RESURRECTING AN OLD PC WITH LINUX

Not only is Linux a viable replacement for Windows on desktop and laptop computers, it's widely touted as being able to breath some life back into old computers. Why even bother? Aside from the potential environmental impact of disposing of an old PC, simply because hardware is out of date doesn't mean it's useless. You can use older computers as file or media servers, stripped-down workstations, or even as low-cost computers in cash-strapped schools. The Linux Caffe, an Internet cafe in Toronto, even uses old ThinkPads running Linux as terminals.

Not all Linux distributions are suitable for an older PC, however – many current ones eat up a considerable amount of memory,processor power, and hard drive space. Luckily, there are a number of small and light, but fully-featured Linux distributions that can be used to resurrect an old PC.

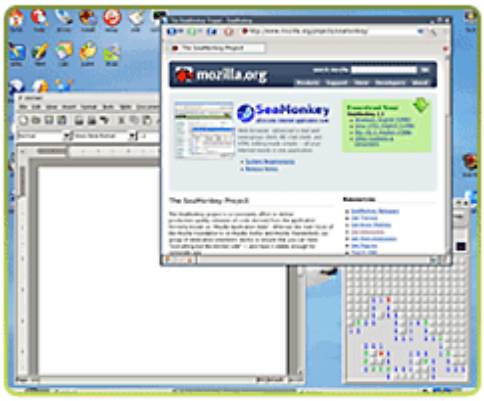
The Top Contenders

While there are a number of Linux distributions (“distros”) that are great for use with older hardware, I've found that three particular distros are really well suited for this task: Puppy Linux, Damn Small Linux, DeLi Linux, and Xubuntu.

Puppy Linux

One of the first lightweight Linux distributions that I tried was Puppy Linux. While it doesn't require much in the way of system resources -- 50 to 90 MB of hard drive space and less than 256 MB of

memory -- Puppy Linux gives you a simple but solid graphical environment and a number of useful applications and utilities.



For example, Puppy comes with the AbiWord word processor and the Gnumeric spreadsheet, and the Mozilla-based SeamonkeyWeb browser. There is also software for editing Web pages, playing audio and video files, working with graphics, and more. And Puppy Linux is fast. In fact, it's easily one of the fastest Linux distributions that I've worked with.

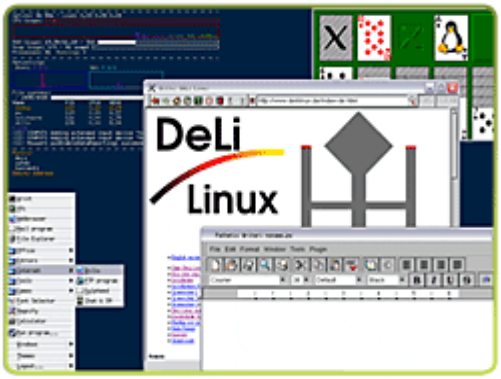
Damn Small Linux

As this distribution's name implies, it's small and fast. Damn Small Linux (DSL for short) only takes up 50 MB of hard drive space and needs a mere 128 MB of memory. You can even run it off of a USB key.

DSL packs a lot into a small space, though. It has a simple but complete graphical environment (either the Fluxboxor JWM window managers) withdozens of applications, including a word processor and text editors, Web and Internet software, and applications for playing multimedia files. You can even use DSL as a Web server. That's a lot of flexibility in such a small package. While the GUI and applications aren't the prettiest or the most powerful, they do get the job done.

DeLi Linux

Have an even older computer, say a 486 or an early Pentium? Then you might want to check out DeLi Linux. Short for Desktop Light Linux, DeLi Linux is a distribution that is truly light. A full installation takes up less than 250 MB of hard drive space, and can run on as little as 16 MB of memory. I can't think of any other lightweight Linux distro that can do that!



But you're not stuck at the command line, unless you want to be. DeLi Linux runs a complete graphical environment. It's not the prettiest, but it doesn't look too bad. On top of that, it uses a number of smaller, less resource intensive applications. Like what? Instead of theOpenOffice.org productivity suite, DeLi Linux runs Siag Office and AbiWord. The preferred Web browser is Dillo, althoughFirefox is available if you have a faster machine or more memory. All in all, there's little fat in this distribution.

Xubuntu

Ubuntu is widely considered to be one of the most user-friendly desktop Linux distributions around. It's easy to use and very flexible. But, it also requires a considerable amount of horsepower in order to run. Most of that is involved in running Ubuntu's window managers --

GNOME and KDE. However, Xubuntu brings the ease of use, flexibility, and power of Ubuntu to older computers.

Like Puppy Linux, Xubuntu comes with a number of smaller and lighter applications like AbiWord and Gnumeric instead of OpenOffice.org. There are also tools for using the Web, various utilities, and more. Using the built-in package manager, you can quickly install a number of other applications. All that you need to run it is under 200 MB of memory and just over 1.5 GB of hard drive space. One

aspect of Xubuntu that makes it suitable for older PCs is its window manager, Xfce. Xfce is a simple, attractive, but fully featured window manager. On top of that, Xubuntu (like its other Ubuntu siblings) lets you take advantage of Synaptic, the Ubuntu package manager. Synaptic makes installing software a breeze.

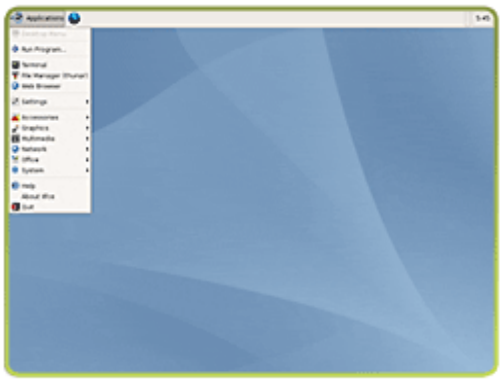
A Real World Test

Recently, I decided to test whether or not a lighter Linux distribution could actually bring an older computer to life. And I had just the PC. Last year, my mother gave me an old Pentium 333 with 265 MB of memory and a four megabyte cheap hard drive. That computer was running Windows 98, but it had been pummeled by adware and spyware. The computer took several minutes to boot up, and applications loaded slowly. All in all, this was the perfect computer for my test.

I chose Xubuntu for the test, for a couple of reasons. First, I had standardized my two cheap laptops on Ubuntu -- it was familiar, and I'm really impressed with Ubuntu's package management tools. Second, the specifications of my old PC fit well with the requirements for Xubuntu. I downloaded the ISO image for Xubuntu and burned it to a CD (see this TechTip for more information on burning ISO images).

Then, I popped the CD into my old PC and booted up the computer. After a minute or two, the installation process started. It's fully graphical, so I was able to do everything point and click. The installation encountered only one glitch. I ran off to answer the phone, and when I came back there was a message on the screen that said Xubuntu couldn't create a file system. When I saw this message, I got a bit worried thinking that the hard drive was damaged. What had happened was that I had told the installer to create a new FAT 16 file system (the one used by Windows 98). Obviously, Xubuntu didn't like that. So, I backed up a couple of screens in the installation and told the installer to use the more Linux-friendly ext2 file system. After that, the installation went smoothly.

Since I was installing on an older, slower computer, the process took about 25 minutes. Slow, but not glacially slow. Relative to a fresh Windows install, 25 minutes is actually pretty speedy. Once the installation was completed, I had a working desktop that actually performs quite well even on the older hardware.



If you're wondering, the computer sits on my home network. It's in constant use as both a publishing server -- compiling documents typeset using LaTeX and DocBook -- and as a file and PDF print server. Sometimes, my daughter uses that computer to practice her typing and mouse skills (she's autistic and this helps her fine motor skills) or to play the educational games that I installed on the system.

In the end, resurrecting that old computer only cost me a little bandwidth for the download, a blank CD, and the time needed to burn Xubuntu to the CD and install it. Regardless of the Linux distribution that you choose, you can probably get the same results. Instead of spending several hundred dollars on a new computer, you can turn an older PC into a powerful workstation for practically no cost.

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