

Considering Linux for your Intel workstation?



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Are you using or adding Intel servers or workstations in your business environment? If so, will you be installing Windows as the operating system because that's what your other desktops have on their machines, or, are you, like many businesses, considering installing Linux? Does Linux have practicality in today's business world, and why are more businesses today choosing Linux servers or workstations as a viable business option?

The Roots of Linux

Linux has been called the fastest-growing server operating system in the world (estimated at over 24% in year-to-year growth), thanks to its powerful functionality, rock-solid stability, and open source foundation. Initially, its reputation was known only among those technical coders who communicated with each other over the Internet each new change, improvement, or discovery of a flaw, linked with the appropriate fix. The Free Software Foundation, now referred to as the Open Source Movement, was at the core of how Linux evolved as "free" software available to anyone to download, with the freedom to modify and share those modifications with others. Very rapidly the code was widely distributed, tested by hundreds of people simultaneously, and improvements and stability in the codeset came along very quickly.

In fact, you can still just download it from the Internet at <http://www.linux.org>. However, as a business person, that's just not practical. Today, most companies buy through distribution, where a 3rd party sells the "free software" + a Graphical user interface (GUI) + installation and system configuration support + the requisite hardware support + access to code updates tested to work for your environment. That helps ensure it all runs together without your technical staff taking on the ownership of testing, integrating, and, more importantly, keeping the code up to date and reliable.

Software of the Linux Variety

Some key distributors include Red Hat, SuSE and UnitedLinux, and major software vendors are now offering Linux "flavors" of their mission-critical business software. IBM has chosen not to be a distributor, but rather support the movement through its membership in the Open Source Committee, and today offers DB2, WebSphere, MQ, Lotus Domino, Tivoli, VisualAge Java and Java JDK, among others, in Linux versions. The value to you, as a business, is that you can choose to enable your departmental or enterprise vertical applications with the reliable, portable, and often cost-efficient Linux solution, knowing it will integrate with your other hardware and solution software.

Some examples of Linux-ready software offerings from IBM include:

- **WebSphere Studio Application Developer for Linux:** An easy-to-use, integrated development environment for building, testing, and deploying J2EE applications.
- **WebSphere Application Server for Linux:** The Advanced Single Server Edition V4.01 for Linux provides strong integration to databases, middleware, legacy systems and applications. This configuration appeals to departments, medium-sized businesses, and pilot applications that require a low-cost, fast-to-get-running option without the additional features associated with multi-server management.
- **WebSphere MQ for Linux:** WebSphere MQ (previously MQSeries) for Linux provides the base messaging functions for servers and clients, and assures "once only" message delivery. It can be used alone or with other members of the WebSphere MQ family. The WebSphere MQ family consists of integrated middleware providing the intelligence and infrastructure to integrate business application and processes -- both within the enterprise and through the firewall -- across the extended enterprise.
- **DB2 for Linux:** The most scalable database in production today that can manage mission-critical data on a single PC, SMP servers, clusters, as well as the mainframe. In addition, with IBM's DB2 Everyplace offering, customers can manage mission-critical data on Linux and embedded Linux devices.
- **Lotus Domino Server for Linux:** The world's leading product for information management, messaging, collaboration, and Web application development. The Lotus Domino server, with its built-in cross-platform support, takes advantage of Linux to provide impressive performance and reliability and new options for affordable application design and deployment.

- **Tivoli Systems Management for Linux:** Linux servers are relatively new to the enterprise, but the need to manage them is as old as the systems they are joining. IBM Tivoli system management software includes the oversight of new Linux platforms, integrating them with the management of legacy systems. Your systems administrators can manage storage, security, remote location monitoring and software distribution on your newer Linux platforms with the same ease they currently enjoy.
- **IBM Developers Kit for Linux, Java 2 Technology Edition:** A development kit and runtime environment containing IBM's just-in-time compiler, enhanced with Mixed Mode Interpreter and a re-engineered Java 2 virtual machine. This Development Kit for Linux passes Sun's Java compatibility test and provides stability and performance when deploying your enterprise e-business applications.

Is Linux Ready for Primetime?

With regard to the applicability of Linux for Intel clients, check out the white paper entitled "[What Good is a Linux Client?](#)", by Mark Chapman (the white paper is available for download on the Datatrend web site) Here are some excerpts from that white paper which you may find interesting: You've heard all the arguments about the economic viability and cross-platform compatibility of open source software in general and Linux in particular, but you may still be intimidated by the prospect of changing environments. IBM's Mark Chapman gives you the benefit of his own experience as a "Linux newbie" as he seeks to change over to Linux. He addresses many of the issues involved, including software availability and support. He states,



The conventional wisdom so far is that Linux is not "ready for prime time" as anything but a network operating system. We shall test this notion to see if I can find commercial, shareware and/or freeware programs for Linux to replace the existing applications I currently use with Windows. If they exist, where can a user find them, how easy are they to install and use, and how well do they work together? Ideally, when I am done I should have a system that would allow me to stop using Windows for anything. (Obviously your mileage may vary, depending on what uses you have for your computer.)

Linux versus Windows

In a recent article on the web (<http://newsforge.com/newsforge/03/01/04/1221251.shtml?tid=19>), John Fitzgibbon, a self-proclaimed long-time Microsoft Windows user who recently switched almost exclusively to Linux, explained his experience:

Rather than writing an exhaustive feature comparison, I'm going to look at a few common (and incredibly persistent) myths about Linux, comparing the myth with my own experience. I emphasize that this is not a technical analysis of Windows/Linux pros and cons - it's a purely subjective study based on my personal experiences with hardware and software I use every day.

For the Linux faithful my observations will probably read like old news, but these myths are so ingrained in the Windows culture that I think this news bears repeating.

So, in no particular order...

Myth: Linux support for power management is second-rate.

Fact: For me, the most important aspect of power management is the "suspend" function on my laptop. I've found the Linux suspend function works flawlessly, and suspend/resume operations are much faster than under Windows 2K. For easy access, I added a "suspend" button to the taskbar beside the "lock"/"log-out" buttons.

Myth: Only techno-geeks can keep Linux software up to date.

Fact: Red Hat's Update Agent updates all my Red Hat software with the click of a few buttons. I get emailed notifications when updates are available. I decide when and what I want to upgrade, which suits me just fine.

Myth: A switch to Linux means all my Windows "stuff" will be lost.

Fact: I installed Linux on a separate hard disk partition. The Linux boot manager, (GRUB), allows me to boot either Windows or Linux. When I boot Linux, all my old Windows drives are mounted and fully accessible, (I mount them as /win/C, /win/D, etc. so things are easy to find). I installed my Windows fonts on Linux using the graphical font manager, so documents look pretty much as they did under Windows. I haven't had any problems opening my Microsoft Office documents using OpenOffice, (though I confess that I don't use many

advanced MS Office features - your mileage may vary if you're a true Microsoft-techy). I use samba to mount remote Windows drives, so I haven't needed to switch O/S on my file servers.

Myth: Linux does not support a wide range of devices.

Fact: I use DVD, CD, wireless networking, wireless keyboard and mouse, Rio MP3 player and various other USB devices on my laptop. On my desktop I use scanners, printers, cameras and a TV card. I've had no problems getting any device to work. In some cases the drivers are not available on the installation CDs, so a little "googling" has been required to find what I need.

The bottom line is that most things I need to do on a day-to-day basis I can do as well, or better, with Linux.

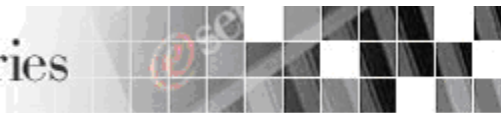
The Linux-UNIX Connection

If you are looking for a Linux solution for your UNIX server, IBM recently introduced the new p630 Linux-ready express configurations, which join the pSeries family of Linux supported servers. IBM has also announced its intent to provide Linux-ready versions of the p650 and p655 servers. With these additions, the IBM **@server** pSeries line extends its industry-low total cost of ownership for 64-bit Linux computing requirements in the 1- to 4-way server market.

Intel Servers Running Linux

Linux in an Intel environment is also an attractive alternative, especially when you combine state-of-the-art Intel servers with server proven Linux-based software and middleware. For example, IBM's **@server** xSeries, with its Enterprise X-Architecture technology, delivers mainframe-class power and enterprise scalability and availability at very attractive prices. Working closely with leading Linux distributors, IBM offers tested and validated configurations for the full line of xSeries servers to ensure maximum performance and functionality across the full line of xSeries servers. Plus, IBM provides Linux versions of its software/middleware offerings, as explained above, which are "server proven" for xSeries servers.

Linux for IBM **@server** xSeries



Logical partitioning; Another Consideration for Intel Servers

Logical partitioning provides you the capability to divide up your server into multiple sections, each running its own memory, disk, networking, OS and application. In an Intel environment, you can implement logical partitioning via server virtualization software such as ESX Server from VMware. For example, VMware on an Intel server like the IBM **@server** xSeries enables you to more effectively and efficiently run, multiple applications within one physical box. You can run instances of Linux and Windows within one physical server, allowing you to run multiple, disparate applications with different operating system requirements. VMware is also useful for initiating file and print functions, setting up small databases, or running test environments. The applications running on top would, in turn, be licensed to those processors within the partition it uses, rather than the entire box. As your need for full-functioning solutions increase, the licensing per processor model will offer you more a cost-effective way to purchase your Linux or Windows software. Furthermore, you will have the confidence that your choice will be scalable and fully integrated.

Considering the Linux Alternative

As you can see, Linux is already a viable business environment and continues to mature. Knowing the options currently available to you will help you make an informed decision. Whether you are considering Linux workstations/clients, Linux servers, or Linux versions of software/middleware, be sure to partner with a solution provider like Datatrend to help you integrate Linux into your business environment so that your organization can effectively address its needs.