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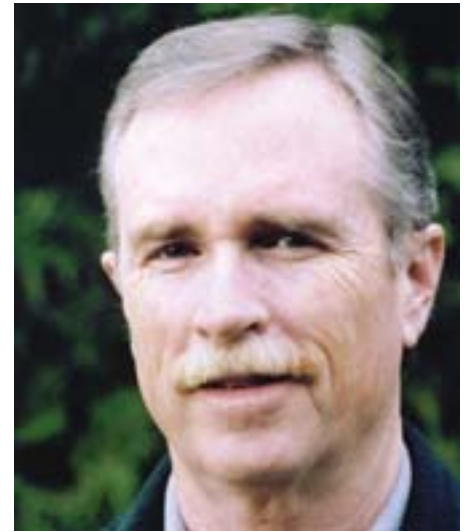


Photo: Terre Perrin

Learning About Linux

Part I

Not long ago, the Manitoba Legal Aid system was looking at a \$325,000 bill for hardware and software necessary to upgrade their province-wide system of computers to Windows XP.

That wasn't a realistic alternative for an organization with a budget of \$333 per person per year for information technology. After some research, they switched their entire computer system to servers and workstations running on a free operating system called Linux. Since Linux includes all the application software you're likely ever to need—word processing, spreadsheets, media players, graphics manipulation, you name it—they didn't have to invest in boxes and boxes of new software.

Total hardware and software costs: about \$20,000.

Linux came to life in 1992 as a university project by Finnish university student Linus Torvalds. He wanted to write a computer operating system (OS) similar to the mainframe OS Unix. An operating system is a computer's basic intelligence, the first thing the computer loads into its memory.

It tells the computer how to communicate with the outside world—how to send information to the screen, receive it from the keyboard, read and write the hard drive, things like that. Basically, it is the interface between the little chips inside and you and me. Windows is an example of an operating system with a graphical user interface or GUI. MS-DOS is an operating system without a GUI. Linux, like Windows, is a GUI-based operating system.

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When Torvalds was finished with his project, with the assistance of others in what has become known as the "open-source community," he created a software copyright licence that says you can freely use and revise the software, but you must be willing to release your revisions to the open-source community.

Today, Linux is maintained by a globe-spanning group of volunteers who work without pay to keep the operating system working.

I can almost hear you asking: *How good can it be if it's put together by a university student and maintained by a bunch of volunteers?*

Good enough that Novell—the networking company—just bought one of the major Linux players, SuSE. IBM is heavily involved in Linux along with Sun Microsystems, makers of those major workstations you see in graphic designers' offices. Corel Software of Ottawa, makers of WordPerfect, have been very involved, as have many other major software companies. They have seconded staff to the project and supported Linux as part of an overall strategy to keep the computer industry vibrant and to provide us with an alternative to Windows.

Free Applications

With virtually any flavour of Linux, you'll get dozens of free programs: photo editors, CD players, email programs, Web browsers, probably everything you work with on a day-to-day basis. I expect at least 80 percent of computer users would be completely happy working on a Linux machine. For a fairly complete list of the Linux equivalents of various Windows programs, go to <http://linuxshop.ru/linuxbegin/win-lin-soft-en/>.

For example, the Linux Open Office Suite includes a top-notch word processor, spreadsheet, presentation manager, and database program. Best of all, it's free. www.openoffice.org

Sun Microsystems has taken the Linux Open Office Suite, made some improvements, provided quality documentation and support, then rebranded it as StarOffice. Sun charges US\$49.95 for its improved product. You can download an evaluation copy for free from <http://www.sun.com/software/star/staroffice/get/#eval>.

Open Office and StarOffice are also available for Windows. Both the Linux and Windows versions are fully MS Office file compatible. The next time you are facing a bill of something like \$200+ per workstation to “upgrade” MS Office, you might want to give one of these products a gander.

Advantages of Linux

Linux has a number of distinct advantages over Windows. Two major ones are its stability and its resistance to computer viruses.

Stability

Windows crashes are much less common under Windows XP than they were under earlier versions. Under the buggy Windows ME, my system crashed several times a day; XP is a distinct improvement, but it is still not unusual for me to get two or three crashes a week.

Linux is virtually crashproof. Linux systems that have been running for years are pretty common. That’s one reason it has become a frequent choice for network servers. In fact, while Linux has yet to make much of a dent on the desktop, it has taken over approximately 35 percent of the network server market.

Linux and Viruses

Mark Nicolett of the consulting firm Gartner Research estimates that viruses and worms add 15 percent to the cost of owning a Windows-based computer system. That’s not just the cost of your anti-virus software—you *do* have anti-virus software, don’t you?—but also the downtime when something gets through, technicians you have to call to clean things up, etc.

“This is part of the carrying costs of using Windows,” Nicolett told TechWeb in early May, a few days after the Sasser worm struck hundreds of thousands of computers around the world. “The cost of a Windows environment has gone up because enterprises have to install security patches very rapidly, deal with outages caused by

secondary problems with these patches, and deploy additional layers of security technology.” Sasser, by the way, hit the world just six days after Microsoft revealed the security flaw the worm exploited.

Linux, on the other hand, has virtually no virus problems. This is for a variety of technical reasons that I’m not going to go into at length. Suffice to say that the way Linux runs creates a more hostile environment for viruses. You can write a Linux virus. You can release it “into the wild.” But it is likely to be “killed off” faster than it can replicate. In biological terms, it’s on the quick road to extinction.

I’m far from enough of an expert on either viruses or Linux to say that viruses won’t become a bigger problem as Linux gains in popularity. But for now they are really not an issue.

Ironically, you still need to have anti-virus software installed just to make sure you don’t accidentally forward a Windows virus to your friends. You’re still going to get them embedded in files sent to you by email and you can spread them if you unknowingly send them on. As a result, there are Linux anti-virus programs.

Why doesn’t everyone use Linux?

The biggest impediment to Linux acceptance is not the quality of the operating system or the quality of the software; it’s

simply inertia. Most companies—and it is big companies that drive the PC marketplace—have no *compelling* reason to switch. “Just as good” isn’t reason enough.

Linux, however, is making big inroads in countries of the Third World that are just now computerizing. They can’t afford the “Microsoft tax” that adds about \$150 to \$200 to the price of every computer for the installation of Windows most of us expect to find on the hard drive on a system we buy. But in China, India—together 40 percent of the world’s population—Africa, Oceania, and Latin America, they’ve not been working with Windows anyway. They look at the two systems side by side and see they are basically equivalent but that one is a **lot** cheaper. The decision is not difficult.

There are several very real disadvantages to switching to Linux. In my next column, I’ll take a look at those, the issue of Windows compatibility, and just how you can try Linux for yourself. ▲

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Linux Desktop