

The Big Guys Latch Onto Linux

Contributed by guri

It started inconspicuously in 1991 when a Finnish university student and computer programmer named Linus Torvalds designed his own operating system, as the basic software that runs a computer is called, on a lark. Back then he never dreamed that his Linux would challenge mighty Unix, a product of AT&T Bell Labs, and Windows, the mainstay of software king Microsoft (MSFT).

From the start, Torvalds had in mind an operating system free to all comers, as opposed to costly Unix and Windows software. And where Microsoft and the suppliers of Unix guarded their software's source code like a state secret, Torvalds stipulated that Linux would remain open for all to alter and improve, as long as they made their enhancements available for others to build upon. So off the beaten path was this open-source program that it may have been the only piece of software ever to have its own mascot, a cartoon penguin named Tux.

In the years since, Linux has become an improbable success. By the fourth quarter of 2002, it powered 14% of the servers sold to run powerful corporate networks, up from 9% a year earlier, according to tech consultancy Gartner. Enhanced versions of Linux reaped \$364 million in revenue in the period, up 90% from a year earlier. By some measures, Linux runs 25% of all corporate servers right now. In short, it's one of the few technology products that's booming in the midst of the lengthy and distressing tech malaise.

BEYOND THE STARTUPS. Perhaps that's because Linux has become a lot less revolutionary than it was just two years ago. Quirky startups -- worn down by the Quixotic quest to sell something that is, after all, free -- have fallen by the wayside. Those still soldiering on are demanding higher and higher fees either for support or (gasp) proprietary add-ons. Of the publicly traded Linux and open-source pure plays, only Red Hat (RHAT) has reported real profits -- and sporadic ones at that. "The willingness of IT managers to buy from a small upstart is significantly less than it used to be," says Martin Fink, general manager of Hewlett-Packard's Linux division.

Conveniently, when it comes to Linux, businesses don't have to buy from startups anymore: Linux's sudden success owes much to the fact that Dell (DELL), Oracle (ORCL), Hewlett-Packard (HPQ), and, most notably, IBM (IBM), have hitched themselves to the Linux bandwagon. All dedicate an increasing amount of brainpower, marketing dollars, and research money to the open-source effort -- a classic case of trying to give customers what they want. And while Linux startups have mostly struggled, these Big Four have collectively pocketed billions in revenues selling and servicing Linux products.

The biggest beneficiary of the bunch is IBM, which bagged \$1 billion in Linux-based revenues in 2002 -- more than double what it got in 2001. Big Blue won't break out profits on that part of its business, but it boasts that its Linux operations are in the black. One step behind is HP. In the past four years, Carly Fiorina's troops have generated \$2 billion in Linux revenue from sales of hardware, software, and consulting. By comparison, gross sales at Red Hat have yet to crack \$90 million a year.

A LEG UP. Aside from scarfing up revenue, the Big Four appear to be using Linux to punish Microsoft, as Goldman Sachs recently outlined in a report entitled "Fear the Penguin." Goldman analysts concluded that Linux will grab an increasing percentage of the key market for operating system software in corporate data centers -- and in so doing eventually will take a bite out of Microsoft.

Microsoft continues to add to its 49% market share of the total server market, but Linux has already started to lessen Redmond's sales potential, says Tony Alma, a senior analyst at Port Chester (N.Y.) software research shop D.H. Brown Associates. Alma argues that Linux has won over Unix users who might have wanted to switch from high-end systems on proprietary hardware to save money and who in the past would have considered Windows on Intel-based computers. "Now they can go to Linux on cheaper Intel boxes," says Alma.

That also gives IBM and HP, in particular, a leg up in the Unix wars, where Sun Microsystems (SUNW) had emerged as the winner. Long the leader in proprietary Unix sales, the Sunnyvale (Calif.) company has steadily lost market share in the lower-end Linux installations serviced by the big tech companies. Jonathan Schwartz, the executive vice-president of Sun's software group, argues that Linux remains a lesser player in high-performance, heavy-duty computing, where

Sun's Solaris operating system shines.

"LOOKING TO MOVE." "Whether its free software doesn't matter all that much because customers want the answer to one question: Will my systems be available?" says Schwartz. He claims that Sun machines require less hand-holding than Linux machines and are far more reliable.

Many others say Linux-based machines are replacing Sun systems for less complex applications, cutting off the middle and lower end of Sun's

market and handing it to big systems integrators such as Accenture (ACN), IBM, or Cap Gemini Ernst & Young. "We have people who are looking to move a lot of custom Unix software applications off of expensive Hewlett-Packard and Sun Solaris servers and consolidate those functions on onto Linux and Intel servers," says John Parkinson, chief technology officer for the Americas at CGEY.

Not that Linux can afford to coast. For starters, its next iteration, version 2.5, shepherded by Torvalds himself, will have to be able to handle more complex computing tasks, such as harnessing more processors working in parallel and better handling of large, memory-intensive tasks. Thus, the disparate volunteers -- mostly unpaid -- who build open-source software will need to vastly improve their coordination to keep Linux' quality reputation intact.

SOURCE-CODE LAWSUIT? At the same time, the financial problems facing Linux companies could drive deep wedges into the open-source community. One of the larger Linux concerns, SCO Group, recently hired antitrust attorney David Boies, the man who fought Microsoft for the federal government. SCO has said it may sue to defend the copyright of some of its proprietary code that allegedly has leaked into open-source software. Should it do that, the fallout could divide a movement that has come surprisingly far on good will and community spirit.

At the same time, Red Hat and other big open-source companies have attached increasingly restrictive conditions to the use of their software packages and the proprietary add-ons they control, according to tech consultancy IDC in Framingham, Mass. Such limits could cause info-tech managers to sour on Linux, since a primary reason many of them bought into open-source software was to avoid worrying about licensing issues.

Worse, the Linux specialists such as Red Hat and SuSE have upped prices on their high-level packages of Linux server software. These increases have pushed the initial purchase costs of Linux close to that of proprietary operating systems, including Windows. Recently, corporate tech departments have begun to view Linux less as a cheaper solution in terms of software purchases and more as one that gives them increased control over their software and lets them save money on hardware.

COLOSSUS COLLISION. This may leave Linux open to renewed competition from Sun, which has been cutting its hardware prices and selling a new software package including an enhanced operating system and network-management and -configuration tools that it claims will provide everything an IT department needs -- all from a single supplier. This would let companies avoid the time-consuming and costly integration of multiple programs that IBM and HP generally undertake for customers.

Linux must also continue to contend with Microsoft, which isn't going away. "Lots of companies will still choose Windows because it's easier to use than Linux," says D.H. Brown's Alma. "You don't have to put everything together from scratch." Indeed, Microsoft is increasingly aiming for the higher-end market, right next to Linux. Redmond's Windows Datacenter 2000 product is built specifically to run big computer networks, call centers, server farms, and do other tasks previously reserved for Unix systems.

These negatives aside, for the foreseeable future established purveyors of Linux stand to make big bucks in a tech market that remains frozen by fears of a new Gulf War and economic uncertainty. At the least, industry experts predict, Linux will continue to grow smartly. And it may influence the entire software world should the ad hoc method of developing new code prove useful for types of software beyond the operating system.

The Linux suppliers could also get a big push from an ongoing effort to move open-source desktop applications from the geekstream to the mainstream, something that's happening particularly quickly overseas, where foreign governments have grown weary of air-mailing bags of cash to Bill Gates. With that kind of wind at their backs, no wonder the Big Four are cruising on the Linux highway.