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## OPEN SOURCE

# The Myths of Open Source

It isn't all about cheap: Companies keep finding good reasons to take advantage of open-source software.

BY MALCOLM WHEATLEY



### Reader ROI

- ▶ Why open source isn't all about the price
- ▶ What companies are using open source for mission-critical applications
- ▶ What questions exist surrounding the legality of using open source

**AT FIRST GLANCE**, the company Employease seems unremarkable. But look a little closer. Employease, which provides employee benefits administration services to more than 1,000 organizations across America, has an IT architecture chiefly built around open-source software, which makes it a rare bird—not that it was planned that way when the company was founded in 1996.

"It's been quite a surprise to me. The open-source model just seems intuitively wrong," says John Alberg, the company's cofounder, CIO, CTO and vice president of engineering. But the facts speak for themselves.

The company's 25 production application servers run on Red Hat Linux, having been switched

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from Windows NT in July 2000. Webpages once delivered by Netscape are now served by Apache, supplemented by Tomcat, an open-source Java servlet engine. Send an e-mail to Employease and it's processed by Sendmail, an open-source mail server, while the company's software developers use XEmacs, an open-source development tool.

But that's not all. Although the company's main applications use Informix for database management, Alberg happily confesses that he can see a time when the proprietary software be displaced by MySQL, an open-source relational database system already used by the company for less critical applications. Snort, an open-source intrusion detection tool, is also under active consideration, says Alberg.

Companies such as Employease herald a sea change in corporate attitudes toward open-source software. Once seen as flaky, cheap and the work of amateur developers, open source has emerged blinking into the daylight. With unrestricted access to the source code to run or modify at will, and support coming from an ad hoc collection of software developers and fellow users, the open-source model is very different from proprietary software. But it is nevertheless proving attractive enough for a host of CIOs to make the switch. Who's using open source? Why are they using it? And are the benefits worth the risks? The answers are surprising—and dispel some of the myths surrounding open source.

**Once seen as cheap and the work of amateur developers, open source has emerged blinking into the daylight.**

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### **MYTH 1**

### **THE ATTRACTION IS THE PRICE TAG**

One of open source's most touted benefits is its price. Download the software, install it—and don't pay a penny. That's the theory. But to a surprising number of open-source user companies, the price tag—or lack of one—is irrelevant. "It's not about being cheap," insists Employease's Alberg. "It's about doing our job effectively—and we're willing to pay quite a bit for that. We want software that does what it says it will do."

What Alberg finds fascinating about moving to open source is the performance improvement that resulted. The move to Linux, for example, dramatically reduced the rate of server failure experienced by the company. Typically, under NT, one of the company's servers would fail each working day. Now, he says, "we get at two failures a month—and often don't get any in a month."

Linux also runs Alberg's applications faster than NT, a fact that has meant that despite more than doubling its business since 2000, the company hasn't had to

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to buy more servers. "Linux increased our capacity by between 50 percent percent," says Alberg.

Even so, Alberg is careful to make clear that his commitment to open source is not the blind buying behavior of a zealot. He wouldn't, for example, go open source if it were more expensive than proprietary code. "Solaris is a strong commercial operating system. We'd choose it over open source if we found it to be less expensive," he says. "[While] cost is a huge driver for our decision-making process, we cannot risk choosing an inferior solution to save money. We can even consider open source if it weren't at par with—or in some cases better than—commercial alternatives."

Ask many users of open source and a similar story emerges. "Cost saving weren't really a factor in our decision to go open source," says John Nova, CEO of 330-plus hotel chain La Quinta, which is moving its online booking system previously on BEA's WebLogic—to a combination of Apache, JBoss and Tomcat. "What got us into it was that it was simply the best technology open to us."

## Open Source Under Attack

SCO group's May 2003 letter to 1,500 large-company Linux users grabbed headlines. The letter warned the users that SCO might seek legal action against them as part of its ongoing fight with IBM over allegedly stolen Unix code that may or may not be in Linux. And SCO's more recent assertion that the General Public License (GPL), under which much open source is published, may violate the U.S. Constitution has caused a few eyeballs to roll and roiled some tempers. But beyond that, the brouhaha's impact may be limited. A number of open-source vendors have already moved to indemnify customers.

Lawyers, too, seem unconcerned about the risks that the SCO assaults pose to the typical CIO—especially since IBM, a major open-source vendor, has signaled its intention to rebut the charge vigorously. "If IBM's involved, we've got some assurance that these issues are going to get resolved," says Karen Copenhaver, a partner in the patent and intellectual property practice of law firm Testa, Hurwitz & Thibault.

Others are also skeptical.

## MYTH 2 THE SAVINGS AREN'T REAL

Open-source software has been described as "free, as in a free puppy." At the absence of software licensing fees needs to be offset along with the cost of training, support and maintenance. On the other hand, proponents of open source also cite reduced costs of "vendor churn," where vendors require users to buy a new version or pay for extra support. Most users we spoke to for this report said they reported a net savings with open source—often a substantial one.

At Sabre Holdings—the company behind Travelocity, the Sabre Travel Network and the Sabre travel reservation system—a major migration to open source is under way, prompted by Sabre's prediction that the move will yield savings of tens of millions of dollars during the next five years.

The company runs two distinct groups of computers, explains CTO Craig Murphy. Where reliability is paramount, Sabre Holdings uses pricing—or "data of record"—applications, which run on high-spec, fault-tolerant Hewlett-Packard NonStop systems. But shopping applications—where customers and travel agents look for the best deals—run on a server farm of lower-cost machines. Each shopping application has its own open-source MySQL database, explains Murphy, synchronized by an application from GoldenGate with the rules, fares and availability information held on the fault-tolerant "data of record" system. Shopping systems were on HP-UX, but by the beginning of this month, all servers will have switched over to an open-source operating system—Red Hat Enterprise Linux AS.

The big attraction of open source is that there's a zero marginal cost of scale because open source doesn't require additional licenses as an installation grows, he says. As a result, the cost per transaction plummets as you add more servers. Exact comparisons are tricky, says Murphy, "but where we can make like-for-like comparisons, we're expecting at least an 80 percent reduction in running costs."

## MYTH 3 THERE'S NO SUPPORT

"It's essentially a dispute between IBM and SCO, and it won't affect the majority of Linux users," says Jeff Norman, a partner in the intellectual property practice of law firm Kirkland & Ellis. "Even if SCO wins, I find it highly unlikely that SCO has a claim on Linux users."

As for the Constitutional claim? "[SCO CEO Darl McBride's] argument that the GPL violates the U.S. Constitution is just plain silly and has generally been dismissed as such," says Copenhaver. "It is certainly one of the more bizarre allegations that he has made."

-M.W.

According to Gary Hein, an analyst with technology consultancy Burton G technical support is a potential open-source user's primary concern. "Who call when things go wrong? You can't wring a vendor's neck when there's vendor," he says.

In practice, the situation is complex. As Hein points out, most open-source projects have a large corps of developers, Internet mailing lists, archives support databases—all available at no cost. That's the good news. The no good news is that there's no single source of information. "A simple question result in multiple, conflicting answers with no authoritative source," he says.

Even so, says Klaus Weidner, a senior consultant with technology consult Atsec, multiple sources of support can be better than being tied to one vendor especially when that vendor provides bad support or refuses to continue supporting software of a certain vintage.

In practice, existing users of open-source software appear perfectly happy with open-source support arrangements. "The breadth of resources available for open-source applications is so great worldwide that we can get support, communicate with a developer or download a patch no matter the time of day," says Tim Jinneman, IT director of RightNow Technologies, an ASP that hosts customer service products for more than 1,000 companies worldwide, including British Airways, Cisco Systems and Nikon.

The company's hosting environment runs on Linux, Apache and Tomcat, and 60 percent of its customers use MySQL, says Jinneman. Indeed, he adds, "we have more trouble getting support for some of our purchased commercial applications than we've had with open-source applications."

Some open-source applications also have support offered by the original developers. JBoss, for example, is backed by JBoss Group, which includes the core developers who wrote the application. Depending on the contract, even JBoss Group President Marc Fleury, users can obtain 24/7 professional support with as little as a two-hour response time. The group also offers training.

A similar model also underpins Sourcefire, whose founders created Snort, a popular open-source intrusion detection tool. Downloaded off the Internet, Snort is command-line-driven, explains Sourcefire CTO Martin Roesch. Enterprises can set it up themselves—but more and more are contracting Sourcefire instead so that the company can handle security management details.

"What I like is that you get all the advantages of open source in terms of working on it, as well as the advantages of a commercial enterprise behind it in terms of longevity and liability," says Kirk Drake, vice president of technology at the National Institutes of Health Federal Credit Union.

## MYTH 4 IT'S A LEGAL MINEFIELD

A variety of open-source licenses exist, and helping CIOs understand their implications is good business for lawyers—very good business. "[CIOs'] concerns chiefly revolve around the implications of using code to which they can't claim their right to use," says Jeff Norman, a partner in the intellectual property practice of law firm Kirkland & Ellis. "Just because you've got a piece of paper saying you own the Brooklyn Bridge, it doesn't mean that you actually own it."

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For some users, third-party indemnification is an option. On Nov. 17, 2006, for example, JBoss Group announced it will indemnify and defend JBoss customers from legal action alleging JBoss copyright or patent infringement. Other vendors of open-source software—including HP, Red Hat and Novell—also offer indemnifications of varying types.

And while conceding that the situation isn't perfect, Sabre's Murphy says he's heard all the legal arguments he needs. "It's a concern, sure, but we've got to do this. There may be friction and challenges—but I don't see any showstoppers." (See "Open Source Under Attack," this page.)

## MYTH 5

### OPEN SOURCE ISN'T FOR MISSION-CRITICAL APPLICATIONS

Mission-critical apps don't come any more crucial than those in banking, and transaction systems simply have to work, period. Experimenting with open source, with its attendant risks in terms of potential infringement, security, maintenance, might be regarded as anathema. "Banks tend to be conservative institutions—first followers, if you like, rather than leaders," says Clive Wilson, CIO of Italian bank Banca Popolare di Milano, who freely admits that the bank's venture into open source was the result of "some fairly lateral thinking."

But walk into Banca Popolare's smart new branch on the Via Savona in Milan's Zona Solari district, and the service these days is much faster than customers have previously experienced. The reason? Unwilling to throw out the bank's legacy banking applications, totaling some 90 million lines of Cobol, but unwilling to keep them running under IBM's vintage OS/2 Presentation Manager operating system, Whincup has used a proprietary legacy integration tool from Jacea to connect the Cobol to IBM's WebSphere—running in a Linux partition on the mainframe.

The result: Formerly disjointed applications now run slickly in a Web browser, yielding faster transaction times, less time spent training tellers—and many opportunities for cross-selling the bank's services.

Billed by insiders as one of Europe's largest Linux projects, the Zona Solari is piloting the new system, says Whincup. Once testing is complete, full rollout will begin in May. One decision to be made before then: whether to leave the desktops running Windows XP, as in the Zona Solari pilot, or move them to Linux as well. "Both of the next two branches to pilot the system will be using Linux on the desktop," Whincup says.

## MYTH 6

### OPEN SOURCE ISN'T READY FOR THE DESKTOP

At Baylis Distribution, a transport and distribution company, IT Director Chris Helps came across the MySQL database four years ago when the company was looking to create a data warehouse. Around the same time, the company was experimenting with Linux, he says, for small-scale, noncritical applications. The move to mission criticality came last year after the vendor of the company's proprietary logistics management system, Chess Logistics, brought out a new version that ran on Linux—a version that promised to improve performance by a factor of between 10 and 15 times. Helps happily signed up, and he hasn't

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regretted the decision.

But his experience of running Red Hat Linux in a true production environment with users logging on to the main Linux server from what he describes as clients with a cut down Linux operating system," prompted him to reevaluate company's desktop policy. In the end, the company opted to replace Microsoft desktops with Linux and open-source personal productivity tools for activities as word-processing and spreadsheets.

"We've not done a formal evaluation of the savings, but a broad-brush calculation is that it costs \$1,820 per seat to install a PC with all the Microsoft tools a user needs. With Linux, and open-source tools, it's only around half that," Helps says. What's more, usability improved. "People can log in from any PC in the group and have all the same services and facilities available to them as if they were sitting at their own desks." Better still, IT support is simplified. "We haven't got the complications of users establishing a unique personalized environment on their desktops: We've got better control, better upgrades, better traceability."

**“ The arguments for and against open source software often get very trivialized. It's not a technology issue; it's a business issue.**

—CTO ANDY MULHOLLAND  
CAP GEMINI ERNST

Nor is Helps alone. Other IT shops—as big and diverse as Siemens Business Services and the Chinese government—are also convinced that Linux is right for the desktop. Siemens, for example, says it has performed extensive testing with "real-world, nontechnical workers," finally declaring that Linux has now moved as a desktop system. The tests confounded the company's expectations. "We first] didn't see Linux on the desktop as a major market, but we were wrong," says a spokesman for the 35,000-employee organization that serves more than 40 countries.

## THE BOTTOM LINE

Is open source right for every organization? In the end, argues Andy Mulholland, chief technology officer for Cap Gemini Ernst & Young, it's a question of a balance. "The arguments for and against open-source software often get very trivialized," he says. "It's not a technology issue; it's a business issue to do with externalization."

Companies with an external focus, he says, which are used to working collaboratively with other organizations, and perhaps are already using collaborative technologies, stand to gain much more from open source than companies with an internal focus, which see the technology in terms of cost savings.

"The lesson of the Web is that standardization is better than differentiation," Mulholland claims. "Is there a virtue in doing things differently? Is there a virtue in doing things the same way as everybody else?" As the past decade has shown, standardization with a proprietary flavor—think Microsoft—has its drawbacks: bloatware, security loopholes, eye-popping license fees and an unsettling dependence upon a single vendor. In offices around the globe, an era of open-source standardization, determined to condemn such drawbacks to history, may be dawning. **CTO**

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We switch from windows to linux 5 years ago, we never regret this décision. We develop our own tools and find that open source model is much more attractive for many reasons.

**Félix Le Blanc**  
CEO  
FLB STUDIO 2K5  
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Hi all,

We are testing Linux and migrating slowly away from proprietary softwaare. Savings are significant, but even more important is flexibility and customisability of Linux and OSS, including every application one would need in the course of business. The fact is, with OSS IT administrator has a total control over his/her network. Problems can be solved in-house, improvement are freely available and stability is beyond and above proprietary software.

**Fredric Herfisch**  
Information Technology  
  
Australian public service  
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A concern of one commentary, "The open source solution is a viable option for our systems. Security is a growing concern, though, since we would not have a large Microsoft target to the world, I am concerned that as Linux systems become more prevalent, then they will become the hackers target also." The reality is that with Windows, the problem isn't the skill of hackers, it's the slopping coding that opens the doors to the Trojan Horse. Because Linux is under constant peer review by a community of contributors, any weaknesses can be addressed and dealt with. That's the beauty of Open Source - fresh minds are in abundance to deal with any issues.

**Sheri Elpern**  
Co-Owner  
SQI, Inc.

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One of the comments above is quite controversial: a) It says you need more training for Linux which offers few features (common less denominator). Now tell me how many users are really aware of the plentitude of features included in MS Office? If we count productivity cuts from their ignorance - how high is the overall TCO in the company, not only in the maintenance? If we were to train them in ALL MS Office features (most of whom they'll never use anyway), how high is the cost for this? Besides, the truth is most open source apps as of mid-2004 can be installed and run by non-techies in the same process as proprietary ones. It is indeed no matter of technology anymore but a business case.

b) It holds insulting comments towards the small enterprises who are over 90% of all business in each and every country. If we all can drive bikes and this is proven to be the cheapest and most efficient way of movement, having a car is an option speaking of arrogance in the first place rather than good business sense.

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I agree that companies need an external focus in order to take advantage of open source and collaborative effectively with other organizations

**John Roth**  
Manager  
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