

Mandrake Linux 9.2 PowerPack and ProSuiteLinux

Linux fabriqué en France

Mandrake Linux has a reputation for being extremely user friendly. And once you actually have Mandrake running, it does fulfill those expectations. Choosing a version is a different matter however.

BY OLIVER FROMMEL

The French distributor has no less than three different versions of its new FiveStar desktop system on offer: the extremely basic Discovery version, PowerPack, and ProSuite for serious Linux work.

On closer inspection, there is very little difference between the latter two packages. While the PowerPack comprises seven CDs, the ProSuite has additional CDs with Java programs and an evaluation version of IBM's DB/2 database. Mandrake refers to the installation CDs of the ProSuite as "Server Installations", but they actually contain the same packages as the PowerPack version. The additional DVD provided with the ProSuite version simply mirrors the content of the CDs.

Extended Docu in Prosuite

Apart from the additional CDs, the ProSuite box contains two different manuals that provide slightly more information than the short guide supplied with the PowerPack. Theoretically, free online support is available for both packages, although the PowerPack has a restricted support period. Unfortunately, we were unable to contact Mandrake's Online Support [1] before this issue went to press. The five free support calls purportedly included in the price of the ProSuite turned out to be fictitious. It was impossible to find the phone number.

Installing Mandrake on a new computer causes very little trouble, as one



would expect. The distributor provides boot disk images on the CDs, and includes tools that allow you to write the images to floppies under Windows. After booting from either the CD or DVD, you are first asked to choose a language and keyboard layout. The Mandrake installer will partition your hard disk automatically, but experienced users can partition the disk manually, if they prefer.

The installer created three partitions for our test installation: two normal partitions for / and /home, and a swap partition. The partitioning tool is quite straight forward, offering a full range of Linux filesystems and the capability to resize Windows partitions.

Mandrake defines functional groups to facilitate the choice of software to install (see Figure 1). If you do not make any

selections at this point, you can choose a minimal installation in the next menu. This installation does not use a GUI and is practical for older machines and servers. Mandrake places the major configuration menu at the end of the installation, just before the restart. The menu provides an overview of your settings, allowing you to check and change as needed. This allows experienced Linux users to work around minor issues that can occur during a standard installation. For example, when we attempted to install Mandrake on the test laptop, where we had previously installed Windows and Red Hat, the installer froze while attempting to write the Lilo boot loader to disk. After a few unsuccessful attempts, we managed to work around this problem by leaving this step out and selecting Grub as an alternative boot loader in the configuration menu.

After completing the configuration menu, the Mandrake installer offers to download and install current updates off the Internet. But this did not work, no matter whether the Internet connection was up or down at the time, and led to error messages in both cases. Once you have Mandrake running, you can use the Control Center to perform an online update, the difference being that this actually works.

Operations

You can use the Mandrake Control Center to configure the system to reflect your preferences. The Control Center allows you to configure new hardware, add new software, or remove installed software, set up hard disks, the screen, the network adapter, and any other type of hard-

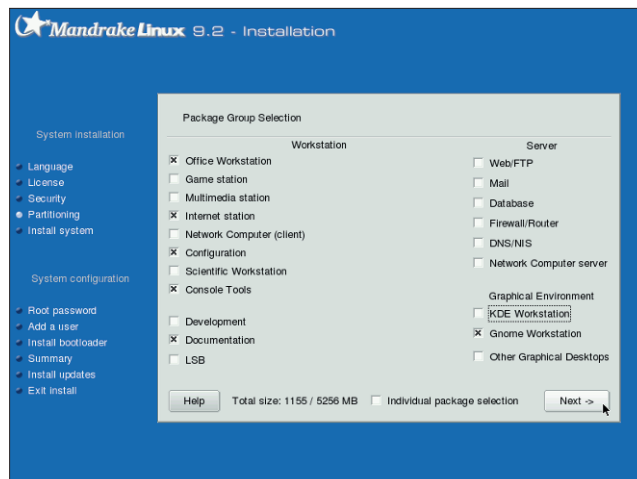


Figure 1: Mandrake organizes software packages in functional groups

ware attached to, or built into, your machine. Unfortunately, Mandrake does not offer a list of Internet service providers to help you configure your Internet connection.

The Mandrake Control Center does not offer any GNOME or KDE settings. Instead both desktop environments have their own control centers. Both desktops are easy to use. You can select a desktop when you log in to display a menu with equivalent functions. However, we did note an alarming tendency for software installations to make entries in the Start menu disappear arbitrarily on both GNOME and KDE. Fortunately, the MenuDrake tool in the Control Center soon had the entries back where they belonged.

Mandrake's multimedia capabilities gave us no cause for complaint. The system automatically recognized the soundcard and set up the configuration

for the ALSA audio subsystem that Mandrake uses. Playing a DVD involves slightly more effort, but Mandrake is not to blame for this. Although Mandrake installs players such as Xine or mplayer on request, it does not install the libdv-css library needed to handle the Content Scrambling Systems due to the still unclear legal situation. Having said that, the description of the vlc video player package does point out Web sites [3] where you can easily download the library.

Mandrake's package manager makes installing software packages child's play. However, the fact that there are different front-ends for installing and de-installing software does make things more awkward for the user. The De-Installer only lists packages that have been installed previously, while the Installer only displays packages that have not been previously installed. The search func-

tions of both tools search the package names, the files belonging to the package and the descriptions.

The differences between these two Mandrake packages are not as significant as the pricing would suggest. Selecting the right packages with the PowerPack version gives you a Linux installation that is identical to the ProSuite. The ProSuite manuals are far more useful than the meager documentation provided with the PowerPack. But you can save money by buying the PowerPack and a good Linux book.

The higher level of support provided with the ProSuite is a purely theoretical benefit, as online support is poor, and telephone support non-existent, as far as we could tell. Mandrake PowerPack is a modern Linux system that integrates both major desktops and is easily managed using the Mandrake Control Center. ■

Suse Linux 9.0 Professional

All inclusive

As in previous versions, Suse's latest Professional Edition is accompanied again by extensive reading material (a User Manual with 421 pages, and an Administration Guide with some 569 pages). Sources are supplied only if you have a DVD drive as they are available on side two of the DVD.

BY MIRKO DÖLLE, HANS-GEORG EBER

Suse's installation tool YaST 2 ("Yet another Setup Tool") – also well known from previous versions – is a comfortable GUI-tool with useful hardware recognition capabilities that covers the installation options in a few steps, and makes useful suggestions with regard to partitioning and other important tasks. Suse Linux Version 9.0 is the first version that can resize NTFS partitions (as used by Windows NT, 2000 and XP) without any loss. This is an essential feature that Suse's competitor Mandrake has supported for some time now.

Suse Linux always adds entries for all the data partitions on a hard disk to

/etc/fstab, irrespective of their format (Windows or Linux), allowing any user to mount them simply by pointing and clicking. There is no way to prevent this from happening – if you do not specify a mountpoint when partitioning the disk, Suse will simply mount the data partitions on */data0*, */data1* and so on. The partition view does not indicate this, however. Any user can, if they so wish, access all the data and home partitions belonging to other Linux installations on the system. And if the User and/or Group ID of the real owner happens to coincide with that of a user or group in the Suse installation, the Suse user has



access to the external home directory, and can arbitrarily modify or delete the data it contains.

A full Suse installation with KDE and/or GNOME as the desktop environment plus major applications like the Mozilla browser, OpenOffice and multimedia software requires between 1 and 4 GBytes of free hard disk space. A minimal (non-GUI) system requires 180 MBytes, and a minimal system with GUI support (Minimal graphical system installation profile) takes up about 500 MBytes of hard disk space. You can modify the package selection that Suse configures for these profiles by either adding package groups, or searching for and adding individual packages.

There is a minor bug in the user configuration during the installation process. Suse uses the UTF-8 character set rather than ISO-8859-1 or ISO-8859-15 when writing non-standard characters in the user's first or family name to */etc/passwd*. This in turn leads to strange looking output on the KDE screen,

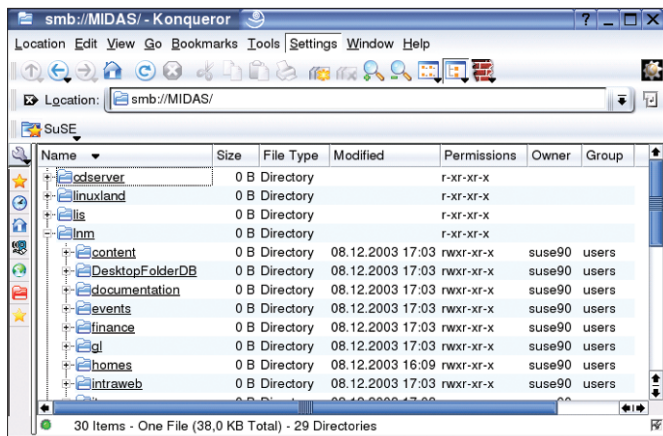


Figure 2: Accessing Windows shares on Suse Linux 9.0

although it has no effect on operations, with the exception of one or two mail programs that read the originator's first and family name from the system's user database. You can avoid this quite simply by not using non-standard characters during the installation process, and correcting any entries that need this in the YaST user management section at a later date.

No Sound?

Sound support for Intel chipsets caused Suse no end of trouble. Suse uses the *ALSA snd-intel8x0* module, which was unable to make any of the machines with Intel chipsets in our test talk. Although Suse does provide a functional kernel module, called *i810_audio*, you cannot enable the module in the YaST configuration tool – not even in expert mode.

This leaves you with no alternative but to change the kernel module manually in the */etc/modules.conf* file. Search for *snd-intel8x0*. The second hit should look something like Listing 1. In the second line, replace *snd-intel8x0* with *i810_audio* and save the file.

The next time you launch the system, the sound chip will work, although KDE can no longer locate the soundcard and

New Features

In a mixed Windows/Linux environment, Suse Linux 9.0 is far more connectivity friendly than earlier versions. The YaST Control Center now provides modules for configuring the Samba client and server. That makes it a lot easier to share files with MS Windows machines or mount MS Windows shares. The client can only set the workgroup name. YaST searches the network for existing groups and offers a selection for you to choose from. You can then use the KDE Konqueror (see Figure 2) to access any MS Windows shares. Typing *smb://* as a URL tells the Konqueror to display a list of shares, or alternatively, you can click on the icon for the local network.

A lot of changes have gone into the GUIs. In addition to new versions of KDE (3.1.4) and GNOME (2.2.2), Suse has simplified the start menu, thus reducing the number of menu levels required to locate a program to two. Any new software you install immediately appears in the GUI menu without requiring a restart. Unfortunately, the

thus disables KDE sounds and the volume control. Fortunately, you can use the *aumix* command line tool or the GUI-based *xmix* program to control the volume level, and programs such as *tuxracer*, or even *mplayer*, will work without any complaints.

Administration was one of the victims of the new uncluttered look. Whereas the menu previously allowed admins to install software, a manual approach is now required.

Typing *yast2 -i packagename* launches YaST's package manager mode, automatically selects the required package, resolves any dependencies automatically, and adds the required packages to the selection. The fact that YaST displays a search dialog when launched is slightly irritating. But you can switch to the installation overview to display the selected packages, and accept the selection by clicking.

There is an important addition for users with DVD writers: the KDE burning tool, *k3b* (see Figure 3), provided with Suse Linux 9.0 can now compile and burn data DVDs. Suse uses *growisofs* from the *dvd+rw* tools as the back-end. In contrast to the commercial *cdrecord-ProDVD*, *growisofs* is a GPL tool, and compared to the *dvdrecord* tool, it supports more or less any burning device and/or format. Although controlling *growisofs* on the command line is very different from using *cdrecord-ProDVD* and *dvdrecord*, the *k3b* front-end means that users no longer need to worry about that aspect.

But all of these changes are not enough to warrant an update from Suse 8.2. The improved DVD support is interesting for users who have recently invested in a DVD writer. And the NTFS repartitioning feature is a useful addition for Windows users wanting to install Suse on their machines. ■

Faulty sound configuration on Suse

```
# W60f.9c1SAu7GW31:82801CA/CAM AC'97 Audio Controller
alias snd-card-0 snd-intel8x0
alias sound-service-0-1 snd-seq-oss
alias sound-service-0-3 snd-pcm-oss
alias sound-service-0-8 snd-seq-oss
alias sound-service-0-11 snd-mixer-oss
alias sound-service-0-12 snd-pcm-oss
```

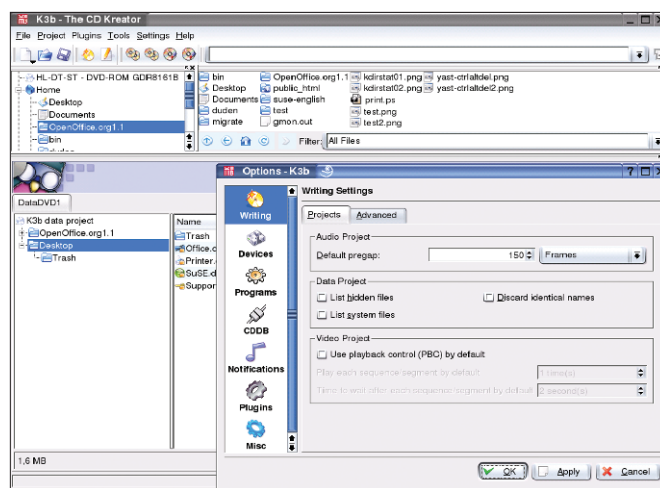


Figure 3: Suse Linux 9.0 provides a K3B version that can burn DVDs – a peek under the hood reveals *growisofs*

Red Hat Professional Workstation

The Standard

Red Hat does not want to entirely do without a boxed product, despite having launched Fedora. You can still purchase Red Hat Professional Workstation online from resellers such as from Amazon [6] or Linux Emporium [7] (but not directly from Red Hat).

BY PATRICIA JUNG

It's only the name of Red Hat Professional on the box: looking inside reveals CDs that belong to the Red Hat Enterprise Linux Workstation 3 edition, an installation guide and two A5-size sheets. Take care not to throw away the white sheet with the manufacturers congratulations on buying the product. The registration number is on the back, and you will need it to register online. Without this number, you cannot update the product via the Red Hat Network, and you have no support.

The Web form for online support issued the following highly intuitive error message “character string buffer



too small ORA-06512: at “APPS.IBU_REQ_PKG”, line 541 ORA-06512: at line 1”, and rejected the support case if the description contained less than about 2000 characters.

Online support did actually process all our test queries, although the response was not exactly immediate, and not always to our liking. There was a delay of about 3 or 4 days before the answer to our question about getting the Canon Powershot A60 working finally arrived – we were told to install a new gtkam package from Fedora [4]. Sadly, Red Hat support declined to investigate our test problem with a pre-installed Suse 8.1 distribution on our lab computer (no, we had not overwritten it!),

with two references to How-Tos and by pointing out the terms of the Service Level Agreement: “[does] not envisage configuration support for multiboot systems”. The Service Level Agreements themselves (and the Red Hat support pages in general) did not refer to Red Hat Professional Workstation, but still to Red Hat Enterprise Linux Workstation (incidentally, we fixed the Suse boot problem by booting from Suse's CD #1 again).

Forget Multimedia!

Professional Workstation is designed as a workhorse for enterprise desktop environments, and this severely impacts the leisure value of the system as regards games and multimedia software. This is one reason why the installation procedure only offers to connect your machine up to your LAN. The distribution does provide the internet-druid to handle modem, ISDN, xDSL, and WLAN configurations, however, you have to look through the GUI-based start menu to find these facilities. They are not components of the “Start here” system settings facility (see Figure 4), which is basically an abstraction level based on Nautilus. KDE users will have to get used to the fact that you can only view the source code of any Web pages you access, even though it may seem that you have a fully-fledged file and Web browser. The

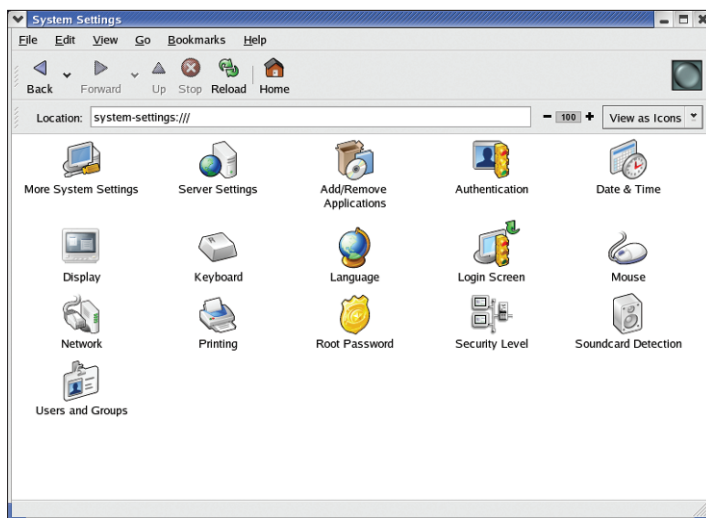


Figure 4: The “Control Center” of the Bluecurve Desktops on a Red Hat Professional Workstation

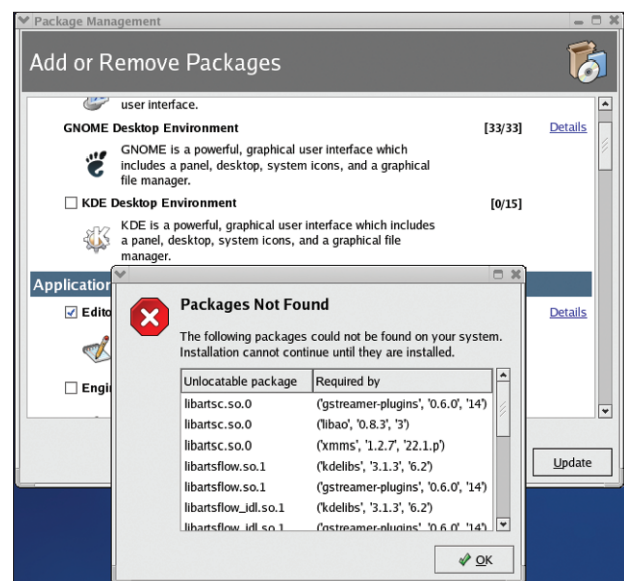


Figure 5: To discover what KDE packages Red Hat offers, check the “KDE Desktop Environment” checkbox. The package manager automatically decides to install 14 of the 15 packages. The package manager continues to complain about unresolved dependencies when you uncheck the checkbox

idiosyncratic “Start here” label for an otherwise extremely useful control center only makes sense immediately after installing, and is just one of the puzzles that the Bluecurve desktop continually poses.

And that is a great pity, as Red Hat really seems to have put some thought into the usability aspects while collating KDE and GNOME to create its own desktop design – much in contrast to other distributions. The desktop layout reflects the KISS principle of “Keep it simple, stupid!”. Menu labels typically refer to the functionality they provide, and are thus very easy to understand and follow. This helps you avoid searching for hours for the right menu, just because you do not

know the names of the particular binaries.

This puts the typical Red Hat restriction to one tool for one job – such as the use of xfig for vector graphics, and the dvdrecord command line tool for DVD burning – in a more positive light. The downside is that users who are used to KDE, and opt to install the KDE desktop, will not find anything where they expect it. Incidentally, you might be interested to know that you can still use the KDE environment even if you opt for a standard installation without KDE, although this will not install any programs outside the kbase package.

The promising trend towards usability seems to have completely passed by Red

Hat’s own package management tool, redhat-config-packages: no search facility, no descriptions for individual packages, user-unfriendly and wildly inaccurate dependency management (see Figure 5), entirely unintuitive behavior – to keep a long story short, completely unusable, use the commandline-based rpm tool instead.

The asking price of this distribution left us in two minds. It would seem that it is only worthwhile for multimedia haters, incapable of downloading and burning the Fedora images themselves, and entirely reliant on external support. Although this description might fit one or two small businesses, home users will typically prefer other alternatives. ■

Debian GNU/Linux 3.0 Release 2

Once you know

Its well-maintained and abundant collection of software, and the unachieved simplicity of the Web update facility has gained the Debian a lot of friends. So many in fact that third parties have started to update the current stable, but long in the tooth, 3.0 “woody” version, and distribute the results as a product of their own. **BY PATRICIA JUNG AND JOHN SOUTHERN**

If you’re on a broadband connection of course you can easily download the complete Debian distro. However, for the test we’ve chosen to pick a retail version from Debian Shop [8], their DVD/manual bundle from December.

The biggest obstacle to using Debian is unfortunately its prehistoric installation routine. If you do not know the correct drivers for your Ethernet and sound cards (and are inexperienced in command line use), you are completely up the creek.

Fortunately, the next generation of Debian (codename: Sarge) promises to fix this hinderance by the inclusion of a new installer.

The fact that the current installer thoughtlessly offers to format any Linux partitions it finds on the hard disk catches out even experienced Debian users sometimes. You have to leave the suggested instal-

lation sequence to locate the partition editor, cfdisk, and perform manual partitioning to avoid this pitfall.

Manual Attention Required

Another thing that you may not expect, is the fact that Debian will not automatically install an X server, unless you check Desktop Environment in the software group selection provided by the taskel tool (see Figure 6).

As it is conceivable that you might want to launch these programs remotely rather than locally, you have to either wade your way through the abysmal interface provided by the dselect package management front-end, or allow the front-end to terminate and then enter the following command:

```
apt-get install xserver-xfree86
```



Figure 6: After installing the basic Debian system and rebooting, you can go on to complete the process, which involves selecting package groups as shown here



debian

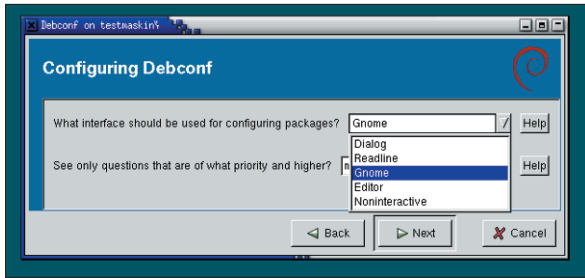


Figure 7: The Debconf package configuration tool's interface can be reconfigured by typing "dpkg-reconfigure debconf". "Dialog" is the recommended setting for the command line. The GNOME variant is shown here

Thanks to Debian Shop, this command installs XFree86 4.1.0.1. And assuming that you have your video card and monitor data handy, you can tell Debconf to take care of configuring the GUI by entering:

```
dpkg-reconfigure xserver-xfree86
```

Your alternative is to use XFree's own graphical configuration tool, `xf86cfg`. If the X server refuses to launch, when you enter `startx`, on the grounds that the

manager, `gdm`, when you install the X server, no matter whether you have actually got X working.

Having come this far, our next step was to install KDE. The Debian Shop version includes KDE 2.2.2. This installed without a problem first attempt. However, we did run into a few glitches when attempting to print Web pages, such as www.pravda.ru, from Konqueror. The PostScript code this attempt generated was faulty. The miscreant turned out to be the scalable-cyrfonts-

fixed font is missing, you need to also install the `xfonts-base` package – this is just one example of many indicative of the headaches that unresolved dependencies in the basic system can cause. Make sure you resolve this dependency before you reboot to avoid a blank screen, as Debian automatically enables the GNOME login

`x11` package, which is required to print Cyrillic characters, but removing it at least meant that the Web site worked. It looks like this may be a bug in Qt.

After installing Magicfilter we did manage to convince the multifunctional HP printer to print a few color hardcopies using the `dj690c-best-filter` printer filter for HP Deskjets, but the pixely, poorly mixed print out hardly reflected the device's true capabilities.

Sound output was more promising: after selecting the correct driver module for our soundcard in the install routine, all we had to do was modify the permissions for `/dev/audio` to allow access by non-privileged users. If multiple users log on to your system, it makes sense to add these users to the audio group.

Experienced users should be capable of navigating most of these obstacles themselves, but if you lack this experience, you should possibly think twice about using a Debian-only system. Both Knoppix and Xandros are useful "Debian trainers", adding a much needed user-friendly layer to the powerful Debian core. ■

Xandros Desktop 2.0

Easy starter

Who remembers the much lauded Corel Linux OS? In May 2001 a company called Xandros took over the development, and recently released a second version, called Xandros Desktop 2.0, on December 16. **BY CARSTEN SCHNOBER**

As we did not have the release version of Xandros Desktop 2.0 in time for the Linux labs test, our test is based on the release candidate 2. Unfortunately, we did not have any manuals for RC2.

There are two incarnations of the new version: the Standard Edition, which is comparable to the pre-release version we tested, and the 50 US Dollar Deluxe Edition with a longer support period and a second CD with Crossover Office 2.1, to run standard Windows applications, a resizer for NTFS partitions, and a few additional programs.

The GUI-based installation program is exactly what Linux newbies need, that is, it does not ask a lot of questions. If you select Express Install, all it wants to know from you, is what to do with the existing operating system, if any. The installation routine looks for a DHCP server and, if it finds one, uses the server to configure the network environment; if not, it asks you about alternative Internet access. If you opt for a Custom Install, you can specify the installation scope, the partitioning, and the network settings yourself, including dial-up connections to the Internet.

While partitioning a disk, you will probably find the option to mount preformatted partitions, and check their contents, a big help. It makes sense to do this before you decide which filesystems to overwrite. There is one slight drawback: the system supports the principle of putting everything that belongs to the core distribution on a single partition. Thus, the wizard will not allow you to put the `/usr` directory on any partition apart from the root. Of course, you can place user and computer specific data such as `/var`, `/home`, `/opt`, and `/usr/local` on partitions of their own.



Before launching, Xandros asks you to supply a root password, and allows you to define unprivileged users. A pleasant surprise follows the reboot: the boot manager automatically adds all the other operating systems on the computer to the boot menu. Xandros even located a Debian system we installed later.

Usability Matters

Xandros relies on the KDE Version 3.1.4 desktop and displays the kdm login manager with a modified design.

Xandros Desktop is completely different from the standard KDE desktop; the individual packages are hardly recognizable. The Switch User item in the Launch (aka Start) menu allows you to log multiple users on to a single KDE desktop without closing the original user's session (and thus the applications running in that session). To switch back, you simply select that user's session in the "Switch User..."

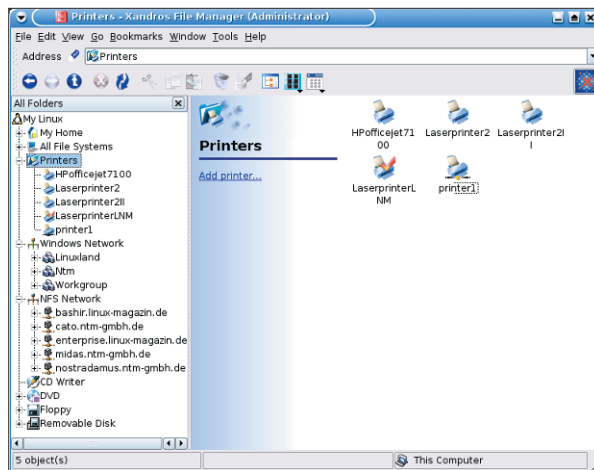


Figure 8: The "Xandros File Manager" adds newly attached hardware without any complaints

dialog box. The developers have added hardware recognition and configuration facilities to the KDE Control Center. No sooner had we hitched up the printer, than the printer icon appeared (see Figure 8).

The File Manager has icons for network filesystems, whether they are NFS or Samba based, allowing you to click on *Mount this share...* It also handles USB-

based keychain storage devices. Xandros was not thrown by the Windows modem in our test laptop, offering a choice of two drivers.

Xandros has its own cdrecord interface, which is integrated with the file manager. You can drag & drop files to the CD Writer folder, and then click on *Write files to disc...*

The distribution provides the basic tools needed for a GUI desktop. But assuming your Internet connection is quick enough, you can launch the Xandros Networks packet manager to access the Xandros archive

and its store of programs specially adapted for Xandros, or unmodified Debian packages.

This makes Xandros well worth a try for anyone with fast Internet access, or for those of you who do not need a great deal of application software. Finally, the distribution is perfect for users interested in moving to Debian without having to navigate the obstacles. ■

Fedora Core 1

New team

In September 2003 Red Hat announced that it would be discontinuing the production of boxed desktop systems. The free Community project Fedora was to fill the gap left by the Red Hat Linux Project. Although Red Hat does have a boxed end user product, the Fedora project continues to exist.

BY CARSTEN SCHNOBER

The developers released the first version of Fedora, known as Core 1, in early November 2003. The Red Hat team is involved in Fedora development, and controls both the scope of the official releases and the homepage content. It hopes that the Community will continue to contribute enhancements that will benefit Red Hat's range of products.

Installing Fedora on a hard disk with an existing Windows system looked

quite simple at first glance. Fedora can resize FAT partitions if required, although it cannot handle NTFS. In fact, Fedora cannot read NTFS at all.

The partitioning software, which comes from Red Hat Linux, may have trouble with larger disks. If the boot partition is not within the first 1024 cylinders of the disk, the program cannot read the partition table, and suggests re-initializing – that is deleting – the whole



disk. You can work around this issue by using a different program to partition your disk manually, however.

Another quirk becomes apparent if you have other Linux systems installed. Fedora will create a swap partition of its own, instead of using the existing partition, and this simply wastes disk space.

The list of available languages is extensive. But Fedora demonstrated a creative approach to language support where translation work is incomplete. When we selected Dutch, for example, applications where translation work has been completed spoke the language, whereas others used an arbitrary mixture of several languages. When you first boot from disk, the Gnome Display Manager pops up to say hello and launches into the default GNOME 2.4.0 in Red Hat's Bluecurve design.

Package Management

We run into a major problem, when we attempted to add some programs after completing the basic installation. The developers obviously forgot to adapt version 1.2.6 of the Red Hat package manager which is supplied with Core 1 to the structure of the Fedora CD. The installation terminates ungracefully but without telling the user why (see Figure 9). We discovered the reason after launching `redhat-config-packages` via the command line: the program looks for packages in the RedHat subdirectory on the CD, but they are stored below Fedora. We solved the problem by manually updating to version 1.2.7 from [5] (`rpm -Uvh redhat-config-packages-1.noarch.rpm`).

The updated `redhat-config-packages` version is not an elegant performer. The installation order does not attempt to match the distribution of the packages across the CDs, and this leads to users being prompted to switch CDs multiple times. The package manager also fails to provide a sorely needed search function to help you find specific programs.

Devices

The Red printer configuration tool recognized our HP OfficeJet immediately, and suggested the correct driver, so that printing worked fine. Despite using the package manager to install Xsane and the recommended driver, we were unable to use the scanning capabilities.

After manually entering the model name, our test camera worked without any complaint using `gtkam`; in contrast to this, we had to install the USB-based keychain storage device manually, as the hardware browser failed to recognize it.

All in all, Core 1 had a kind of unfinished feel to it. The distribution does not offer a large number of packages, the configuration tools courtesy of Red Hat do not work properly, the package manager being the major culprit. We were also surprised to note that the Xmms system does not play MP3 files to avoid

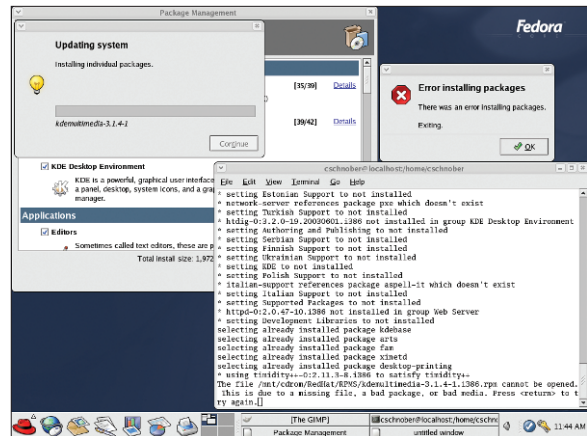


Figure 9: The Fedora package manager in our version refused to work

copyright issues; Red Hat seems to be the only distributor afraid of legal retributions just for playing MP3 format files.

It remains to be seen whether the Community will live up to Red Hat's expectations, and add value to Fedora. The current version shows obvious signs of teething trouble, and cannot hope to compete with other distributions whether they be boxed products or downloadable projects. ■

Conclusion

Linux users are still spoiled for choice. Suse has its popularity going for it, and it has found a safe harbor in Novell. Mandrake has a genuine fan following, and Xandros has a lot of major and minor features that put the fun factor back into Linux computing. As regards hardware, today's commercial Linux distributors cannot expect their users to RTFM, and progress continues to be made on the usability front. However, this still left us wishing that the major distributors would put more effort into quality control. And at times one cannot avoid the sneaking suspicion that end user distributions are designed to beta test the more expensive enterprise versions.

User support is particularly in need of attention. Complaints about Suse's support are on the increase, Red Hat's Support Web interface is poor, and support at Mandrake a farce; this would seem to indicate that distributors still

regard contact to end users as an expensive liability rather than a self-evident responsibility for a given product. Experienced users with cheap broadband Internet access can still save the asking price of the box, and opt for a downloadable version or a free distribution, but newbies often do not have these options.

The free distributions we tested obviously have different goals in mind. While Debian tends to sacrifice user-friendliness in favor of stability and conformity to standards, Red Hat's Fedora is on a completely different tack. It attempts to guide users step by step through the installation and configuration using only free tools. The rough edges do tend to dash one's hopes of finding a Linux distribution for newcomers without having to opt for a commercial version. It remains to be seen if future versions of the free distributions will be able to close the gap on proprietary installers.

Until they do, Debian will remain the domain of experienced Linux users, and Fedora will continue to be hampered by teething trouble, so that both represent insurmountable obstacles to any newcomers, no matter where they look for a free distribution choice. ■

INFO

- [1] Mandrake Online Support: <http://www.mandrakeexpert.com/>
- [2] Mandrake Club: <http://www.mandrakeclub.com/>
- [3] libdvdcss: <http://developers.videolan.org/libdvdcss>
- [4] Fedora: <http://download.fedora.redhat.com/pub/fedora/linux/core/1/i386/os/Fedora/RPMS/gtkam-0.1.7-6.1.i386.rpm>
- [5] Red Hat package manager: <http://people.redhat.com/~katzj/redhat-config-packages/1.2.7/redhat-config-packages-1.2.7-1.noarch.rpm>
- [6] Amazon: <http://www.amazon.co.uk>
- [7] Linux Emporium: <http://www.linuxemporium.co.uk/>
- [8] Debianshop: <http://www.debianshop.com>

Distribution Comparison – Installation

Installation	Mandrake Linux PowerPack 9.2	Mandrake Linux ProSuite 9.2	Red Hat Professional Workstation	Suse Linux 9.0 Professional	Xandros Desktop 2.0	Fedora Core 1	Debian GNU/Linux 3.0 r2
Language (English, French, Italian, Spanish, Polish, German, Romanian)	en, fr, it, es, pl, de, ro	en, fr, it, es, pl, de, ro	en, fr, it, es, de	en, fr, it, es, de	en	en, fr, it, es, de	en, fr, it, es, pl, de
Comprehensiveness and Scope of Installation Help	Extremely readable online help for all items, rudimentary installation chapter in manual	Extremely readable online help for all items, rudimentary installation chapter in manual	Online help for all items, rudimentary installation manual	Online help for all items	Readable online help for all items	Online help for all items	Incomplete online help
Automatic and manual partitioning	Optional	Optional	Optional, point and click deletion of all existing, or all existing Linux partitions possible	Optional	Optional	Yes	No
Resizing of FAT32 and NTFS partitions	Yes / Yes	Yes / Yes	No / No	Yes / Yes	Yes / only with Deluxe Version	Yes / No	No / No
Filesystems supported	Ext2, Ext3, ReiserFS, XFS, JFS, VFAT	Ext2, Ext3, ReiserFS, XFS, JFS, VFAT	Ext2, Ext3, VFAT	Ext2,, Ext3, ReiserFS, FAT, XFS, JFS	ReiserFS	Ext3	Ext2, Ext3, ReiserFS
Installation Profiles	None, selection of functional groups possible	None, selection of functional groups possible	GNOME desktop with Web server and Samba, selection by functional groups also possible	Minimal, minimal graphical, default	None	Personal desktop, workstation, server, user-defined	none, functional groups selectable in tasksel
Packet Search Feature Search	No	No	No	Yes	Yes	No	in dselect
Security Profiles	Default, high, higher, paranoid	Default, high, higher, paranoid	Firewall yes/no, permit HTTP; SSH, FTP, Telnet, SMTP and specific ports	No	No	Disable firewall/ HTTP/FTP/SSH/ Telnet/SMTP/ enable other port/ enable by device	No
GUI-based login	Default; can be disabled at end of installation procedure. Installation without X possible in Expert Mode	Default; can be disabled at end of installation procedure. Installation without X possible in Expert Mode	Default	Default	Default	Automatic setup	X not automatically configured; if configured, yes
Boot Manager	Lilo or Grub	Lilo or Grub	Lilo or Grub	Grub	Lilo	Grub	Lilo
Network/dialup installation included with install?	Yes	Yes	Only network adapters	Yes	Only network adapters with Express Installation, any in Custom Mode	Ethernet / Dialup	Ethernet (if correct Kernel module is selected) / Modem
ISP Provider database	No	No	No	Yes	No	Modem / ISDN	No
Printer configuration included with install	Yes	Yes	Yes	Yes	No	No	No
Printer database	Yes	Yes	Yes	Yes	Yes	n.a., available for installation later	n.a., available for installation later
Supports creating of at least one non-privileged user	Mandatory for some security profiles, optional for default profile	Mandatory for some security profiles, optional for default profile	Possible, can be disabled explicitly	Can be disabled by ignoring warnings, problems with non-standard characters in first/family name	Mandatory	Optional	Optional
Root password required	Mandatory for some security profiles, optional for default profile	Mandatory for some security profiles, optional for default profile	Yes	Yes	Yes	Yes	Yes
Navigate back and forward in all installation dialogs	Possible in part (e.g. Package selection)	Possible in part (e.g. Package selection)	Yes. Retains settings except for manual partitioning scheme	Yes. Loses some settings	Yes. Retains settings	Yes. Retains settings	Yes. Retains some settings
Number of CDs required to install a KDE desktop with programming tools	3 CDs	3 CDs	4 CDs	4 CDs	1 CD	3 CDs	n.a.
Minimum RAM requirement	64 MB (Text Mode – 32MB)	64 MB (Text Mode – 32MB)	256MB	64 MB	64 MB	192 MB (Text Mode – 64 MB)	Not specified

Distribution Comparison – Components

Components	Mandrake Linux PowerPack 9.2	Mandrake Linux ProSuite 9.2	Red Hat Professional Workstation	Suse Linux 9.0 Professional	Xandros Desktop 2.0	Fedora Core 1	Debian GNU/Linux 3.0 r2
CD/DVD/Boot floppy	7 CDs, 2 of which with sources, 1 additional tools, 1 commercial applications	9 CDs, 1 of which with DB/2, 2 sources, 1 additional, 1 commercial applications, 1 Java + 1 Workstation DVD	9 CDs, 3 of which source, 1 docs, 1 Java support	1 double DVD (B-Side: sources), 6 CDs (binaries only, of which 1 SQL Anywhere Studio)	1 CD, Deluxe: 2 CDs	3 CDs	1 double sided DVD + Update 3.0r2 CD
Additional items	1 Getting started manual	1 Reference manual, 1 Getting started manual	1 Installation guide	2 manuals, 1 sticker	1 manual	-	1 manual, 1 PC Badge, 1 Security quick reference card
Kernel	2.4.22	2.4.22	2.4.21	2.4.21	2.4.22	2.4.22	2.2.20
X11	4.3.0	4.3.0	4.3.0	4.3.0.1	4.3.0.4	4.3.0	4.1.0.1
KDE	3.1.3	3.1.3	3.1.3 (Bluecurve)	3.1.4	3.1.4	3.1.4-Bluecurve	2.2.2
GNOME	2.4	2.4	2.2.2 (Bluecurve)	2.2.2	-	2.4.0-Bluecurve	1.4.0.6
StarOffice/OpenOffice	OpenOffice 1.1.0	OpenOffice 1.1.0	OpenOffice 1.0.2	OpenOffice 1.1	OpenOffice 1.1.0	OpenOffice 1.1.0	-
Scribus	1.0.1	1.0.1	-	1.0.1	-	-	0.6
GNOMEMeeting	0.98.5	0.98.5	0.96	0.98.1	-	0.98.5	0.12.2
GnuCash	1.8.6	1.8.6	-	1.8.5	-	1.8.7	1.6.6
Quanta	3.1	3.1	-	3.1.4	-	3.1.4	2.0.1
Mozilla	1.4.13	1.4.13	1.4	1.4	1.4.0	1.4.1	1.0.0
Opera	7.11 (banner version)	7.11 (banner version)	-	7.11 (banner version)	-	-	-
Evolution	1.4.4	1.4.4	1.4.5	1.4.4	-	1.4.5	1.0.5
Gimp	1.2	1.2	1.2.3	1.2.5 and 1.3.20 (devel)	-	1.2.5	1.2.3
Sketch	0.6.16	0.6.16	-	0.6.15	-	-	0.6.13
Xmms	1.2.7	1.2.7	1.2.7	1.2.8	1.2.8	1.2.8; without MP3 plugin	1.2.7
Realplayer	8.0.3.421	8.0.3.421	-	8.0.3.465	9.0	-	-
Acrobat Reader	5.0	5.0	-	5.08	5.05	-	-
XCDRoast	0.98alpha14 (with DVD)	0.98alpha14 (with DVD)	-	0.98alpha14 (with DVD)	-	0.98a14	0.98alpha
Xine	0.9.22	0.9.22	-	0.99.rcoa	0.9.21, notes on playing encrypted DVDs in Xine FAQ supplied	-	0.9.8
Xawtv	3.88	3.88	-	3.88	-	3.88	3.72
MusE	0.6.1	0.6.1	-	0.6.1	-	-	0.5.2
Tux Racer	0.61	0.61	-	0.61	0.61	0.61	0.61
Mail server	Postfix 2.0.13 (default), Sendmail 8.12.9	Postfix 2.0.13 (default), Sendmail 8.12.9	Sendmail 8.12.10 (default), Postfix 2.2.0.11	Sendmail 8.12.10, Exim 4.22, Postfix 2.0.14 (default)	Exim 3.36	Sendmail 8.12.10	Exim 3.35 (default), Postfix 1.1.11, Sendmail 8.12.3, Zmailer 2.99.55
Sshd	OpenSSH 3.6.1p2	OpenSSH 3.6.1p2	OpenSSH 3.6.1p2	OpenSSH 3.7.1p2	OpenSSH 3.6.1p2	OpenSSH 3.6.1p2	OpenSSH 3.4p1
Samba	3.0.0 / 2.2.8a	3.0.0 / 2.2.8a	3.0.0	2.2.8a	3.0.0	3.0.0	2.2.3a
Webserver	Apache 1.3.28 / 2.0.47	Apache 1.3.28 / 2.0.47	Apache 2.0.46	Apache 1.3.28 and 2.0.47, Zope 2.6.1	Apache 1.3.27	Apache 2.0.47	Apache 1.3.26, Zope 2.5.1
Personal Firewall/ GUI tool for packet filter configuration	DrakFirewall	DrakFirewall	redhat-config-securitylevel	Susefirewall 2 3.1	Control Center: System Administration / Services	redhat-config-securitylevel-tui	Not provided for by distribution, possible with Webmin 0.94 or Firestarter 0.8.2
GnuPG	1.2.3	1.2.3	1.2.1	1.2.2	-	1.2.2	1.0.6
Gcc	3.3.1	3.3.1	3.2.3	3.3.1	3.0, 3.2, 3.3	3.3.2	2.95.4 and 3.0.4
Perl	5.8.1	5.8.1	5.8	5.8.1	5.8.0	5.8.1	5.6.1
Java Runtime Environment	Sun JRE 1.4.2	SUN JRE 1.4.2	IBM Java2 1.4.1	Sun Java2 JRE 1.4.2	Sun Java2 JRE 1.4.2	-	Installer for IBM JDK 1.1 (manual download of tgz-Files required)
Price	£59.99 (Amazon £49.99)	£199 (Amazon £179.99)	£79.99 (Amazon £67.99) Deluxe: £81.08	£59.99 (Amazon £45.79)	Standard: £35.25 (www.lindengrove.net)	-(Download)	£30 (Debian Shop)
Number of installations permitted	Not specified	Not specified	Not specified	Support and updates restricted to one	1	Unlimited	Unlimited

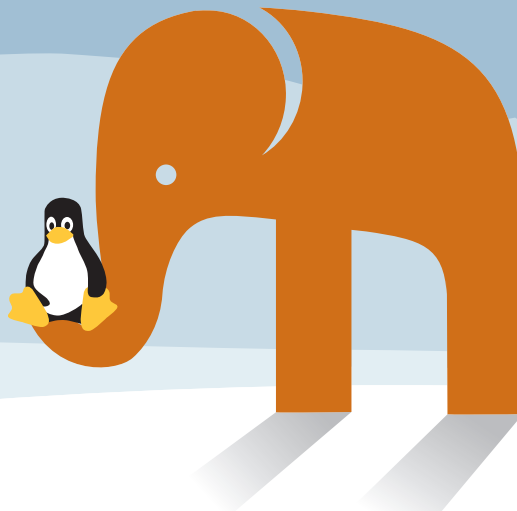
Distribution Comparison – Preconfiguration, Configuration, Support & Documentation

Preconfiguration	Mandrake Linux PowerPack 9.2	Mandrake Linux ProSuite 9.2	Red Hat Professional Workstation	Suse Linux 9.0 Professional	Xandros Desktop 2.0	Fedora Core 1	Debian GNU/Linux 3.0 r2
Number of installations permitted	Not specified	Not specified	Support and updates restricted to one	Unlimited	1	Unlimited	Unlimited
Automatically add Windows installations to boot menu	Yes	Yes	Yes	Yes	Yes	Yes	No
Access FAT/NTFS partitions without manual mounting	Yes	Yes	No	Yes	Yes	No	No
Standard desktop	KDE or GNOME	KDE or GNOME	GNOME	KDE	KDE	GNOME	GNOME
Standard print system	CUPS	CUPS	CUPS	CUPS	CUPS	CUPS	lpr/lpd
Switch from GNOME to KDE provided for	Selectable at login	Selectable at login	Yes	Selectable at login	Not available	Yes	No
Menu/Desktop appearance	Good	Good	Good	Good	Good	Tidy menu structure on GNOME, GNOME menus and desktop also on KDE	Different menu items in GNOME and KDE, task orientation not major criterion
Euro symbol in standard X terminal	No	No	Yes	Yes	Yes	Yes	No
Default language for system messages	English (en_GB)	English (en_GB)	Console: English, X: localized	Depends on installation language	Depends on installation language	Configurable on installation	Configurable on installation
Shadow password	Yes	Yes	Yes	Yes	Yes	Yes	Yes, if required
Configuration							
Default Package Manager	RPM-Drake, rpm	RPM-Drake, rpm	redhat-config-packages, rpm	YaST 2 rpm	Xandros Networks (RPM and Debian packages)	redhat-config-packages (rpm)	APT/dpkg
Integration of configuration tools	Mandrake Control Center	Mandrake Control Center	"Start here" control center on desktop	Central tool – YaST2	No central tools, some functionality via control center	redhat-config available via menu in part	No
Default X server tool	XFDrake	XFDrake	redhat-config-xfree86	SaX 2	Control Center: Display	redhat-config-xfree86	debconf (dpkg-reconfigure xserver-xfree86)
Auto-Update	via Control Center, selection of updates to be performed possible	via Control Center, selection of updates to be performed possible	Via Red Hat Network, selection possible	YOU (YaST Online Update), selection possible, can be performed automatically by cronjob later	Yes, selection possible	Yes, with Up2Date; selection possible	apt-get upgrade, explicit selection possible
Encrypted filesystem support	In theory, yes, but did not work in test	In theory, yes, but did not work in test	No	Not possible at later stage, encryption possible for new file-system or crypto files (Loopback)	No	No	No
Support & Documentation							
Manual							
Total number of pages in documentation	367 pages	572 pages	113 pages	990 pages	No manual with pre-release version	114 pages	-
Format	DIN A5	DIN A5	DIN A5	DIN A5	n.a.	-	A5 Spiral bound
Point size	Approx. 9pt	Approx. 11pt	Small	Approx. 11pt	n.a.	-	Approx. 9pt
Language	English	English	English	English	n.a.	-	English
Target group	Beginners	Beginners and experts	Beginners	Beginners and experts	-	-	Medium to experts
Telephone & Email support / Web resources							
Scope and cost of telephone support	No phone support	Theoretically five calls within 60 days; we were unable to locate a support number	30 days toll-free (0800)	Installation support: local call cost (0845) Other: 46 Euros per incident	-	-	-
Cost/Period of free Email support	60 days web support	90 days	30 days; via www.redhat.com/support/	90 days	Standard: 30 days, Deluxe: 60 days	-	-
URL of portal page	www.mandrakesoft.com/		www.redhat.com/software/workstation	portal.suse.com/PM/page/supportRequest.pm	www.xandros.com/	fedora.redhat.com/	www.debian.org/

Distribution Comparison – Support & Documentation, Hardware tests

Support & Documentation (cont'd)	Mandrake Linux PowerPack 9.2	Mandrake Linux ProSuite 9.2	Red Hat Professional Workstation	Suse Linux 9.0 Professional	Xandros Desktop 2.0	Fedora Core 1	Debian GNU/Linux 3.0 r2
Telephone & Email support / Web resources (cont'd)							
URL of patch page	www.mandrakesecure.net/en/advisories/ , www.mandrakelinux.com/en/errata.php3		https://rhn.redhat.com (Registration required, one machine permitted)-	www.suse.de/en/private/download/updates	www.xandros.com/downloads.html	fedora.redhat.com/html/download/	www.debian.org/security/updates .
User forum, mailing lists	www.mandrakeclub.com/ (90 Day free), http://www.mandrakeexpert.com/		–	www.suse.de/en/support/online_help/maillinglists	www.xandros.com/forums.html	www.redhat.com/mailman/listinfo/fedora-list	lists.debian.org/
Hardware tests							
Fujitsu-Siemens Lifebook S601 Laptop							
Sound chip supported out of the box	Yes	Yes	Yes	No (issue remedied later)	Yes	Yes	No
Suspend and resume supported	Yes	Yes	Yes	Yes	No	No	Yes
Multifunctional OfficeJet HP 7140xi							
Print	Yes	Yes	Not configurable using distribution specific printer tool, generic support via CUPS Web interface	Yes	Yes	Yes	Poor quality after manual configuration
Scan	Yes	Yes	No	Yes	No	Yes	No
Canon Powershot A60 digital camera							
Automatically recognized	Yes	Yes	No	Yes	Yes	No	No
USB storage device							
Automatically recognized	Yes, but not mounted	Yes, but not mounted	No, but accessible via command-line	Yes	Yes	No	No

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