

Knoppix

By Robert Spotswood

Linux the Easy Way

You've probably heard about this other operating system called Linux by now. Perhaps you'd like to try it, but don't have a spare machine or hard drive available? The thought of having to study how to install an operating system (and a different one at that) doesn't appeal to you? Then Knoppix is for you!

What is Knoppix?

Knoppix is a bootable version of Linux that runs completely off CD. No hard drive is required. No install required. It contains about 2.1 Gigs of software on one CD and supports a very wide range of hardware, although winmodems (most modern internal modems) are not supported. The hardware auto-detection and configuration means it will run almost effortlessly on any supported hardware. There are various wizards to help you configure any hardware that Knoppix can not auto configure.

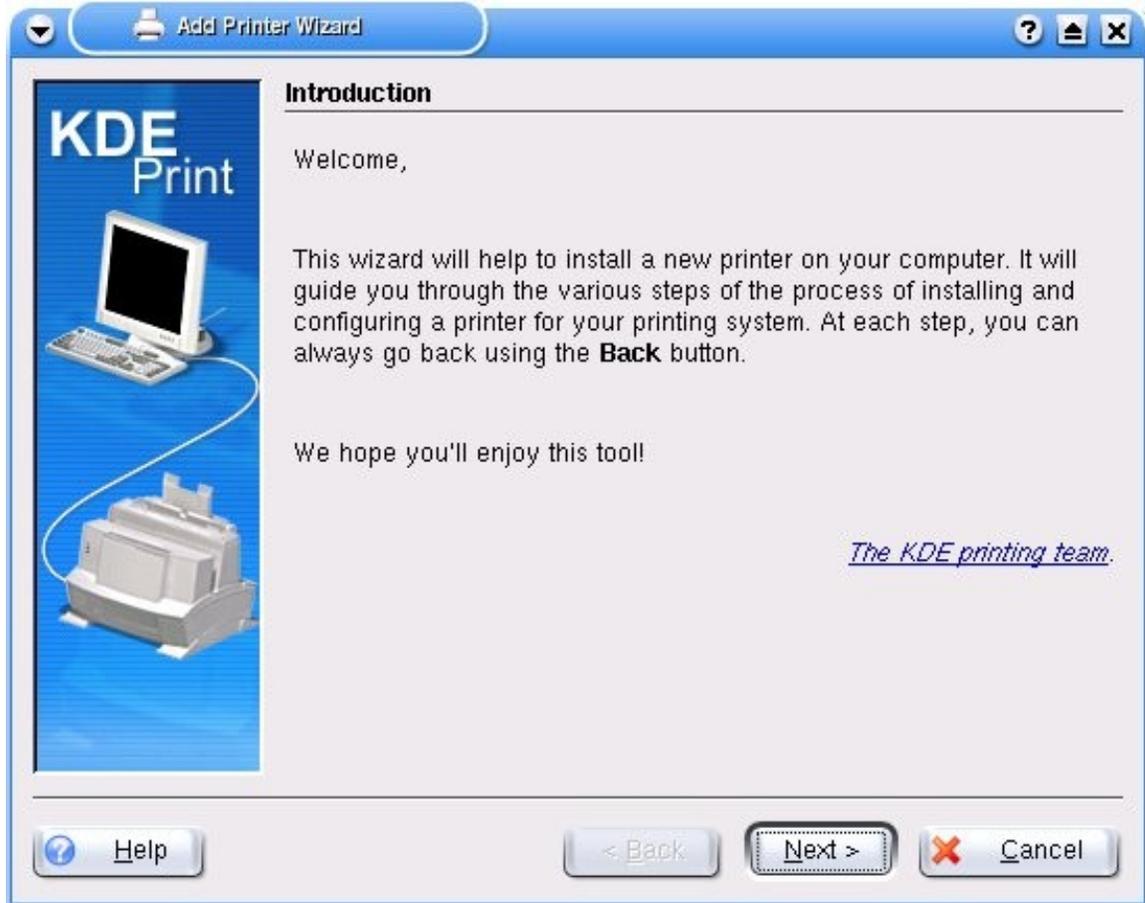


Illustration 1: The add printer wizard

Knoppix can use your hard drive if you want it to. By default, it will be in read-only mode so your data is safe from harm, but it can write to FAT and FAT32 partitions if so instructed.

With Knoppix, you'll get a full graphic interface, along with web browsing, email clients, an office suite, games, graphics software, security tools, diagnostic tools, and more. It has over a 1,000 different programs on that one CD.

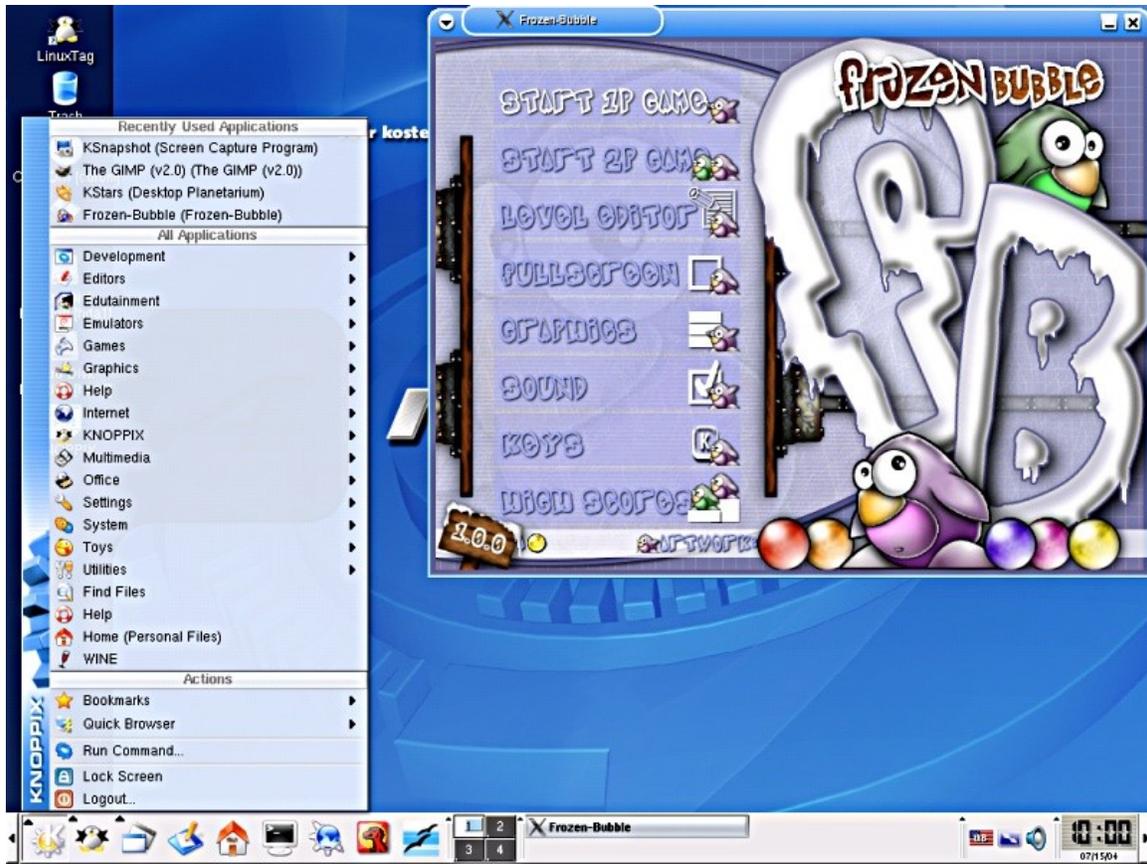


Illustration 2: Knoppix Graphical Interface

Since it runs off CD, if you decide you don't like it, or make a mistake, simply reboot. Best of all, it's available completely free of charge. It can be downloaded from various websites (<http://www.knopper.net/knoppix-mirrors/index-en.html>), or the Linux SIG often has extra copies available.

System Requirements

Knoppix will run on almost any PC less than 5 years old, and many even older than that. It requires a 486 or better CPU (300 Mhz or better recommended for the graphics mode), at least 16 MB of RAM for text mode and 96 MB for graphics mode with KDE (at least 128 MB of RAM is recommended to use the various office products), bootable CD-ROM drive, or a boot floppy and standard CD-ROM (IDE/ATAPI or SCSI), standard SVGA-compatible graphics card, serial or PS/2 standard mouse or IMPS/2-compatible USB-mouse. USB devices in general are supported, but they should be plugged in and turned on before booting for the auto configuration to detect them. Other, full fledged versions of Linux, do not have this issue.

Uses

First and foremost, Knoppix allows you to try out Linux without having to make any real commitment. You don't have to go through a lengthy install process. You don't have to partition and format your hard drive. In fact, the only change you need to make to your computer is to change the boot order so the CD is booted before the hard drive. This makes Knoppix an excellent learning tool for new Linux users. Any mistake can be undone with a simple reboot.

Knoppix makes an excellent diagnostic tool. If you are having trouble with a piece of hardware under Microsoft Windows, try it under Knoppix. If it doesn't work under Knoppix (and it is supported), then you know you have a hardware problem. Otherwise, you have a Microsoft Windows problem. For such uses, it's best to run Knoppix before you have problems to get an idea of what hardware is supported and what is not.

Because Knoppix runs off CD and in memory, it can also help protect your privacy. Unlike programs such as Internet Explorer, upon reboot, there is no history or files in your cache for someone to go through. Spyware (it seems like the majority of Windows machines do have spyware) and software keyloggers are useless against someone running Knoppix. Network monitoring is still an issue however.

Knoppix has a number of features useful for disaster recovery. Knoppix has been known to read files from partitions and hard drives Microsoft Windows would refuse to recognize. Infected with a virus or spyware? Knoppix can help you get on the Internet and download the software and instructions to remove your uninvited guest. Knoppix even includes an option to download and run a personal edition of F-prot (a virus scanner). Under the right conditions, you can clean viruses off your Microsoft Windows machine directly from Knoppix.

Caveats

Do not judge the speed of Linux by the speed of Knoppix. Knoppix runs slower than most installed versions of Linux, including a hard drive install of Knoppix. This is due to the fact it runs off CD. CD's are slower than hard drives and no software can overcome that limitation. Your Microsoft Windows system is using a hard drive.

If you have a FAT or FAT32 partition available, you can run the CD image from the hard drive, and you will notice a considerable increase in speed. Those users with at least a Gig of RAM can also run Knoppix completely from memory which will also give you a speed boost once you have moved everything to memory.

Secondly, in order to get all this software and drivers to run off one CD, some good industrial strength compression has to be used. This means whenever some program is run, it must be decompressed first. This adds to the time it takes to run any program and makes Knoppix run slower.

Some Dell computer owners have reported that their computer won't start after using Knoppix. This is due to a known flaw in the Dell bios. Either remove the power cord for a few seconds or boot Knoppix with the kernel parameter "apm=real-mode-poweroff".

Conclusion

Knoppix is a fine example of the power of open source software. Give people the source code and the right to change it, and you'll be amazed at what is possible. That's what Linux is all about. Freedom and learning. If you've ever wondered what Linux is like, boot up Knoppix. To learn more about using Knoppix, or Linux in general, come to a meeting of the Houston Linux Users Group/Linux SIG (<http://www.hlug.org>).