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WHAT'S 'IN STORE' FOR DELL

An interview by **CHRIS PREIMESBERGER** 63
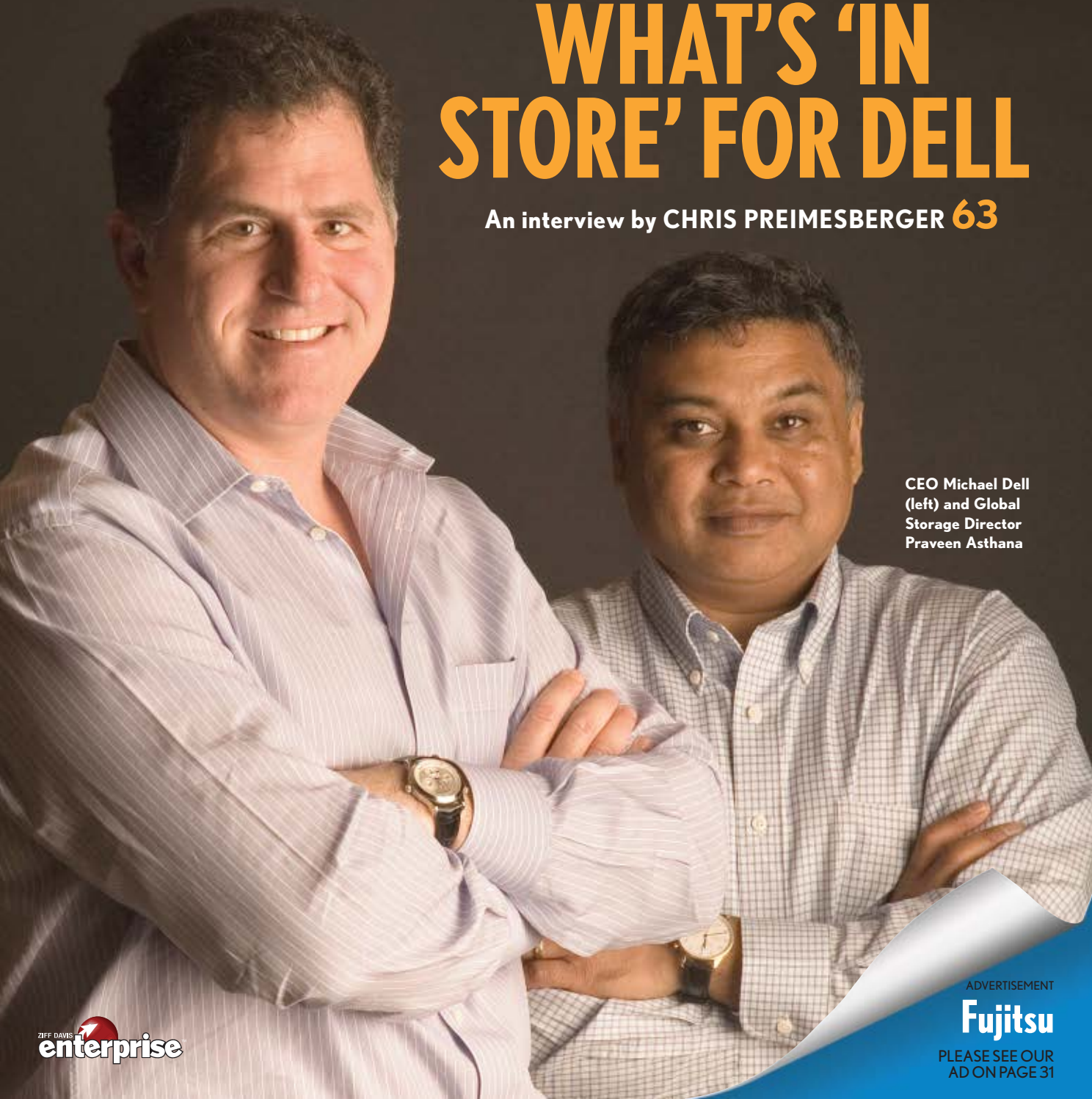
CEO Michael Dell (left) and Global Storage Director Praveen Asthana

ZIFF DAVIS **enterprise**

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COVER PHOTO: CHRIS COVATTA

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The 15 Most Influential People in Security Today

1 Tavis Ormandy Google Security Team

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Upfront

Twittering about layoffs

The ax fell on some 1,000 Yahoo employees Feb. 13 after months of speculation and rumor-mongering from tech watchdog news sources.

Hopes that a hostile bid from Microsoft would save Yahoo jobs were dashed as Yahoo rejected the buyout offer Feb. 11 as "substantially undervaluing" the search giant.

Yahoo officials would not say which departments and offices were having their head counts slashed—only that the reductions were targeted at areas of the company's business that didn't support its growth initiatives.

But in this age of rapid Web communication through blogs and other social media tools, it is surprisingly easy to find out who is affected.

One laid-off employee used Twitter, a micro-blogging service, to dispatch snippets of his last day at Yahoo to the Web. "Ironic that I just got my PC repaired yesterday. Won't be needing that anymore," Ryan Kuder wrote at 9:03 a.m. on Feb. 12. At 9:54 a.m. Kuder wrote, "This is a serious downer. Trying to drown it in free lattes, which I

will miss," and at 3 p.m. he wrote, "Lots of whispered conversations. Like people are afraid to ask who's gone."

Dispatches from other laid-off Yahoo employees came through their personal blogs.

These reports point to the layoffs touching many

groups across the company—it is suggested that they come from departments as far apart as search marketing, incubation, advanced technology and special "comeback plan" projects—and are in contrast to previous reports.

"Rather than make across-the-board cuts, we will make targeted reductions," CEO Jeffrey Yang said during the company's fourth-quarter earnings call in January.

Meanwhile, the public nature of these layoffs

and Yahoo's reputation for having sought-after talent have led many to predict that none of these employees will be out of work for long.

"There will be inevitable job losses. But you could be in a worse place than on a street with a résumé from Yahoo," Jim Lanzalotto, vice president of strategy and marketing for Yoh, a talent and outplacement company, told eWEEK. "Being at Yahoo isn't exactly being at the low end of the totem pole."

However, it is likely that before laid-off Yahoo employees start updating and distributing their résumés, they will be following the lead of Kuder, who Twittered at 9:15 p.m. Feb. 12: "Celebrating unemployment with a giant margarita at Chevy's."

—Deb Perelman

Never can say goodbye

Users seeking a divorce from Facebook are

finding that their personal data may be kept as alimony payments.

Several users who have tried to leave Facebook have posted unflattering tales of their experiences online, with some saying it has taken weeks or months to extract themselves entirely from the popular social networking service.

A Facebook spokesperson told eWEEK that users can remove their information from Facebook by deactivating their accounts. Once a user deactivates the account, his or her profile becomes inaccessible on the main Facebook service, and the data is kept by Facebook only to allow easy reactivation.

Users not interested in any further relationship with the site may delete their profile, which means their name and all e-mail addresses associated with the account are deleted from Facebook servers.

What Facebook doesn't explain in its statement, or in its help section, is the hoops that users have to jump through to delete their accounts.

Steve Mansour, a programmer from Canada, wrote a post on his

Web site that details a protracted back-and-forth process with a customer service person. Ultimately, Mansour was told he had to delete each of his minifeeds, wall posts, incoming and outgoing messages, and other bits of profile information.

What Mansour learned was this: You can remove yourself from Facebook, but only after you go into your account and manually delete each detail—an inconvenient process for a site dedicated to making it easier to find people.

Why is it so hard to remove oneself from Facebook? Why isn't there a simple button that allows users to "nuke" their profiles from the site?

Social networks use personal data to target consumers with digital advertisements that play off their online behaviors, a lucrative but challenging ad niche that Google, Yahoo and Microsoft are struggling to figure out.

Facebook's ad system, Beacon, ran into trouble earlier this year as an opt-out service that informed users' friends about their online activities. Chastened by complaints and privacy watchdogs, the company made Beacon

purely opt-in.

"[Other sites] don't resort to 'stopping us at the door' when we want to leave, and that's where our problem with Facebook comes in," Mansour said. "They make it very clear that they are granted full, unalienable rights to everything you put on

Facebook, and that once it's on their servers, they own the rights to it forever."

Mansour's blog post inspired Facebook user Magnus Walling to set up a Facebook group site, "How to permanently delete your Facebook account," with instructions on what to do to get oneself removed. The site has more than 6,700 members.

With all the hullabaloo, Facebook said it is changing its approach to deactivation and deletion.

"We are working to bet-

ter explain the simple deactivation process and to ease the deletion process for those who want their personal information removed from our servers," said a Facebook spokesperson, who would not provide more detail.

In the meantime, Facebook may shoulder the brunt of more privacy complaints. Electronic Frontier Foundation Staff Technologist Peter Eckersley said the people who are complaining are not willing to live in a world where they can be "databased with impunity. The more Facebook refuses to delete accounts, the more people will want them deleted."

Eventually, Mansour said, the story could have bigger implications. While Facebook may not be doing anything untoward with the user data, it's still on the Internet, where a hacker can grab the data and do with it as he or she wishes.

"While this applies to every other social network, of course, it's again that Facebook has collected such specific personal data about each user that makes this a much scarier proposition than, say, someone hacking into MySpace and stealing all of someone's photos and musical pref-

erences," Mansour said.
—*Clint Boulton*

Microsoft makeover

By now, it would be hard to have missed the "I'm a Mac, I'm a PC" commercials.

The commercials feature a young, hip-looking, casually dressed guy meant to characterize the Mac persona and a formalistic, stuffy, work-obsessed guy representing PC users.

They certainly didn't fall under the radar of Microsoft employees.

"Those ads tapped into an old stereotype. There used to be a stereotypical Microsoftie, but those stereotypes are hard to maintain when you have 70,000 employees," Ariel Stallings, a Microsoft employee and the blogger behind Microspotting.com, told eWEEK.

With the tagline "Like the paparazzi, but for geeks," Microspotting.com represents a new wave in corporate workplace communications—using Web 2.0 technologies to introduce employees to one another and to the world beyond the corporate campus.

Sponsored by Microsoft, written by a Microsoft employee and focusing on Microsoft employees themselves, the blog features photos and short interviews with people on

How to Protect and Improve System Performance

The Top 10 Points to Know about fragmentation

IT professionals are heroes of the workplace. Whether with cunning wit or a Phillip's head screwdriver, they solve most any computer emergency. However, keeping a computer running at top speed is usually preventative maintenance instead of last-minute, adrenaline-surging, virus-vaccinating heroics.

Here are 10 key points to maintain peak performance across any network:

1. The hard-disk is the slowest part of any system.
Say you are operating a 2.5 GHz processor. That's 2.5 billion operations every second. A large number of hard disks only spin at 7200 rotations per minute, or 120 cycles per second, or 120 Hz. This means your CPU is more than 20 million times faster than the hard disk. The hard disk still has mechanical components. Think *Terminator 2*®, when a mechanized Schwarzenegger is outclassed by the faster, smarter T-1000. When the slowest part of your computer is making unnecessary reads, the entire system is dragged down.

2. Fragmentation has severe effects.
It's more than sluggish and crawling computer speeds; fragmentation leads to crashes, hangs, data errors, file corruption and boot-time failures. Files that suffer fragmentation are more difficult and take longer to back up. When systems are thoroughly defragmented, they run faster and more reliably—period.

3. Real-time defragmentation is necessary.
Many companies rely on 24/7, mission-critical servers. Taking these systems offline for maintenance is not an option. But, having a server with I/O bottlenecks is also not an option. Only real-time, invisible defragmentation fixes this catch-22 situation.

4. Give your systems faster-than-new speeds.
NTFS best-fit attempts for file placement on hard drives are limited. Diskeeper® 2008 comes with a new technology called I-FAAST™ (Intelligent File Access Acceleration Sequencing Technology)[1] that re-sequences your files. So, in addition to consolidating free space, defragmenting with Diskeeper boosts access to your most frequently used files by as much as 80%. I-FAAST gives systems faster-than-new speeds.

5. Servers are especially susceptible.
While disk striping improves physical I/O capacity and performance, RAID and SAN systems simply do not fix fragmentation where it begins—at the file system. Enormous volumes with heavy read/write activity lead to astronomical fragmentation rates, making RAID and SAN work harder than they should. The efficiency of RAID and SAN may lessen some of the physical effects of fragmentation, but fragmentation is never eliminated. You'll need to buy more and more equipment to compensate. Sooner or later, the tortoise catches the hare, and your system suffers I/O bottlenecks and slow server speeds.

6. Operate without interrupting productivity.
The new InvisiTasking™ technology makes software transparent. Diskeeper 2008 with InvisiTasking will work invisibly in the background; only using untapped resources. Systems are continually improved without any management or impact on a system's usability.

7. Defragment despite minimal free space.
The purpose of defragmentation is to restore lost speed and performance. A defrag engine must be able to operate in limited free space because drives with extremely limited free space are the ones in need of the most help. Diskeeper 2008 handles millions of fragments and can function with as little as 1% free space.

8. Stop fragmentation before it happens.
Diskeeper 2008 comes with Frag Shield™ 2.0, a technology that automatically defends against fragmentation of critical system files. Frag Shield 2.0 prevents crash-inducing fragmentation. It's like Superman® saving the day —two days before there's a problem.

9. Auto-defrag breathes life into systems.
It keeps systems at optimum speeds and eliminates fragmentation-related performance issues. Thoroughly defragging systems adds 2–3 years onto the hardware's useful life.[2]

10. Analyze your network's performance.
Poor performance on a remote system can easily be mistaken for a slow network.

When systems are thoroughly defragmented, they run faster and more reliably—period.

Get Disk Performance Analyzer for Networks™. This free utility scans networked systems for fragmentation. See for yourself how fragmentation is affecting your systems. This groundbreaking program will provide comprehensive reports on how system speeds will improve with thorough defragmentation. Visit www.diskeeper.com/we2 and get this free, must-have utility.

Diskeeper 2008 is the only fully-automated defragmentation program. It operates invisibly in the background and it dynamically adapts defragmentation strategies to fit the needs of individual volumes. With new defrag engines, Diskeeper 2008 restores performance on volumes with as little as 1% free space. Get rid of slows, bottlenecks, and fragmentation-induced crashes. Visit www.diskeeper.com/we

[1] Available on Pro Premier, Server and EnterpriseServer editions.
[2] See white paper at www.diskeeper.com/wepaper

the software marker's sprawling Redmond, Wash., campus.

Stallings likened her role to being a roving reporter.

For months, she said, she "stalked" the gold-helmet-wearing, Segway-riding Microsoft employee everyone saw but few had the nerve to talk to.

"He's very visible to employees, but he's mysterious. Who is he? Why does he wear that helmet? He even gets on the elevator on his Segway. Northwesterners are really polite, so they're not going to ask the guy with the sparkly gold helmet what his deal is," said Stallings.

"When I featured him on the blog, it was the story that's gotten the most talk internally. 'Oh, it's that guy,' people would say."

In the interview, readers learn that not only is "The Golden Helmet" a perfectly normal guy (who got the sparkly helmet because he wanted something drivers could see in the dark), but he's also the guy who created the yellow highlighting that shows up if you use Outlook's search function.

A petticoat- and top-hat-wearing Goth was another Microspotted employee, also not the image presented by "PC guy."

From the interview, readers learn that not only does this technical editor on the Dev Div team write an online advice and eti-

quette column for Goths, but that she often finds herself doing the same for Microsoft employees who have questions about her subculture.

"Every team I've been on, I'll get someone who wanders into my office and says, 'So, my kid's getting into this wearing all black kinda thing, listening to weird music ... can I bring them in to talk to you?' And I'm always like, 'Sure! I'm happy to explain that you can still be a freak and a gainfully employed grown-up,'" Jillian Venters told Microspotting.

However, one of the most telling facts about the shifting culture at the software maker is not that Stallings—who openly admits she never thought she'd end up at the "so-called Evil Empire"—works there. Nor for that matter is it any of the other employees featured; it's the blog itself.

Microspotting is run not on Microsoft's Spaces blog platform but on WordPress, an independent platform. The photos are hosted on Flickr, a photo service owned by competitor Yahoo, and the videos are hosted on YouTube, which is owned by Google.

"When I asked about using these back-end systems, I was basically told that the era of Microsoft people being allowed to use only Microsoft products is over," said Stallings.

That's a change in and of itself.

—*Deb Perelman*

Influence is fleeting

My eWEEK slide show, the "Top 25 Most Influential People at Microsoft," is turning into an executive death watch.

(See the slide show at www.eweek.com/c/a/Windows/The-25-Most-Influential-People-at-Microsoft.)

During the list's compilation, several influencers were removed because they had either left or announced plans to leave Microsoft. Now, another one is out: Peter Knook, senior vice president of Microsoft's Mobile Communications Business group.

Other top influencers on the outs: Michael Sievert, corporate vice president of Windows marketing (No. 24), and Steve Berkowitz, senior vice president with the Online Services Group (No. 21).

Indeed, it seems like Microsoft is bleeding executives right now.

I've watched Microsoft closely for more than a decade, and I have never seen so many executives on the outs at the same time. Several factors—including timing, accountability and transition (such as Bill Gates' retirement in June)—can be seen as reasons underlying the executive shuffling.

And more shuffling came on Feb. 14, when 14 Microsoft executives were promoted to new positions in a reorganization aimed at focusing the company's leadership on Microsoft's expanding portfolio of products and technologies.

The watch continues.

—*Joe Wilcox*

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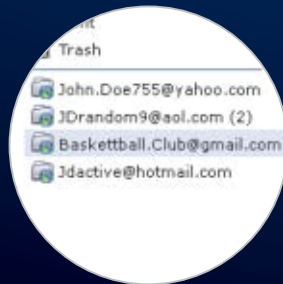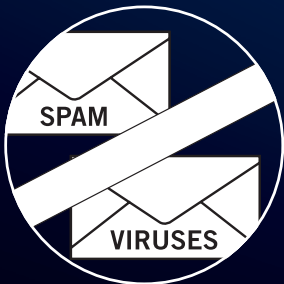
GMX Internet Services Inc. is a subsidiary of United Internet, a listed company with a market capitalization of 5 bn US $ and over 3,500 employees. GMX has over 10,000,000 enthusiastic users and thousands more are joining every day.

Outages hit online apps

Problems with Salesforce.com, RIM illustrate pitfalls of on-demand services

By Renee Boucher Ferguson

SOME SALESFORCE.com customers and users of Research In Motion's popular BlackBerry handheld device found themselves in the frustrating situation of having no service for several hours Feb. 11, thanks to separate outages.

But while the problems generated anger and headlines, Charlie Wood, developer of Spanning Sync, a service that synchronizes Google's Calendar and Apple's iCal, said that in this new on-demand world, people should get used to it.

"It's the new normal," Wood said. "I think what people are going to have to realize is it's the nature of the Web, the nature of the Internet. Delivery of information is not guaranteed. [Data] is very likely to get there, but it's not guaranteed. If you go to a Web page [and it's not available], you hit refresh and it reloads. People will have to get used to that with online applications. There [have] to be some shifts in expectations."

The Salesforce.com outage came after the company migrated a subset of its overall user base to its Spring '08 release, officials said. In the process, Salesforce.com experienced an outage to its NA5 server that lasted, intermittently, for about 7 hours and affected a small set of customers.

BlackBerry users experienced an outage lasting for several hours when they tried to reach e-mail and calendar services. RIM officials blamed a recent upgrade to an internal data routing system as the culprit for the 3-hour outage, adding that it was only a preliminary determination.

The bottom line is that on-demand services, like the phone system, are subject to some unexpected downtime. Wood and others say users of on-demand services should anticipate occasional small outages.

"Most people would be surprised how often Google Apps are not available," Wood said. "It's not these major outages like Salesforce.com or BlackBerry; it's microusers—a small subset of users that would be affected for 15 minutes. It's very distributed."

Wood said Google is aware of the issue and working to make Google applications more available. A Google Gears developer advocate did not return calls from eWEEK.

Most SAAS (software as a service) providers aim for what's referred to as the "five nines," or 99.999 percent uptime. In 2005, Salesforce.com spent $50 million to build new data centers to get as close to 100 percent uptime as possible by replicating customer information in real time. However, even that was not without issues. Salesforce.com customers experienced a string of hours-long outages in 2006 that CEO Marc Benioff said were a result of the data center upgrades.

The bottom line for Wood is not that the APIs don't work sometimes but that the outages are small and usually workable. He said users need to have a backup plan when their data is sitting in the cloud.

"Using traditional on-premises applications is like owning a car, whereas on demand is like taking a taxi," Wood said. "With a taxi, you pay for the ride, but you don't pay for things like insurance and maintenance. But you can't always be sure you're going to find a ride. But if you have a phone, you can make other arrangements."

Beagle Research Group analyst Denis Pombriant said "expectation" is the key word when talking about uptime.

"The expectation that everybody has going forward is that the on-demand technology world will be as reliable as the phone system," Pombriant said. "The phone system overall doesn't usually go down. It may have an outage in a small area—a line that's down somewhere—but the phone system doesn't go down." *e*

Senior Writer Roy Mark contributed to this report.

On the outs

In an on-demand world, occasional service outages shouldn't come as a surprise. The most recent examples from Feb. 11 include:

▶ **Salesforce.com** A migration of users to a new software release results in a key server being out of commission for about 7 hours; data center upgrades also caused several outages in 2006

▶ **RIM** An upgrade to an internal data routing system causes a 3-hour service outage of its BlackBerry handheld device

Source: eWEEK reporting, Reuters

Yahoo moves forward

Company pushes its road map while Microsoft continues to pursue a deal

By Clint Boulton

THE FRANTIC EXCITEMENT that surrounded Microsoft's $44.6 billion bid for Yahoo has two weeks later given way to a slower tempo as the two companies settle in for what could be a long negotiation.

Similar to other situations, such as Oracle's eventual successful bid to acquire BEA Software, Microsoft and Yahoo have pulled back publicly from the proposed deal. However, industry observers say that, in the end, it will be difficult for Yahoo to find another buyer or partner that could offer the kind of money that Microsoft is offering, or a way of going forward on its own that would give similar value to shareholders.

Having two weeks to dissect the deal, many believe not only that the deal will happen, but that it is good for Microsoft. Bear Stearns analyst Robert Peck said in a Feb. 13 note that mobile Internet service and the advertising associated with it is an area that Microsoft finds attractive about Yahoo, as it looks to acquire the company and compete more effectively with Google.

"We believe Microsoft sees Yahoo's mobile advancement coupled with the future direction of Web growth as an undervalued gem in the Yahoo portfolio," Peck wrote. "If Yahoo can capture up to 5 percent of the mobile advertising market over the next few years, we believe it can generate up to $1 billion in additional revenues."

Yahoo's Board of Directors Feb. 11 predictably rejected Microsoft's offer, saying it undervalued the company.

After meeting with Yahoo's management team, and financial and legal advisers by phone Feb. 8, Yahoo's board said Microsoft's proposal doesn't properly weigh Yahoo's brand, worldwide audience, investments in advertising platforms, future growth prospects, free cash flow, earnings potential and investments such as Yahoo Japan and Alibaba.

In a statement released later that day, Microsoft called Yahoo's rejection "unfortunate" and suggested it will press to get the deal done. "It is unfortunate that Yahoo has not embraced our full and fair proposal to combine our companies," Microsoft said in the statement. "Based on conversations with stakeholders of both companies, we are confident that moving forward promptly to consummate a transaction is in the best interests of all parties."

Microsoft said the combination of the two rivals would enable it to better compete with Google in the market for Internet services, where Google lurks as the top earner for search and ad dollars generated from such services.

The software vendor isn't budging, suggesting that it will fight to acquire the company. "Microsoft reserves the right to pursue all necessary steps to ensure that Yahoo's shareholders are provided with the opportunity to realize the value inherent in our proposal," the company said.

With that in mind, IDC analyst Karsten Weide told eWEEK that Microsoft's next step is to offer a sweeter bid, but the company is unlikely to offer the $40 per share many believe Yahoo is seeking.

Microsoft also will seek out the largest Yahoo shareholders to convince them of the deal's value and ask them to press Yahoo's board to accept.

Not all of Yahoo's investors will need convincing. Bill Miller, portfolio manager for Yahoo's second-largest shareholder, Legg Mason, said it will be difficult for Yahoo to find

Back and forth

With a deal yet to be announced, the Microsoft-Yahoo dance continues, with steps that include:

Feb. 11
▶ Yahoo rejecting Microsoft's offer, saying it undervalues the company
▶ Microsoft vowing to continue pursuing Yahoo

Feb. 12
▶ Yahoo pushing ahead with plans, including buying online video platform maker Maven, cutting a search deal with T-Mobile and creating a mobile communications service that includes social networking
▶ Yahoo reportedly moving forward with cutting about 1,000 jobs

Feb. 12-13
▶ Some Yahoo investors saying that while the Microsoft deal makes sense, they want to see Microsoft up the ante

Feb. 13
▶ Yahoo reportedly talking with News Corp. to combine their Web properties

Source: eWEEK reporting, Reuters

ways to deliver more value than Microsoft would be willing to pay.

"We think this deal is a strategic imperative for MSFT, and that YHOO is in a tough spot if it wishes to remain independent," Miller wrote in a Feb. 10 note to shareholders of Legg Mason's Value Trust Fund.

Miller also said what every shareholder wants to hear: that Legg Mason values Yahoo in the $40-per-share range and Microsoft must enhance its offer if it wants to complete a deal.

Such a statement from a corporate investor with more than 80 million shares puts pressure on Yahoo and Microsoft. As Miller said, Microsoft will most likely have to up the ante to stay at the table, but for the most part, it can sit and wait while Yahoo sweats.

Other investors have been mum on the deal. Capital Research and Management, Yahoo's largest investor with more than 11 percent of the company, declined to comment, as did smaller investors Vanguard and Goldman Sachs.

Internet pundit Henry Blodget panned Microsoft's proposed acquisition. At a meeting of the New York Software Industry Association Feb. 11, Blodget said that if the deal goes through, "it's going to be a disaster."

Blodget, CEO, co-founder and editor in chief of Silicon Alley Insider, a news site focused on the New York digital business community, said Microsoft CEO Steve

Ballmer "is not used to losing. They're doing something that's conceptually smart, but that's not going to work."

Despite all this, Yahoo is not acting like a company facing a hostile takeover bid. According to CEO Jerry Yang, the company is pushing ahead with plans that include product enhancements and

Yahoo's Yang: Plans are in place to grow the company.

acquisitions of its own.

At the same time, Yahoo officials reportedly have met with Rupert Mudoch's News Corp. to discuss combining MySpace and other News Corp. online properties with Yahoo. News Corp. would get a 20 percent or greater stake in Yahoo in the deal, which is designed to fend off Microsoft's bid. While a deal with News Corp. has been bandied about for more than a year, there have been disagreements over the value of MySpace.

Meanwhile, Yang reaffirmed the company's turnaround plan in an e-mail sent Feb. 11 to Yahoo employees.

"We are putting in place the pieces we need to accelerate growth by becoming a leading starting point for

users and the must buy for advertisers," Yang wrote. "The global online advertising market is projected to grow from $45 billion in 2007 to $75 billion in 2010, and our more focused strategies position us to capture an even larger share of this market."

Yang highlighted Yahoo's brand, substantial operating cash flow and computing investments as reasons employees should have faith in a turnaround. Yang also said he expects to grow cash flow in the double digits in 2009, providing "the financial flexibility to execute our plans." Finally, investments in Yahoo's computing infrastructure could help the company scale better and boost algorithmic search as much as tenfold.

A day after rejecting Microsoft's offer, Yahoo made a series of moves to fortify its Internet services, including buying online video platform maker Maven Networks for $160 million, making a search deal with T-Mobile and creating a mobile communications service that bundles social networking.

In buying Maven, Yahoo will be able to offer its publishing partners such as eBay, Comcast, a newspaper consortium and Forbes.com a media player through which to distribute premium online video content. Maven also makes an advertising insertion engine, inventory management and reporting tools, and advanced ad formats to help publishers boost ad inventory. Yahoo will offer

the media player and ad engine to its publishers.

For advertisers, adding Maven's platform to Yahoo's search and display offering could create more inventory and more diverse ad choices. Forrester Research estimates that United States online video advertising will grow to more than $4 billion in 2011.

The deal is a significant play to boost Yahoo's video ad plans, which along with mobile and social networking ads are expected to bring significant rewards for Google, Yahoo and Microsoft in 2008 and beyond.

On the present mobile search and advertising front, T-Mobile has picked Yahoo's OneSearch to replace Google's mobile search software as the exclusive mobile search service for T-Mobile customers in Europe starting at the end of March. OneSearch, which Yahoo said has more than 600 million subscribers, will help consumers access Web sites, news, financial information, weather information, photos and Web images.

The deal, announced at Mobile World Congress in Barcelona, Spain, is a coup for Yahoo, which leads the market in display ads but is fighting it out with Google and Microsoft in mobile search. It came the same day that Nokia announced it was expanding its relationship with Google, integrating Google's search engine with its own search application. *e*

Senior Editor Darryl K. Taft contributed to this article.

Microsoft preps partners

Company aggressively getting third parties ready for Feb. 27 enterprise launch

By Peter Galli

MICROSOFT IS PREPARING for the largest enterprise launch in its history and is turning to its partners for help.

Company officials hope the Feb. 27 launch of Windows Server 2008, Visual Studio 2008 and SQL Server 2008 will kick off a wave of demand for the new products and are aggressively enlisting help.

So important is partner readiness that Allison Watson, corporate vice president of Microsoft's Worldwide Partner Group, headed off on a 45-day global tour to review all partner businesses. She returned to the United States Feb. 12.

"We feel more on top of this launch than for any other launch in our history," Watson said. "This is the biggest launch for the IT professional and the core IT community, and it has the potential to reinvigorate and offer new options for both partners and customers."

Microsoft has launched an aggressive training program, with more than 150,000 people already having been trained since the beginning of Microsoft's fiscal year and another 150,000 to be trained over the next few months, Watson said.

However, NPD Group analyst Chris Swenson said that while those numbers are a good start, given the massive installed base of Windows Server, Visual Studio and SQL Server, Microsoft "clearly needs to train more partners to handle the sheer volume of upgrade projects over the next one to three years as customers migrate to the new versions."

Watson acknowledged that achieving launch readiness was complicated by the fact there were three products that all required ISVs and service partner readiness but said she is confident of Microsoft's preparedness.

"We will have more than 1,200 shipping ISV applications for Visual Studio at launch, more than 1,000 applications for SQL Server and 1,200 shipping applications for the core Windows Server," she said.

"In addition, our partner training has

Watson says Microsoft is ready for the massive product launch.

explicitly touched all of our core infrastructure, networking infrastructure, partner infrastructure, security and systems management."

Figures from market research com-

> ## 'We will have more than 1,200 shipping ISV applications for Visual Studio at launch.'
>
> —ALLISON WATSON

panies IDC and Gartner show there is a $120 billion partner revenue opportunity in the United States over the next 18 months, targeting some 3.5 million new server installations, Watson said.

The research also indicated that for every dollar of Microsoft software sold, there is an attach rate of $18 for partners, which is higher than for previous launches.

In the large and growing business intelligence market, the outlook is also good, she said. Between Performance Point Server, which Microsoft launched in 2007, SQL Server and Windows Server, "You are unlocking something significant and which may not have been as evident before," Watson said.

Swenson said Microsoft is doing a better job of achieving partner readiness than it has done in the past.

"Although I think Microsoft's partner programs have always been good, over the past couple of years they've really focused like a laser beam on how to make their partners more successful, how to improve their training and how to get them up to speed," he said.

An example of this is Empower for ISVs, essentially a licensing program that enables small ISVs to try out Microsoft software such as Windows Server and Visual Studio for two years, easing them into a regular Microsoft licensing program on completion, Swenson said.

"The program has been enormously successful," he said. "Clearly, Microsoft is listening to the concerns of its partners and working with them to create more effective programs." *e*

Mashups spawn debate

By Darryl K. Taft IN NEW YORK

WITH MASHUPS gaining acceptance in the enterprise, a debate is emerging between the need to enable innovation through mashups and the need to govern the results of these new services.

Some in the industry are saying that since many application mashups are done outside the purview of a company's IT department, the need to find ways to gain control over them is building.

However, others argue that governance should take a back seat to innovation.

"There's not a lot out there to be governed," said René Bonvanie, senior vice president of marketing at Serena Software. "I think innovation is what's more at stake here than governance. The thing is, How can we get enough people to do mashups and make them more innovative? ... We've overestimated the need for governance and underestimated the need for innovation."

Bonvanie was one of several panelists debating the issue at the Web Services/SOA on Wall Street conference here Feb. 11.

A mashup is a Web application that combines data or services from more than one source into a single integrated application.

Opposing views over innovation, governance of the technology emerge

Jonathan Marsh, director of mashup technologies at WSO2, a Web services and SOA (service-oriented architecture) infrastructure provider, said WSO2 is focused on Web development and making Web applications more quickly. WSO2 uses open-source and Web 2.0 technology as the core of its solution set.

"Soon mashups will be built into the infrastruc-

ture," Marsh said.

Miko Matsumura, vice president and deputy chief technology officer at Software AG, said governance will continue to grow in importance. "The goal of governance is you don't have to trust the people who are mashing up things like crazy," Matsumura said. "You just constrain them in a way that benefits the enterprise."

Kelly Emo, SOA product marketing director at Hewlett-Packard, said the use of the word "governance" tends to carry the notion of lockdown and control. "We don't mean it that way," Emo said. "The idea of implicit governance is to let IT get ahead of the curve and plan. Then you can understand how much consumption you can support. You get ahead of it."

Mashups

Here are some things you should know about these application conglomerations:

▶ They're applications built from multiple pieces of data or other applications

▶ They're all about the Web, driven by such technologies as Web APIs, RSS content, wikis and social networking environments

▶ Some mashup platforms include IBM's QEDWiki, Microsoft's Popfly and Xignite's Splice

▶ Gartner expects 30 percent of businesses to use mashups this year

Source: eWEEK reporting

In this way, IT departments can ensure that services are "mashable" and consumable. "It's like being on the road driving—you're not even aware that you're being governed," Emo said.

Both HP and Software AG sell SOA governance solutions. Serena sells a mashup tool to help less technical users in an enter-

prise create mashups.

HP's Emo said IT needs to ensure that services are mashable and consumable "because you don't actually know where that innovation is going to come from."

Cameron Purdy, vice president of development of Fusion Middleware at Oracle, said mashups could succeed in ways that SOA-inspired frameworks have not, at least initially.

"SOA did not take off the way people in the ivory towers thought it would," Purdy said. "I think Web services have become the focal point for so many technologies. We're starting to see [that] screen-scraper tools are starting to produce Web services APIs."

Purdy also said he has seen more SOA implementations in the financial services industry than in most others, "but we've probably seen fewer mashups coming out of financial services."

He said this could be the case because of the risk of aggregating public information with financial services.

Purdy said the industry will see tools traditionally used in financial services—such as Excel—used as springboards for mashups.

Marsh said he expects that there will be much more use of community-based technologies entering the enterprise. *e*

Vista SP1: Start your engines

Microsoft update offers a roll-up of fixes and performance enhancements

By Jason Brooks

MICROSOFT'S WINDOWS Vista Service Pack 1 has hit the RTM milestone, so if you've been waiting for SP1 to begin your organization's move to Vista, now is the time to start turning over your upgrade engines.

If, on the other hand, the conventional wisdom surrounding the SP1 marker isn't enough to get your Vista testing efforts in gear, Microsoft's planned June 30 halt to sales of shrink-wrapped or OEM copies of Windows XP means that if your company is going to get ahead of Vista, it's now or never.

On the whole, Vista SP1, which becomes generally available in mid-March, is a fairly staid update with very little in the way of new features or cosmetic changes. SP1 consists of a roll-up of Vista's first year of security and bug fixes, new support for a handful of emerging hardware and software standards, and an update to Vista's kernel and core systems that brings the operating system in line with Windows Server 2008, which was also recently released to manufacturing.

In addition, SP1 features a handful of performance improvements in file copy operations, which I was able to confirm during my tests in our lab.

While the faster file copy operations are welcome, they're not going to radically change your Vista user experience. What's more, while

The stand-alone service pack installer I tested weighed in at 434MB and required about 45 minutes to update my ThinkPad test system to SP1.
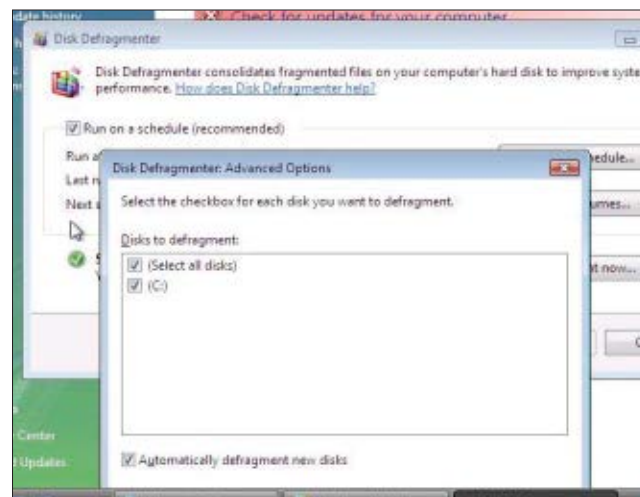
One of SP1's few feature extensions is the new option for selecting which disks to defragment.

Vista SP1 addresses some of the performance shortcomings in Vista's initial RTM release, the new operating system will still be a bit slower than Windows XP on the same hardware.

Whether Vista is ready for use at your organization will depend most heavily on whether your hardware and software providers have embraced Vista.

For most new hardware and software products, it's safe to assume Vista support. However, among products first sold before Vista hit the shelves just over a year ago, the status of Vista support depends largely on how willing these vendors have been to extend the life of already-sold products at the potential cost of new sales.

In any case, while XP still has life left in it (SP3 for XP should be shipping fairly soon), the fact that Microsoft will soon be turning off the tap for certain XP license sources means that if your company intends to continue running Windows, you're going to have to deal with Vista. I recommend that sites that have yet to kick off their Vista tests make plans to do so soon.

SP1 to the test

I TESTED VISTA SP1 ON A pair of identical Lenovo ThinkPad T60 notebook computers, each equipped with 1GB of RAM, a 2GHz Intel T2500 processor and a 93GB hard drive split into 68GB

_INFRASTRUCTURE LOG

_DAY 74: This is so complicated. We're spending all our
time and money managing our boxes. Gil says he has a
big idea for how to better manage our x86 environment.

_Gil's big idea: sheepdogs...says they work for biscuits.

_DAY 75: I just wrangled up the scalable IBM System x3950.
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x86-based virtualization. Managing our servers and storage
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VISTA SP1 FROM PAGE 22

NTFS (NT File System) and 25GB FAT32 partitions. On one notebook, I installed the original RTM copy of Vista and applied all available updates (save for SP1). On the second system, I installed Vista from an installation disk with SP1 slipstreamed in.

To test the file copy performance improvements that Microsoft is touting for SP1, I took a set of 724 software packages totaling 476MB from the install disk for RHEL (Red Hat Enterprise Linux) and carried out a group of file copy operations.

I noted how long it took to do the following: copy the files from the RHEL disk onto my Vista systems; copy the files between the FAT32 and NTFS partitions of my test machines; copy the files from one folder to another folder on the same notebook; compress the files into a Zip archive on each system; and decompress those files back to a folder on each desktop.

I ran each test five times and used the average of the five runs to compare the Vista iterations. Once I completed my round of tests, I installed XP SP2 on one of the ThinkPads and ran the same tests to weigh the two Vista flavors against XP.

For all the detail on the file copy changes that you might ever wish to digest (and then some), Microsoft's Mark Russinovich has posted an expansive blog at blogs.technet.com/markrussinovich/archive/2008/02/04/2826167.aspx.

Briefly, however, the original RTM version of Vista scaled back heavily on its use of cached I/O for file copy operations. This negatively affected

performance in certain situations. In Vista SP1, the Windows team reversed course on cached I/O, a move that yields performance gains
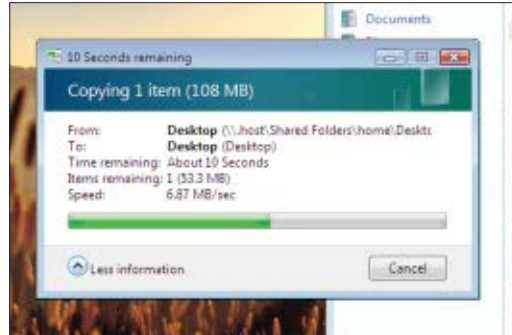
Vista SP1 aims to address the file copy lags that have irked some of Vista's early adopters.

over the initial Vista release.

During my tests, the 476MB set of test files took 1 minute to copy from one partition to another on the original Vista RTM; the same operation took 50 seconds on Vista SP1. On the same hardware running XP SP2, the operation took 43 seconds. Copying the same set of files from
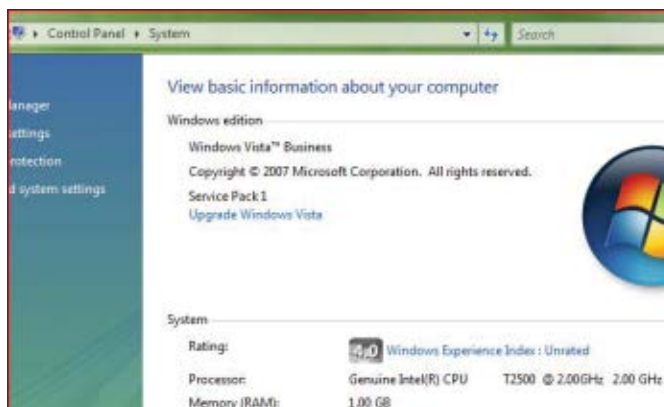
Following the installation, we visited Vista's system information dialog to confirm that SP1 was in the house.

one folder to another folder on the same notebook took 49 seconds on Vista RTM, 43 seconds on Vista SP1 and 38 seconds on XP SP2.

Microsoft has cited much larger performance differences copying files into and extracting them out of Zip archives using the Windows Compressed Folders tool, and my

tests bore out these differences. It took Vista RTM 1 minute and 44 seconds to compress the test 476MB file set into a Zip file, compared with 1 minute and 7 seconds on Vista SP1. With XP SP2, the same operation took 1 minute.

I recorded the greatest disparities among Vista RTM, Vista SP1 and XP SP2 while measuring the time it took Windows to decompress my test archives. Vista RTM averaged 3 minutes and 39 seconds, Vista SP1 averaged 2 minutes and 49 seconds, and XP SP2 averaged a much faster 46 seconds.

I suspect that at least some measure of the difference between the XP SP2 and Vista results is tied to differences in the user interface that the two iterations of the Compressed Folders tools present to users. It's possible that XP's utility appears outwardly to have finished its work, while cached I/O operations may be continuing in the background.

I also tested the stand-alone SP1 installer, which Microsoft provided to eWEEK Labs along with the Vista SP1 install disk. Microsoft has reported that some Vista SP1 testers have experienced driver problems after having installed the service pack. I did not experience any performance degradation or driver malfunctions with SP1 and the ThinkPad model I tested. *e*

eWEEK Labs Executive Editor Jason Brooks can be reached at jbrooks@eweek.com.

Telco immunity debate marches on

Bush urges U.S. House to follow Senate's lead in supporting carriers' role

By Roy Mark

THE DEBATE OVER whether to grant telecommunications carriers immunity for their role in President Bush's warrantless domestic spying program is back before the U.S. House of Representatives.

The Senate Feb. 12 rejected two efforts to hold telephone companies legally liable for allegedly providing customer telephone and e-mail records—often without a warrant or subpoena—to the government.

On a 31-67 vote, the Senate defeated an amendment to the FISA (Foreign Intelligence Surveillance Act) renewal that would have stripped away immunity from the carriers, which are currently facing civil lawsuits over their cooperation with the White House.

Now Bush is urging the House of Representatives to follow suit, although a showdown on the issue could be in the offing. The House in November approved similar FISA legislation that did not include the immunity, and before the Senate vote, House Democrats vowed to fight any legal relief for the carriers.

The differences between the two chambers must be reconciled before the FISA renewal can be sent to Bush's desk. The current FISA law was slated to expire Feb. 16.

"Congress does not need to rush into a decision over granting immunity to phone companies that chose to cooperate with the president's war-

rantless wiretapping program," Rep. Ed Markey, D-Mass., said in a Feb. 8 letter to his House colleagues. "As long as the administration refuses to give us a relevant debriefing, we should refuse to legislate in a vacuum."

However, the president has promised to veto any legislation that hits his desk that does not include immunity for the telcos.

"In order to be able to discover ... the enemy's plans, we need the cooperation of telecommunication companies," Bush

said Feb. 13 from the White House. "If these companies are subjected to lawsuits that could cost them billions of dollars, they won't participate; they won't help us; they won't help protect America."

The president praised the Senate's vote.

"I am pleased that last

night, senators approved new legislation that will ensure our intelligence professionals have the tools they need to make us safer," Bush said.

"The Senate bill also provides fair and just liability protections for companies that did the right thing and assisted in defending America after the attacks of September the 11th," he said.

The Senate vote took place the same day as primaries in Washington, D.C., Maryland and Virginia. Presidential hopeful

Sen. Barack Obama, D-Ill., voted against immunity, and candidate Sen. Hillary Clinton, D-N.Y., was not present for the vote. Republican front-runner Sen. John McCain of Arizona voted for immunity.

On a 30-68 vote, the Senate also defeated an amendment that would have substituted the government for the telcos in any civil action.

"If we vote for [killing immunity], the most important partners we have will be discouraged in cooperating with us," Sen. Kit Bond, R-Mo., said before the vote.

Bond said civil lawsuits also run the danger of disclosing classified information.

The carriers contend they relied on existing federal, state and local laws and assurances from the highest level of government to provide access to consumers' personal telephone calls and e-mail.

Sen. Chris Dodd, D-Conn., who sponsored the amendment to strip telco immunity out of the FISA bill, said Feb. 11 in extended floor remarks that "much more than a few companies and a few lawsuits are at stake. Equal justice is at stake—justice that does not place some

Rep. Markey, left, is leading the House fight against immunity for telcos; Sen. Bond sees the carriers as key partners.

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corporations outside the rule of law."

Dodd was one of 30 Democrats voting to take immunity away from the carriers. Eighteen Democrats crossed the aisle and joined 48 Republicans and one Independent in rejecting the Dodd amendment.

Now the action moves back to the House, where Markey urged fellow congressmen to resist the push by the Bush administration for fast action.

"The only reason the administration is trying to force a snap decision now is because of their own desire to avoid scrutiny by either the courts or the Congress in their final months of power," Markey said.

Bush insisted that both the Senate and the House have had enough time to debate the issue. In late January, Bush agreed to a 15-day extension of the expiring FISA legislation. The president said Feb. 13 he's not interested in any more delays.

"I will not accept any temporary extension. House members have had plenty of time to pass a good bill," he said. "Congress has had over six months to discuss and deliberate. The time for debate is over."

The Electronic Frontier Foundation, co-lead counsel in the nearly 40 pending lawsuits against the major telecom carriers, contends the carriers broke the law by providing the National Security Agency with the full content of billions of e-mails, text messages and VOIP (voice over IP) calls. The EFF claims it is an issue for the courts to decide.

The carriers insist that the real issue is between the White House and Congress.

"Current law ... provides a complete defense to any provider who in good faith relies on a statutory authorization," AT&T wrote in an Oct. 12 letter to lawmakers. "If the government advises a private company that a disclosure is authorized by statute, a presumption of regularity attaches."

During a debate on the issue last month, Sen. Orrin Hatch, R-Utah, said the telcos are key partners in protecting the United States.

"The identification of any company that may or may not have cooperated with the government is highly, highly classified information," Hatch said. "Our security is very dependent on the cooperation of the telecoms." *e*

JUDGE RULES AGAINST WHITE HOUSE

A PUBLIC ADVOCACY GROUP WON ANOTHER legal round in its efforts to force the White House to reveal the whereabouts of millions of missing Bush administration e-mails.

Rejecting the White House Office of Administration's contention that it is not subject to Freedom of Information Act requests, District Court Judge Colleen Kollar-Kotelly Feb. 11 ordered the OA to participate in limited discovery.

With Kollar-Kotelly's ruling, the CREW (Citizens for Responsibility and Ethics in Washington) can continue its campaign to find documents prepared by the OA assessing the scope of the missing White House e-mail problem and its proposed recovery plan.

Discovery allows the parties in a lawsuit to provide relevant information—including documents—to each other. The court ordered the parties to submit a discovery plan by Feb. 21.

"Out of an abundance of caution, the court shall permit the parties to engage in what may be viewed as jurisdictional discovery," Kollar-Kotelly ruled. "The court shall also deny OA's request that it be permitted to provide a declaration as to OA's functions and authority in lieu of engaging in discovery."

The missing e-mails were first revealed during a congressional investigation into the firing of U.S. attorneys general. CREW claims the e-mails missing are from between March 2003 and October 2005. In addition, CREW contends that until October 2003, backup tapes allegedly containing some of the e-mails were recycled.

During the time period of the missing e-mails, federal investigators were probing the disclosure of Valerie Plame Wilson's covert identity. The period also covers a time frame from the start of the Iraq war to the Bush administration's response to Hurricane Katrina.

The White House is subject to two sets of federal laws governing how it must maintain and preserve its records: the Federal Records Act and the Presidential Records Act. Both require the preservation of all e-mail.

CREW originally filed a Freedom of Information Act request with the OA on March 29, 2007, regarding records of the missing e-mails. When the office refused to turn over the information, CREW sued the White House May 23 for the information. The organization also released a report on the missing e-mails based on information obtained from two confidential sources.

Following up on CREW's information, the National Security Archive also sued the White House on Sept. 5. The National Security Archive and CREW have subsequently consolidated their legal actions against the White House to force disclosure of the missing e-mails.

U.S. Rep. Henry Waxman, D-Calif., scheduled a Feb. 15 hearing on the matter for his Committee on Oversight and Government Reform. —*Roy Mark*

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The forgotten security risk

Researchers warn that networked multifunction printers can be a prime entry point for hackers

By Ryan Naraine

THAT NETWORKED MULTIFUNC-tion printer sitting innocently in the corner of your office just might be the most significant entry point for hackers to hijack sensitive data from your business.

Combining several functions in a single unit—including fax, copy, print and scan—these devices are a forgotten risk in every enterprise, security researchers warn.

"A compromised [multifunction printer] is dangerous for a number of reasons. First and foremost, no one in the enterprise pays attention to them. That lack of visibility makes for a very attractive attack platform," said Brendan O'Connor, a researcher who was among the first to call attention to the printer security risk during a Black Hat talk in 2006.

"When I was doing my research, I had dozens and dozens of MFDs [multifunction devices] under my control, and no one in IT knew what I was doing. The idea of an attacker having equipment completely under their control on a company's internal network is a fright-ening proposition," O'Connor said in an interview with eWEEK.

The networked printers, scanners and copiers, he said, are no longer dumb machines sitting in a corner performing mundane tasks. In his

Send attack to printer

Here are a few attack scenarios that can play out on multifunction printers:

▶ **DoS** Specialized malware can be programmed to crash printers and scanners, disrupting paper-based business operations.

▶ **Code execution** Hackers can exploit vulnerabilities to load a rootkit into printers, hijacking all documents passing across the network.

▶ **Document spying** With built-in network, fax/modem and network capabilities, there are a variety of ways to smuggle the stolen information out of an organization once it's been captured.

▶ **Credentials theft** If users need to enter a password for certain operations, such as scanning to e-mail or network folders and shares, an attacker can capture user names and passwords to gain further access to network resources.

Source: eWEEK reporting

mind, IT administrators should start paying serious attention to vulnerabilities and weaknesses in printers—and start preparing patch- and risk-management strategies.

O'Connor, who works in information security for a major financial services company, said printers should be treated the same as every other asset because, for businesses that depend on a paper trail, something as simple as a DoS (denial of service) attack can be debilitating.

During his Black Hat presentation in 2006, O'Connor picked apart the security model of a Xerox WorkCentre multifunction printer, showing how the device operated more like a low-end server or workstation than a copier or printer. In fact, the device used an Advanced Micro Devices processor, 256MB of SDRAM (synchronous dynamic RAM) and an 80GB hard drive and ran Linux, Apache and PostGreSQL.

He showed how the authentication on the device's Web interface can be easily bypassed to launch commands to completely hijack a new Xerox Work-Centre machine.

A Xerox spokesperson confirmed that the vulnerability discussed by O'Connor has since been patched.

"All the information that's being printed, scanned and faxed is susceptible to theft," O'Connor said. "Once under an attacker's control, it is simple to covertly save copies of other people's data on the machine's hard drive. With built-in network, fax/modem and network

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Embracing Virtualization

Data center virtualization is an idea whose time has come. It's no longer an emerging, uncertain trend; it's a powerful strategy with proven value and a compelling business case. Consolidating data center operations onto high-powered servers and using virtualization technology to break the "one-server-one-application" rule deliver immediate and long-term savings, plus increased scalability and agility.

The factors driving virtualization initiatives include:

- Data center space consolidation
- Improved utilization rates on servers, storage systems, and other assets
- Reduced spending on hardware and maintenance
- Reduced electricity costs for servers and cooling systems
- Reduced management complexity and costs
- Improved return on IT investments
- Improved response time to changing business conditions
- Faster go-to-market for products and services
- Improved contingency planning and business continuity.

Fast Market Facts

Recent research has shown that smart, competitive companies are already leveraging the power of virtualization to spur business growth, and the market for virtualization hardware and software is growing rapidly.

Real Savings

With virtual machines running on high-performance servers, companies can host anywhere from five to 15 servers per hardware unit, an immediate reduction in acquisition and maintenance costs. In addition, Gartner analyst Steve Prentice reports that server consolidation can cut 40 percent-50 percent off a company's energy bills—driving 'greener' data centers that impact the environment less and add substantial savings to the bottom line.

- Whirlpool Inc. replaced 30 SAP application servers with just five partitioned IBM machines, using virtualization to handle changing workload dynamically. (IBM, November 2006)

Virtualization deployments on the rise

No definite timetable - 15%
Deployed or migrating - 62%
Plan to deploy within 3-12 months - 23%

According to a June 2006 Yankee Group survey, 85% of respondents have already deployed a virtualization strategy or are planning to migrate within the next year.

Source: The Yankee Group 2006 Global Server Virtualization Survey

- CDW saves $25,000 per month in deployment costs by rolling out virtual machines instead of physical servers. (VMware, 2006)

- Welch Foods saved $331,000 consolidating 100 servers down to 10, and its IT department can deploy a new server in less than an hour. (*Baseline*, April 2006)

- Del Monte cut help-desk calls by 90 percent after consolidating systems and standardizing application platforms. (*eWEEK*, December 2005)

- 7-Eleven is hosting 15 virtual machines on dual-core servers and 30 on quad-core machines, shortening deployment time from 6-8 weeks to one day and improving server utilization by 60 percent. (VMware, 2006)

Making Virtualization Work for You

A forward-looking strategy should involve a detailed analysis of your current infrastructure, staffing needs, and costs, calculating the total cost of ownership (TCO) over the expected lifecycle of current and new equipment, and the projected return on investment (ROI) for new purchases. Depending on its size and makeup, your company will benefit from server consolidation and will cut software expenses and management overhead with virtualization technology.

VIRTUALIZATION MARKET SHOWS STRONG GROWTH

The consolidation market—which encompasses hardware, software and services—will grow from $18.1 billion in 2004 to $24.7 billion in 2009, a 6.5 percent growth rate.

Infrastructure software—primarily virtualization and centralized management products—is expected to grow 13.1 percent. That's more than twice the rate of the overall consolidation market. (IDC, June 2006)
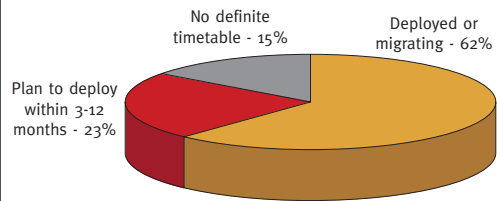
Even technology giants such as HP are practicing what they preach and jumping on the virtualization bandwagon:

In May, HP announced its own consolidation project, stating that over the next few years it will trim the number of data centers worldwide from 85 to six, saving an estimated $1 billion in costs. (*eWEEK*, May 2006)

In an August 2006 survey, Enterprise Management Associates (EMA) Senior Analyst Andi Mann found that 74 percent of respondents were deploying virtualization in test and development environments, 64 percent were also using it in their application server environments, and 47 percent were using virtualization on the Web server front.

"Almost 75 percent of surveyed enterprises have already deployed virtualization in one form or another, and the virtualization market is increasing by approximately 26 percent on average. Less than 4 percent of surveyed enterprises have no virtualization," EMA's Mann found. (*eWEEK*, August 2006)

In a December 2006 study, The 451 Group found that virtualization was driving mergers and acquisitions among major hardware, operating system, and management vendors, as they vied for dominance in this hot sector.

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capabilities, there are a variety of ways to smuggle the stolen information out of an organization once it's been captured."

Another attack scenario is password and credentials theft in an organization. "If users need to enter a password for certain operations like scanning to e-mail or network folders and shares, an attacker can capture user names and passwords to gain further access to network resources," he said.

O'Connor warned that some MFDs have public IP addresses that can be found with a clever Google search query. "A slightly more sophisticated attack would be to use CSRF [cross-site request forgery]. In a CSRF attack, if a user views a specially crafted Web page, an attacker can trick the user's Web browser into launching an attack against an internal printer. If done properly, a CSRF attack can be invisible to the victim and give an external attacker control over an internal device," he said.

There's also the scenario of someone posing as a copier technician to obtain physical access to a device. Done properly, an attacker can completely compromise a vulnerable device in minutes, O'Connor said, citing the insider threat as another significant risk to printer security.

Thomas Ptacek, principal and founder at penetration-testing company Matasano Security, said the risk is more than just theoretical.

"Should my mom be worried that a hacker is living in her printer? No. But if you're a Fortune 500 company, vulnerable printers on your network is a scary thing," Ptacek said in an interview with eWEEK.

"There are several of these printers on every floor of every business, basically working as file servers for important documents. Printers deal with much more sensitive information than your typical file or storage server, but they get no protection whatsoever. They're altogether ignored as a risk on the network. Do you know of anyone looking for patches for a printer? People underestimate how dangerous these things are," Ptacek said.

In the financial and health sectors, for example, he said a skilled hacker

'Printers deal with much more sensitive information than your typical file or storage server.'

—THOMAS PTACEK

with unfiltered access to a print server can do serious damage.

"He can hide himself in there with a rootkit [and] capture all the documents passing through the print server. He can take over the printer and basically have full control of every action. It's the perfect catbird seat," Ptacek said.

Ptacek, who provides security consulting services to several major software vendors, said businesses should be worried about printer-specific malware.

"Think about it: Printers are the perfect target for things like network worms," he said. "It's usually a [monoculture] because you buy them by the truckloads and install them with the same default settings, with exactly the same footprint and no run-time security. You run a command on one printer, you can run that command on all 1,000 printers in the enterprise."

Even though his Black Hat presentation in 2006 raised awareness around the issue, O'Connor said the problems remain because printer manufacturers have not invested in security during the code creation process.

"Some vendors have taken some good steps as far as trying to release more secure code and giving the end user more visibility and manageability with regards to the operation of the devices. Other vendors—which I would rather not name—have hyped new security features and software on their MFDs. These things make for great sales points and press releases but do not address the real problem in my opinion. From what I can tell, most vendors haven't done much of anything," O'Connor said.

He recommended that IT administrators make a priority out of talking to vendors to find out what's being done to protect MFDs.

"Ask things like, do they do a security review of their code?" O'Connor said. "Do they issue patches and fixes for security bugs? Do they have tools for the IT staff to better manage the devices and gain some visibility into what's going on under the hood?

"Unfortunately, if your vendor is uncooperative, there's not a lot you can do. You will most likely break your support contract if you start poking around yourself," he said.

According to Gartner, businesses should be careful when making buying decisions, especially since some laws—most notably the Health Insurance Portability and Accountability Act and the Gramm-Leach-Bliley Act—have prompted increased scrutiny of nonpublic information.

Instead of focusing narrowly on a single security threat to a printer or multifunction product, Gartner suggests that IT buyers find a vendor that quickly identifies and deals with new security threats as they arise. *e*

IBM's Rational buy pays off

IBM reaps the benefits 5 years after purchase of middleware company

By Darryl K. Taft

FIVE YEARS AGO, IBM SOFTware Group Senior Vice President Steve Mills set out to draw a deeper connection to the company's middleware technology with a focus on building a complete, process-integrated development platform.

The Software Group has been on a buying spree since 1995, spending almost $18 billion on 66 acquisitions during that time to expand its range of offerings and gain share in existing markets.

For what Mills wanted to do with IBM's middleware offerings, the company bought Rational Software on Feb. 20, 2003, for $2.1 billion. Since that time, IBM's Rational division has not only provided the company with new software tools to market but also helped improve the way IBM develops products and delivers services to customers.

Rational has become an integral part of the IBM software story and a prime example of IBM's successful acquisition strategy to broaden its software base.

"I am entirely satisfied [with the Rational deal]," Mills said in an interview. He said the motivation behind the deal was that IBM had an existing long-term partnership with Rational and needed to beef up tooling across its middleware line. Since the acquisition, Rational technology has been fused with WebSphere, Tivoli and Lotus software in various ways, Mills said.

"We knew we needed to tool the WebSphere run-time," he said.

Danny Sabbah, general manager of IBM's Rational software unit, said that today the Rational "business is twice the size of what it was when we acquired it"—both through organic growth and acquisitions.

Sabbah said Rational's focus on the governance of software and systems development and delivery has paid off, as has the division's enterprise modernization portfolio and its focus on languages and compilers.

Rational also launched an effort to support developers in the SOA (service-oriented architecture) space. Meanwhile, demand for Rational's requirements management, quality management and other tools has remained strong, Sabbah said.

For the fourth quarter of 2007, IBM Rational revenue grew by 22 percent over the same period in 2006. For the entire year, Rational's revenues grew 16 percent. Also in 2007, the Rational division itself oversaw two key IBM Software Group acquisitions: BuildForge, a build management software company, and Watchfire, a Web application security software vendor.

Customer focus has helped drive revenue, Sabbah said. "One of the things I've tried to do is focus the team on a much more active view of how we support our customers," he said. "One thing we've instituted is a passion for satisfying customers."

Since developers are a core group of customers, Rational conducts a variety of developer-focused events and programs, including the DeveloperWorks and AlphaWorks Web sites, as well as international events where Rational targets about 13,000 developers annually. At least 3,000 developers attend the IBM Rational Software Development Conference each year.

Sabbah said more enterprises are realizing the value of their software and how their code impacts their bottom line. At the same time, companies are looking to do more with less by squeezing more productivity out of fewer employees.

Given that, IBM Rational introduced business-driven development as an integrated approach to software development that aligns line-of-business, development and operations teams to improve business performance. Sabbah said that when development is managed as a business process, it drives competitive advantage.

The Software Group is expected to account for 50 percent of IBM's overall profit by 2010, thanks in large part

> **'One of the things I've tried to do is focus the team on a much more active view of how we support our customers.'**
>
> —DANNY SABBAH

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- David Buzzell, CIO, Sedona Group
- Rick Dell, President, U.S., Mitel
- Michael Fuqua, SVP, Global Information Systems, Global Crossing
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to acquisitions such as Rational. More important, these acquisitions have allowed IBM to enter new markets and drive growth with additional revenue streams, Sabbah said.

Moreover, nine Fortune 10 companies, 45 of Fortune's top 50 companies and 87 of Fortune's top 100 companies all use Rational software, he said.

Meanwhile, officials say the Jazz project, IBM Rational's effort to simplify team development, will redefine the process-plagued world of software development.

On one front, Jazz brings teams of developers together in a transparent environment—allowing each developer to perform his or her task and view its progress and potential impact on the broader project's goals.

On another front, Jazz technology, in the form of Jazz.Net, is being used in an open software community of developers, customers and partners to contribute to the next generation of software development.

While Jazz is effectively bringing individual developers together in a team environment to accomplish project goals, Jazz.Net is taking it a step further by bringing together allies from various organizations to work as a team and create innovative customer solutions.

IBM is pursuing what Sabbah called an "open, commercial" strategy with Jazz.Net, enabling the community at large to help shape the development of Jazz and Jazz-based products.

"What I expect to be the norm is that [the open, commercial strategy will] give our partners a chance to develop things we will not have

the time or resources to address," Sabbah said.

Meanwhile, as IBM is known for its vast services organization, Rational has had influence there as well.

"The services guys are on a track to be more effective with assets," Sabbah said. "They focus

Booch said Rational focuses less on technical markets now.

on delivering value and innovation by leveraging pre-existing frameworks."

In addition, not only the IBM services group but all of IBM uses a tailored version of RUP (Rational Unified Process), a methodology created at Rational for software development. The version used internally is known as IRUP, for IBM RUP.

Grady Booch, an IBM fellow and chief scientist at IBM Ratio-

> ## '[IBM's acquisition] has gotten us deeper into the enterprise than we could have gotten on our own.'
>
> —GRADY BOOCH

nal, said one byproduct of IBM's Rational acquisition is that "it has gotten us deeper into the enterprise than we could have gotten on our own."

Yet, Booch, a longtime Rational employee prior to the IBM acquisition, also said the Rational group under IBM has tended to focus less on some of the more technical markets in which Rational the company had legacy customers.

However, with IBM's pending acquisition of Telelogic, that is likely to change, IBM officials said. IBM in June announced its intent to acquire Telelogic, but approval of the deal has been held up while the European Commission evaluates antitrust issues.

Swati Moran, market integration lead for the pending Telelogic acquisition, said that should the deal be approved, Telelogic will move under the IBM Rational brand and its tools will play a role in "helping our customers be successful in this space"—this space being the complex systems development market.

At the time IBM bought the company, Rational provided broad support for both Java and .Net platforms. However, under IBM, Rational quickly adopted the Eclipse framework as the basis for its ongoing development. So Rational became more of a Java shop.

However, "We weren't looking at [acquiring] Rational as a shot against Microsoft," Mills said.

Meanwhile, small and midsize businesses will become an increasingly important segment for Rational, Sabbah said. Rational will announce more Express offerings to let smaller organizations take advantage of the same Rational collaborative and secure development software that enterprises are already using, he said. *e*

Enterprises eye Web 2.0 skills

IT professionals called upon to leverage technologies such as wikis and RSS

By Deb Perelman

ENTERPRISE DEMAND for IT professionals capable of working in the Web 2.0 world is growing as more companies call on this technology to address problems facing their information systems.

To date, most IT departments have resisted Web 2.0 tools, viewing them as consumer-grade and of secondary interest to their other investments. That may be changing in 2008.

According to IT recruiting company Robert Half Technology, CIOs anticipate a 15 percent increase this year in the need for IT workers with Web 2.0 application development skills.

In periods of slow economic growth, IT organizations are expected to find places to save money, and one way is to add more functionality to existing technologies. Web 2.0 technologies, such as enterprise RSS and social networking tools, are likely to get extra attention because of the business value they deliver.

"IT is obviously trying to become more relevant to business, to be seen not just as a cost center but an innovation center," Forrester Research analyst Oliver Young said. "Web 2.0 technologies can be valuable to business when implemented because they can be done very easily and at a low cost."

Web 2.0 is likely to make enterprise inroads first in places where information worker problems remain unresolved, such as help desk ticket resolution, IT project management, documentation tracking and e-mail.

Other areas that have piqued enterprise interest include RSS deployment, as companies have discovered the value of blogs and wikis for knowledge workers. *e*

Vendors jockey for BI position

Oracle, SAP and IBM have all made massive acquisitions; how will they differentiate?

By Renee Boucher Ferguson

FOR THE PAST DECADE OR SO, the mantra for business intelligence software developers has been to get BI deeper into the enterprise—beyond the 10 to 20 percent penetration rate it's reached to date. Now that the doors have closed on three of the biggest transactions in history in the burgeoning BI sector, the real work will begin toward that goal. But, this time, competition—and R&D—will be on a whole new level.

In less than a year, three of the world's largest software vendors—Oracle, SAP and IBM—have acquired three of the world's largest BI vendors. Oracle acquired Hyperion in March 2007; SAP acquired Business Objects in January; and IBM acquired Cognos on Feb. 6. Indeed, there are few independent BI vendors left of any significant size, and, for those that are left, independence just got tougher.

The result: BI competition has been ratcheted up a notch or two (or 10) given the vast product portfolios now in the

PAUL CONNOLLY

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hands of Oracle, SAP and IBM.

In addition to a massive portfolio of ERP (enterprise resource planning) applications—including E-Business Suite, PeopleSoft, JD Edwards and Siebel CRM—Oracle has a massive database business and a huge set of middleware tools. SAP is the world's largest enterprise applications company, with ERP suites for every level of business, a growing middleware business with its NetWeaver integration platform, and a colossal ecosystem to support its efforts. Finally, IBM has a tremendous middleware business and an enormous software portfolio, and it's also one of the largest services businesses on the planet.

The interesting (or ironic, depending on how you look at it) thing, however, is that each of these three companies is taking a similar approach to BI. Oracle calls it Corporate Performance Management; SAP calls it Performance Management; and IBM calls it Business Optimization.

The question is: How will Oracle, SAP and IBM differentiate given their nearly identical focus? And what do current and potential customers have to look forward to?

"[Oracle, SAP and IBM] recognize that [BI] is no longer a specialty play; it is part and parcel of the architecture," said AMR Research analyst John Hagerty. "Going forward, buyers will have the ability to buy a much broader range of capabilities from core suppliers. Some view that as a good thing— one throat to choke. Each company will also be able

to leverage BI technology in their organizations."

Integrated approach

According to Oracle documentation, the company plans to "redefine business intelligence" by providing an integrated suite of BI applications and tools and Hyperion's performance management software to create an EPM System "that spans planning, consolidation, operational analytic applications, BI tools, reporting and data integration, all on a unified BI

Schwarz: [I see] dramatic differentiation.

platform."

The EPM System is made up of Oracle's Business Intelligence Enterprise Edition and Hyperion's Essbase, which makes up the BI Foundation, a suite of BI infrastructure and tools software. The BI EE suite provides dashboards, guided analytics, a prepackaged data warehouse and integration with source data in Oracle applications.

Hyperion Essbase has time series enhancements as well as a new trickle-feed capability enabling near real-time analytic applications, according to Oracle documentation. Oracle also has bundled in Hyperion System 9, a performance management platform that helps financial users formulate strategies, model scenarios and assumptions, develop operational and strategic plans, monitor performance against plans, and consolidate financial information for management and reporting.

Oracle's BI platform uses the company's Fusion Middleware to integrate the necessary parts.

"We now have one unified enterprise performance management and business intelligence development organization," said Thomas Kurian, the senior vice president of Oracle Server Technologies, in an October 2007 statement released when Hyperion was integrated with Oracle BI. "The latest enhancements to Oracle's products deliver on our promise to support the recently acquired Hyperion software, while continuing to protect and enhance our customers' existing investments."

A separate piece

Industry watchers initially dismissed the deal between SAP and Business Objects on the

Corporate performance management: Where it all fits in

ORACLE
▶ E-Business Suite
▶ PeopleSoft
▶ JD Edwards
▶ Siebel
▶ Numerous vertical applications from acquisitions
▶ Fusion Middleware
▶ Oracle Database

SAP
▶ SAP R/3
▶ SAP ERP 2006
▶ Business ByDesign
▶ All-in-One
▶ Business One
▶ SAP Web services
▶ NetWeaver integration suite
▶ Massive ecosystem

IBM
▶ Information on Demand acquisitions: Ascential, Trigo, DWL, SRD, Venetica, iPhrase, LAS, Unicorn, FileNet, DataMirror, Princeton, Solid, Cognos
▶ WebSphere middleware
▶ DB2 database
▶ Servers
▶ Storage systems
▶ Huge software portfolio

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basis that SAP would force Business Objects users to migrate to SAP's NetWeaver platform (taking away Business Objects' "Switzerland status" as a data integrator). That may be the reason why SAP has combined Business Objects with its Business User Group and spun the two off into a separate subsidiary.

Business Objects and the Business User Group seem to be moving in a single direction, defined by Doug Merritt, general manager and executive vice president,

Kurian: Oracle's products support Hyperion software.

Performance Optimization Applications, under John Schwarz, CEO of Business Objects, an SAP company.

At a December 2007 press conference, Merritt said SAP's Business User applications are best described by what they are not. "We are not a repetitive, transaction-driven applications group like ERP and CRM. What we [at SAP] and all our competitors have done is create engines that automate specific processes," said Merritt. "Business User is a whole new area, automating tacit processes, nonrepetitive processes, chaotic processes."

Merritt gave several examples of areas where chaotic processes live: risk management, corporate management, product recall, and mergers and acquisitions management.

Prior to the Business Objects acquisition, Merritt's group introduced two groups of applications—Governance, Risk and Compliance and Corporate Performance Management—focused on making the finance group more effective.

But the goal for Business Objects is to remain fairly independent of SAP, according to Schwarz.

"We are building a very independent strategy as a company," said Schwarz in a December 2007 interview with eWEEK. "We still are the largest BI organization in the world—40 percent bigger than the next—and we have a very successful global operation. What I think is going to happen in 2008 is a dramatic differentiation of SAP Business Objects from what the other guys are doing."

Schwarz said he believes IBM bought Cognos primarily to support IBM's DB2 database and ensure its survival, and that Oracle bought Hyperion as a maintenance stream. Both IBM and Oracle, he said, will kill off essential pieces of their acquisitions' application stack.

"Our value proposition as a combined company is far broader," he said. "We are the largest combined data integrator, so we bring data from structured, unstructured, SAP applications, non-SAP applications, the Web, internal sources—from anywhere.

"Secondly, we have the most comprehensive platform for query, data, reporting, analysis, search. ... We have the [Business Objects] XI platform—the integrating layer, the foundation for intelligent apps—and that is a very rich suite of intelligence apps that come from us, and SAP will live on top of that."

Schwarz said the most exciting innovation coming up in the BI world is the idea that people inside of organizations have multiple roles, or multiple personas, and BI tools and technology can be adapted to those roles.

"What we are hoping to develop is an environment where an individual can live inside their system's environment in a way that mirrors their job definition, [with the ability] to, rather than adapt to a system, to combine, recombine and integrate different steps of processes that allow a person to operate in any way that is efficient to them," Schwarz said.

Doing the math

To differentiate itself from Oracle and SAP, IBM is bringing in its core

Doing the BI math

IBM researcher Brenda Dietrich discusses how math enhances the effectiveness of Information On Demand and business intelligence

BRENDA DIETRICH IS A research fellow within the mathematics department of IBM's research division. Dietrich attended IBM's launch of Cognos and spoke with eWEEK senior writer Renee Boucher Ferguson about her department's plans to work with Cognos and what might be accomplished by applying mathematical techniques to traditional business intelligence.

What is the focus of the mathematics department at IBM?

The IBM research division has had a mathematics department for more than 50 years. Our role is to work with clients on everything from supply chain and product design to demand forecasting to [building] models to better understand and predict customer behavior.

How does that translate in terms of the work you do on a daily basis?

We observe a business situation—with supply chain I spent a lot of time in IBM manufacturing, watching how it's done. We decide how decisions are made, then use mathematics to figure out the best decisions. We instantiate this in software that is generally hooked up to ERP [enterprise resource planning] or CRM [customer relationship management], and the

Dietrich: IBM has had a math department for 50 years.

algorithm sucks data out of the system and makes recommendations.

How accurate are the recommendations?

Accuracy is a function of data quality, always. Data mining is statistics-based and it's very accurate when it's in something that is approaching [stability]; you can't predict something if it hasn't occurred, if it hasn't shown up. In general, [the predictions] are more accurate than the processes they replace.

How predictable are the scenarios in Cognos' world of BI and performance management?

We're hoping to work that out with the Cognos team—the acquisition is [young]—and some customers to understand the problems that are

> ### 'Our role is to work with clients on everything from supply chain and product design to demand forecasting.'

at the cutting edge of what Cognos is able to address—[things such as] dashboarding or alerts, to put more predictive modeling into and to project [the] future.

Why is Cognos having such a big

impact on your research?

Part of it is this area we worked in [Information On Demand] is growing really rapidly. It started very small, but it really does require a full infrastructure to be more effective.

Now we're in a market where customers have historical data. They've invested in ERP, and as a byproduct of investing in ERP, you get trace data and this is a gold mine for doing modeling. Ten years ago it didn't exist.

Will your research with Cognos result in actual products?

Probably pieces of an actual product. I don't think we will be likely to have entire products around our pieces of work.

What type of research have you focused on in the past?

We've been involved in the on-demand strategy since it launched two years ago. We will accelerate that; we will have a lot more friends in the IBM organization that want to work with us. We've been working with high-performance scientific computing. We do work that supports IBM supercomputers ... to make computers more usable. Information On Demand is aimed at addressing business problems.

Where do you see your work with Information On Demand going?

Computing has become much more valuable as a

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tool by [many] more people. Let me give you a very simple example called the shortest path to a problem. It's not hard or complicated—given a map, knowing how long each road is, what is the shortest path between point 'A' and point 'B'? Now everyone in the world can solve that with Google. What's running in the background is an interesting algorithm and it's running off standard data now accessible to everyone.

My mother-in-law can use Google. If I ever wrote down the algorithm, she would have difficulty with me. But she can use [the algorithm]. That's what I see happening in the world. If we are able to capture the mathematics that are well posed, it opens the world mathematically to everyone, and not just the geeks among us. And people can make better decisions. You won't follow the route your brother-in-law said is the best route, you will follow the absolute best route. It takes opinion and personal prejudices out of decision making. Everything is based on data.

It's amazing how the business processes we work with at IBM, how emotion has gone out of the data. Everything is based on data, not on who yells the loudest.

Is there a point where data becomes too pervasive?
One thing we do worry about is do you lose creativity and new ideas when you are doing everything based on encapsulated processes? I think that's why everything we deliver has a human in the loop. That's where judgment and creativity still has the capacity to come into it, but based on analysis and information. You can test the model with much [fewer] consequences. *e*

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strength as a decades-old company with deep R&D pockets: sophisticated analytics derived from some serious mathematical expertise. It plans to add Cognos to its Information on Demand division, a group formed two years ago that forms the basis of a handful of data-type acquisitions—FileNet and Cognos being two of the biggest. Cognos will also work with IBM's mathematics research department to figure out new ways to use analytics.

"IBM is a treasure trove of technology," said Steve Mills, IBM senior

Mills: "IBM is a treasure trove of technology."

vice president and group executive for IBM Software Group, during a Feb. 6 press conference announcing the close of the Cognos deal. "We've not been seen as a company doing BI, but ... we are the only company that deals with deep analytics and sophisticated mathematics to conquer things like scheduling and bio research. Time and again we've applied deep analytics around technology, with decades of the most sophisticated algorithmic capabilities. So, with Cognos, we're very excited about the R&D capabilities, with Cognos the tip of the iceberg."

On a broader scale, IBM plans to couple its technology with Cognos to offer an architectural approach to Information on Demand and its corollary, performance management. Rather

Ashe: The new battleground is performance management.

than offer products on a one-off basis, the company will work with customers (and prospects) to determine the best approach to implementing a performance management architecture that has

the same metadata shared across all products.

As for integrating Cognos with IBM, much of the early work is completed, or at least rationalized, given the two company's 15-year partnership. During the Feb. 6 press conference, IBM announced 10 new integrated IBM and Cognos packages. For example, IBM's Retail Integration Framework now incorporates Cognos' Store Operations Planning Blueprint and IBM's retail data models.

Cognos' core platform—Cognos 8—has been preintegrated with IBM's Information Server software platform, which brings about a couple of key capabilities: data integration and quality capabilities, as well as metadata integration for better data lineage. IBM and Cognos have also developed pre-configured templates for integrating Cognos 8 BI with IBM FileNet Business Process Management software.

"Performance management is the new battleground," said Cognos CEO Rob Ashe, who now heads IBM's IOD group. "And we [at Cognos] have been saying that for six years at least. There's sort of a category collapse going on where CPM and BI, reporting, analytics are kind of starting to merge. The lines are getting very gray, and I think customers are broadly viewing all this stuff now as performance management. ... So, our ability to go into those environments where companies have different transactional systems, we are with a big neutral supplier called IBM. That's a differentiator." *e*

How to tame virtualization sprawl

The benefits of virtualization are eroded when VMs go unchecked

By Cameron Sturdevant eWEEK LABS

COMPANIES HAVE EM-braced virtualization for the many efficiencies the technology brings to the data center. But with the increasing use of virtualization comes an increasing challenge: managing and securing all those virtual server instances.

In fact, virtualization's benefits are eroded when virtual machines are not controlled by a life-cycle process.

VM sprawl—the creation of VMs without regard for ongoing utilization monitoring, desired-state configuration management, or an automated process for correlating VM and physical host performance characteristics—can be remediated in a cost-effective manner if IT managers get the balance right between ease of VM creation and management oversight.

What follows are best-practice suggestions based on eWEEK Labs' virtual testing implementation and tips from virtual infrastructure users and management vendors.

The physical and virtual relationship

CONSOLIDATING WORKLOADS THAT currently run on underused physical systems is what makes virtual systems so attractive. In a Ziff Davis Enterprise Editorial Research survey conducted for

MORE
from Your VoIP

OR

Dial tone only from your VoIP

Sure, it makes sense that if you need to make phone calls, you can buy a telephone system for your business. And it's true, any PBX "enabled" for VoIP can do dial tone. But for real VoIP communications, it's all in the applications. And for that, you invest in the platform that's been All-in-One from Day 1.

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eWEEK, about 75 percent of respondents said that improving server utilization was among the main drivers leading to a virtualization implementation at their organizations. (See chart, right.)

Long after the honeymoon with virtualization ends—that is, when maximum physical server utilization is achieved—it may be that management efficiency will rise in importance for virtualization projects. IT managers will have to use management systems to ensure that virtual systems are maintained in a desired configuration state that includes security and operational patches to both the operating system and applications.

In other words, virtualization drivers that scored low on the survey—including lowering staff costs—will become much more important when server utilization and the accompanying hardware cost reductions are driven out of the equation by widespread use of virtualization.

The management question is critical because there is a relationship between physical resources and VMs. This is especially true of VM performance. Unused CPU cycles, excess network bandwidth and underused RAM create the virtual real estate upon which entire cities of virtual systems have been created. Virtual server sprawl is created when management systems designed for purely physical systems don't keep up with tracking the relationship between physical machines and VMs.

Transforming traditional physical management into a hybrid that manages both physical machines and VMs is the first step in controlling sprawl. But it's not the only step. Sprawl is created if there is a loss of control after the machines are created, if there is no orderly plan for maintaining machines in a desired configuration once they are placed in production, or if machines are abandoned but not decommissioned when they are no longer used.

The question of when to terminate a VM is most applicable to test and development environments, where there is a need to ensure the orderly decommissioning of virtual systems. As projects end, IT managers will need to take down unused systems so that physical compute resources can be reallocated. IT managers should ask project leaders to specify a date when the virtual system will be turned off and to use management tools to monitor server utilization. Ferret out owners of unused systems to ensure they have a legitimate need for the resource.

However, before virtual systems are taken down, they must be created, which is also one of the best places to start managing virtualization.
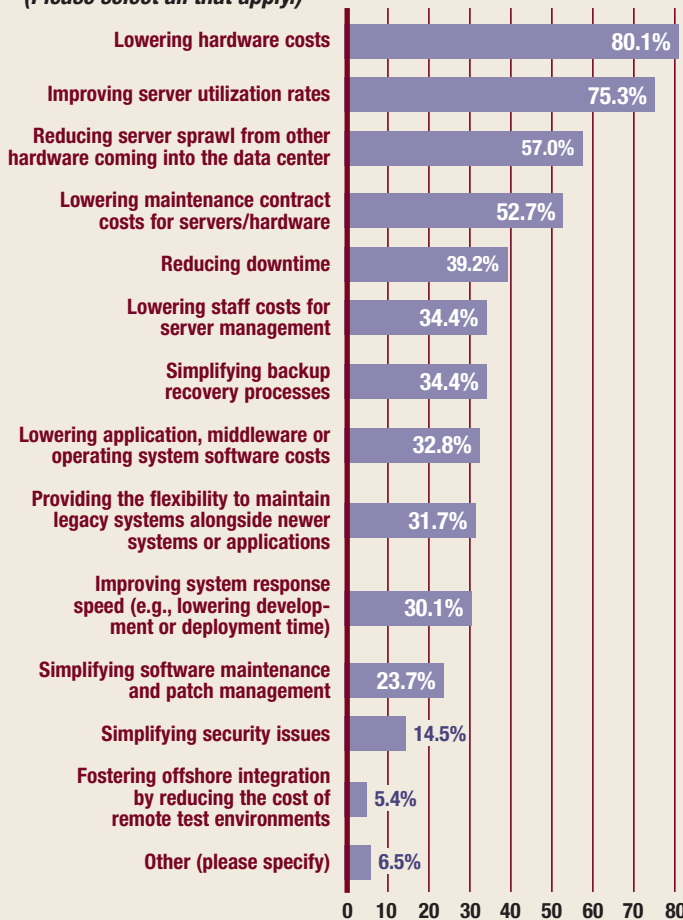
Server setup

SERVER VIRTUALIZAtion brings industrial production to the data center. One key to industrial design is placing a premium on creating products that are cost-effective in mass production.

In the case of server virtualization, IT managers should create a catalog of standard server configurations from which business managers can choose to install new applications. For example, Option A could be a single-processor system with 2GB of RAM and 10GB of storage. Option B could be a two-processor system

Virtualization drivers

Q. Which of the following would you say are the main reasons that led or are leading to server virtualization at your organization? (Please select all that apply.)

Lowering hardware costs	80.1%
Improving server utilization rates	75.3%
Reducing server sprawl from other hardware coming into the data center	57.0%
Lowering maintenance contract costs for servers/hardware	52.7%
Reducing downtime	39.2%
Lowering staff costs for server management	34.4%
Simplifying backup recovery processes	34.4%
Lowering application, middleware or operating system software costs	32.8%
Providing the flexibility to maintain legacy systems alongside newer systems or applications	31.7%
Improving system response speed (e.g., lowering development or deployment time)	30.1%
Simplifying software maintenance and patch management	23.7%
Simplifying security issues	14.5%
Fostering offshore integration by reducing the cost of remote test environments	5.4%
Other (please specify)	6.5%

0 10 20 30 40 50 60 70 80

Source: Ziff Davis Enterprise Editorial Research   **Based on 186 respondents**

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VIRTUALIZATION FROM PAGE 48

with 4GB of RAM and 20GB of storage. The purpose of creating and enforcing a standard catalog of virtual systems is to prevent customized server sprawl, where each VM is handcrafted for each application. Maintenance costs associated with customized servers can eat up much of the cost savings gained from implementing a virtual infrastructure.

One of the best ways to ensure that servers are correctly configured and easily maintained is to provide business managers with enough standard configuration choices to satisfy most of their application needs and to disallow the return of handcrafted server customizations that drive up the amount of maintenance labor time.

Implement a resource SLA (service-level agreement) as part of virtual server instantiation. Go as far up the organizational chart as necessary to get an authoritative decision on which applications will be preordained winners and losers in the event of a contest for available physical resources. Be ready to offer suggestions based on application type. For example, order processing and the associated database systems are easy candidates for a guaranteed high SLA because they (presumably) conduct high-value transactions.

Create only the number of systems needed to adequately support an application. For organizations that are new to virtualization, and where there are virtualization skeptics, plan on allowing at least six months to prove the reliability of the virtual system creation process. If IT managers can show business managers that creating servers as needed based on actual performance reports works, then it will be possible to right-size applications from the get-go. For organizations that forecast IT budgets based on capacity trends, it is especially important to accurately measure server use.

It is also important to ensure that system owner information is up-to-date. The ease with which virtual systems can be created also makes it easier for server owners to forget about these VMs. Unlike physical systems that require an extensive budget process, a physical implementation, an accounting depreciation and sometimes lease company accountability, virtual systems can easily sit forgotten and unaccounted for. Aside from taking up virtual processing overhead, these forgotten systems soak up management cycles because they must be updated. Further, idle virtual systems can be a security hazard.

One of the great timesavers of a virtual infrastructure is the ability to instantiate new servers by cloning an existing system, and it's important that new systems are cloned from approved images. It may be quicker to clone a VM from one already in production, but tracking the lineage of that system to ensure it has the right security patches and service configurations is extremely difficult. Also consider that a VM cloned from a system operating in one part of

Virtual management tools

Important aspects of virtual and physical machine management—including utilization, up/down and configuration state—overlap. To handle the unique aspects of VM management, traditional system management vendors have adapted their management platforms. New entrants into the market are also worth looking at for virtual management chores. At large organizations, IT managers should be sure to use a management system that can integrate multiple virtualization platforms.

▶ **BMC Performance Manager for Virtual Servers** is focused on VMware environments and gauges real and virtual machine performance.

▶ **CA Unicenter Advanced Systems Management,** part of CA's Virtual Platform Management, is a cross-platform tool for VMware, Microsoft's Virtual Server and Sun's Logical Domains.

▶ **ConfigureSoft** www.configuresoft.com offers configuration and change management.

▶ **Citrix XenServer** is a virtualization platform with integrated management tools, including XenCenter.

▶ **Fortisphere** www.fortisphere.com offers asset identification, as well as tracking and reporting of on- and offline virtual machines.

▶ **HP Virtualization Director** is based on the Opsware Server Automation System and is a cross-platform tool that can manage VMware and Solaris virtualized environments.

▶ **Hyperic HQ** provides systems and application management software.

▶ **The Ganeti** is a Google code project that is a virtual server management tool built on Xen.

▶ **IBM Virtualization Manager 1.2** is a Director extension that manages VMware, Xen and IBM Power virtualized environments.

▶ **mValent** offers configuration and change management.

▶ **ManageIQ** provides automated management specializing in virtual infrastructure.

▶ **Surgient** is a preproduction virtual lab management tool.

▶ **VMware ESX Server 3** is a virtualization platform that uses VirtualCenter and other VMware offerings to provide integrated management.

Source: eWEEK Labs
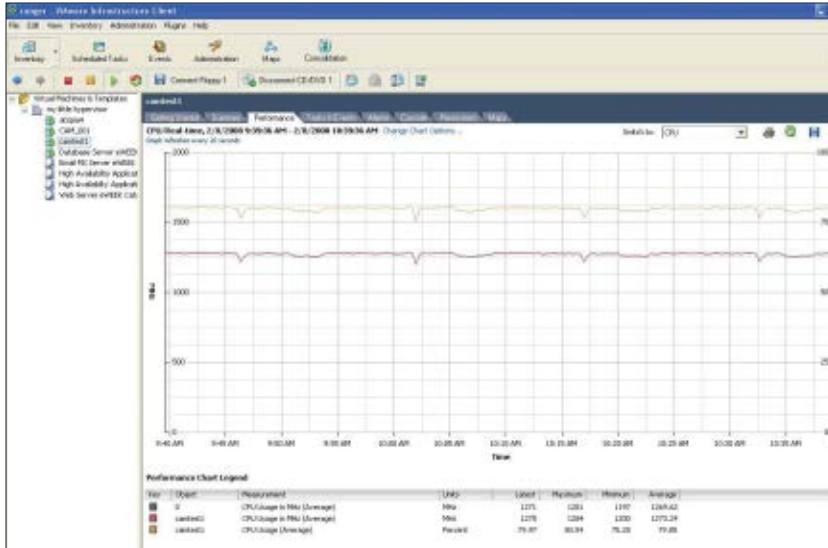
Tracking virtual server utilization is an essential component of understanding how to allocate physical resources.

your network may not be correctly configured to operate in another part. For example, an internal Web portal system that gets cloned and placed in a DMZ would be a sitting duck.

Moves and changes

IT'S RELATIVELY EASY WITH PHYSI-cal systems to understand the interdependencies of various applications because the systems are often kept in close physical proximity to one another. With virtual systems, the interdependencies may not be as obvious. It's therefore important to have a plan for tracking dependencies and where interdependent systems move in the physical infrastructure.

Understand the policies that enable the creation and movement of virtual systems. Losing control of virtual server positions as the result of moving a virtual system to another physical host to improve performance can lead to sprawl. Most virtualization platforms include the ability to monitor virtual server performance and the availability of physical compute resources. When a VM reaches a predefined high uti-lization rate, the allocation module can move virtual systems to physical hosts with more available power. It is up to IT managers to monitor this process and ensure that virtual server resources are accounted for, regardless of the physical host where the virtual system currently resides.

Desired configuration

IN OCTOBER, THE CENTER FOR IN-ternet Security released its first benchmark for securing VMware's ESX Server 3.x. The CIS said "the benchmark is a compilation of security configuration actions and settings that 'harden' virtual machines."

Many long-standing configuration management vendors, including Configuresoft, provide management tools that check desired-state configuration against actual configurations for physical and virtual systems. Consider that VMs share physical resources. Systems that require stringent security configuration should be co-hosted on the same physical hosts to prevent low-priority virtual servers that may not be as diligently cared for from taking shared physical resources from high-priority virtual servers.

Connect the dots between physical and guest systems and ensure that configuration management on both types of systems is in place to help manage a virtualization rollout.

Monitor, manage, report

IMPLEMENT A SYSTEM MANAGEMENT platform that can integrate with your chosen virtualization platform(s).

Virtual systems share physical resources that were never shared in the one physical server/one application model. From the beginning of a virtualization project, it's important
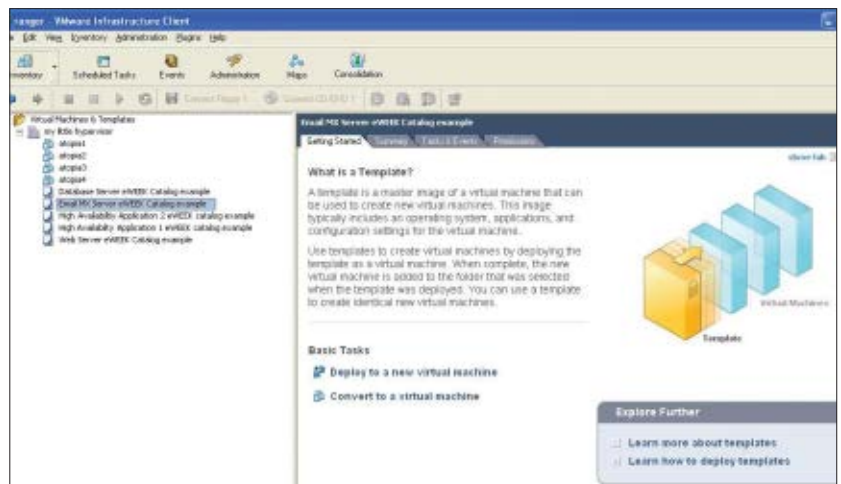
Virtualization costs can be kept low over time by creating a catalog of standard VMs.

VIRTUALIZATION FROM PAGE 51

to understand how to correlate physical system performance with the hosted machines running on the physical resource.

Monitor the tempo of VM creation to see if auditing intervals are frequent enough. It may be prudent to increase compliance audit frequency in response to rapid VM deployment.

Requests for capacity planning forecasts are an inevitable outgrowth of successful virtualization projects. In organizations where virtualization evolves from "great to have" to "standard operating procedure," IT

managers will have to accurately measure the amount of physical resources needed to host the expected increase in virtual infrastructure requirements. Only management systems that track utilization over time will be able to provide reasonable metrics for sizing future IT hardware requirements.

Maturing virtualization infrastructures that have been in place for two or three years will increasingly be measured against a performance yardstick that disallows infrastructure management mistakes. Today, there is still a halo glow around wringing huge productiv-

ity gains from existing hardware. Tomorrow, it will be expected, and downtime caused by uncontrolled virtual infrastructure sprawl will be a mark against IT. *e*

Technical Director Cameron Sturdevant is at csturdevant@eweek.com.

For tips on building management and security into your virtualization platform from the ground up, go to **www.eweek.com/c/a/ Infrastructure/How-To-Get-Virtualization-Rightfrom-the-Start.**

Virtual feedback

Q. Which best describes what happens when your organization creates a virtual server? The virtual server ...

▶ ... becomes a permanent part of our infrastructure — **53.7%**

▶ ... is used as long as needed and then manually torn down — **36.6%**

▶ ... is created and torn down dynamically and automatically — **9.7%**

Percentage of 134 respondents
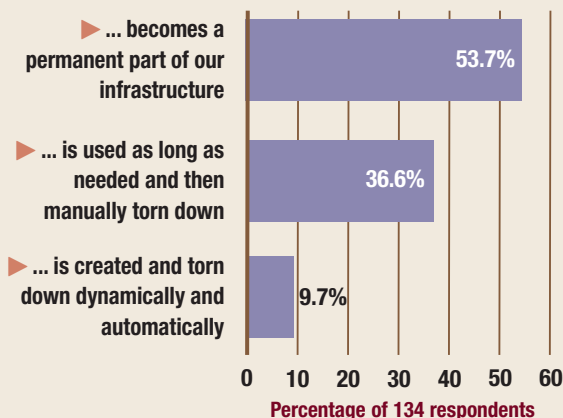
Q. Which of the following skills or tools do you think are or will be required to manage your organization's virtual infrastructure? (Select all that apply.)

▶ Server provisioning — **61.8%**
▶ Backup — **61.8%**
▶ Load balancing — **58.6%**
▶ Patch management — **54.8%**
▶ Continuity planning — **51.1%**
▶ License management — **50.5%**
▶ Availability management — **46.2%**
▶ Preventing configuration drift — **31.7%**
▶ Security lockdown — **31.7%**
▶ Custom coding — **10.8%**

Percentage of 186 respondents
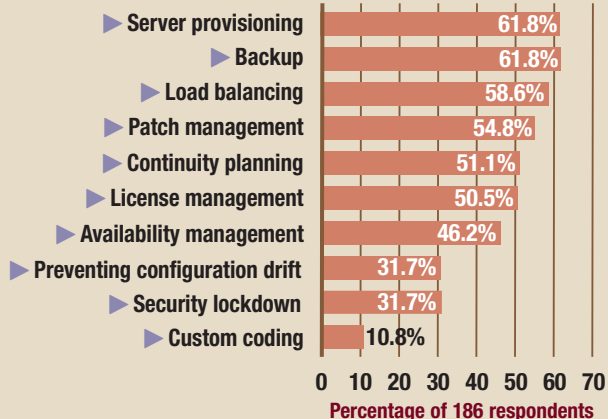
Q. When it comes to running multiple workloads on one physical server, what is the biggest resource issue for your organization?

▶ Memory — **26.5%**
▶ I/O — **24.9%**
▶ Processor — **15.7%**
▶ Network — **10.3%**
▶ No problems running multiple workloads on one physical server — **20%**
▶ Other — **2.7%**

Percentages do not add up to 100 percent due to rounding.

Percentage of 185 respondents
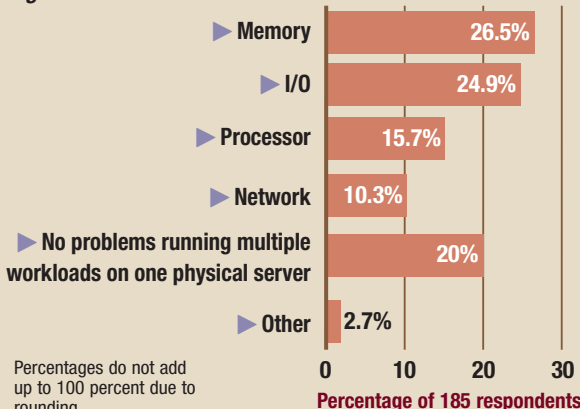
Q. Besides servers, for what other platforms are you using or considering virtualization?

▶ Notebooks — **9.7%**
▶ Desktop PCs — **19.2%**
▶ Storage — **24.1%**
▶ Virtualization "in the cloud" — **3.1%**

Percentage of 183 respondents
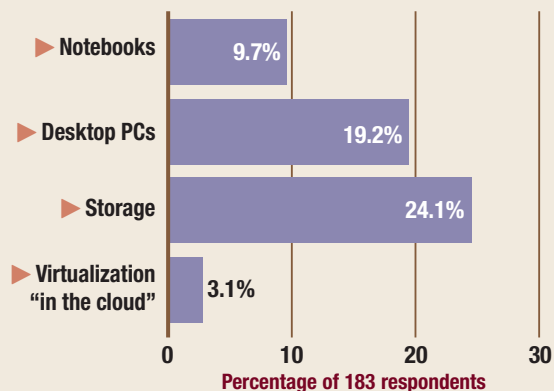
Source: Ziff Davis Enterprise Editorial Research

ERIC LUNDQUIST

Mashups must mesh

Acquisition mashes, as with application combos, can go astray

MASHUPS ARE one of 2008's hot technology trends. The basic idea behind the mashed-up application is that it is wiser and a better use of corporate time and revenues to build new applications from existing pieces (which could be inside or outside the company) than create new apps from scratch.

The creation of the mashup sounds simple: Take a financial package from one area, an inventory control system from another and geographic positioning information from a third. Mix those three sources well, and, voilà, you have an application that lets you know not only the cost but also the location of the inventory you now carry. The devil, of course, is in the details, and what is often lost is the reason behind the mashup in the first place.

Not only applications but also entire companies are being mashed up. And what often gets lost in application development can get lost in acquisition mashups as well. Here's my take on three recent mashes.

Dell and EqualLogic. This combination should be one of the top mashes of 2008. Dell needed to find a storage partner that could move

faster than EMC in the iSCSI networked storage area and needed an experienced channel company to help Dell figure out how to balance direct and channel sales. Dell's simplicity and manufacturing expertise, tied to EqualLogic's SAN smarts, can move Dell's revitalization strategy ahead.

IBM and Cognos. This mash might work. IBM has been busy filling out its middleware strategy; what

was missing was the answer to the question of what new business insight can a company gain from creating a big IBM middleware stack. Cognos' business intelligence software should answer that question in a tight integration with the stack. The goals of performance management, corporate search and a dashboard view of a company's operations hinge on BI applications that are easy to create and available to nontech managers. IBM made some previous BI partners grumpy with the Cognos purchase, but the

company needed tight, rather than partner-based, application integration. (See related story, Page 39.)

Microsoft and Yahoo. This column is being written as the Yahoo board is busy rejecting Microsoft's $44.6 billion bid. I'm expecting that Microsoft will come back with a few more bucks and Yahoo will succumb. Of all the mashups, I think this is the riskiest. The amount of money—even for

Microsoft—is substantial, and mashing up a company (Microsoft) that has an undefined Internet strategy with an early Internet pioneer that seriously lost its way (Yahoo) does not a powerhouse make. Mashing up apps written in different programming languages with different interfaces is a difficult undertaking. Mashing up two companies with different cultures in a hostile takeover is one combination that would be better off left alone. *e*

Editorial Director Eric Lundquist is at elundquist@eweek.com.

> ### What is often lost is the reason behind the mashup in the first place.

▶ **What** do you expect me to do?

▶ **Why** didn't you talk to me earlier?

▶ **Where** is the money for this coming from?

Is your enterprise prepared to fish for e-Discovery data?

Reducing Risks and Controlling Costs

ZIFF DAVIS ENTERPRISE
virtualtradeshow
:: e-DISCOVERY

February 21, 2008

PANEL:

- **Reduce risk from improper data management**
- **Avoid costly and time-consuming searches**
- **Satisfy compliance and e-discovery requirements**
- **Align legal, business and IT teams**
- **Know how technologies impact litigation**

FEATURED SPEAKERS:

- **George J. Socha, Jr., Esq.**
  Founder, Socha Consulting LLC, and co-author of The Socha-Gelbmann Electronic Discovery Survey

- **Matthew Todd**
  Chief Security Officer and Vice President, Risk and Technical Operations, Financial Engines, Inc.

- **Mikke Tomlinson**
  Litigation Support Manager, Chesapeake Energy Group

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KEYNOTE:

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KEYNOTE SPEAKER:

- **Patrick L. Oot, Director of Electronic Discovery and Senior Counsel, Verizon**
  InsideCounsel magazine named Verizon's e-discovery team as one of the ten most innovative legal groups of 2007. Mr. Oot is a member of the advisory board for The Georgetown University Law Center CLE Program's Advanced E-discovery Institute, and The eDiscovery Institute, an independent search and retrieval science consortium.

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JIM RAPOZA

Relief comes from the cloud

Travelers must deal with the headache of getting data through customs

THERE HAS BEEN A lot of talk recently about how most computing usage will move into the Internet cloud. In this vision of the computing future, people won't even carry PCs around; they'll just access their data from any system that connects to the Internet.

For some people this may not sound all that attractive, but I can think of one group that probably can't wait to use this—namely, international travelers.

That's because international travelers are increasingly faced with the risk that their laptops might be taken from them, or, almost as bad, all of their personal and business data will be copied and taken somewhere unknown.

Who is perpetrating these thefts? Why, it's U.S. Customs agents, who have been given the OK by the government to view information on, copy the data from or even seize the personal electronics (including laptops and smart phones) of travelers entering or returning to the United States.

According to recent news reports about these seizures, there are more than a few companies that are concerned enough about this practice that they have put in place procedures to protect company data for workers who do travel internationally, in some cases providing special clean laptops for these workers.

So what should those of us who have to travel internationally do?

Well, one good step for laptops would be to take advantage of imaging software to create two images of your laptop. One would be a perfectly clean, nothing-else-on-it version of the operating system. The other image would be taken just before you left on your trip and stored away (preferably in a couple of places, such as work and home).

Bring a bootable DVD of the clean image on your trip and, just before returning into the country, overwrite your regular system with the clean image.

Save data accumulated on the trip on a remote server, burn to a CD or DVD, or put on an unobtrusive USB drive (such as a USB pen). When you've passed through customs and returned home, you can restore your standard image.

It may seem like a lot of work, but in my opinion it may be the only way to truly protect your personal

> **Some people can't wait for the day when they won't carry PCs around.**

and business data.

It's sad that international travelers have to deal with this on top of all the other headaches of travel. But until this practice stops or the government provides some clarification on how and when systems and data can be searched and seized, it's the only way to make sure your personal and business data doesn't become part of some big central database. *e*

Chief Technology Analyst Jim Rapoza can be reached at jrapoza@eweek.com.

JASON BROOKS

Windows Server, hourly edition

Amazon.com's EC2 provides many options for Web-based businesses

FOR THE PAST SEVERAL months, anyone who's asked me about the latest big new thing in IT has gotten an earful about Amazon.com's Elastic Compute Cloud, or EC2.

You pay Amazon.com 10, 40 or 80 cents an hour (depending on the RAM, storage and CPU) and you get a virtualized server running in one of the company's data centers. It's a compelling model and one that offers all companies, but small companies in particular, a route for scaling up their Web-based businesses very quickly. EC2 also gives larger companies with their own data center capacity the option of turning to "the cloud" to handle spikes in traffic, rather than requiring these businesses to overprovision to meet occasional capacity crunches.

Right now, however, there's a big asterisk floating alongside EC2. The service, which is based on technology from the open-source Xen hypervisor project, is a Linux-only proposition. This works out just fine for businesses built on the LAMP (Linux, Apache, MySQL and PHP/Python/Perl) stack, but EC2 doesn't offer much to companies that rely on Windows Server applications.

While this Windows support asterisk signals a limitation of EC2, I contend that this bit of rhetorical punctuation would be best interpreted as a wake-up call to Microsoft. After all, I'm not the only one who's taken note of EC2. Red Hat has teamed with Amazon.com to make Red Hat Enterprise Linux available in Amazon.com's cloud, complete with tools to help manage mixed in-the-

There's a big asterisk with EC2. The service is a Linux-only proposition.

cloud and on-premises server deployments. While many businesses currently rely on Windows Server, I'm sure that Red Hat and other Linux platform vendors would be only too happy to help customers migrate to Linux-based, cloud-ready alternatives to companies' Windows-anchored applications.

As luck would have it, Microsoft now boasts its own virtualization platform technology, in Windows Server 2008's Hyper-V. Building out a WC2 (Windows Compute Cloud) service would give

Microsoft the opportunity to demonstrate that its new hypervisor is capable of powering a major virtualized infrastructure—a sorely needed proof point for the brand-new Windows component. What's more, a WC2 platform would be a major boon to Microsoft's channel partners, particularly those selling to SMB customers for whom hosting their own on-premises servers is an unwelcome diversion from running their businesses.

Cloud computing services certainly present challenges, such as dealing with the added latency and security issues that come with entrusting machines to remote providers. To some extent, however, we're all headed cloudward for our computing, and our vendors will either lead us there, or be left scrambling to follow. *e*

eWEEK Labs Executive Editor Jason Brooks is at jbrooks@eweek.com.

DEBRA DONSTON

IT objects of our affection

From SAAS to VOIP, here's what we're loving right now

Valentine's day has come and gone, but we're still feeling the love for the following technologies.

SAAS: SAAS offerings take much of the administrative and data center burden off IT, and the subscription model often makes good economic sense. Service outages and scalability concerns could cool our ardor, however.

Google Docs and Spreadsheets: Speaking of SAAS, hardly a day goes by around here when someone doesn't say, "I'll build a Google spreadsheet/document/calendar for that." The free Google productivity suite provides a simple, effective place for colleagues to keep updated and share ideas.

One Laptop Per Child Project: No, the XO didn't come in at $100, and, yes, there have been—and will be—some bumps along the distribution road. But we appreciate how the OLPC group has identified a social problem and is using technology to help overcome it.

Virtualization: With the ability to divide one x86 server into many, companies have been able to dramatically cut costs. And, with the forthcoming Windows Server 2008 offering built-in virtualization capabilities, it may be easier for companies that haven't hopped on board the V-train to do so.

Social networking: Joining a social networking site can be a bit overwhelming. It's amazing how quickly connections are made and shared, and the opportunities for collaboration seem almost endless. But that's the beauty of it, too, and an increasing number of companies are discovering how much potential the technology has as a way to connect with customers and effect better communications and relationships.

Smart phones: I was going to single out the iPhone here, but, really, it's smart phones as a category that have evolved to the point that we now have almost seamless always-on access to our e-mail, the Web, contacts and so on. The iPhone is just the coolest one of all—for now.

WiMax: Wireless access anywhere? WiMax is still a ways from being mainstream, but the possibilities are pretty compelling.

GPS: I've been lost more times than I like to admit, so now that GPS is available in a relatively affordable form for the masses, there are lots of long road trips in my future. And location-based services in general are poised to provide new ways for sellers to connect with buyers.

If a picture is worth a thousand words, a video can be worth a million.

Web video: If a picture is worth a thousand words, then a video can be worth a million. Companies are increasingly seeing the value of video on their Web sites—to educate, to sell, to promote ...

VOIP: When a call to China costs as much as a call next door—and can be made with your laptop— what's not to love? VOIP has saved many a company and individual many a dollar. *e*

eWEEK Editor Debra Donston can be reached at ddonston@ eweek.com.

BLOG WATCH

eWEEK in the blogosphere

Andrew Garcia: Signaling IT

IN HALF-HEARTED DEFENSE OF VISTA

WITH WINDOWS VISTA SERVICE Pack 1 kinda, sorta ready for its public debut, I felt it was time to follow the time-honored SP1 tradition and make the leap to Vista on one of my primary-use PCs for good.

While I've spent hundreds of hours with Windows Vista and its beta iterations during the last two years—reviewing various subsystems such as BitLocker, User Account Controls, Group Policy, USB drive controls and the wireless networking system—I've never really experienced the operating system for day-to-day computing. It's about time to change that. (See related review, Page 22.)

This oversight is not out of character for me, as I have a history of slow migration. For instance, I did not move from Windows 2000 to Windows XP for good until late 2003—a full two years after XP made the scene. Ultimately, as a user, I really don't want to incur the time or expense to make a move that doesn't motivate me. I don't care—nor do I want to care—about what operating system I use. Rather, my concern is simply for the applications and devices I need and want.

I decided to burn one of my precious 32-bit Vista Business activations for the install, figuring my PC does not need the full media capabilities offered by Vista Ultimate. But I wanted to get more of the experience than is possible via the more basic versions of Vista. The PC itself is a laptop, a Lenovo T60p with a dual-core processor, 2GB of RAM and 802.11n wireless. The Vista Experience score is 4.3, with the graphics subsystem being the most lagging component.

With resounding success, I threw the open-source gamut of applications on Vista for my productivity software. Open-Office, Thunderbird, Firefox and Pidgin all installed perfectly. For testing and research, VMware Workstation seems to work just fine. And for security, the latest iteration of Trend Micro Internet Security installed without a hitch.

In fact, the only things that did not work were my printer drivers. I have an HP LaserJet 1000 attached to another PC in my network. While I could install the printer drivers offered from the share, I could not actually print any jobs. The HP Web site had a note from December 2006 saying Vista drivers were coming soon, but there has been no further news in the intervening 14 months. It's disappointing, but I can't blame Microsoft for HP dropping the ball.

After three weeks of frequent usage, Windows Vista somehow seems like less than the sum of its parts. I know there are a lot of compelling features under the covers (I've reviewed them ad nauseam), but their impact is hidden by a few glaring features that are constantly in your face, making you forget—or never notice—all the interesting stuff under the hood.

Unfortunately, this is the level of experience that most people will have with Vista—intruded upon by the three features and characteristics that dominate the Vista experience.

One, everything has moved. I'll never understand why Microsoft feels the need to rearchitect the interface for each iteration of Windows.

Two, Aero Glass is an uninteresting resource pig, completely unworthy of all the resources it consumes.

Three, UAC, or User Access Control, is annoying to some users. UAC does not bother me at all. I've been a big proponent of Least User Privilege computing in the enterprise for a long time, and I have tried with varying success to practice it at home as often as possible. Frankly, Least User Privilege is much, much easier to accomplish in Vista than in any other Windows operating system. I can live with it, and I actually appreciate it.

Save for the printer drivers, everything works, and I can safely say that, so far, I am fine with Vista. I wouldn't say it impresses me, but it does (almost) everything I need it to. The operating system certainly does not live down to the reputation it has garnered out in the field. I can see how it has frustrated many, but not to the level that would cause me to petition to keep Windows XP alive longer.

And as history has shown, Microsoft will make it better over time.

That's why we wait for the service packs.
Posted Feb. 13, 2008 1:02 PM PST

Ryan Narine:
Security Watch

SECURITY FEATURES HIGH IN FIREFOX 3 BETA 3 RELEASE

MOZILLA IS INCHING closer to delivering the next major refresh of its flagship Firefox browser.

On Feb. 12, the open-source group shipped Firefox 3 Beta 3, an update that features approximately 1,300 individual changes from the previous beta, including fixes for stability, performance, memory usage, platform enhancements and user interface improvements.

The latest beta is heavy on security improvements, including an enhancement to the Google-powered Malware Protection feature that puts up a warning sign when users visit sites that are known to install viruses, spyware, Trojans or other malware.

It also comes with improvements to the security-themed One-click site info feature that lets Firefox users click on the favicon in the location bar to see who owns the site and to check if the connection is protected from eavesdropping.

The feature prominently displays identity verification that makes it easier for the nontechnical user to understand. For example, when a site uses Extended Validation SSL certificates, the site favicon button will turn green and show the name of the company the browser is connected to.

Also new in Firefox 3 Beta 3:
• Web Forgery Protection
• SSL error pages
• Add-on and plug-in version checks
• Secure add-on updates
• Anti-virus integration
• Windows Vista Parental Controls
• eTLD (effective top-level domain) service
• Better protection against cross-site JSON (JavaScript Object Notation) data leaks.

Posted Feb. 12, 2008 8:17 PM EST

Cameron Sturdevant: Permit/Deny

VIRTUALIZATION RIGHT— FROM THE START

IN MY STORY ABOUT MANAGING virtualization (see Page 46), I recommend how IT managers can tame existing server sprawl. This sprawl can be avoided altogether at companies just beginning or planning a server virtualization if the following steps are taken:

Know your existing physical network. IT managers must leverage existing knowledge of the physical systems along with the logical network layout of those systems. Virtual systems must exist on physical hosts, and these physical hosts provide clues about the most effective architecture for implementing virtual systems.

Survey workloads. Next, survey the workloads that will be virtualized. Make sure that business-critical applications are certified to operate in (and are supported in) a virtualized environment. If not, find out when the vendor intends to provide such certification.

If you can't determine that, it is likely not advisable to virtualize the application.

Chart apps. For applications that are supported on a virtual platform, make a chart of the performance, security, patch, update, backup and recovery characteristics of the applications. For x86 environments that are still relative newcomers to the virtualization party—as compared to mainframe systems that have been managing virtual workloads for many years—it is advisable to put similar workloads on the same physical host.

Baseline costs. Everything I have recommended up until this point will be beneficial even if you don't go forward with a virtualization plan. If you are going to move forward, now is the time to base-line current operating costs and get at least a basic understanding of how costs will be charged to users of virtualized infrastructure.

Get ready to start charging. While researching my managing virtualization story, it was clear to me that one thing that is lagging in virtualized environments is a good chargeback mechanism. In the era of running workloads on individual physical systems, chargeback was fairly straightforward. In a virtualization era, chargeback is going to take on a whole new level of importance. Groups that may have been willing to pay for servers reserved for their exclusive use will likely want a different price structure when sharing the physical resource with different parts of the organization.

Look to SAAS (software as a service) multitenancy for chargeback models. The idea of multitenancy that is all the rage in the SAAS world has some relevance for chargeback. IT managers should look into usage measurement tools so that they can provide business users with fairly accurate figures of what it costs to get into the virtualized infrastructure. As energy and cooling costs escalate and rack space becomes more scarce, chargeback billing will become a core component of managing a virtual server infrastructure.

Build a lab based on your real network. Finally, build a lab using the equipment and workload present in your organization based on organizational surveys conducted by the IT department. Assess the impact of using various virtualization platforms on CPU, RAM, I/O and storage. In particular, if your organization uses multiple virtualization platforms, ensure that you get a management tool that can stretch across these platforms to provide the operational details needed to maintain control of the infrastructure. Base-line the costs of providing virtual infrastructure using the lab to get a starting price that business groups will pay to use the new virtualized environment.

Posted Feb. 14, 2008 4:03 PM EST

Michael Dell and Praveen Asthana

What's 'in store' for Dell

CEO Dell and storage chief Asthana talk storage strategy

CHRIS COVATTA

HERE'S A POP-QUIZ QUESTION FOR YOU: Which segment of Dell's hardware business—PCs, servers or storage systems—has been its fastest-growing during the last two years?

If you said storage systems, you are correct. For more than two decades, Dell has been known the world over for building PCs and high-quality application servers. Yet, as Dell executives look toward the future, they see major opportunity in making hardware and software for people and businesses that want to store all their digital stuff.

Many other companies see the same opportunity, however, as the amount of data accumulating continues to grow at astounding proportions.

So what is it that will set Dell apart from EMC, Network Appliance, Hewlett-Packard, IBM, Hitachi, Fujitsu, Sun Microsystems and a host of smaller but equally savvy storage companies? All these competitors, bent on one-upmanship, continue to come out with faster, more capacious, and easier-to-use hardware and software. And, generally, the prices are coming down as competition heats up.

Senior Writer Chris Preimesberger sat down with Dell CEO and founder Michael Dell and Dell Global Storage Director Praveen Asthana to discuss the company's storage strategy and 2008 trends.

Michael, you've been back in the CEO position for one year now, since replacing Kevin Rollins in January 2007. As objectively as possible, how do you assess

Dell's progress over the last 12 months?

Dell: I've been really pleased with our last four quarters. I feel really good about us right now. We're growing at a faster rate than ever. Our storage business is the fastest-growing in the industry right now—it's been that way for the last seven quarters. This is due to our distribution system, new and innovative products, our geographic expansion, and a better cost structure alignment that we've put into place.

Storage is one of our three most important businesses right now, along with servers and PCs. I intend to maintain that emphasis in 2008.

Dell's recent acquisition of EqualLogic was the second-largest pure storage acquisition in IT history, at $1.4 billion in cash. Only Sun's merger with StorageTek in 2005 was larger, at $4.1 billion. Praveen, what has the EqualLogic acquisition brought to Dell's overall business strategy?

Asthana: There are two aspects [of the deal] that make it so important for us. First of all, it's simplification of IT. Dell launched a strategy to simplify IT for customers, and it was very well received. Customers have been saying, "That is really my main issue. Life is too complicated, with too many headaches, so if you can simplify IT, great."

If you look at the storage side, for the last few years we've actually been simplifying the storage infrastructure for customers—with the launch of the MD3000i, for example. This deal takes that simplification to a whole other level because now you're able to employ very advanced storage systems without needing professional services or a huge IT staff. So that changes the game as far as simplicity.

The second aspect of why this deal is so important to Dell is that we are one of the largest suppliers of server virtualization technology. We are a direct-to-customer company, so we get a lot of feedback from customers directly. They say that the No. 1 problem they have when deploying server virtualization is the storage. We wanted to find the simplest storage for server virtualization, and that's what EqualLogic provides.

Dell: According to IDC, iSCSI storage is going to be a $6 billion segment of the market by 2011, and that's why we made the move to acquire EqualLogic, which we judged to be the best of the new breed [of second-generation storage software vendors]. We made a decision a while back that that's where we were going to go. We evaluated several possible candidates [for acquisition], and EqualLogic just turned out to be by far the best for us.

Their blade technology is fabulous—40GB connectivity on the backplane, which uses 19 percent less power than comparable blades—and they fit right in with what our 27,000 channel partners were looking for. ... It's all

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> ## 'Our storage business is the fastest-growing in the industry right now—it's been that way for the last seven quarters.'
> *—Michael Dell*

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just easier to install and manage, it has every feature you'd need, and the EqualLogic brand just fits into any existing system, thanks to its built-in virtualization.

The market is moving to 100GB Ethernet, and virtualization works even better in that environment. We're the leading vendor of x86 systems in the world, and these new arrays and blades fit perfectly into our product offerings overall.

Why is nonvirtualized storage so difficult to deal with?

Asthana: Storage is difficult to deal with from a management perspective for a couple of reasons. One is that the amount of data growth you sometimes have is unpredictable—and it's extraordinary. So when you have a single array, and the amount of capacity gets filled up, you have to go buy another array. Managing two different arrays becomes difficult. If you virtualize it, it all looks like one pool of storage, so it is very easy to manage.

What is Dell planning to do in the archive business in 2008? Will it provide its own archiving product line?

Asthana: Dell supplies archive systems [with access through file systems and metadata] to customers through our partnership with EMC.

EMC told me that it provides about 75 percent of the storage hardware that Dell sells. Aren't many of the new, second-generation-type products EqualLogic brings to the table going to overlap with those that EMC already supplies to Dell? And might that cause some friction within the companies and with channel sales?

Asthana: To the question of whether our products overlap with some of EMC's, the answer is, yes, there is some overlap. There is overlap with any kind of array that you put out there in the market because the amount an array can scale will overlap a little bit with how much another array scales.

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But customers don't look at it that way. They're not just buying arrays capacitywise. What a customer is interested in is this: "What's my entry, and how far can I go up?"

In terms of pure capacity, yes, there is overlap. You can look at it that way. But let me give you an off-the-wall analogy: How much overlap is there between a pickup truck and a Ferrari? They both have wheels. Both of them can probably go 50 mph. At that point, you can say they overlap.

If you wanted to go 50 mph, you can do it with either one of the two. But they serve totally different purposes. If you want it to go fast and look good on the racetrack, you have the Ferrari. And if you need to haul stuff, need capacity and have a totally different mind-set, you have the pickup truck.

If you're from Texas, you're buying the pickup truck; if you're from Los Angeles, you're buying the Ferrari.

So when you look at products from Dell and from EMC, if you just look at one surface-level [factor], you can say they overlap. But we look at them from the usage perspective. If you're a customer who wants Fibre Channel, you'll buy EMC products from us. If you are a customer deploying server virtualization and want best linkage [connectivity], then you'll buy the EqualLogic products. If you're a Power-Edge server customer of ours and need a product that looks like a server, you'll buy the MD series.

What new things can we expect to see from Dell this year?

Asthana: What you'll find from Dell is more solutions. EqualLogic was an important step in proving the optimum virtualization solution for the customer. We're going to increase our linkage with other applications—for example, we're finding that the way different applications are changing is putting different demands on the storage.

And we want to make sure we have the best storage. As an example, Microsoft has put in new intelligence in its Exchange Server 2007—storage intelligence. And that actually allows the implementation to use lower-cost storage than in the past. In the past, if you needed an Exchange setup, you had to buy a pretty expensive SAN [storage area network] back end. And it was very complicated to manage all that.

Microsoft changed Exchange and allowed it to work with DAS [direct-attached storage] products. There's actually a customer implementation of 30,000 mailboxes using Dell MD DAS products and Exchange. Now that's a revolution.

You'd think: "Why would anybody want to go back to DAS?" But you're not—the intelligence in the application brings in the same kind of availability and scalability as SAN, but it's much cheaper to buy and manage. ...

Dell is evolving its thinking from just saying, "Hey, we've got a little box for you; it's only five grand," to, "How can I give you a bigger Exchange mailbox for the price of a small one?" That is a solutions player—you'll see a lot more of that from us.

Tell me something I don't know about Dell that you think is important for people to know.

Dell: Did you know that 85 percent of Dell's products are sold to business and government customers?

Actually, no, I didn't. I figured a much higher percentage of sales to the consumer market.
Asthana: We've been the fastest-growing storage company in the world for the last four or five years. We are the fast-growing division within Dell. We also are very entrepreneurial in our approach, which is the same as a startup. We have a small team focused on winning, and we're changing the game in storage.

A lot of people don't know how much we are changing the game in storage. Not only are we changing the price economics by lowering the cost of entry-level storage, we've also changed the playing field altogether with our DAS-Exchange solution. ...

We're not just tweaking things—we're fundamentally changing things.
Dell: So, there—you learned something new.

Happens every day. *e*

> ## '[Customers] say that the No. 1 problem they have when deploying server virtualization is the storage.'
> *—Praveen Asthana*

Asthana and Dell acquired "the best of the new breed" with EqualLogic.

CHRIS COVATTA

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1. Are you responsible for, or are you involved in your company's IT business projects goals, direction or strategy? ☐ 1. Yes ☐ O. No

1A. Which of the following describe your role in the IT decision-making process at your company? *(Check all that apply)*

☐ 01. Authorize Purchases
☐ 02. Evaluate/Specify Brands or Vendors
☐ 04. Create IT Strategy
☐ 05. Determine IT Needs
☐ 06. Align Business & IT Goals
☐ 11. Manage Vendor Relationships
☐ 99. None of the above

2. How many business technology projects will your company initiate in the next 12 months? *(Check one only)*

☐ 01. 50 or more
☐ 02. 25 - 49
☐ 03. 10 - 24
☐ 04. 1 - 9
☐ 05. None

3. Which of the following best describes your primary job title? *(Check one only)*

IT MANAGEMENT
☐ 01. CIO
☐ 02. CTO
☐ 16. CSO/CISO/Chief Technical Architect

Exec VP/Sr VP/VP:
☐ 03. IS/IT/MIS
☐ 06. Networking/Communications
☐ 07. E-Business/E-Commerce/Finance
☐ 08. Operations/Security/Quality Assurance
☐ 09. Engineering/Systems/Product Dev./R&D
☐ 56. Software/Application Development
☐ 57. Web Development
☐ 13. Other Exec VP/Sr VP/VP _____ *(please specify)*

Director/Sr Mgr/Head of:
☐ 50. IS/IT/MIS
☐ 51. Networking/Communications
☐ 52. E-Business/E-Commerce/Finance
☐ 42. Operations/Security/Quality Assurance
☐ 53. Engineering/Systems/Product Dev./R&D
☐ 58. Software/Application Development
☐ 59. Web Development

☐ 54. Other Director/Sr Mgr/Head _____ *(please specify)*

IT MANAGEMENT
☐ 14. CEO/COO/CFO
☐ 36. President/Owner/Chairman/Partner
☐ 17. Sr Executive VP/VP/General Manager

Exec VP/Sr VP/VP:
☐ 55. Finance/Accounting
☐ 20. Engineering/Manufacturing/R&D
☐ 21. Purchasing/Marketing/Sales

☐ 46. Director/Sr Mgr/Head Corporate Management

Other
☐ 44. Internet Tech Consultant/Analyst
☐ 45. Other IT Management _____ *(please specify)*
☐ 60. IT Staff
☐ 24. Financial/Business Consultant Analyst
☐ 47. Other Corporate Management _____ *(please specify)*

☐ 15. Other _____ *(please specify)*

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4. Which of the following best describes your company's primary business? *(Check one Only)*

NON-COMPUTER INDUSTRY

- ☐ 01. Manufacturing
- ☐ 02. Finance/Banking/Accounting/Venture Capitalist
- ☐ 09. Insurance/Real Estate/Legal
- ☐ 03. Government (Federal/State/Local)
- ☐ 08. Aerospace/Defense/Military
- ☐ 04. Healthcare/HMO/Hospital/Medical
- ☐ 06. Pharmaceuticals/Biotech/Agricultural
- ☐ 15. Education
- ☐ 14. Retail/Wholesale/Distribution
- ☐ 11. Transportation (highway, air, railroad, maritime)
- ☐ 12. Mining/Energy/Utilities/Refineries
- ☐ 13. Engineering/Architecture/Construction
- ☐ 07. Tourism/Travel/Hotel/Restaurant Services
- ☐ 05. Entertainment/Publishing/Broadcasting
- ☐ 17. Marketing/Advertising/Public Relations
- ☐ 16. Non-Profit/Trade Association/R&D
- ☐ 19. Business Services/Consultancy

COMPUTER RELATED INDUSTRY

- ☐ 20. Computer Manufacturing (hardware, software, etc.)
- ☐ 22. Retail/Wholesale/Distribution
- ☐ 10. Telecommunications/Network Service Provider
- ☐ 23. System/Network Integrator or Provider/VAR
- ☐ 21. Data Processing Services/Outsourcing
- ☐ 18. Computer/Network Services Consultancy
- ☐ 25. ISP/ASP/Communication Carrier
- ☐ 26. Independent Web/Software Developer or Vendor
- ☐ 24. E-Commerce/E-Business Integrator or Provider
- ☐ 28. Security/Storage Provider/SAN Management
- ☐ 27. Other _____

(please specify)

5. What is your company's annual budget for each of the following? *(Select one dollar range for each category)*

	$100 Million or More	$50 to $99.9 Million	$10 to 49.9 Million	$1 to $9.9 Million	$500,000 to $999,999	$100,000 to $499,999	Less than $100,000	None
Networking/Communications	1. ☐	2. ☐	3. ☐	4. ☐	5. ☐	6. ☐	7. ☐	10. ☐
Internet/Intranet Software/Services	1. ☐	2. ☐	3. ☐	4. ☐	5. ☐	6. ☐	7. ☐	10. ☐
Application/Business Software	1. ☐	2. ☐	3. ☐	4. ☐	5. ☐	6. ☐	7. ☐	10. ☐
Hardware Systems/Servers	1. ☐	2. ☐	3. ☐	4. ☐	5. ☐	6. ☐	7. ☐	10. ☐
Storage/Data Management	1. ☐	2. ☐	3. ☐	4. ☐	5. ☐	6. ☐	7. ☐	10. ☐
Security/Business Continuity	1. ☐	2. ☐	3. ☐	4. ☐	5. ☐	6. ☐	7. ☐	10. ☐
Consulting/Outsourcing/Staffing	1. ☐	2. ☐	3. ☐	4. ☐	5. ☐	6. ☐	7. ☐	10. ☐
Peripherals	1. ☐	2. ☐	3. ☐	4. ☐	5. ☐	6. ☐	7. ☐	10. ☐

6. Overall, what percentage of the above budget are you personally involved with? *(Check one Only)*

- ☐ 01. 81% - 100%
- ☐ 02. 61% - 80%
- ☐ 03. 41% - 60%
- ☐ 04. 26% - 40%
- ☐ 08. less than 25%
- ☐ 07. None

7. Which of the following categories do you have purchasing authority for? *(Select all that apply)*

- ☐ 01. Global IT Operations
- ☐ 02. Enterprise-wide IT Operations
- ☐ 03. IT Department and Business Unit Operations
- ☐ 04. Standards and Platforms/IT Architecture
- ☐ 05. Business Process Re-engineering/Compliance
- ☐ 06. None of the above

8. How many people are employed in your entire organization? *(Check one Only)*

- ☐ 14. 10,000 or more
- ☐ 04. 5,000 - 9,999
- ☐ 05. 1,000 - 4,999
- ☐ 06. 500 - 999
- ☐ 07. 100 - 499
- ☐ 16. 50-99
- ☐ 17. 1-49

9. What is your organization's annual revenue? *(Check one only)*

- ☐ 01. $25 Billion or more
- ☐ 15. $10 to $24.9 Billion
- ☐ 04. $1 to $9.9 Billion
- ☐ 05. $550 to $999.9 Million
- ☐ 06. $100 to $549.9 Million
- ☐ 07. $50 to $99.9 Million
- ☐ 16. Less than $50 million

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March 10	Feb. 25	March 17	March 3	March 24	March 10	April 7	March 24

EDITORIAL CALENDAR

ISSUE	FEATURES	DEMOGRAPHICS
March 10	Messaging and collaboration Enterprise applications	Developer Solutions
March 17	Storage IT Planner: 5 steps to secure development	
March 24	The extended enterprise Midmarket	
April 7	The 100 most influential people in IT	Channel Solutions

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Chip chat on the boardwalk

HP may tap AMD quad cores; some OEMs cautious about 'Puma'

The warm-blooded mammal was sick of the snow, ice and slush on the East Coast, so he did what certain other winter-weary creatures do in mid-February—he decamped to milder climes. In Spencer's case, it was an impromptu flight to **Silicon Valley**, which was enjoying a prolonged stretch of sunny, springlike weather.

Then it was a quick rental-car ride over the coastal mountains on winding Route 17 to **Santa Cruz**, where he was summoned to a discreet meeting on the city's sun-drenched beach boardwalk by a tipster wanting to talk about chips of the silicon variety while noshing chips of the deep-fried-potato-and-fish variety. There the Learned Lynx heard that **HP** will likely be the first big system vendor to come out with a server that uses **AMD's** quad-core processors—formerly code-named **Barcelona**.

The tipster told the Tabby to check out h20000.www2.hp.com/bc/docs/support/SupportManual/c00795594/c00795594.pdf on the HP Web site to find a manual on the DL585 G2 server. This model is currently available only with dual-core AMD **Opteron** processors. But reading through the manual, you find the author discussing the benefits of the quad-core processor—specifically an 8200- or 8300-series chip, the designation for the quad cores. So, it seems HP is ready to accept that AMD's chips are no longer suffering from the bug that plagued them when they were introduced last year.

Then the tipster told Spencer that some PC OEMs are getting a little nervous about the launch of AMD's **"Puma"** platform. Since AMD had problems with its last big chip launch, the OEMs may be taking a cautious look at what AMD might be offering on the mobile front. A delay or the appearance of more quality problems could soon lead to the long-rumored shake-up of AMD's leadership. There is already plenty of speculation in the Valley about who might buy AMD if the company can't resolve its problems expeditiously. Some say a likely candidate might be **Nvidia**, with its CEO **Jen-Hsun Huang** as the executive who could turn things around.

Another tipster dropped Spencer an e-mail saying a battle might be brewing between HP and **Dell** in the desktop management space. HP recently reduced prices on some of its desktop and deskside server management tools in response to growing competition from Dell, the tipster averred.

Later last week, Spencer was at **Sun's** Menlo Park campus attending one of the company's periodic media days to get an update on Sun's 2008 product strategy. All the top brass were there, including CEO **Jonathan Schwartz**; **John Fowler**, executive vice president of systems; and **Rich Green**, executive vice president of software. The Katt was catching up with Fowler, who's now in charge of Sun's hardware development efforts, when Schwartz walked over. The brash Bobcat hit Schwartz up for a one-on-one interview. "Sure, it's OK with me," Schwartz said, "but John over there—well, he really runs the company. I'm just his puppet sock." Fowler laughed. "Right. You know the movie, 'Ratatouille'? That's Jon and me. He's the boy—I'm the rat pulling his hair." **e**

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HOW TO SURVIVE A CRACKBERRY BLACKOUT — © Ziff Davis Enterprise

Commandeer Granny's LifeCall alarm
"No, I haven't fallen. How you doin'?"

"Oh, hello."

Mug an iPhone user
"Hand over the iPhone, pal! These thumbs could bend you in half!"

Look up for once and check out your surroundings— drink in reality

CONNOLLY