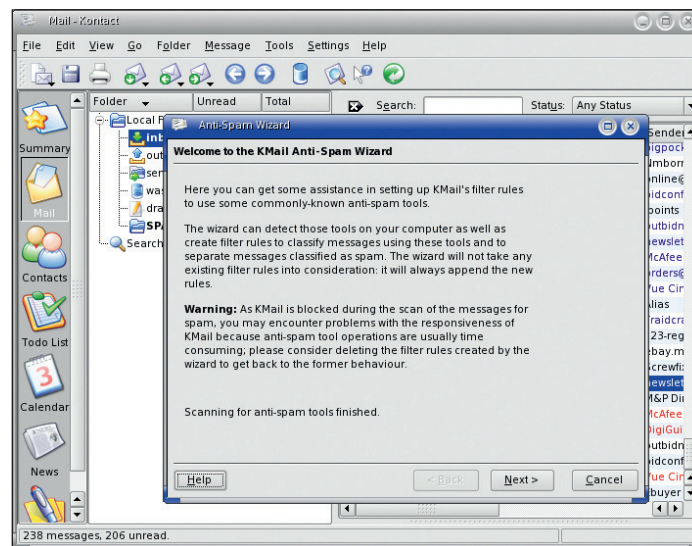
You are just a wizard away from sorting out spam.

Feeling alone

Q **I'm new to all this! Where can I get more help from the Linux community?**

A The readers of *Linux Format* will be happy to help you at the forums. Surf on over to **www.linuxformat.co.uk**. ●