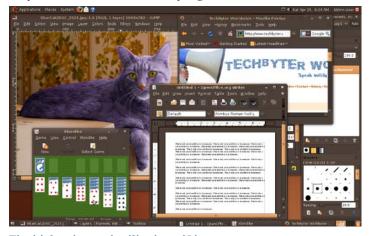
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Linux Can't Win. Linux Must Win.

his article was born in Gedit, an open source text editor, on a computer that was running Linux. It is my primary production computer, which has both Linux and Windows XP installed. Today's Linux (particularly the easy-to-install distributions such as those from Ubuntu) does everything that many users need. It's free. It's easy to install. It updates itself almost automatically. It's generally more secure than Windows. But Linux machines are still just a tiny fraction of desktop systems. Dell sells perhaps 20,000 Linux computers a year. Given today's economy, why aren't these machines flying out of warehouses?



The frightening, unfamiliar face of Linux.

When I finished writing the article, though, I needed to restart the computer and run Windows to gain access to InDesign. Yes, I could probably get InDesign to run under Linux by using WINE, but what's the point of running an application to mimic Windows on a Linux machine when I can just start Windows.

That's one of the reasons that Linux won't win, even in today's economy. If you depend on applications such as Dreamweaver, Word, Photoshop, and the like, you might be able to make do with Bluefish or Amaya (websites), with Open Office (word processing, number crunching, and presentations), and with the GIMP (photo editing). But the key term is *make do*. The open-source applications have attracted a large following, but none of the applications I've mentioned comes close to offering the features that their commercial competitors do.

I could possibly perform the tasks I need to with those applications, but I wouldn't want to. For that reason, Linux won't win on my desktop.



The reassuring, friendly face of Windows.

Another reason that Linux won't win is fear. The company's chief technical officer (CTO) might personally run Linux or Apple's OSX at the office and at home, but the thought of converting a company full of Windows users to another operating system is daunting. Most users stop learning about the computer when they have mastered the bare minimum needed to perform their assigned tasks. No matter that Word may have features that would make their work faster and easier; there's no time for learning those. And there's certainly no time to master an entirely new operating system and new applications.

This isn't necessarily a criticism of users. I'm lazy, too. Sometimes that laziness will drive me to spend hours trying to find a better way to perform a 30-minute task. That's because I know there's probably a way to turn that 30-minute task into a 5-minute task. Once I've figured out how, I'll gain 25 minutes every time I need to repeat that task.

Most users don't like change, either. Show them Office 2007 and many will denounce its new interface even though spending a few minutes learning how the new interface works would pay off big time. Tell an office full of people that they must switch to a new operating system and new applications and you're likely to have a mutiny on your hands. CTOs don't like mutinies.

Yet another shortcoming for Linux, at least in an office environment, is the relatively small number of Linux administrators. It's easy to find someone who has knowledge, experience, and certification for Windowsbased networks and computers. Linux experts are harder to find.

So although Linux offers substantial advantages over Windows and Apple's OS X, Linux is likely to continue to run a distant third place behind Windows and OSX (which is a distant second to Windows).

The Advantages

Then I started writing this article under Linux, the operating system told me it had been 39 days since I had booted Linux. It then downloaded and installed 115 updates while I was typing. The reality isn't as bad as that makes it seem: I had used Linux far more frequently on my notebook computer. And during a week of vacation in March, I tried an experiment.

Instead of starting Windows each day, I started Linux and I was able to work for long periods on several days without Windows. I still can't realistically see a time when Linux will be the king of the desktop, but I know for certain that Linux does most of the tasks needed by a large number of computer users.

So maybe it's time to consider some of the Linux advantages.

Cost Advantage: Linux is free. Part of the cost of a computer is the operating system and Windows adds about \$200 to the cost of the hardware. That's not a lot if you're buying a high-end computer priced at \$2000 to \$3000, but it's quite a bit if you're looking for a computer in the sub-\$500 range. Eliminating the cost of the operating system would allow the buyer to reduce the price or to obtain better hardware at the same cost.

Performance Advantage: Linux can generally do more with less hardware. It will happily use large amounts of memory and high-power video cards if you provide them, but Linux manages to get along better than Windows does on low-end machines. You'll also probably find that Linux starts and shuts down faster than Windows.

Reliability Advantage: Recently, when Windows lost track of both DVD drives in my computer, I was able to determine that the problem wasn't a hardware failure by booting Linux and allowing it to confirm that the drives were working. The problem turned out to be a Windows Registry problem. Linux doesn't store all of the important configuration information in a single gigantic (and easily corrupted) file as Windows does. Linux also doesn't use shared dynamic link library (DLL) files as Windows does. This makes adding and removing applications much easier and much less likely to end in disaster.

Security Advantage (sometimes): Some Linux distributions take security more seriously than others, but generally speaking Linux and Unix machines are more secure than Windows. Vista's security is good, although cumbersome, and Windows 7 will probably offer the same strengths without the complexity. Still, because Linux is based on Unix, the directory structure was designed from the beginning with security in mind.

ROBUSTNESS ADVANTAGE: Windows users who routinely add and remove software usually need to reinstall the operating system once or twice per year. This is rarely needed with Linux.

DISK ADVANTAGE: Because of the way Windows writes to hard drives, files become fragmented. This reduces performance and the only solution is to run a defragmentation program. Linux takes a different approach to writing files and, as a result, fragmentation is far less likely to occur until the disk drive is nearly full.

Sharing Advantage: It's a common misconception that Linux can't write to Windows NTFS volumes. It can. Linux doesn't use drive letter designations as Windows does, but it can be set up to mount any NTFS volume for writing as well as for reading. Some distributions (Ubuntu, for example) will do this automatically.

One-Stop-Shopping Advantage: When you're looking for an application, and particularly if you're using one of the more consumer-oriented distributions ("distros" in Linux-speak), adding an application is as easy as selecting Add Programs from a menu and picking the applications you want from a list that's divided into categories (utilities, programming, office, games, and such). Select as few or as many as you want and tell Linux to start. The operating system locates all of the applications, downloads them, installs them, and sets them up on the menu. It doesn't get any easier than this.

Updating Advantage: Linux can track updates to applications as well as updates to the operating system. You'll be notified when there are updates and obtaining them consists of a single click that instructs the updater to get to work. When a new version of the operating system is available, you'll be offered an opportunity to install the updates. The download is automatic. The update is automatic. And you can continue working on the machine during most of the process.

Ubuntu 9.04 Hops onto Computers

The *Jaunty Jackalope* version of Ubuntu Linux was released on April 23 as an update to version 8.10. The update was 618MB. In all, 10 packages were removed, 104 were installed, and 993 were upgraded. All automatically.

The expected download time was just shy of 2 hours, but the actual time was closer to 5. Part of this was because the Ubuntu FTP servers were clearly swamped on the first day the new version was available. But I also had in process a 2GB backup procedure that was sending files to Carbonite. Simultaneous big uploads and big downloads don't work very well. When I shut down the Carbonite process, the download speed increased to about 80Kbps, which was still far slower than it should have been. But when millions of people are all trying to dowload the same 618MB upgrade, you have to expect some network latency.

My involvement in the update was limited to approving the installation and providing my administrator password when asked.

If you need a computer, but you don't require any Windows-specific or Mac-specific applications, maybe it would be worth your time to consider Linux. ${\bf B}$