DESKTOPIA: Jo's alternative desktop

ENTRANCE
DOOR

Unfortunately the age of Star Trek is still a long way off. If your computer doesn't recognise you, either by voice or fingerprint, then xdm could be a timely interim solution. Jo Moskalewski explains how

Even Ali Baba and his 40 thieves knew that without a password, there is no open sesame. Since then a lot of water has flowed under the bridge, and it's been a long time since a single magic phrase was enough to open the gates of our computers: Every visitor is unique and has his own password – we certainly don't want to admit all 40 thieves at once, after all. Now, there are various ways into our own kingdom – a classic route finder for this is xdm, the X Display Manager.

Stone age flair

Many people might feel like biting into their keyboard in view of the fact that this is definitely the bedrock xdm being presented. Considering KDE's kdm offers more features and runs well, what would anyone want with xdm?

With equal justification, users of alternative interfaces (like XFce) may ask why they should waste disk space just for kdm, when in fact xdm starts quicker and as a standard X tool, does not require any additional disk space. Apart from nibbling away at resources, the apparently practical features of kdm are debatable: On a system with, for example, 50 or more users, clickable user selection does not really make sense. Anyone wanting to log in will have to look longer for their icon, than they would take to type in their name. They can still type afterwards anyway, but by the time you get to the password the rodent will have come to a sticky end. A system which does not even reveal the existing users is clearly more secure than one which simply lists them all in the first place.

Distribution sovereignty

Anyone who now reaches happily for their cover CD expecting a brand-new xdm is going to be bitterly disappointed. No, we haven't forgotten to tie up a little packet, it's rather that the good part does not come on its own. xdm is a component of XFree itself, so you will either find it has long since been installed on your system, or it's slumbering in a free-standing

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xdm packet taken from stock by your distributor, on your distribution CD. In any case you've owned the X Display Manager, which goes with your graphical user interface, for a long time. Whether or not xdm is already installed or not, the simplest way to find out is via entering:

```
locate bin/xdm
```

at an input prompt. If there is an output, xdm is already there. If only the prompt appears again, the package manager including the CDs will help with the distribution.

Open, sesame!

If xdm is installed, it should also show itself when you start the system. If it doesn't, then your distributor has presumably intended it for a different run level than the one in which you are booting. Each run level is a compilation of services that are started or stopped. Run levels 2 to 5 are intended for ordinary working (0 provides for a shutdown, 6 for a reboot, and the single user mode alias run level 1 serves unfortunate admins as a safety rope). You can change the run level with the tool init: for run level 3 it's the input prompt with the command init 3 (important: only root is authorised and able to use init).

Once you have found the run level which serves for a graphical login by means of xdm, you can enter it as default in the file /etc/ inittab. To do this, you need only alter the line

```
id:2:initdefault:
```

accordingly. SuSE users are better off using YaST for this, in which the graphical login can be activated.

Manual labour...

... is required, if you want to configure xdm (but you don't have to do this – it's preconfigured in any case). The configuration files are usually to be found under */etc /x11 /xdm/* or */usr/ X11R6/ lib/ X11/ xdm/*. It's worthwhile casting a glance into each of the files in there – the distributors often cook their own individual soups here, so it's only possible to give general indications. It may be that you have options not available to other users.

The most exciting thing for the home desktop tinkerer may be the file Xresources, which is responsible for the display. Here among other things, the pixel width of the frame, the colours, fonts and the greetings text can be altered to your heart's content.

No less exciting is Xsetup. This bash script is run through as soon as xdm becomes active. It's therefore possible in here to provide xdm with a background image or a background colour or to change the standard mouse pointer into an arrow. In the simplest case the first lines of this file could look like this:

```
#!/bin/sh
xsetroot -cursor_name left_ptr &
xsetroot -solid black &
```

But it's not only the simple settings that can be altered here: When you also start applications, new and interesting options open up.

Down with the mouse

If you run a minimal Linux installation you'll certainly miss having a shutdown button with xdm. The computer boots up independently until login, but there is no option of shutting it down from there just as simply. Just typing in shutdown -h now will after all scarcely allow just anyone to log in as root.

Attentive readers of this column have long known that Ctrl+Alt+Backspace easily does away with the X-Server (and thus, too, xdm, where the latter is better stopped by Ctrl+R), yet an X-Server armed with xdm has several lives. On a smart system it has accepted its death after three attempts at resurrection, but on some installations he would not spread his heavenly wings even after several weeks. Those of a less patient nature therefore find a plain and easily adaptable Tcl/Tk script on the cover CD, which supplements xdm by a shutdown and reboot button. The buttons place themselves automatically at the bottom right corner of the screen.

Installation is pretty simple: Just copy tkshutdown to */usr/ X11R6/ bin/*, and add the following line to Xsetup:

```
/usr/X11R6/bin/tkshutdown &
```

In this way, you can also expand your display

Figure 1: Simple, proven and yet modern - xdm

manager by adding a clock or the penguins as presented in previous "out of the box" articles – your imagination has no limits. By the time you log in for the first time you will find everything you start here will be taken over onto the user desktop.

And so there is a file which is run through when leaving xdm: Xstartup. Since this (as with xdm) is executed by root, it cannot be used to define individual user settings. Instead of this, there is a suitable way to sweep tkshutdown off the desktop: in Xstartup, enter a

```
killall wish
```

and the shutdown button is done away with when you leave xdm. Why is wish sacrificed, when in fact the program is called tkshutdown? Well, the program is a simple script, which wish starts as interpreter. The rug has to be pulled away from under wish, as it is in fact the active program.

Labyrinth

It gets more confusing if one looks at the user-equivalent of Xsetup, called Xsession. This file is called up after the user has logged in. What you enter here affects all users; if on the other hand you want only to grant special settings to just one specific user (so that he can use a different window manager than the system default, for example), then you should create for them an executable file named .xsession in their home directory.

Settings which you have previously activated in *~/.bash_profile*, are better cancelled in the graphical login in this file. Your tried and trusted *~/.bash_profile* no longer has any effect when you login via xdm, because no bash is needed from booting the kernel to the start of your X session.
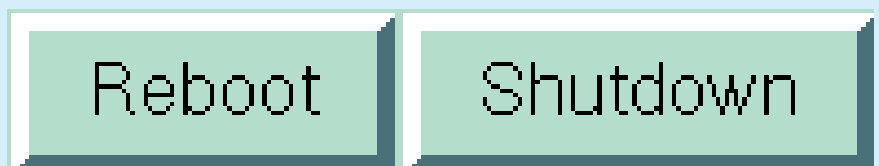

Figure 2: Small expansion in Tcl/Tk