# Novell Tries to Recapture Its Glory Days

Quick Note

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It's easy to forget that Novell was once the dominant IT supplier for corporate LANs. NetWare, which Novell introduced in 1983, became *the* standard for file and print serving to a degree that few, if any, vendor-specific protocols or approaches have since. It helped create a market for network operating systems (NOS), and owned as much as 70 percent of that market as it grew. That once-dominant market position is the thing that has kept it going to this day, even as its traditional role is eaten up by servers running more general-purpose operating systems like Windows and Linux. Its surprisingly loyal customer base also helped. As recently as April 2003, a *Computerworld*

online poll indicated nearly 70 percent of NetWare users expected to stay on NetWare "as long as possible."
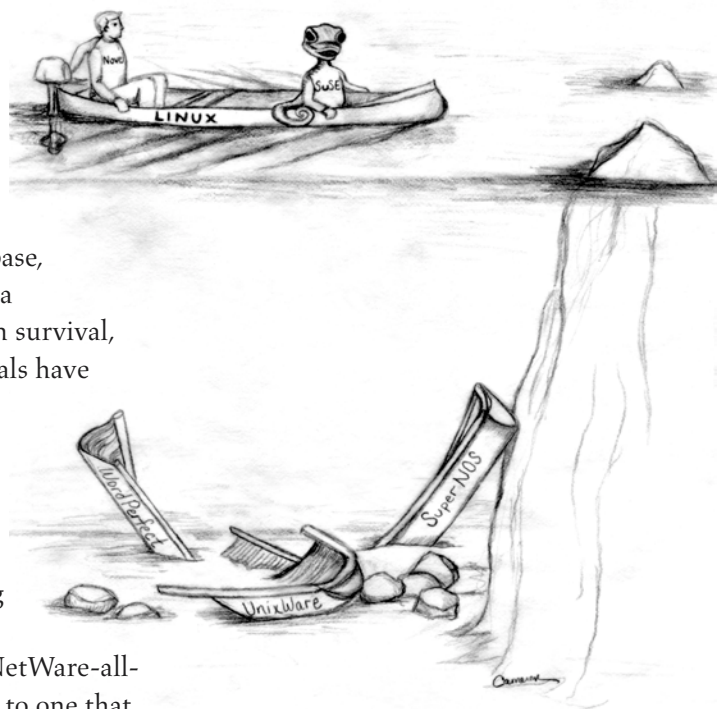
But desperately clinging to a shrinking installed base, however loyal, is hardly a recipe for growth or even survival, a point that Novell officials have acknowledged for years. Novell's recent Linux tilt—in the form of Ximian and SuSE acquisitions—is only the latest in a long string of attempts to move beyond an (almost) all-NetWare-all-the-time business model to one that can provide long-term growth. Novell's strategic intent and the companies it has chosen to buy are sensible, solid choices. But Novell has a decade-long track record of stumbles when it tries to move beyond its NOS roots, so a little skepticism about this latest attempt is hardly unwarranted.

The Missing Nineties

To Novell's credit, it has long recognized the need to do something different, to branch out in new directions. It just hasn't been very good at doing so. Its list of

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attempts that have failed—or at best been margin-ally successful—is long. During the mid- to late-90s, every major effort to strike out into new terri-tory circled back to NetWare, partially due to the political power of the NetWare division, which was responsible for the bulk of Novell's revenue. In fact, the "official" company history on Novell's Web site essentially ignores the entire 1990s, which were a tumultuous decade for the company. That was the decade during which Windows went from being a buggy desktop operating system to a rapidly growing OS for departmental servers—Novell's sovereign territory. Novell began the decade with Novell founder Ray Noorda at the helm, followed (after a nasty internal struggle to move him out) by former Hewlett-Packard standout Bob Frankenberg, and, eventually, Sun guru Eric Schmidt in the CEO's office. You'd think that Novell would have been up to *something* during all that time that's worth a mention in the corporate bio. Well, it was. But it was mostly high-energy dithering, corporate infighting, and competitive wishful thinking.

Not that Novell ignored Windows NT. It obviously had to address the threat of an OS that was expressly designed to supplant NetWare on small-to mid-range departmental servers, but then-CEO Ray Noorda was obsessed with an ultimately doomed and arguably nonsensical need to compete directly with Microsoft on all fronts.

To that end the company bought WordPerfect (an unsuccessful competitor to Word and Office), bought and further developed what became Group-Wise (a surviving but comparatively unsuccessful competitor to Exchange and Lotus Notes), designed several embedded operating systems (which competed successfully against Microsoft At Work and other Microsoft embedded OSes only to the extent that they all basically failed until handhelds became practical, at which point Palm OS and Windows CE began to gain traction) and a host of development tools (that not only failed to compete successfully against Visual Studio, but couldn't even get developers to build enough applications for NetWare to keep it competitive with NT).

Novell also launched a host of sometimes-saga-cious, sometimes-silly initiatives to spread the use of both NetWare and the directory that was its most powerful feature. These included worthy efforts like helping to develop the first versions of LDAP and initiating embedded versions of the directory that could link non-IT devices such as building-automation systems and emergency response connections. But they also included a version of NetWare's communications protocol designed to communicate over power lines so that users could link their homes to the Internet without cable modems or phone connections. That might have worked except for two things: first, no one could figure out how to get a clean networking-protocol signal through the static-producing transformers on the local power grid; second, the power line tech-nology was supposed to allow home-appliances to communicate with a central control console. Though Novell did demonstrate a coffee maker connected to a NetWare server via power lines, it never lived down the image of this technology as ToasterWare, which doomed it in the minds of supporting vendors even before the technical diffi-culties became obvious.

Novell did buy or build a number of more signifi-cant products, mostly designed to plug NetWare networks more tightly into other environments, or to otherwise make NetWare less of a one trick pony. Various middleware products including the Tuxedo transaction processing monitor, for example, did an adequate job of adding corporate computing power to NetWare networks using Unix, but never made Novell credible as more than a LAN vendor in the minds of most IT managers.

Losing the Real War

But it was into the NetWare vs. NT fight that Novell threw most of its weight. First it tried to counter the Windows NT encroachment by acceler-ating development of its ground-breaking directory. It failed to overwhelm the networking public in its first few versions, though it has ultimately become Novell's major strength.

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So, given the need to compete directly with the directory-less NT's low cost and ability to do many jobs adequately, Novell focused on making NetWare NOS more like a real, live operating system that could run applications as well as provide the high-performance file and print services for which it was known.

Applications running on NetWare had to be built according to rigid requirements, largely because NetWare's architecture was optimized for speed, not multitasking. NetWare Loadable Modules (NLMs), as the resulting applications were known, ran in Ring 0, where all programmatic requests are executed directly, rather than in Rings 1, 2, or 3, from which applications can pass requests to the operating system, which can vet them for errors before executing them. Running in a protected user space makes an application slightly slower than one running in Ring 0, but is much safer. Even a small coding glitch in Ring 0 will bring down the whole machine, rather than simply producing an error message when the OS rejects an imprecise request. Building glitchless NLMs was so difficult that many ISVs never bothered. NT was much easier to build for, and the existing installed base of Windows PCs and servers made it an obvious choice for ambitious developers.

So Novell decided to buy itself an application platform and integrate it with NetWare, rather than totally reinventing the wheel. It purchased Unix source code and UNIX brand and intellectual property from AT&T. The result was to be a kind of Frankenstein's monster called SuperNOS, that was to retain all the high-performing file-and-print characteristics of NetWare, but be as easy to code for and as powerful an application platform as Unix. That particular effort lasted a couple of years. Novell never got further than a loose dual-server version of NetWare and UnixWare in which both shared a directory, but couldn't share jobs effectively with the other. In 1995, Novell sold Unix-Ware and the associated Unix property to SCO— which, ironically, now is using it as part of an

expansive derivative right claim against Linux, of which Novell will be a major distributor now that it's buying SuSE.[1]

Novell also sold off WordPerfect, which had been a leading word processor in the DOS days, but which Novell bought while it was well on its way back down the acceptance curve. It didn't head back up. Novell passed WordPerfect to Corel, another company which has had more than its share of failed strategies and products. (Although Novell no longer sells office productivity software, it still sells collaboration software in the form of GroupWise.)

Under Bob Frankenberg, in fact, Novell trimmed away most of the non-core products that Noorda had championed as a way to compete with Microsoft, leaving Novell focused, once again, on its NOS and its directory.

But it took Eric Schmidt, who took over as CEO following Frankenberg's retirement, to make Novell's directory more than just a powerful feature of NetWare. As a Novell outsider, a credible authority on both networking and computer science, and a veteran of the Internet-savvy Sun Microsystems, he was able to cut through much of the corporate infighting and convert NetWare, the product, from a sacred cow into just one of the many platforms on which the directory should run.

On his watch Novell decoupled the directory from NetWare and made a credible business of selling it in various forms as both an administrative trouble-saver for multi-OS corporate networks, and an open-standards-based identity management middleware connecting companies whose networks need to be securely linked via the Internet.

In neither of these capacities, however, has Novell been able to break out of its traditional niches to become a dominant force in either the Internet or in internetworking, despite the undoubted technical advantages of its distributed directory.

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1. See Illuminata report "SCO's Derived Case Against Linux" (August 2003).

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The Latest Chapter

So Novell is now seeking to expand into other operating systems, first on a small scale by purchasing Cambridge, Mass.-based Linux vendor Ximian in August. However, in many respects, this acquisition wasn't even clearly about Linux even though Ximian was perhaps best known for its development of GNOME—a leading Linux desktop interface, along with KDE. Other Ximian properties such as the Evolution email client and personal information manager, together with an associated connector for Microsoft Exchange, may well have been of interest to Novell's GroupWise group. Likely even more interesting was Ximian's work in Web services—especially Mono, which is essentially an open-source implementation of Microsoft's .NET. This reinforced recent Novell efforts in network services including the purchase of SilverStream for that company's Java application server and Web services software, which Novell now sells under the exteNd brand.

By contrast, Novell's SuSE acquisition is an unambiguous Linux play that also leverages other Ximian capabilities. For example, SuSE was already busy integrating Ximian's Red Carpet, a software-management product that performs the same sort of update, deliver, and dependency checking within an enterprise as the Red Hat Network does. Over time, Red Carpet will merge with Novell's own ZENworks product, which can already automate a variety of IT lifecycle management tasks for not just Linux, but also Windows, NetWare, and Solaris. SuSE's YaST—which is more oriented to update management on single PCs—will likely stay more or less in its current form for now.

Over the past year or two, SuSE has clearly emerged as the "other" (than Red Hat) worldwide Tier 1 Linux distribution.[2] Like Red Hat, SuSE offers an explicitly "Enterprise" version of its distros—one patterned after commercial Unix-like release and update processes, which are designed to appeal more to IT managers who demand predict-

ability and thorough testing, not hobbyists who want the latest and greatest version even if the code isn't fully baked. However much these premium-priced enterprise distributions discomfit some of the "Linux (or even all software) should be free" purists, the datacenter reality is that heavy-duty support is a *sine qua non*.

But SuSE hasn't been content to plod along in Red Hat's shadow. It's been more aggressive than Red Hat in bringing its enterprise Linux version to platforms other than 32-bit x86—most notably IBMs iSeries, pSeries, and zSeries architectures. While Red Hat expanded the number of architectures that it supports in its latest release, SuSE remains a much closer partner of IBM, a position that could well pay significant dividends as IBM expands its Linux on POWER push.[3] SuSE is also pursuing the Linux desktop with far and away the most vigor of the two. Its SuSE Desktop Linux is an IT-oriented desktop distro that includes additional licensed software such as CrossOver Office from CodeWeavers to simplify running any "must have" Windows applications under Linux.

SuSE is one of the major players on the Linux scene. Novell could hardly have picked a better partner with which to re-enter the Unix waters with Linux. But will SuSE help Novell to swim or will Novell drag SuSE under?

Making the Nth Time the Charm

While Novell has had its troubles with diversification, some things are different this time around that provide reason for optimism.

First, there's the matter of strategic fit. Many of Novell's past acquisitions and initiatives seemed calculated to either prop up NetWare (e.g. Unix-Ware) or to improbably refight a battle that was already lost (e.g. WordPerfect). In contrast to these prior missteps, Linux is a vibrant and integral part of today's IT. To be sure, there remain many questions around how vendors will integrate Linux into

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2. See Illuminata report "Penguins in Ties: Two Linuxes for the Enterprise" (April 2003).

3. See Illuminata report "IBM Marches to Its Own 64-Bit Linux Drummer" (February 2003).

profitable business models. However, it should be abundantly clear that pretending Linux doesn't exist is a surefire path to irrelevance and failure.

This Linux effort also plays to a core Novell strength: its ability to market and support complex systems-software products through indirect channels of distribution, on a worldwide basis. Novell is a name that enterprise and SMB customers have never stopped trusting—even those who have stopped relying as much on Novell for their networking, and begun relying on other vendors, especially Microsoft. Novell makes sense as a major Linux distributor, because it gives both customers and VARs the same comforts with Linux that they have come to expect with commercial software options.

Nor is Novell in this game on its own. At the same time that Novell was spending $210 million on SuSE, IBM was investing $50 million in Novell. That demonstrates IBM's profound interest in what becomes of this particular acquisition. As well it should; Linux is central to IBM's eServer strategy and SuSE is IBM's premiere Linux partner. IBM won't let this buyout go awry if it has any say in the matter—and $50 million buys a lot of say.

Why didn't IBM just acquire SuSE itself? Because doing so would have destroyed SuSE's value. IBM clearly has the know-how to create its own personal Linux distros—as do HP and Sun.[4] But neither IT buyers nor ISVs are looking for a plethora of vendor-specific Linux distros, and that would be the inevitable result of a company like IBM taking its distro internal. Going forward, neither HP nor Sun would offer an IBM flavor of Linux if they could avoid it. Thus, SuSE has far more value to IBM—and indeed the user base—as an independent entity, albeit one with close ties to IBM.

Novell's track record with "what comes next" strategic initiatives is enough to create a generalized concern about failure. But, in this case, that concern must be counterbalanced with the deal's considerable strategic advantages and the involvement of a savvy, successful partner with a strong interest in things going well. Novell hasn't had this good a shot at rekindling past success for a long time. It certainly won't get another chance like this one.

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4. In fact, Sun did so briefly when it first opened its doors to Linux. See Illuminata report "Sun Linux Rises" (August 2002).

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