Linux on the Desktop: The Time *is* Now

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At the Desktop Linux Conference in Boston on November 10th, 2003, Sam Docknevich of IBM Global Services kicked off a frenzy of media speculation with a presentation entitled "The Time is Now for Linux on the Desktop." While this furor turned out to be much ado about nothing—if you take IBM's somewhat equivocal dismissal of the report's significance at face value—the reaction was unsurprising. The Linux desktop has become one of the hottest technology topics in the industry and IBM's imprimatur would have been a major step forward for all open source lobbyists. While rumors continue to swirl around IBM's ultimate plans for the space, there are plenty of other providers out there with significant interests in the desktop opportunity and coherent desktop software product offerings that are targeting disenchanted Microsoft customers and open source advocates alike.

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The acquisitions of Ximian and SuSE by Novell, both of which offer software for the Linux desktop, also garnered major attention—Novell's share price, which languished at less than $5 for a considerable time, has recently bounced up into the $15 range. SuSE, of course, is the vendor whose offerings displaced Microsoft in the City of Munich despite a personal visit by Steve Ballmer. Domestically, the City of Austin has embarked on an initiative to explore Microsoft alternatives. When it comes to volume opportunities, Sun made quite a splash in November when it announced a deal with the Chinese government backed China Software Software Co (CSSC) to install a minimum of 500,000 Linux desktops based on Sun's Java Desktop System offering.

Taken in isolation, these customer announcements would be interesting but not particularly compelling. Such is Microsoft's footprint on the desktop that despite compelling pricing and improved performance from Linux based alternatives, the sheer inertia of entrenched Redmond product offerings have more often than not forestalled serious looks at alternative products, at least domestically. Taking individual data points in aggregate, however, clearly indicates a spike in Linux opportunities on the desktop. The creator of Linux, Linus Torvalds, has been quoted in recent weeks as seeing significant desktop opportunities in 2004. Venture capitalists are starting to sit up and take notice: Azure Capital Partners' Larry Augustin, himself a former CEO of VA Linux, indicated that the Linux desktop was a likely target of investments in the upcoming year.[1]

Based on press coverage, it would seem that the industry is breathlessly awaiting the next round of the Linux saga – an incursion onto the desktop, an area thus far mostly ceded to Microsoft. By now, of course, the story of Linux's David to Microsoft's Goliath has become common knowledge. Its transition from a hobbyist's operating system (OS) into a pillar for tech bellwethers such as Dell, HP, IBM and Sun has indeed been startling, and an exhibition of disruptive technology at work. To date, Linux's footprint at the enterprise desktop level has been minimal. With the spate of recent announcements, leaked memos, and general gossip building to a crescendo, however, many believe that the time of the Linux desktop is now, as Docknevich speculated, at hand.

[1] "Desktop Linux Tweaks VC Interest," Computer Business Review, 1.19.2004

Beyond the Hype

Setting aside the hype and rhetoric, there are many compelling reasons for enterprises to consider desktop alternatives. While these products are not suitable for all constituencies – power users will likely find Microsoft's lead on a feature/function basis unthreatened, for example – many typical enterprise tasks, such as email, word processing, and basic internet functionality are more than satisfied by today's Linux offerings. Like many others, we do not see Linux representing a substantial marketshare threat in the immediate future, but we believe its footprint will be greatly expanded in the months ahead, mainly as a result of an increasing maturity of offerings.

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How has Linux bridged the gap from hobbyist OS to enterprise desktop candidate? We'll examine the most common questions that enterprises have concerning Linux on the desktop in a follow up publication, but there are several macro trends at work. Here are those most critical to its arrival:

- **OS Maturity**:

  From installation to everyday usage, the Linux experience was until very recently characterized by troublesome installs, configuration via text files, and a general lack of polish. While the Linux experience doesn't yet match Windows in terms of ease of use, many distributions have now reached a maturity level where regular desktop users can become productive quickly. To be sure, experiences will vary; in the City of Munich example cited earlier the project has recently suffered setbacks from user pushback and retraining issues.[2] But in other settings creative implementers have used a variety of social tactics to overcome initial uncertainties and objections.[3] Provided that the common "fear of the unknown" resistance can be overcome, in typical enterprise settings with appropriate IT support, where end users are not forced to sweat through the installation processes, Linux desktop packages are fairly easy for Windows users to adapt to. The learning curve is less steep than might be expected, partly due to an effort to mirror Windows conventions, for example in file system metaphors, but largely a result of the increased maturity of the two main desktop user interfaces, GNOME (used in Sun's Java Desktop System) and KDE (used in SUSE's Enterprise Desktop). The net result for users - a relatively usable, stable desktop.

- **Security**:

  While Bill Gates has contended that the successive series of virus attacks on Windows has helped make the platform more mature[4], the fact is that system admins and IT staffs have spent countless hours – and precious resource time – furiously patching their machines against virus after virus. Gates is right to an extent; Linux advocates' attempt to turn its weakness marketshare-wise into a strength by highlighting the lack of motivation for virus writers is indeed a theoretical danger, as being low profile does not equate with having a secure platform. But practically

[2] "Munich Open Source Plows Ahead," Wired, 2.11.2004
[3] "Battle of sexes (and toy penguins) in Linux move," News.com, 2.11.2004
[4] "Gates takes swipe at Apple, Linux security," News.com, 1.27.2004

speaking, the small footprint of Linux desktops does make them a rather unattractive target and therefore enterprises are unlikely to have to deal with Linux equivalents of Sobig, Blaster, or most recently MyDoom. As a result, IT staffs deploying Linux to the desktop are not subject to the same constant patching concerns that their Windows counterparts are. This is driven, however, not only by virtue of a lack of attention from malware creators as Gates might contend, but also by virtue of operating system principles such as least privilege.

- **Good Enough Computing**:

  For years, the inability of Microsoft alternatives to compete on a feature function basis doomed them to limited marketshare and isolated deployments. Given an economic climate that places a premium on cost savings and a growing realization that most users are only utilizing a small portion of the actual functionality that's been purchased for them, enterprises are beginning to wake up to the realization that Linux desktops are in many cases "good enough." While that's a marketing message not likely to be heard from the Linux vendors, the fact is that with few exceptions Microsoft still leads on a feature by feature basis in both the OS and Office software areas. But savvy enterprises are examining the needs of various constituencies within their enterprise, and determining that for some groups – datacenter employees being a common example – Microsoft's offerings are feature overkill.

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- **Web Applications**:

  While a critical consideration for desktop selections in past years has been compatibility with various client side applications, this concern has lessened for many organization due to a shift towards web based applications. Many enterprise applications, such as Siebel, have migrated away from traditional client server architectures towards a web based client or have become available via standardized enterprise portal infrastructures. While the transition between Microsoft's IE and Linux alternatives like Mozilla or Konqueror is not seamless, we find that many web based applications – even Microsoft's own Exchange Outlook Web Access client - perform just fine on non-IE platforms. This shift away from client server applications lessens the application barrier towards Linux adoption.

- **Office Productivity & Messaging**:

  Information workers today are spending a good portions of their day immersed in office productivity software and email clients, and this has been a clear advantage for Microsoft's operating systems. While the gap has narrowed, Microsoft still holds the edge. But for both office productivity and messaging, Linux has very viable options from the Sun Star Office product for office productivity to the Ximian Evolution product for mail and messaging. Interoperability with Microsoft environments is solid, as Star Office can edit the majority of Microsoft Office documents provided the formatting is not highly complex. Evolution meanwhile offers a plugin that allows its messaging client to connect to Microsoft's Exchange server product. And for enterprises wedded to the Microsoft Office package, a package called CrossOver Office from CodeWeavers allows users to run Microsoft's office suite on

Linux desktops.

- **Windows Interoperability**:

  Long a concern for alternative desktop supporters, this ability to coexist peacefully with Microsoft networks and server products is a must for most enterprises. All of the Linux desktop packages intended for enterprises we've surveyed, including offerings from Sun, SuSE and Xandros, offer this capability, and most work out of the box with no configuration required. While the next phase in Microsoft's assault on Linux appears to be focused on interoperability, the fact remains that for typical enterprise tasks Linux desktops perform adequately, as they can exchange files easily on Windows based networks, share network resources such as printers, and access web based applications with relative ease. If enterprises have based their infrastructure on Microsoft specific technologies such as Active Directory or are Microsoft only, Linux is clearly not an ideal client, but for heterogeneous environments this is rarely a concern.

- **Device Support**:

  This area is still problematic for Linux vendors, although it is improving. The availability of drivers for printers, scanners, PDAs, digital cameras and other devices likely to be encountered in the enterprise is far better than it was a year or two ago, but many devices will be problematic and installation can be difficult. For enterprise user groups that require either varied or obscure devices, proceed with Linux desktops very carefully, and be sure to test out the compatibility of prospective packages with your anticipated devices. Microsoft's device support will remain difficult to match, as its ubiquity on the desktop has led to unparalleled driver support.

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RedMonk Take

Irrespective of the validity of predictions of breakout success for Linux on the desktop in 2004, it is impossible not to mark the coming year as a critical juncture for alternative desktops in general. Calling 2004 a make-or-break year would be an overstatement, but not by much. Conditions can hardly be expected to improve; from economic factors to available Linux skills to attitudes towards "good enough" solutions, the opportunity for alternative desktops is very ripe. In fact, Linux desktops in our view have a somewhat limited window to establish themselves as a mainstream enterprise desktop offering. Windows has arguably advanced relatively little since the release of Windows 95, with the primary changes being in reliability and ease of use, and as a result "good enough" Linux clients can fare decently in comparisons. But the pending release of Longhorn has the potential to impact the desktop market substantially, as it represents a nearly total overhaul of the operating system. In our view, Linux needs to be well established before the arrival of Microsoft's next desktop iteration, because the potential improvements in productivity that may result from the infusion of relational database technology and a revamped user interface will in all probability reset the bar for desktops even higher. If Linux is to become a mainstream option for the enterprise desktop, the time is now.

About RedMonk

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