



Mike Saunders presents...

SLACK TO THE FUTURE!

It's the longest-running Linux distribution in existence, but just what is it that makes Slackware so popular among hardcore Linux fans?



Give a man Ubuntu, and he'll learn Ubuntu. Give a man SUSE, and he'll learn SUSE. But give a man Slackware, and he'll learn Linux. Well, so the old internet maxim goes, but while it's normally used with a touch of humour, there's a great deal of truth in it too.

Slackware is a curious animal, minding its own business while other distros roam the popularity plain and strive for dominance among their peers. It's not trying to win enormous desktop market share, nor is it loaded with blinking lights, hold-your-hand graphical wizards and package managers that change with every release. Slackware is about as pure a GNU/Linux system as you can get – at least, without all the arduous leg work of Linux From Scratch.

There are many reasons why Slackware has a devoted base of hardcore fans, usually Linux old-timers but occasionally newcomers too. The top four:

- » It's almost entirely developed by one man.
- » The packages are not patched to the hilt.
- » It's comfortable in its own distrosphere.
- » It's very, very, very stable.

Let's look at these in more detail. For most of its history, since the first release in 1993, Slackware has been largely the work of one developer: California-based 42-year-old Patrick Volkerding. Pat had some assistance from other paid developers in the distro's earlier days, but now he's a one-man band – albeit with the help of bug reports and patches

from the community – and uses sales of Slackware boxed sets to fund his work on the distro.

An affable chap with a quirky sense of humour (see *On The Origin Of Slack*, page 53, top-right), Pat's down-to-earth geekiness puts many long-time Linuxers at ease. Got a question? Try Pat. Got a suggestion? Try Pat. Want to file a bug report? Try Pat. Don't worry about mailing lists, project leaders and *Bugzilla* accounts – Pat's your man. Indeed, he's known as The Man in Slackware circles.

Unbefuddled software

With Pat's central role in Slackware firmly established, we come on to patches. Most distros take the original, upstream source code of a program and weld on patches – one, two, 10, often more – to fit it in with the rest of the software and distro. That's fine for many users, but if you want to be sure you're getting what the developer originally intended, you're better off with Slackware. Now that's not to say that Pat is a patchphobe – some programs are tweaked in places – but by and large the software is left untouched and you don't feel like you're getting a distorted version of the original.

There's another side of package purity to consider as well. Contrary to what a lot of armchair distro-pundits may have you believe, Slackware does have a package management system. It's just based around very simple tarballs (.tgz files) rather than the dependency tangled, database-backed systems of RPMs and Debs. The upshot of this is that



› **Slackware's installer isn't graphical, but you can Tab, Space and Enter your way to a working system easily.**

Slackware packages are extremely easy to pop open, fiddle around in and put back together.

Slackware's stringent focus on simplicity has led to a few software casualties in its history, most notably Gnome. In 2005, Pat decided that the work of building and integrating the vast mixture of Gnome packages and their dependencies was just too much. He said:

"Please do not incorrectly interpret any of this as a slight against Gnome itself, which (although it does usually need to be fixed and polished beyond the way it ships from upstream more so than, say, KDE or Xfce) is a decent desktop choice."

This kicked other developers into action, with the Dropline Gnome add-on desktop project starting shortly after the announcement. It's a great implementation of Gnome, but the message was clear: if you want your software to be included with Slackware, make sure that it's neatly contained and not a nightmare to build and distribute.

Know your goals

This brings us to our third point: Slackware has steadfastly remained a non-newbie distro. It's not hard to use – far from it – but it doesn't have a graphical installer or step-by-step wizards to automate every aspect of usage and installation. Slackware users are expected to have a fair grounding in the command line and editing configuration files, which returns us to the maxim at the start: if you decide to use Slackware, you aren't shielded from the workings of Linux under the GUI.

You get to learn the underpinnings of Linux, and because the distro doesn't have a huge number of customisations and patches to its software, you don't end up with countless distro-specific config files in guessing-game locations. If you learn the ins and outs of, say, Fedora, you'll be a Fedora guru (which is great). If you learn the workings of Slackware, you'll pick up knowledge that's transferable across many distros.

So Slackware doesn't try to be the best pond for Linux toe-dipping: it strives to be a great all-round distro for those

The missing releases

Slackware 5 and 6 don't exist. Slightly controversially in the community, Pat chose to jump from version 4 to version 7 in 1999 in order to keep up with other distros (Red Hat 7, Mandriva 7 and so on). There was a lot of debate about this at the time, but in true Slack fashion, everyone soon realised that it didn't matter and debates are stupid and everyone should just chill out. And that was that.

On the origin of Slack

The word 'Slack' comes from the Church of the SubGenius, a parody religion and subculture. In this context, Slack is a sense of original thinking and freedom, but also the art of doing nothing and still getting what you want. Followers of the church study "sadofuturistics, ridiculophagy, sarcastrophy" among other awesome-sounding philosophies. They're based around the work of JR "Bob" Dobbs, a drilling equipment salesman who saw a vision of God in 1953 on a TV he built

himself. See www.subgenius.com if you like being utterly confused. We're still trying to make sense of it – but we think it's probably not meant to be understood fully.



› **JR "Bob" Dobbs – figurehead of the Church of the SubGenius – was apparently assassinated in 1984.**

who know exactly what they want and don't want the distro getting in their way. (An example: SUSE's *Yast*, while undoubtedly a highly powerful tool, can give experienced users a headache by stomping over config file changes.)

Regular reliability

Finally, let's look at Slackware's stability. Without the colossal developer base of Debian, you'd think Slackware would be more prone to problems, but that's not the case. Pat is generally conservative when it comes to integrating new software: the Slackware 12.2 release, for instance, arrived in October 2008 with KDE 3.5, even though KDE 4.1 had been released three months earlier.

Having one man at the helm provides a stability boost too. Multiple teams and developers can lead to a discrepancy between the quality of patches, whereas Pat builds the whole lot before a release and therefore maintains a wide but hands-on view of the distro. Sure, big distros such as Debian need large teams and in that context the approach works well, but

for Slackware the 'one man doing it all' approach has done an equally good job.

So there we go.

That's Slackware. It's not the newbie's best

friend, but it's still a much-loved distro after 15 years and no intermediate-or-above Linux user should go without trying it at least once. We've included the distro on the **LXF DVD**, so turn over the page and give it a go. Just be aware of one other snippet of wisdom from Slackware circles: "Once you go Slack, you'll never go back."

»



› **KDE and Gnome packages are available, but a speedy distro deserves a nippy desktop such as Xfce, we reckon.**

Try it now

Fear not the text-based installer – Slackware isn't hard to get running if you've got a bit of prior Linux experience. We lead you through your first steps to becoming a Slacker.

Slackware requires at least a 486 CPU and 48MB of RAM, so it's useful for reviving dusty old machines, but if you want to use a modern desktop we recommend a 1GHz CPU and 256MB RAM. In the Distros/Slackware section of the **LXF**DVD you'll find two ISO

images. Burn these to CD-R and label them Slackware 12.2 discs 1 and 2 – they include the base Slackware system, Xfce desktop and various apps, then follow the steps below. Slackware doesn't try to pre-empt you – it doesn't attempt to guess what you want to do and what you're using

Step by step: Installing Slackware 12.2



1 Boot Slackware

Boot your PC from the first CD-R and you'll see an info screen. Read all the text, so you can make informed choices. Type **huge.s** for an old pre-Pentium Pro machine, or just hit Enter for the default kernel on a more recent box. At the prompt, log in as root.



2 Partition your drives

Now you'll need to partition your hard drive. Enter **cfdisk** to bring up the partition manager – the keybindings for options are shown at the bottom. We recommend a minimum 5GB Linux (number 83) partition with a 512MB swap (number 82) partition.



3 Run setup

Write your partition changes and exit **cfdisk**. Then enter **setup** to start the menu-driven installation utility. Choose the ADDSWAP option in the menu to get the process going and begin by selecting the swap partition you created previously.



4 Define the root

Next, choose the partition you want to use for root. You'll be given a choice of filesystem options – if you've never explored this aspect of Linux before, just stick with ext3. Then the installer will ask you for a media source, so choose CD-ROM.



5 Select software

You'll then be prompted to select the range of software you want to install. You can go down the list, hitting Space to select or deselect options. Press Enter when you're done. (KDE isn't on discs 1 and 2, so deselect it here – you can add it later).



6 Finishing touches

The packages will be installed; if you're asked for disc 3, hit Cancel – everything you need is on discs 1 and 2. Now you'll be prompted for a default screen resolution, network settings and root password. Exit the installer and hit Ctrl+Alt+Del to reboot into your installation.

1993
Slackware 1.0
Largely based on SLS; kernel 0.99p111.

1994
Slackware 2.0
Package creation tools; UMSDOS to install on a DOS partition.

1995
Slackware 3.0
Moved to ELF binary format; kernels 1.2.13 and 1.3.18

May 1999
Slackware 4.0
Kernel 2.2.6; "Latest GNU releases of /bin/true and /bin/false".

Oct 1999
Slackware 7.0
First release to use Glibc 2; KDE 1.1.2.

the installation for. You might be running it as a server or router, in which case the default boot-up mode (to a text login) is perfect. Chances are you'll want to use it in graphical mode, though, so follow these instructions to get it working to your liking.

1 Get graphical

At the login prompt, enter 'root' and then the password you specified during the installation process. To bring up the X server (graphical mode), enter **startx** and the desktop or window manager you chose during the installation will appear. Note that you're running as root right now, so anything you do could potentially botch your system – as such, it pays to be über-careful!

If you want Slackware to boot into a graphical login screen, edit the **/etc/inittab** file using the editor of your choice, for example, *Nano* or *Vi*. Look for this line:

```
id:3:initdefault:
```

This defines the default runlevel that Slackware boots into or, in other words, which background services and daemons are started. Above this line, you'll see a commented list of runlevels and you note that runlevel 4 is used for *X11*. So change '3' to '4'; reboot and you'll get a graphical login screen.

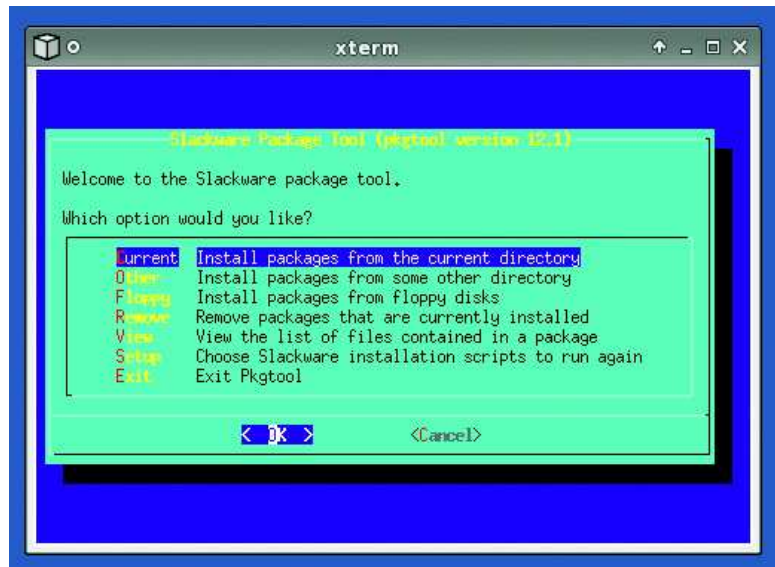
2 Add a new user

Running as root all the time is a bad idea, so the next step is to create a normal, restricted user account for your day-to-day work. Open up a terminal window and enter **adduser**. You'll then be prompted for a username, home directory location, default shell, password and other options. You only really need to bother with setting the username and password – **adduser** will fill out the rest with sane defaults.

3 Manage your packages

Let's explore the package management system in more detail. As mentioned earlier, Slackware's packages are just .tgz tarballs with some meta-information provided via text files inside. You can extract them the usual way (**tar xfvz filename**) and look around inside to see how they work – they're extracted into the root (**/**) directory so you'll see files to go in **/etc**, **/usr** and so forth.

Also, you'll always find an **install** directory in the package, which tells Slackware's package tools what to do on installation (**doinst.sh**) and what the package does (**slack-desc**). Note that normal Slackware packages don't include dependency information; the distro assumes that you know what the software does and needs beforehand. This may seem annoying initially, but when you've got tired of other distros pulling in a jillion recommended dependencies of



» As root, enter **pkgtool** to bring up a menu-driven interface for adding to and removing from your collection of packages.

dubious value just to install one program, you'll value the complete control you get with Slackware.

If you've got a .tgz package that you want to install, the simplest method is:

```
installpkg filename.tgz
```

A more elegant way to go about this is using **pkgtool**. This brings up a menu-driven interface for viewing the list of installed packages, installing multiple packages from a directory and removing packages. Another system you can use is *slapt-get* (<http://software.jaos.org>) which, as the name suggests, is a Slackware workalike of Debian/Ubuntu's *apt-get*. This enables you to retrieve packages from various sources on the internet such as the official Slackware archives and www.linuxpackages.net, and includes some basic dependency resolving if you need it.

4 Read more

In the Distros/Slackware section of the DVD you'll find the Slackware Book, **slackbook-2.0.pdf**. This meaty 284-page guide to the distro

covers the topics of installation, configuration and administration in great depth with some excellent

Slackware wit and bizarre sci-fi references thrown in; it's the first place you should turn to if you have any problems. Indeed, it's well worth having a thorough read once you've got the distribution installed to explore the system further. As the guide itself says:

"We hope you'll lend it to all of your friends when they come asking about that cool Slackware operating system you're running. While this book may not be an edge-of-your-seat novel, we certainly tried to make it as entertaining as possible. With any luck, we'll get a movie deal." **LXF**

“This guide covers both installation and configuration with wit.”

Slackware on the net

» www.slackware.com
The main site, with information on new releases

» <http://store.slackware.com> Buy the distro to support development

» www.droplinegnome.org, www.gnomeslackbuild.org

and www.gware.org
An array of Gnome packages

» www.linuxpackages.net
Excellent source of add-on Slackware packages

» www.linuxquestions.org
Has a dedicated forum for Slackware help

2001

Slackware 8.0
Kernel 2.4.5; XFree86 4.1.0; KDE 2.1.1.

2003

Slackware 9.0
Kernel 2.4.20; KDE 3.1; XFree86 4.3.0; Gnome 2.2.

2004

Slackware 10.0
X.org replaces XFree86; kernel 2.4.26 (2.6.7 as an option).

2006

Slackware 11.0
KDE 3.5.4; *udev*; device hotplugging with optional kernel 2.6.17

2007

Slackware 12.0
Xfce 4.4.1; HAL; kernel 2.6 is finally the default.

