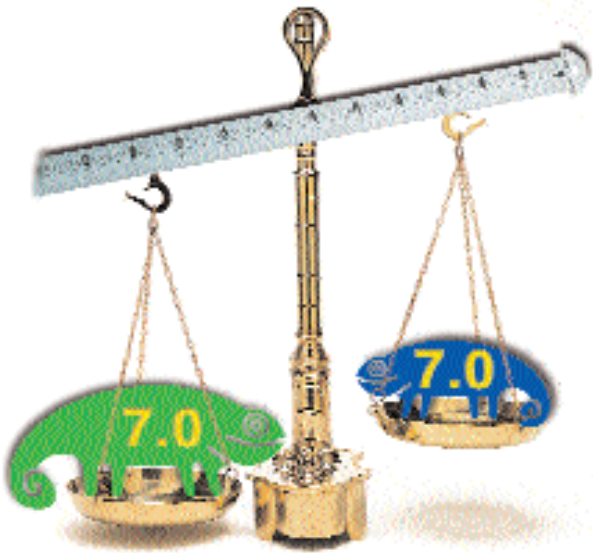


SuSE Linux 7.0 Personal and Professional Edition

BETTER AND BETTER

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With version seven SuSE presents two versions of its distribution for private users and professionals. We took a critical look at both shortly after they appeared.

Fig. 1: Basic configuration of the system presents no difficulty.

The two distributions differ in both price and scope. The Personal Edition with three CDs costs £29.00, but SuSE is asking £20 more for the Professional Edition which boasts six CDs and one DVD. Everything else is pretty much the same in both versions: a quick install manual, manuals covering configuration and software, a few chameleon stickers and a Tux badge. The Professional Edition also

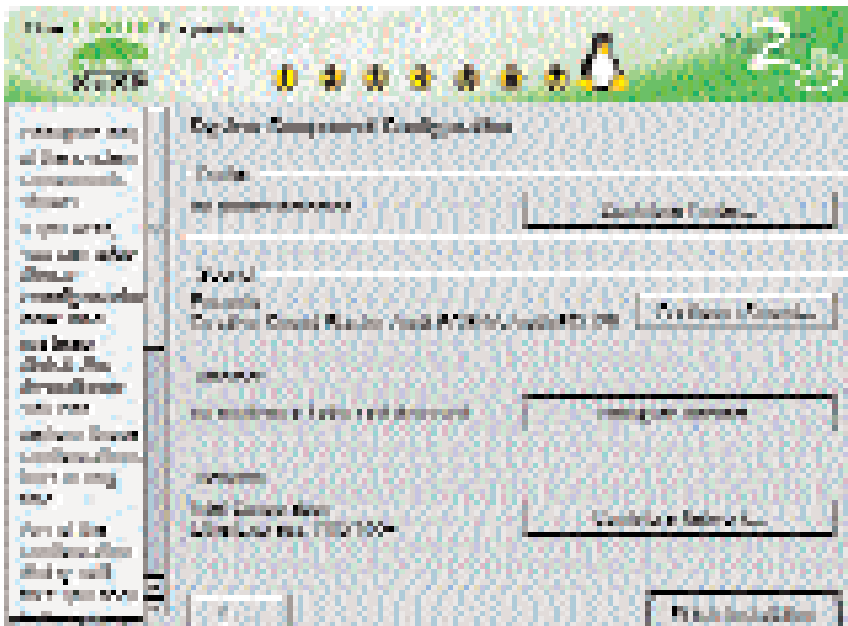
includes the traditional SuSE "know-how" manual and entitles you to 90 days installation support instead of 60.

Included software

SuSE Linux has gained a reputation as being one of the largest and most comprehensive distributions. The Personal Edition now contains just three CDs and to achieve this some packages have been removed. Despite this, the source code of all the programs is still supplied. Two CDs contain binary programs and one holds the source files.

However, the Personal Edition is no mere half portion. If you don't need things like archie, nntpd, five different FTP servers and the complete KDE development environment it is possible to get by quite well with it. We only missed the Apache module PHP, SSL and Perl. Contrary to rumours that have repeatedly cropped up in IRC, the Personal Edition does contain (of course) a C and C++ compiler, Perl and Tcl/Tk, LaTeX as well as frequently used daemons like inetd, Network Server Kit, portmapd, Samba Server and Client, YP Server and Client. KDE 2 (Beta 2) also exists in the Personal and Professional Edition despite what it says on the box.

XFree86 doesn't fall short either. SuSE – like Mandrake – achieves a dual installation. You select using SaX or SaX2 whether XFree86 3.3.6



or 4.0 is to be used. Both versions are installed on the computer and many of the libraries and other files are shared.

For XFree86 4.0, SuSE supplies hardware-accelerated drivers for nVidia chipsets and is the only distribution so far to include a special X server plus a kernel module for the Diamond Fire GL1. The installation of this exotic graphics card doesn't even require manual work. YaST 2 recognised the card and even installed on request the 3D hardware acceleration. For manual installation you must use a special SaX2 option but the required files and documentation are all available. Thus we succeed for the first time in commissioning "out of the box" a Diamond Fire GL1 with 3D hardware acceleration.

Graphical set-up

Whoever expects that the two versions use installation procedures suited to the respective target group of users will be disappointed. The installation is absolutely identical (apart from the differences in included packages) so that beginners will also cope well with the Professional Edition.

A new installation on our test computer, a Pentium II 400 MHz with 128 Mbytes RAM, ran without any glitch and coped with graphics cards such as the Creative Labs Riva-TNT2-Ultra, Matrox G400 DH-MAX, ATI Rage 128 Pro Fury and Diamond Fire GL1 without difficulty. The keyboard and mouse connected to the USB port were also easily recognised and incorporated despite USB support being switched off in the Bios. SuSE has also thought about the visually impaired: a Braille line is supported in the installation. The installer's capabilities are a bit lacking when it comes to partitioning. Existing Windows partitions cannot be reduced in size during the installation although *GNU PartEd*, for example, manages it perfectly and competitors like Mandrake and Caldera also provide this facility. For the Personal Edition – the most likely choice of someone using Windows and trying Linux for the first time – this would be very useful. It is hoped that a future version will employ *GNU PartEd* and perhaps make it easier to operate via a nicer front-end.

We were pleased to see that a beginner cannot actually select an unusable partitioning or formatting configuration. If you don't create a swap partition YaST 2 points out that this is unusual (if possible at all). If you want to set up "/" as ReiserFS without having a separate /boot partition formatted with ext2, YaST 2 will not even allow it. The only disappointing aspect is that when the option to automatically partition the entire hard disk is chosen no ReiserFS option is offered: all data partitions are formatted as ext2.

The size of the standard installation including StarOffice amounts to around 1.1 Gbyte. However, you cannot avoid inserting four of the six CDs of the Professional Edition, even though in the Personal Edition the whole thing fitted on to two.

Immediately after the installation, XFree86 is set up – normally version 3.3.6 except in the case of graphics cards that are only supported by version 4.0. In our test this included the ATI Rage 128 Pro Fury as well as the Diamond Fire GL1. The basic configuration (Fig. 1) of the sound card, ISDN, network card and NFS devices all went smoothly and the system was ready for operation in the twinkling of an eye.

The only real shortcoming is the printer set-up: As many printers as you want can be set up without difficulty (in the case of network printers you can even have the connection tested) but having done so you cannot get rid of them again. There isn't even a list of the printers already installed. Without changing the `/etc/printcap` manually and using the APS filter configuration program there is no way round this problem. We expected to be able to get a list of installed printers as this deficiency was pointed out when version 6.4 was tested. However, SuSE hasn't been inactive in the printer field: the selection of supported printers has been considerably extended.

YaST1

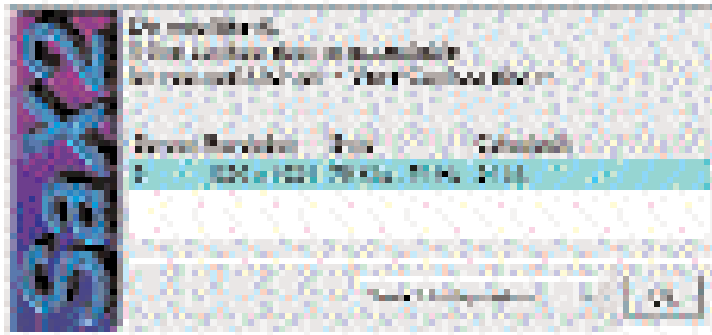
The console based tool YaST version 1 is preferred to the graphical version by many SuSE experts. But it is not obsolete. User and group administration, for example, as well as some basic system settings, have still not yet been integrated into YaST 2. YaST 1 lets you activate many settings that would otherwise have to be attended to after installation.

A selecting *manual* at the boot prompt of the first CD, as in version 6.4, gets you into the old YaST. Anyone who is attempting to set up an old PC and needing to boot up from a diskette would be advised to go and get a coffee at this point – to the start of the installation on a Pentium 133 with 40 Mbytes RAM took a whole 7 minutes. This also applies to the start-up of a rescue system. YaST 2 requires a minimum of 64MB of RAM so owners of older computers in particular will have to use the old-style interface.

What you get is a less easy but considerably more flexible installation. In YaST 1 neither sound nor network cards are automatically recognised, so you must already know what hardware is present in order to get the network to run. The name server, too, has to be entered manually.

If you do not need to set up the network, ISDN or sound card during or short after the installation you can still use the new YaST. SuSE now offers a console interface for YaST 2. Pity that we searched in vain for this tip in all the manuals.

When partitioning the disk more care is necessary than when using YaST 2 as no kind of test is made as to whether you will be able to boot from your system later. We were able to install without difficulty on a hard disk with just a single ReiserFS partition. Only later did we find that *lilo* would not install. The Personal Edition provides no help on the



[top, left] Fig. 2: The configuration suggestion is normally usable; only in special cases do you need the selection menu.

[top, right] Fig. 3: In most cases the simple configuration is sufficient

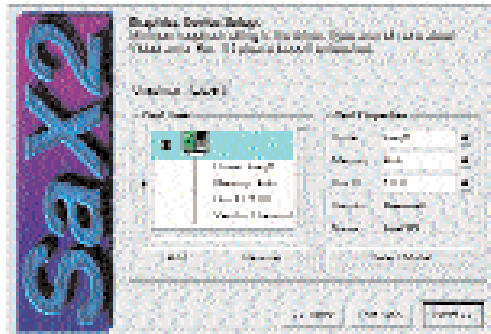


Fig. 5: Several resolutions and higher colour depths are not a problem



The graphics card is clearly displayed with all the details.

subject of partitioning: it is assumed throughout the documentation that you are using YaST 2.

We found a pitfall in the installation via YaST 1. The USB mouse on the test system has been automatically recognised by YaST 2 but configuration of GPM in YaST 1 proved to be a problem. If you choose the wrong mouse type it can even happen that the keyboard no longer works and you have to reactivate the computer by resetting it. The basic modules for USB support were loaded but the modules `mousedev` and `usbmouse` were missing. We recommend that USB mouse owners don't install GPM initially but do it later – the protocol is *PS/2* and as a mouse device you enter */dev/input/mice*.

Another problem occurred when manually calling `lsbin/init.d/usb. modprobe` constantly complained that the file `/etc/modules.dep` was too old, but a regeneration of `modules.dep` did not bring about a solution. The blame for this was down to an `/etc/modules.conf` dated one hour into the future: a touch `/etc/modules.conf` and subsequent `depmod-a` provided the cure.

Update of 6.4

We also assessed the update of the precursor version to SuSE Linux 7.0 Professional. For this purpose a PC with a full installation of SuSE Linux 6.4 as well as a notebook with a modified 6.4 system were brought into the laboratory. The update takes place exclusively using YaST 1.

At the start of the update a whole raft of unfulfilled dependencies and packages no longer present awaited us. This can be traced back to the partial splitting of the packages in version 7.

The computer with the full installation held a nasty surprise. The update proceeded at a snail's pace. For the first CD alone, the 400MHz K6-II with 128 Mbytes RAM took a full six and a half hours: after the second CD and a total of two days we stopped the update. The sticking brake block was found quickly. Before the update the RPM database was a proud 110 MB, after the third CD it had grown to a full 230 MB! For the installation of each individual package the RPM database had to be opened, changed and closed again, and at this immense size and in view of the comparatively puny memory it takes for ever. To save SuSE's honour it should be said that this is a fundamental problem of the RPM database and is a problem that can occur with every other RPM-based distribution. Surprisingly, the system has so far been running smoothly despite the interrupted installation.

The update of the notebook initially went unremarkably. The system rebooted after the final restart, but didn't get as far as the graphic login. We found that the old `XF86Config` (Version 3.3.5) had been removed from `/etc` and placed in `/tmp`. The link to the X server had then been deleted from `/var/X11R6/bin`. That was unnecessary as the configuration could continue to be used faultlessly under `XFree86 3.3.6` after the X server had been linked and the configuration file put back into `/etc`.

Another problem concerns `sendmail`. Although we were informed during the update that the `/etc/sendmail.cf` would not be changed and the new file would be written as `/etc/sendmail.cf.rpmnew`, we discovered a complete newly generated configuration file – the old one had been moved to the update backup. Moreover, `sendmail` could not be

operated with it. What triggered this dubious action has not yet come to light: we suspect *SuSEconfig*.

A further – but very nasty – trap was sprung by the new mouse. At the time of the update we replaced the PS/2 mouse that had been used under 6.4 with a USB mouse. The result was that neither *SaX* nor *SaX2* could be started: the system hung every time and had to be reset. The remedy is to specify the mouse type explicitly:

```
SaX -d /dev/input/mice
SaX2 -t ps2 -n /dev/input/mice
```

XFree86 configuration

SuSE Linux 7.0 contains both XFree86 3.3.6 and XFree86 4.0. In order to set up XFree86, use *SaX* for 3.3.6 and *SaX2* for version 4.0. *SaX2*, however, is definitely easier to use than its predecessor, and not just as regards the design of the interface. The hardware recognition has been improved and most devices are automatically recognised.

Notebook owners pay attention! On one test machine *SaX2* wrongly recognised the PCMCIA Bridge as the first and the actual graphics controller as the second graphics card. This is quite interesting because *lspci* correctly determined the type of the supposedly first card as "PCMCIA Bridge". To get round this call up *SaX2* first with the parameter "p", whereupon the graphics cards found will be listed. With the parameter "-c 1" select the graphics chip no. 1 from the list for installation.

At the start you will be offered a suggested configuration by *SaX2* for your system (Fig. 2) which you can simply accept if you agree with the resolution and refresh rate. With that, everything is now finished. If you want a different setting start from the entry window of *SaX*. As shown in Fig. 3 there is a simple mode which only requires you to select the graphics card (Fig. 4) and monitor data (Fig. 5). There is also a complex selection that lets you select the mouse, keyboard and system paths. Then the X server starts and you can make changes to the positioning and monitor frequencies.

First Start

After installation with YaST 2 the system booted up smoothly to *kdm* which presented us with the users chosen during installation in the menu. *root* does not appear in this. If you do log in as *root* you see a pretty red and black background with a few exploding bombs. The risk of damaging the system by making improper changes could hardly be made clearer. The KDE Desktop seen by a normal user has been smartened up – SuSE has done a bit of work on the icons and they now fit in well with the KDE interface. For beginners, SuSE has come up with something quite special: in their first KDE session each new user is presented with the "SuSE Tour" shown in Fig. 6.

The Tour is an excellently structured HTML document containing first steps, a precise description of the most important commands including screenshots and many useful tips. We can recommend these instructions to everyone, particularly SuSE's competitors. It makes this distribution very beginner-friendly. In fact, SuSE-Tour can not deny it is german roots - SuSE forgot to replace the german screenshot.

StarOffice is already on the hard disk in the server installation version. Every user who wants it needs, therefore, only to complete the StarOffice Workstation installation to create his own settings and folders. If users install the full version a massive 250 MB per user will deposit themselves in the home directory: reason enough for the administrator with several users to point this out.

Conclusion

Whether to choose the Personal or Professional editions is a question of application. For the ordinary home use without network ambitions the Personal Edition is perfectly adequate. But the Professional, nevertheless, is equally suitable for beginners, those wanting to update and professionals.

As regards updating, it goes quite well but almost inevitably leaves you with further work to do. In the matters of hardware recognition and simplicity of installation SuSE has taken another step forward: the hardware-accelerated drivers do the rest.

We have never before found it so easy to carry out such an extensive configuration of even exotic hardware, even if there is still a problem to be solved here and there. But despite all this, SuSE version 7.0 deserves to be a hit.

Info

SuSE Homepage:

<http://www.suse.de/en/>

Revised packages:

ftp://ftp.suse.com/pub/suse_update/7.0/

Fig. 6: Not just for beginners – the SuSE Tour explains most commands completely with example and screenshot.

